

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

In the Matter of the Request for Amendment #1 of
the Site Certificate for Shepherds Flat Central

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**FINAL ORDER ON
AMENDMENT #1**

Oregon Energy Facility Siting Council
March 12, 2010

SHEPHERDS FLAT CENTRAL:
FINAL ORDER ON AMENDMENT #1
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LIST OF ABBREVIATIONS

BPA	Bonneville Power Administration
Certificate Holder	South Hurlburt Wind LLC
Council	Energy Facility Siting Council
Department	Oregon Department of Energy
DEQ	Oregon Department of Environmental Quality
DSL	Oregon Department of State Lands
GCZO	Gilliam County Zoning Ordinance
MCZO	Morrow County Zoning Ordinance
MW	megawatt or megawatts
ODFW	Oregon Department of Fish and Wildlife
SCADA	Supervisory, Control and Data Acquisition (the control system for the energy facility)
SFC	Shepherds Flat Central
SFN	Shepherds Flat North
SFS	Shepherds Flat South
SFWF	Shepherds Flat Wind Farm
USFWS	U.S. Fish and Wildlife Service
WMMP	Wildlife Monitoring and Mitigation Plan

**SHEPHERDS FLAT CENTRAL:
FINAL ORDER ON AMENDMENT #1**

I. INTRODUCTION

1 The Oregon Energy Facility Siting Council (Council) issues this order in accordance
2 with ORS 469.405 and OAR 345-027-0070. This order addresses a request by the certificate
3 holder, South Hurlburt Wind LLC, for amendment of the site certificate for Shepherds Flat
4 Central (SFC).

5 The Council issued a Site Certificate for SFC in September 2009. The Site Certificate
6 authorized construction and operation of up to 77 wind turbines and related facility
7 components. The facility would have a peak generating capacity of up to 231 megawatts. The
8 facility site is entirely on private lands located partly in Gilliam County and partly in Morrow
9 County south of Interstate Highway 84 and east of Arlington, Oregon, between State
10 Highways 19 and 74. The certificate holder has not begun construction of the facility.

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

II. PROCEDURAL HISTORY AND AMENDMENT PROCESS

13 On November 4, 2009, the certificate holder submitted a “Request to Amend the Site
14 Certificate for Shepherds Flat Central” (Request for Amendment #1). On November 12, 2009,
15 the certificate holder sent copies of the amendment request to a list of reviewing agencies
16 provided by the Oregon Department of Energy (Department) with a memorandum from the
17 Department requesting agency comments by December 11, 2009. On November 17, the
18 Department sent notice of the amendment request to all persons on the Council’s mailing list,
19 to the special list established for the facility and to an updated list of property owners supplied
20 by the certificate holder, requesting public comments by December 11, 2009.

21 By letter dated November 18, the Department notified the certificate holder that the
22 proposed order would be issued no later than January 15, 2010.

23 In response to the public and agency notices of the amendment request, the
24 Department received written comments from the following reviewing agencies and members
25 of the public:

- 26 • Reviewing Agencies
27 Sarah Kelly, Oregon Department of State Lands
28 Jerry Sauter, Oregon Water Resources Department
29 Rose Owens, Oregon Department of Fish and Wildlife
30 Todd Hesse, Oregon Department of Environmental Quality
- 31 • Public Comments
32 Johnson Meninick, Confederated Tribes and Bands of the Yakama Nation
33 Marisa Meyer / Gary Miller, U.S. Fish and Wildlife Service
34 Leslie Nelson, The Nature Conservancy

1 The Department considered all of the comments in preparing the proposed order. A
2 summary of all comments received and the Department’s responses are included in
3 Attachment D, incorporated herein by this reference.

4 By letter dated January 13, 2010, the Department notified the certificate holder that
5 additional time would be needed to prepare the proposed order and, in accordance with OAR
6 345-027-0070(4), explained the circumstances justifying the delay. The Department stated
7 that the proposed order would be issued by February 5.

8 The Department analyzed the Request for Amendment #1 for compliance with all
9 applicable Council standards. The Department’s recommended findings and conclusions were
10 presented in the proposed order. The Department recommended that the Council approve the
11 amendment request, subject to revisions of the Site Certificate discussed below at page 48.

12 After issuing the Proposed Order on February 4, 2010, the Department issued a public
13 notice as required under OAR 345-027-0070(5). The Department mailed the notice to all
14 persons on the Council’s general mailing list and to all persons on the SFC special list,
15 property owner list and reviewing agency list. In addition, the Department posted the notice
16 on the Department’s Internet website. The notice invited public comments and gave a
17 deadline of March 8, 2010, for comments or contested case requests. The Department
18 received the following comment by the deadline of March 8:

- 19 • Leta Neiderheiser, Oregon Historic Trails Advisory Council, requested that
20 certain restrictions for the avoidance of impacts on the Oregon Trail be
21 maintained for the new proposed boundaries of the “Shepherds Flat Wind
22 Farm.”¹ The Department responded to the comment by email, noting that the
23 protections are incorporated in Condition 46 of the SFC site certificate and
24 would continue to apply to the facility if the amendment were approved.²

25 At a public meeting in Hood River, Oregon, on March 12, 2010, the Council
26 considered the Department’s recommendations and voted to approve the amendment request.

III. DESCRIPTION OF THE PROPOSED AMENDMENT

27 The amendment request describes an expansion of the site boundary to accommodate
28 an alternative route for a 230-kV transmission line to connect the facility to the regional
29 transmission system operated by the Bonneville Power Administration (BPA). The alternative
30 route would terminate at the same point of interconnection as described in the site certificate:
31 a BPA substation currently under construction next to BPA’s Slatt Switching Station. The
32 alternative route for the transmission line would run west from the SFC substation to the new
33 BPA substation. The certificate holder proposes to construct the transmission line within
34 either the previously-approved corridor or the proposed alternative corridor.

35 Companion amendment requests were submitted to the Council by North Hurlburt
36 Wind LLC for Shepherds Flat North (SFN) and by Horseshoe Bend Wind LLC for Shepherds
37 Flat South (SFS). The 230-kV interconnection lines for SFN, SFC and SFS would be jointly-
38 owned by the certificate holders for the three facilities, and the power from the three facilities

¹ Letter from Leta Neiderheiser, Chair, Oregon Historic Trails Advisory Council, February 27, 2010.

² Email from John White, Oregon Department of Energy, March 8, 2010. The condition also applies to Shepherds Flat South.

1 would be carried on the same lines. Contracts among the three certificate holders or with a
2 third party would address transmission line maintenance. All three facilities would use the
3 same transmission line corridor. Use of the alternative route would eliminate the need for the
4 interconnection line to cross an existing high-voltage power line and a County road within the
5 SFN site.

6 The amendment would add approximately 4,834 acres to the facility site, of which
7 approximately 2,413 acres are within the previously-approved site boundary of SFS.³ The
8 companion amendment for SFS includes a modification of the SFS site boundary to remove
9 1,123 acres from the SFS site. These acres would be added to SFC. In addition, approximately
10 1,290 acres of land within the SFS site would be added to the SFC site, but would also be
11 retained within the SFS site for a transmission corridor (no SFS turbines would be located
12 within the area).

13 The amendment would add new lands (lands lying outside the previously-approved
14 SFS or SFC site boundaries) to the SFC site. Most of the new land lies next to the previously-
15 approved transmission and access corridor between SFC and SFS.⁴ As shown in the typical
16 layout, an aboveground collector line would be located in this area.⁵ The area may also be
17 used for alternate turbine locations for turbines that might need to be relocated in the final
18 design.⁶ The area includes approximately 1,030 acres that are also proposed to be added to
19 SFS under a companion amendment request to accommodate the reconfiguration of the 230-
20 kV transmission line for SFS to reduce the impact on a cultivated field.

21 The expansion of the site would accommodate additional wind turbines and related
22 components as well as an alternative route for a 230-kV transmission line. The amendment
23 would allow the certificate holder to build up to 116 wind turbines at SFC with a maximum
24 peak generating capacity of 290 MW.

25 The amendment request includes a request for an exception to Condition 40(d) of the
26 site certificate. This condition requires a minimum setback distance of 110-percent of
27 maximum blade tip height from facility wind turbines to “the nearest boundary of the
28 certificate holder’s lease area.” The exception would apply to two isolated areas: a cultural or
29 historic resource area (approximately 17.5 acres) and an area occupied by the landowner’s
30 drill-rig and used for storage (approximately 18.5 acres).⁷ Both of these areas are excluded
31 from the certificate holder’s lease with the landowner. The excluded areas and the
32 surrounding land is owned by the same landowner, who is in agreement with the proposed
33 exception to the setback requirement for these two areas.

³ The areas within the current SFS site that would be added to SFC under this amendment are shown in the Request for Amendment #1, Section V, Map 1.

⁴ This land (approximately 2,396 acres) was proposed to be included in the Saddle Butte Wind Park, as described in the Notice of Intent submitted by Saddle Butte Wind LLC in August 2009. In addition, the new lands include a segment of the alternate transmission line corridor between the previously-approved site boundary and the BPA Slatt substation (approximately 8.8 acres) and a transmission corridor crossing Eightmile Canyon (approximately 16.2 acres).

⁵ Request for Amendment #1, Section V, Map 2.

⁶ Email from Patricia Pilz, January 21, 2010.

⁷ The Request for Amendment #1 included a request for a general exception to Condition 40(d) where the adjacent land (outside of the certificate holder’s lease area) is subject to a separate wind development lease and the wind leaseholders on both parcels have entered into a setback agreement acceptable to the Department. The certificate holder has withdrawn this exception request (email from Patricia Pilz, January 1, 2010).

1. Amendment Procedure

1 Under OAR 345-027-0050, a site certificate amendment is needed because the
2 certificate holder proposes to design, construct or operate SFC in a manner different from the
3 description in the current site certificate. In particular, the certificate holder proposes to
4 expand the site boundary and increase the generating capacity of the facility. These changes
5 could result in significant adverse impacts that the Council has not previously addressed and
6 in the need to revise the conditions of the site certificate. In addition, the certificate holder
7 proposes changes to Condition 40. Under OAR 345-027-0050(1)(c), a site certificate
8 amendment is required when new or amended site certificate conditions are needed.

9 The Department and the Council must follow the procedures of OAR 345-027-0070 in
10 reviewing the amendment request. In making a decision on this amendment request, the
11 Council applies the “applicable substantive criteria” (defined in OAR 345-022-0030) that
12 were in effect on the date the certificate holder submitted the request for amendment. The
13 Council applies all other State statutes, administrative rules and local government ordinances
14 that are in effect on the date the Council makes its decision. For an amendment that would
15 change the site boundary, the Council must consider whether the facility complies with all
16 Council standards with respect to the area added to the site by the amendment. In addition, the
17 Council must consider whether the amendment of Condition 40 would affect any finding
18 made by the Council in an earlier order.⁸ For any amendment, the Council must consider
19 whether the amount of the bond or letter of credit required under OAR 345-022-0050 is
20 adequate. We address compliance with these requirements in Sections IV and V.

2. The Certificate Holder’s Proposed Amendments to the Site Certificate

21 The certificate holder described the proposed changes to the facility in Section III of
22 the amendment request. The amendment would increase the maximum generating capacity of
23 the facility to 290 MW and would increase the maximum number of wind turbines to 116.
24 The amendment would change the facility description and location by enlarging the facility
25 site to increase the micrositing area for wind turbines and other components and to allow the
26 option of constructing the 230-kV interconnection line in an alternative corridor. The
27 amendment would modify Condition 40 and authorize exceptions to the lease boundary
28 setback requirement for wind turbines.

29 In Section IV of the Request for Amendment #1, the certificate holder proposed
30 specific changes to the site certificate.⁹ The Department recommended that the Council
31 approve the substance of the site certificate amendments proposed by the certificate holder
32 and other modifications consistent with the amendment request. The Department’s
33 recommended site certificate revisions are discussed below at page 48. The *Wildlife*
34 *Monitoring and Mitigation Plan* is incorporated in Condition 83 of the site certificate. The
35 Department’s recommended modifications of the *Wildlife Monitoring and Mitigation Plan* are
36 addressed in Revision 13 and in Attachment A. The *Habitat Mitigation Plan* is incorporated
37 in Condition 85 of the site certificate. The Department’s recommended modifications of the
38 *Habitat Mitigation Plan* are addressed in Revision 14 and in Attachment C.

⁸ The Council’s *Final Order on Amendment #1 for the Shepherds Flat Wind Farm* (September 11, 2009) is the only applicable earlier order.

⁹ Request for Amendment #1, Section IV, following p. 4.

3. Description of the Facilities Authorized by Amendment #1

1 The *Final Order on Amendment #1 for the Shepherds Flat Wind Farm* (September 11,
2 2009) – hereinafter referred to as the *Final Order on Amendment #1 (SFWF)* – describes SFC
3 as approved before this amendment. If the Council approves Amendment #1, the facility
4 description would be modified as described below.

5 Turbines

6 The Council previously approved construction of up to 77 turbines at SFC. The
7 amendment would add 39 turbines and authorize the certificate holder to construct up to 116
8 wind turbines at the facility. The certificate holder has selected a 2.5-MW turbine for the
9 facility.¹⁰ The combined peak generating capacity of the facility would not exceed 290 MW.¹¹

10 Power Collection System

11 Approximately 59 miles of 34.5-kV electric collector cables would connect the
12 turbines to the facility substation.¹² Most of the collector system would be installed
13 underground, but segments of the collector system could be located aboveground. The
14 certificate holder has determined that collector lines would not be understrung on the 230-kV
15 transmission line structures.¹³ The maximum length of double-circuit segments would be 9
16 miles, and the maximum length of single-circuit segments would be 6 miles.¹⁴ Overall, the
17 maximum combined length of aboveground segments would increase by approximately 1.2
18 miles compared to the previously-approved facility. Up to 25 surface junction boxes would be
19 installed to provide service access to the underground collector lines.¹⁵

20 Substation and Interconnection

21 A facility substation would be constructed within the SFC site boundary. Power from
22 the collector system would be stepped-up to 230 kV at the substation. An aboveground 230-
23 kV transmission line would connect the SFC facility to the regional transmission grid through
24 the new BPA substation under construction near the Slatt Switching Station located west of
25 the main project area.

26 The previously-approved transmission line route (described in the amendment request
27 as “Option A”) would require a transmission line approximately 5.9 miles long that would run
28 from SFC substation north to the SFN substation and from there west to the BPA substation.¹⁶
29 The proposed alternative transmission line route (“Option B”) would run west from the SFC
30 substation directly to the BPA substation. Under Option B, the transmission line would be
31 approximately 3.7 miles in length. The certificate holder would be authorized to use either the
32 previously-approved interconnection line corridor or the alternative corridor. The Option A
33 and Option B transmission line routes are shown on Map 3 of the amendment request, which
34 is incorporated herein by this reference.¹⁷ The 230-kV transmission line would be supported
35 on steel monopole structures.

¹⁰ Request for Amendment #1, Section I, p. 1.

¹¹ Request for Amendment #1, Section III, p. 1.

¹² Email from Patricia Pilz, January 12, 2010.

¹³ Email from Patricia Pilz, December 16, 2009.

¹⁴ Table of typical and maximum components (email from Carol Weisskopf, December 21, 2009).

¹⁵ Email from Carol Weisskopf, December 22, 2009.

¹⁶ Length of transmission line based on typical layout (Request for Amendment #1, Section III, p. 1).

¹⁷ Request for Amendment #1, Section V, Map 3.

1 **Control System**

2 The Supervisory, Control and Data Acquisition (SCADA) system is a fiber optic
3 communications network that follows the same segment routes as the collector system. Where
4 underground, communications lines would be placed in the same trenches as the collector
5 lines, and aboveground communications lines would run on the same power poles as the
6 collector lines. The overall length of the SCADA system is the same as the overall length of
7 the collector system. The proposed amendment would increase the maximum length of the
8 SCADA system to approximately 59 miles.¹⁸

9 **Access Roads**

10 The amendment would increase the maximum overall length of new roads to 33 miles
11 (compared to the previously-approved maximum of 25 miles).¹⁹ In addition, up to 4.5 miles of
12 existing ranch roads would be improved (a decrease from the previously-approved maximum
13 of 7 miles). The finished roads would be 16 feet wide. The new roads and the improved
14 existing roads would have a compacted base of native soil and a graveled surface to a depth of
15 four to ten inches.²⁰

16 **Construction Disturbance Areas**

17 During facility construction, there would be approximately 312 acres of temporary
18 disturbance, based on the typical layout (an increase of up to 178 acres compared to the
19 previously-approved facility).²¹ Temporary disturbance includes approximately 28 miles of
20 new access roads, 2.5 miles of existing ranch roads that would be temporarily widened up to
21 71 feet wide to accommodate crane travel and approximately 3.6 miles of other roads that
22 would be temporarily widened up to 43.5 feet wide.²² Areas of temporary construction
23 disturbance also include two 4-acre temporary staging and storage areas, approximately 69
24 acres of temporary construction area at turbine sites, approximately 27 acres of temporary
25 disturbance for trenching and approximately 28 acres of temporary disturbance associated
26 with construction of aboveground collector and 230-kV transmission lines.

27 In addition to the increase in construction disturbance due to the increase in the
28 number of turbines under the proposed amendment, the certificate holder's estimate of the
29 area of construction disturbance increased based on discussions with the construction
30 contractor regarding final design details, which occurred after the Request for Amendment #1
31 was submitted.²³ The reasons for the increase are described herein at page 19.

32 **Site and Site Boundary**

33 The *Final Order on Amendment #1 (SFWF)* describes the SFC site and site boundary
34 as previously approved. If the Council approves Amendment #1, the area within the site

¹⁸ The overall length of SCADA lines is assumed to be about the same as the overall length of the collector system lines.

¹⁹ Table of typical and maximum components (email from Carol Weisskopf, December 21, 2009).

²⁰ Email from Patricia Pilz, January 7, 2010.

²¹ Temporary project construction footprint, typical layout (email from Carol Weisskopf, December 22, 2009). There could be up to 384 acres of temporary disturbance under maximum habitat disturbance layout, as shown in Table 3 herein.

²² Email from Patricia Pilz, January 7, 2010. The width roads would be reduced to a finished width of 16 feet upon completion of construction.

²³ Email from Carol Weisskopf, December 21, 2009.

1 boundary would increase by approximately 4,834 acres to a total of approximately 11,769
2 acres.²⁴ The proposed expansion areas are shown with a typical turbine layout in Map 2 of the
3 amendment request, which is incorporated herein by this reference.²⁵

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

4 The Council must decide whether the amendment complies with the facility siting
5 standards adopted by the Council. In addition, the Council must impose conditions for the
6 protection of the public health and safety, conditions for the time of commencement and
7 completion of construction and conditions to ensure compliance with the standards, statutes
8 and rules addressed in the project order. ORS 469.401(2).

9 The Council is not authorized to determine compliance with regulatory programs that
10 have been delegated to another state agency by the federal government. ORS 469.503(3).
11 Nevertheless, the Council may consider these programs in the context of its own standards to
12 ensure public health and safety, resource efficiency and protection of the environment.

13 The Council has no jurisdiction over design or operational issues that do not relate to
14 siting, such as matters relating to employee health and safety, building code compliance, wage
15 and hour or other labor regulations, or local government fees and charges. ORS 469.401(4).

16 In making its decision on an amendment of a site certificate, the Council applies the
17 applicable State statutes, administrative rules and local government ordinances that are in
18 effect on the date the Council makes its decision, except when applying the Land Use
19 Standard. In making findings on the Land Use Standard, the Council applies the applicable
20 substantive criteria in effect on the date the certificate holder submitted the request for
21 amendment. OAR 345-027-0070(10).

1. General Standard of Review

OAR 345-022-0000

22 *(1) To issue a site certificate for a proposed facility or to amend a site certificate,*
23 *the Council shall determine that the preponderance of evidence on the record*
24 *supports the following conclusions:*
25

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

31 *(b) Except as provided in OAR 345-022-0030 for land use compliance and*
32 *except for those statutes and rules for which the decision on compliance has been*
33 *delegated by the federal government to a state agency other than the Council, the*
34 *facility complies with all other Oregon statutes and administrative rules identified*
35 *in the project order, as amended, as applicable to the issuance of a site certificate*
36 *for the proposed facility. If the Council finds that applicable Oregon statutes and*
37 *rules, other than those involving federally delegated programs, would impose*

²⁴ Request for Amendment #1, Section I, p. 2.

²⁵ Request for Amendment #1, Section V, Map 2.

1 *conflicting requirements, the Council shall resolve the conflict consistent with the*
2 *public interest. In resolving the conflict, the Council cannot waive any applicable*
3 *state statute.*

4 * * *

5 We address the requirements of OAR 345-022-0000 in the findings of fact, reasoning,
6 conditions, and conclusions of law discussed in the sections that follow. Upon consideration
7 of all of the evidence in the record, we state our general conclusion regarding the amendment
8 request in Section VII.

2. Standards about the Applicants

(a) Organizational Expertise

OAR 345-022-0010

9 (1) *To issue a site certificate, the Council must find that the applicant has the*
10 *organizational expertise to construct, operate and retire the proposed facility in*
11 *compliance with Council standards and conditions of the site certificate. To*
12 *conclude that the applicant has this expertise, the Council must find that the*
13 *applicant has demonstrated the ability to design, construct and operate the*
14 *proposed facility in compliance with site certificate conditions and in a manner*
15 *that protects public health and safety and has demonstrated the ability to restore*
16 *the site to a useful, non-hazardous condition. The Council may consider the*
17 *applicant's experience, the applicant's access to technical expertise and the*
18 *applicant's past performance in constructing, operating and retiring other*
19 *facilities, including, but not limited to, the number and severity of regulatory*
20 *citations issued to the applicant.*

21
22 (2) *The Council may base its findings under section (1) on a rebuttable*
23 *presumption that an applicant has organizational, managerial and technical*
24 *expertise, if the applicant has an ISO 9000 or ISO 14000 certified program and*
25 *proposes to design, construct and operate the facility according to that program.*

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

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

Findings of Fact

1 In the *Final Order on Amendment #1 (SFWF)*, the Council found that the certificate
2 holder, as a subsidiary of Caithness Energy, LLC, has the organizational expertise to
3 construct, operate and retire the proposed facility in compliance with Council standards and
4 conditions of the site certificate.²⁶ The Council found that the certificate holder may
5 optionally obtain concrete, water and fuel from “service areas” that would be permitted,
6 constructed and operated by third-party contractors. In choosing that option, the certificate
7 holder would rely on third-party permits. The Council found that the third-party contractors
8 have a reasonable likelihood of getting the necessary permits and that the certificate holder
9 has a reasonable likelihood of entering into a contractual or other arrangement with these
10 contractors for access to concrete, water and fuel necessary for construction of SFC.²⁷

11 The proposed changes to the SFC site boundary and increased generating capacity
12 would not affect the Council’s previous findings. The Council finds that there have been no
13 changes of circumstances or underlying facts that would affect the Council’s previous
14 findings under this standard.

Conclusions of Law

15 Based on the findings discussed above, the Council concludes that certificate holder
16 would meet the Council’s Organizational Expertise Standard if Amendment #1 were
17 approved.
18

(b) Retirement and Financial Assurance

OAR 345-022-0050

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

20
21 *(1) The site, taking into account mitigation, can be restored adequately to a useful,*
22 *non-hazardous condition following permanent cessation of construction or*
23 *operation of the facility.*

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

Findings of Fact

27 In the *Final Order on Amendment #1 (SFWF)*, the Council found that the SFC site
28 could be restored adequately to a useful, non-hazardous condition following permanent
29 cessation of construction or operation of the facility.²⁸ The Council found that the cost of site
30 restoration would not exceed \$6.131 million in 3rd Quarter 2009 dollars.²⁹ The Council found
31 that the certificate holder, South Hurlburt Wind LLC, had demonstrated a reasonable
32 likelihood of obtaining a bond or letter of credit for that amount.

²⁶ *Final Order on Amendment #1 (SFWF)*, p. 15.

²⁷ *Final Order on Amendment #1 (SFWF)*, p. 15-16.

²⁸ *Final Order Amendment #1 (SFWF)*, p. 16.

²⁹ *Final Order Amendment #1 (SFWF)*, p. 23.

1 As described herein, the proposed amendment would enlarge the facility site and
2 would increase the maximum number of wind turbines. It would increase the maximum
3 combined length of aboveground segments of the collector and SCADA system and would
4 increase the number of junction boxes. It would increase the maximum combined length of
5 new access roads and would increase the area of temporary disturbance during construction.
6 The amendment would reduce the maximum length of the 230-kV transmission line.³⁰

7 For this amendment request, the Department calculated a revised cost estimate for
8 SFC following the estimating procedure outlined in its draft “Facility Retirement Cost
9 Estimating Guide.” The estimate assumed a facility configuration that would result in the
10 highest site restoration cost consistent with the maximum design flexibility requested by the
11 certificate holder. The assumptions underlying the revised SFC cost estimate are as follows:

- 12 • 116 GE 2.5-MW turbines, each weighing 302 U.S. tons (including the weight
13 of steel in the towers, nacelles, internal ladders and platforms).³¹
- 14 • Turbine foundations containing 66 cubic yards of concrete above three feet
15 below grade.³²
- 16 • 116 step-up transformers located within the turbine towers.³³
- 17 • 88 turbine turnouts.³⁴
- 18 • Two meteorological towers, one field workshop, one substation.³⁵
- 19 • 24 miles of single-circuit or double-circuit aboveground 34.5-kV transmission
20 line and SCADA lines mounted on up to 266 poles.³⁶
- 21 • 7 miles of 230-kV transmission line mounted on up to 54 steel monopoles.³⁷
- 22 • 25 junction boxes.³⁸
- 23 • 33 miles of access roads.³⁹

³⁰ The full length of the 230-kV line and all support structures needed for SFC are included in the estimate, although the same transmission route would be used for SFN and SFS and some support structures would be shared.

³¹ Table of typical and maximum components (email from Carol Weisskopf, December 21, 2009) and wind turbine specifications, Request for Amendment #1 for the Shepherds Flat Wind Farm, Section III, p. 14.

³² Wind turbine specifications, Request for Amendment #1 for the Shepherds Flat Wind Farm, Section III, p. 14.

³³ Email from Patricia Pilz, January 7, 2010. The unit cost for transformer removal is based on electrical disassembly costs alone.

³⁴ Turbines at ends of roads have no turnout, based on permanent facilities footprint (email from Carol Weisskopf, December 22, 2009).

³⁵ Permanent facilities footprint (email from Carol Weisskopf, December 22, 2009).

³⁶ Table of typical and maximum components (email from Carol Weisskopf, December 21, 2009). The unit cost for the 34.5-kV collector line has decreased from that listed in the *Final Order on Amendment #1 (SFWF)* due to an increased distance between collector poles (based on changes to footprint calculations, email from Carol Pilz Weisskopf December 21, 2009).

³⁷ Table of typical and maximum components (email from Carol Weisskopf, December 21, 2009). The unit cost for the 230-kV transmission line has decreased from the cost shown in the *Final Order on Amendment #1 (SFWF)* due to a change from double-circuit to single-circuit and an increased distance between transmission poles (based on changes to footprint calculations, email from Carol Weisskopf, December 21, 2009).

³⁸ Email from Carol Weisskopf, December 22, 2009.

³⁹ Table of typical and maximum components (email from Carol Weisskopf, December 21, 2009).

- Removal of facility components would disturb additional area around the component footprints. The estimated areas affected and the unit costs to restore these areas, based on the severity of disturbance expected, are shown in the table below.⁴⁰

Using these highest-cost assumptions, the Department estimated the site restoration cost for SFC as shown in Table 1.⁴¹

Table 1: Cost Estimate for Facility Site Restoration (1st Quarter 2010 Dollars)

	Quantity	Unit Cost	Extension
<u>Turbines</u>			
Disconnect electrical and ready for disassembly (per tower)	116	\$1,061	\$123,076
Remove turbine hubs and blades (per tower)	116	\$4,106	\$476,296
Remove turbine nacelles and towers (per net ton of steel)	35,032	\$76.67	\$2,685,903
Remove turbine foundations (per cubic yard of concrete)	7,656	\$38.68	\$296,134
Remove transformers (per transformer)	116	\$2,407	\$279,212
Restore turbine turnouts (per turnout)	88	\$97	\$8,536
<u>Met Towers</u>			
Dismantle and dispose of met towers (per tower)	2	\$9,483	\$18,966
<u>Substation and Field Workshop</u>			
Dismantle and dispose of substation	1	\$88,577	\$88,577
Dismantle and dispose of field workshop	1	\$29,509	\$29,509
<u>Transmission Lines</u>			
Remove 230-kV transmission line (per mile)	7.0	\$15,490	\$108,430
Remove 34.5-kV transmission line and SCADA (per mile)	24	\$2,419	\$58,056
Remove junction boxes & electrical to 4' below grade (each)	25	\$1,416	\$35,400
<u>Access Roads</u>			
Remove roads, grade and seed (per mile)	33	\$17,460	\$576,180

⁴⁰ The unit cost for restoring areas around access roads assumes that grading and seeding would be needed. The unit cost for areas of temporary transmission line access roads and cross-country crane paths assumes that only seeding would be needed. Restoration area for 34.5-kV and 230-kV transmission line poles includes both the permanent footprint and temporary disturbance areas. Acreages of disturbance shown in the table are based on the table of temporary construction disturbance, worst-case layout (email from Carol Weisskopf, December 22, 2009), except for the acreages for 34.5-kV transmission line support poles and cross-country crane paths, which are based on the table of typical and maximum components (email from Carol Weisskopf, December 21, 2009).

⁴¹ The Facility Retirement Cost Estimating Guide computes the retirement and site restoration cost in terms of mid-2004 dollars. In the *Final Order on Amendment #1 (SFWF)*, the Council adopted unit costs adjusted to reflect preliminary 3rd Quarter 2009 dollars. Table 1 shows unit costs in 3rd Quarter 2009 dollars and an adjustment of the subtotal to 1st Quarter 2010 dollars using a multiplier of 1.0051. The multiplier was generated by dividing the 1st Quarter 2010 Gross Domestic Product Implicit Price Deflator (GDP) of 110.4873 by the 3rd Quarter 2009 GDP of 109.9229.

<u>Restore Additional Areas Disturbed by Facility Removal</u>			
Around turbine pads (per acre)	69.28	\$5,988	\$414,849
Around turnarounds and turning radii (per acre)	13.34	\$5,988	\$79,880
Around met towers (per acre)	0.22	\$5,988	\$1,317
Around substation (per acre)	1.83	\$5,988	\$10,958
Around 34.5-kV power line poles (per acre)	15.30	\$2,973	\$45,487
Around 230-kV power line poles and pulling disturbance (per acre)	13.61	\$2,973	\$40,463
Around access roads (per acre)	248.47	\$5,988	\$1,487,838
Around temporary transmission access and cross-country crane paths (per acre)	28.96	\$2,973	\$86,098
Laydown and storage areas (per acre)	8.0	\$2,973	\$23,784
<u>General Costs</u>			
Permits, mobilization, engineering, overhead, utility disconnects (unit cost)	1	\$475,517	\$475,517
Subtotal			\$7,450,466
Subtotal Adjusted to 1st Quarter 2010 Dollars			\$7,488,464
Performance Bond		1%	\$74,885
Gross Cost			\$7,563,348
Administration and Project Management		10%	\$756,335
Future Developments Contingency		10%	\$756,335
Total Site Restoration Cost (rounded to nearest \$1,000)			\$9,076,000

1 The Council finds that the SFC site, taking into account mitigation and including the
2 changes proposed by Amendment #1, can be restored adequately to a useful, non-hazardous
3 condition following permanent cessation of construction or operation of the facility. The
4 Council finds that \$9.076 million (1st Quarter 2010 dollars) adjusted annually as described in
5 revised Condition 30 is a conservative estimate of the cost to restore the SFC site to a useful,
6 non-hazardous condition. The Department’s estimate is significantly higher than the amount
7 the Council previously found to be a reasonable cost to restore SFC to a useful, non-
8 hazardous condition (\$6.131 million in 3rd Quarter 2009 dollars). The increase in the
9 estimated site restoration cost is due primarily to the larger number of turbines that would be
10 built under the proposed amendment and the associated increases in the miles of access roads
11 and acres of temporary disturbance.

12 The certificate holder provided a letter from JPMorgan Chase Bank, N.A. (Chase)
13 stating that Chase “would be interested in issuing a letter of credit in the stated amount of up
14 to \$9,076,000 for the benefit of The Oregon Department of Energy by application of South
15 Hurlburt Wind, LLC.”⁴² Chase stated that “there is a reasonable likelihood that Chase would
16 be inclined to issue” the letter of credit (LC) if “the reimbursement obligations under the LC
17 would be collateralized and documented in the same manner that Chase has previously issued
18 letters of credit on behalf of other subsidiaries of Caithness Energy.” The letter does not
19 constitute a firm commitment by Chase to issue the letter of credit, but it is evidence that the
20 certificate holder could obtain the necessary letter of credit for SFC. The Council finds that
21 the certificate holder has demonstrated a reasonable likelihood of obtaining a bond or letter of
22 credit, satisfactory to the Council, in an amount adequate to restore the SFC site to a useful,
23 non-hazardous condition.

⁴² Email from Carol Weisskopf, January 29, 2010, with attached letter from JPMorgan Chase Bank.

1 Conclusions of Law

2 Based on the findings stated above, the Council concludes that the certificate holder
3 would meet the Council’s Retirement and Financial Assurance Standard if Amendment #1
4 were approved.

3. Standards about the Impacts of Construction and Operation

(a) Land Use

5 **OAR 345-022-0030**

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

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

10 ***

11 *(b) The applicant elects to obtain a Council determination under ORS*
12 *469.504(1)(b) and the Council determines that:*

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

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

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

25 *(3) As used in this rule, the “applicable substantive criteria” are criteria from the*
26 *affected local government’s acknowledged comprehensive plan and land use*
27 *ordinances that are required by the statewide planning goals and that are in effect*
28 *on the date the applicant submits the application. If the special advisory group*
29 *recommends applicable substantive criteria, as described under OAR 345-021-*
30 *0050, the Council shall apply them. If the special advisory group does not*
31 *recommend applicable substantive criteria, the Council shall decide either to make*
32 *its own determination of the applicable substantive criteria and apply them or to*
33 *evaluate the proposed facility against the statewide planning goals.*

34 *(4) The Council may find goal compliance for a proposed facility that does not*
35 *otherwise comply with one or more statewide planning goals by taking an*
36 *exception to the applicable goal. Notwithstanding the requirements of ORS*
37 *197.732, the statewide planning goal pertaining to the exception process or any*
38 *rules of the Land Conservation and Development Commission pertaining to the*

1 *exception process, the Council may take an exception to a goal if the Council*
2 *finds:*

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

5 (ii) *The land subject to the exception is irrevocably committed as described by*
6 *the rules of the Land Conservation and Development Commission to uses not*
7 *allowed by the applicable goal because existing adjacent uses and other relevant*
8 *factors make uses allowed by the applicable goal impracticable; or*

9 (iii) *The following standards are met:*

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

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

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

18 * * *

Findings of Fact

19 In acting on this amendment request, the Council applies the applicable substantive
20 criteria in effect on the date the certificate holder submitted the request for amendment. The
21 Planning Directors of Gilliam County and Morrow County have confirmed that the applicable
22 substantive criteria for the evaluation of wind energy facilities in the two counties have not
23 changed between June 15, 2009 (the date the request for Amendment #1 for the SFWF was
24 submitted) and the date the certificate holder submitted the present amendment request for
25 SFC (November 4, 2009).⁴³ Therefore, the local land use criteria that the Council applied in
26 the *Final Order on Amendment #1 (SFWF)* are applicable to this amendment request.

27 In the *Final Order on Amendment #1 (SFWF)*, the Council found that its previous
28 findings with respect to the former Shepherds Flat Wind Farm would apply to SFC.⁴⁴ The
29 Council found that SFC would occupy more than 20 acres of land in Gilliam County and
30 therefore would not comply with Gilliam County Zoning Ordinance (GCZO) Section
31 4.020(D)(14). The Council found that SFC would occupy only one acre of land in Morrow
32 County and would, therefore, comply with Morrow County Zoning Ordinance (MCZO)
33 Section 3.010(D)(16).⁴⁵ The Council's previous land use findings are incorporated herein by

⁴³ Email from Carla McLane, Morrow County Planning Director, December 1, 2009; email from Susie Anderson, Gilliam County Planning Director, December 2, 2009.

⁴⁴ *Final Order on Amendment #1 (SFWF)*, p. 25.

⁴⁵ *Final Order on Amendment #1 (SFWF)*, p. 27. MCZO Section 3.010(D)(16) provides that a power generation facility must not "preclude more than 12 acres of high value farmland or 20 acres of other land from commercial use."

1 this reference. All land within the previously-approved site boundaries of SFC, SFN and SFS
2 is zoned Exclusive Farm Use (EFU).⁴⁶

3 When a facility does not comply with all of the applicable substantive criteria in the
4 local jurisdiction, the Council must determine whether the facility otherwise complies with
5 the applicable statewide planning goals or if an exception to any applicable statewide
6 planning goal is justified. The Council analyzed SFC for compliance with the requirements of
7 ORS 215.283 and implementing regulations, specifically OAR 660-033-0120 and -0130, and
8 the analysis is incorporated herein by this reference.⁴⁷

9 The *Final Order on Amendment #1 (SFWF)* includes the Department’s analysis of
10 compliance with OAR 660-033-0120 and OAR 660-033-0130, as amended January 2, 2009
11 (the new rules), as well as analysis under these regulations in effect before the January 2009
12 amendments (the old rules). As of the date the certificate holder submitted the present
13 amendment request, Gilliam County had not incorporated the January 2009 changes to OAR
14 660-033-0120 and OAR 660-033-0130 into the local zoning ordinances. Therefore, the land
15 use analysis must address the old rules and the new rules.

16 Under the old rules, a power generation facility must not occupy more than 12 acres of
17 high-value farmland or more than 20 acres of non-high-value farmland.⁴⁸ The Council has
18 found that there is no high-value farmland within the previously-approved SFC and SFS site
19 boundaries.⁴⁹ To the extent that the proposed amendment would add areas to the SFC site that
20 are already included in the previously-approved SFS site boundary, the proposed expansion of
21 the SFC site occupies non-high-value farmland.⁵⁰ Approximately 2,421 acres lying outside the
22 previously-approved SFC or SFS site boundaries (new lands) would be added to SFC by the
23 proposed amendment.⁵¹ In the amendment request, the certificate holder provided a map
24 showing the Land Capability Classifications of all new lands proposed to be added to the SFC
25 site.⁵² The map demonstrates that there is no high-value farmland in these areas.

26 The area that would be occupied by SFC components is shown in Table 2 below:

⁴⁶ *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), p. 19.

⁴⁷ *Final Order on Amendment #1 (SFWF)*, pp. 28-33.

⁴⁸ The *Final Order on Amendment #1 (SFWF)* includes the definition of “high-value farmland” and “non-high-value farmland” at pages 27 and 29.

⁴⁹ *Final Order on Amendment #1 (SFWF)*, pp. 29-30.

⁵⁰ The amendment would add approximately 4,834 acres to the facility site, of which approximately 2,413 acres are within the previously-approved site boundary of SFS.

⁵¹ All but 25 acres of the new lands were included in the proposed site of the Saddle Butte Wind Park, which lies entirely on EFU land (Notice of Intent, Saddle Butte Wind Park, August 2009, Exhibit J, p. 8). The new lands include a segment of the alternate transmission line corridor between the previously-approved SFC site boundary and the BPA Slatt substation (approximately 8.8 acres) and a transmission corridor crossing Eightmile Canyon (approximately 16.2 acres). These lands are also within the EFU zone.

⁵² Request for Amendment #1, Section V, Map 7.

Table 2: Area Occupied by the Facility⁵³

Structure	Gilliam County (acres)	Morrow County (acres)	Total
Principal use			
Turbine towers, including pad areas and turnouts	3.6	1.4	5
Meteorological towers	< 0.1	< 0.1	< 0.1
Field workshop	1.6	0	1.6
34.5-kV collector line structures	< 0.1	< 0.1	< 0.1
Access roads	45.9	16.1	62
Subtotal	51.2	17.5	68.7
Substation	3.2	0	3.2
230-kV transmission line structures	< 0.1	< 0.1	< 0.1
Total	54.4	17.5	71.9

1 Comparing Table 2 above with Table 5 in the *Final Order on Amendment #1 (SFWF)*,
2 the proposed amendment would increase the area occupied by SFC components in Gilliam
3 County and Morrow County. The facility with the changes requested in Amendment #1 would
4 occupy more than 20 acres of land in Gilliam County and therefore would not comply with
5 Gilliam County Zoning Ordinance (GCZO) Section 4.020(D)(14). The land occupied in
6 Morrow County would still be less than 20 acres, in compliance with MCZO Section
7 3.010(D)(16). Overall, the amendment would increase the total component footprint by
8 approximately 20 acres.

9 The Council must analyze the facility’s compliance with the applicable statewide
10 planning goals. Because SFC would occupy more than 20 acres of non-high-value farmland,
11 the facility does not comply with OAR 660-033-0130 (old rule).⁵⁴ In the *Final Order on*
12 *Amendment #1 (SFWF)*, the Council found that a Goal 3 exception was justified for SFN, SFC
13 and SFS under ORS 469.504(2)(c) for the same reasons as discussed in the *Final Order on the*
14 *Application for the Shepherds Flat Wind Farm* with respect to the SFWF.⁵⁵ Those findings
15 are incorporated herein by this reference. The amendment would potentially affect 2,421 acres
16 outside of the area previously approved for SFC or SFS, but the amendment would increase
17 the total land area occupied by the facility components by not more than 20 acres. The
18 proposed amendment does not change the nature of the land use. The effect of selecting
19 Option A or Option B for the interconnection route would be a difference in location of the
20 transmission line. It would not significantly increase the land use impacts associated with the
21 transmission line or change the nature of those impacts.⁵⁶ The addition of up to 39 turbines
22 and the reconfiguration of turbine locations, access roads and other components within a
23 larger micro-siting area would not significantly increase the impacts of the wind energy facility
24 compared to the impacts already considered by the Council in the previous orders mentioned

⁵³ Based facility footprint by county table (email from Carol Weisskopf, December 23, 2009)

⁵⁴ Former OAR 660-033-0130 does not specify whether or not the 20-acre limit applies to a single county.

⁵⁵ The reasons justifying a Goal 3 exception are discussed at pages 55-58 of the *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008).

⁵⁶ Selection of Option B would reduce the length of the 230-kV transmission line distance (and the area occupied by support structures) between SFC and the BPA Slatt substation compared to Option A (Request for Amendment #1, Section III, p. 1).

1 above.⁵⁷ The Council finds that a Goal 3 exception is justified for SFC, including the changes
2 requested in this amendment, for the same reasons discussed in the Council’s previous orders.

3 Under the new rules, OAR 660-033-0130(37)(a) requires a finding that “reasonable
4 alternatives” to siting a wind power facility on high-value farmland soils have been
5 considered. As discussed above, SFC, including areas added by the proposed amendment,
6 would not be located on high-value farmland soils. OAR 660-033-0130(37)(b) applies to
7 “arable” land and requires specific findings regarding “unnecessary negative impacts on
8 agricultural operations,” “unnecessary soil erosion or loss that could limit agricultural
9 productivity,” “unnecessary soil compaction that reduces the productivity of soil for crop
10 production” and “unabated introduction or spread of noxious weeds and other undesirable
11 weeds species.”⁵⁸ The SFC components would be located on combination of arable and
12 nonarable lands.⁵⁹ Accordingly, the criteria in OAR 660-033-0130(37)(b)(A) through (D)
13 apply to SFC.

14 OAR 660-033-0130(37)(b)(A) requires that the proposed wind power facility must not
15 “create unnecessary negative impacts on agricultural operations conducted on the subject
16 property.” This requirement is substantially similar to the approval standards the local
17 ordinances of Gilliam County and Morrow County. In the *Final Order on the Application for*
18 *the Shepherds Flat Wind Farm*, the Council found that the SFWF complied with GCZO
19 Section 4.020(H), GCZO Section 7.020(Q) and MCZO Section 3.010(D).⁶⁰ Each of these
20 local ordinances require that a conditional use on EFU land must not “force a significant
21 change in accepted farm or forest practices on surrounding lands devoted to farm or forest
22 use” and must not “significantly increase the cost of accepted farm or forest practices on
23 surrounding lands devoted to farm or forest use.” In the *Final Order on Amendment #1*
24 *(SFWF)*, the Council applied its earlier reasoning and found that the SFC and SFS
25 components located on arable lands in Gilliam County and Morrow County would not result
26 in unnecessary negative impacts on agricultural operations.⁶¹ Those findings are incorporated
27 herein by this reference.

28 OAR 660-033-0130(37)(b)(B) requires that the proposed wind power facility must not
29 “result in unnecessary soil erosion or loss that could limit agricultural productivity.” OAR
30 660-033-0130(37)(b)(C) requires that facility construction or maintenance activities must not
31 “result in unnecessary soil compaction that reduces the productivity of soil for crop
32 production.” In the *Final Order on Amendment #1 (SFWF)*, the Council found that the SFC
33 and SFS components located on arable lands in Gilliam County and Morrow County would
34 not result in unnecessary soil erosion or loss. Potential adverse impacts to soils and measures
35 to avoid or control soil erosion and compaction are addressed by the Council’s Soil Protection
36 Standard, discussed below at page 18. Subject to Conditions 11, 36, 73, 75, 76 and 84, the

⁵⁷ There are approximately 24,656 acres of land devoted to farm use within the SFC land use analysis area (Request for Amendment #1, Section IV, p. 3). The SFC components, including components that would be added or enlarged by Amendment #1, would occupy less than one-half of one percent of this land. The area in which the certificate holder proposes to add 39 turbines to the SFC is the same area where a similar number of SFS turbines were previously approved.

⁵⁸ OAR 660-033-0130(37)(b) defines “arable lands” means “lands that are cultivated or suitable for cultivation, including high-value farmland soils described at ORS 195.300(10).”

⁵⁹ “Agricultural use by county” (table), Request for Amendment #1, Section IV, p. 3.

⁶⁰ *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), pp. 22, 30-32 and 42.

⁶¹ *Final Order on the Amendment #1 (SFWF)*, p. 33.

1 Council finds that SFC, including the changes proposed by Amendment #1, would comply
2 with OAR 660-033-0130(37)(b)(B) and OAR 660-033-0130(37)(b)(C).

3 OAR 660-033-0130(37)(b)(D) requires a finding that construction or maintenance
4 activities would not result in the “unabated introduction or spread of noxious weeds and other
5 undesirable weeds species.” This requirement may be met by submission of a county-
6 approved weed control plan. Condition 38 requires the certificate holder to implement a weed
7 control program that is consistent with the Gilliam County and Morrow County weed control
8 programs. Condition 84 addresses construction impacts to agricultural land and requires the
9 certificate holder to implement the *Revegetation Plan*, which includes weed control measures
10 recommended by Gilliam County and Morrow County weed control authorities. The Council
11 finds that, subject to the site certificate conditions, the construction and operation of SFC,
12 including components within the expansion areas proposed by Amendment #1, would not
13 result in unabated introduction or spread of weeds.

14 The Council finds that SFC, with the changes requested in this amendment, would
15 meet the approval criteria contained in the new rules for a wind power generating facility
16 under OAR 660-033-0130.

17 Conclusions of Law

18 Based on the findings of fact, reasoning and conditions discussed above, the Council
19 finds that SFC, with the changes proposed by Amendment #1, would comply with all
20 applicable substantive criteria from Gilliam County and Morrow County except GCZO
21 Section 4.020(D)(14). Accordingly, the Council must proceed with the land use analysis
22 under ORS 469.504(1)(b)(B).

23 If the old rules apply, the Council finds that SFC does not comply with OAR 660-033-
24 0130(22) because it would occupy more than 20 acres of non-high-value farmland. Therefore,
25 the facility does not comply with the applicable statewide planning goal (Goal 3). The
26 Council finds that an exception to Goal 3 is justified under ORS 469.504(2)(c). If the new
27 rules apply, the Council finds that SFC, with the changes proposed by Amendment #1,
28 complies with OAR 660-033-0130(37) and otherwise complies with all applicable statewide
29 planning goals.⁶²

30 Based on these findings and the site certificate conditions described herein, the
31 Council concludes that SFC would comply with the Land Use Standard if Amendment #1
32 were approved.

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

⁶² If the new rules apply and SFS were found not to comply with OAR 660-033-0130(37), then an exception to Goal 3 would be justified for the reasons discussed herein.

Findings of Fact

1 In the *Final Order on Amendment #1 (SFWF)*, the Council found that the design,
2 construction and operation of SFC would not result in a significant adverse impact to soils.⁶³
3 Those findings are incorporated herein by this reference. Amendment #1 would add
4 approximately 4,834 acres to the site boundary, but approval of the amendment request would
5 not result in any soil impacts of a kind that has not been addressed by the Council.⁶⁴

6 A larger area of temporary disturbance could occur during construction under the
7 proposed amendment. In the *Final Order on Amendment #1 (SFWF)*, the Council found that
8 approximately 134 acres of land could be temporarily disturbed during construction of SFC,
9 based on the typical layout.⁶⁵ The certificate holder now estimates that temporary disturbance
10 would affect approximately 312 acres under the typical layout.⁶⁶ Much of the increase is due
11 to the greater number of turbines that would be allowed under the proposed amendment. A
12 substantial part of the increase, however, is due to the certificate holder's ongoing discussions
13 with the construction contractor, the final selection of a turbine type for the project and on-site
14 geotechnical investigations. The certificate holder listed the following considerations
15 affecting the estimate of temporary disturbance:⁶⁷

- 16 • The number of foundations requiring compaction is based on core samples taken at
17 the turbine sites.
- 18 • The temporary disturbance at non-compacted sites has increased due to the necessity
19 of assembling part of the hydraulic system on site and then inserting it into the bottom
20 tower sections. This requires the nacelle and tower sections to be present before
21 erection, and just-in-time component delivery is precluded.
- 22 • The disturbance area around each 230-kV or 34.5-kV transmission line support pole
23 has increased to allow assembly from both sides of the structure while it is lying on
24 the ground.
- 25 • A temporary access roadway (10 feet wide in the typical case and 16 feet wide for the
26 worst case) runs along the portions of the transmission line that are not adjacent to
27 project or ranch roads.
- 28 • The disturbance width has been reduced for roads used for access but not for crane
29 travel. The difference in widths for the typical and worst case analysis is the estimated
30 area needed for stockpiling of topsoil.
- 31 • Crane paths are required because the turbines sited between the PGE and PPL
32 transmission lines cannot be accessed by the crane using project roads and because
33 Rhea Road is not wide enough to accommodate the crane safely. Where possible,
34 crane paths have been located on ranch roads or above trenching disturbance to reduce
35 the additional footprint.
- 36 • The 230-kV line will be passing beneath a PGE transmission line with a 700-foot
37 easement and a PPL transmission line with a 50-foot easement. Extra equipment and
38 personnel will be necessary for transmission pole erection within the easement.

⁶³ *Final Order on Amendment #1 (SFWF)*, p. 34.

⁶⁴ Approximately 2,413 acres of the area added to the SFC site lies within the previously-approved SFS site.

⁶⁵ *Final Order on Amendment #1 (SFWF)*, Table 9, p. 47.

⁶⁶ Temporary project construction footprint, typical layout (email from Carol Weisskopf, December 22, 2009).

⁶⁷ Email from Carol Weisskopf, December 21, 2009.

1 Aside from the increased area of potential construction disturbance, the changes that
2 would be allowed if Amendment #1 were approved would not substantially change the facts
3 on which the Council relied in its previous findings regarding impact to soils. The Council
4 finds that no changes to the site certificate conditions related to soil protection are needed
5 (Conditions 11, 36, 73, 75, 76 and 84). The Council finds that the design, construction and
6 operation of SFC, with the changes proposed by Amendment #1, would not likely result in
7 significant adverse impact to soils, taking into account the mitigation required by the site
8 certificate conditions.

Conclusions of Law

9 The Council concludes that SFC would comply with the Council's Soil Protection
10 Standard if Amendment #1 were approved.

(c) Protected Areas

OAR 345-022-0040

11 *(1) Except as provided in sections (2) and (3), the Council shall not issue a site*
12 *certificate for a proposed facility located in the areas listed below. To issue a site*
13 *certificate for a proposed facility located outside the areas listed below, the*
14 *Council must find that, taking into account mitigation, the design, construction*
15 *and operation of the facility are not likely to result in significant adverse impact to*
16 *the areas listed below. References in this rule to protected areas designated under*
17 *federal or state statutes or regulations are to the designations in effect as of May*
18 *11, 2007:*

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

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

24 *(c) Wilderness areas established pursuant to The Wilderness Act, 16 U.S.C.*
25 *1131 et seq. and areas recommended for designation as wilderness areas pursuant*
26 *to 43 U.S.C. 1782;*

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

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

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

36 *(g) National recreation and scenic areas, including but not limited to Oregon*
37 *Dunes National Recreation Area, Hell's Canyon National Recreation Area, and*
38

1 *the Oregon Cascades Recreation Area, and Columbia River Gorge National*
2 *Scenic Area;*

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

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

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

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

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

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

17 *Coastal Oregon Marine Experiment Station, Astoria*

18 *Mid-Columbia Agriculture Research and Extension Center, Hood River*

19 *Agriculture Research and Extension Center, Hermiston*

20 *Columbia Basin Agriculture Research Center, Pendleton*

21 *Columbia Basin Agriculture Research Center, Moro*

22 *North Willamette Research and Extension Center, Aurora*

23 *East Oregon Agriculture Research Center, Union*

24 *Malheur Experiment Station, Ontario*

25 *Eastern Oregon Agriculture Research Center, Burns*

26 *Eastern Oregon Agriculture Research Center, Squaw Butte*

27 *Central Oregon Experiment Station, Madras*

28 *Central Oregon Experiment Station, Powell Butte*

29 *Central Oregon Experiment Station, Redmond*

30 *Central Station, Corvallis*

31 *Coastal Oregon Marine Experiment Station, Newport*

32 *Southern Oregon Experiment Station, Medford*

33 *Klamath Experiment Station, Klamath Falls;*

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

1 *the Blodgett Tract in Columbia County, the Spaulding Tract in the Mary's Peak*
2 *area and the Marchel Tract;*

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

5 *(p) State wildlife areas and management areas identified in OAR chapter*
6 *635, Division 8.*

7 * * *

Findings of Fact

8 In the *Final Order on Amendment #1 (SFWF)*, the Council found that the design,
9 construction and operation of SFC were not likely to result in significant adverse impact to
10 protected areas.⁶⁸ Those findings are incorporated herein by this reference. The changes that
11 would be allowed if Amendment #1 were approved would not substantially change the facts
12 on which the Council relied in its previous findings regarding adverse impacts to protected
13 areas. Much of the land proposed to be added to the site (2,413 acres) lies within the site
14 boundary of SFS, which the Council has previously determined to be in compliance with the
15 Protected Areas Standard. The amendment would also add approximately 2,421 acres of new
16 lands to the facility site, consisting of several separate areas adjacent to the previously-
17 approved site boundary. The amendment request includes a map of these areas.⁶⁹ All of the
18 lands proposed to be added to SFC by this amendment are privately-owned and are not
19 adjacent to any protected areas.⁷⁰ The new areas do not significantly enlarge the analysis area
20 previously considered by the Council in making findings of compliance with the standard.
21 The Council finds that SFC, including the area proposed to be added to the site by
22 Amendment #1, is not located in any protected area listed in OAR 345-022-0040 and that the
23 design, construction and operation of SFC are not likely to result in a significant adverse
24 impact to any protected area.

Conclusions of Law

25 For the reasons discussed above, the Council concludes that SFC would comply with
26 the Council's Protected Areas Standard if Amendment #1 were approved.

(d) Scenic Resources

OAR 345-022-0080

27 *(1) Except for facilities described in section (2), to issue a site certificate, the*
28 *Council must find that the design, construction and operation of the facility, taking*
29 *into account mitigation, are not likely to result in significant adverse impact to*
30 *scenic resources and values identified as significant or important in local land use*
31 *plans, tribal land management plans and federal land management plans for any*
32 *lands located within the analysis area described in the project order.*

33 * * *

⁶⁸ *Final Order on Amendment #1 (SFWF)*, p. 37.

⁶⁹ Request for Amendment #1, Section V, Map 1.

⁷⁰ Request for Amendment #1, Section IV, p. 3.

Findings of Fact

1 In the *Final Order on Amendment #1 (SFWF)*, the Council found that the design,
2 construction and operation of SFC, taking mitigation into account and subject to the site
3 certificate conditions, were not likely to result in significant adverse impact to scenic
4 resources and values identified as significant or important in applicable federal land
5 management plans or in local land use plans in the analysis area.⁷¹ Those findings are
6 incorporated herein by this reference.

7 The changes that would be allowed if Amendment #1 were approved would not
8 substantially change the facts on which the Council relied in its previous findings regarding
9 visual impacts on identified scenic resources or values. The amendment would reduce the
10 maximum allowed length of the 230-kV interconnection line from 8.6 miles to 7.0 miles.⁷²
11 Although Option B would allow construction of the interconnection line along a different
12 route than under Option A, the choice of transmission line route would not significantly affect
13 scenic resources. The Council finds that the design, construction and operation of SFC are not
14 likely to result in significant adverse impacts to scenic resources aesthetic values identified as
15 significant or important in applicable federal land management plans or in local land use plans
16 in the analysis area.

Conclusions of Law

17 For the reasons discussed above, the Council concludes that SFC would comply with
18 the Council's Scenic Resources Standard if Amendment #1 were approved.

(e) Recreation

OAR 345-022-0100

19 *(1) Except for facilities described in section (2), to issue a site certificate, the*
20 *Council must find that the design, construction and operation of a facility, taking*
21 *into account mitigation, are not likely to result in a significant adverse impact to*
22 *important recreational opportunities in the analysis area as described in the*
23 *project order. The Council shall consider the following factors in judging the*
24 *importance of a recreational opportunity:*
25

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

27 *(b) The degree of demand;*

28 *(c) Outstanding or unusual qualities;*

29 *(d) Availability or rareness;*

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

31 * * *

⁷¹ *Final Order on Amendment #1 (SFWF)*, pp. 37-38.

⁷² Request for Amendment #1, Section IV, p. 1. As proposed, Option B would reduce the length of the 230-kV interconnection line to 3.7 miles.

Findings of Fact

1 In the *Final Order on Amendment #1 (SFWF)*, the Council found that none of the
2 recreational opportunities in the analysis area met the criteria to be considered “important”
3 under the factors listed in the standard.⁷³ Therefore, the Council found that the design,
4 construction and operation of SFC were not likely to result in significant adverse impacts to
5 recreational opportunities in the analysis area. Those findings are incorporated herein by this
6 reference.

7 The expansion of the site to accommodate additional wind turbines and related
8 components as well as an alternative route for a 230-kV transmission line as requested in
9 Amendment #1 would not affect any recreational opportunities that were not previously
10 addressed by the Council. Approval of Amendment #1 would not change the facts or
11 circumstances upon which the Council relied in making findings regarding impacts on
12 recreational opportunities.

Conclusions of Law

13 For the reasons discussed above, the Council concludes that SFC would comply with
14 the Council’s Recreation Standard if Amendment #1 were approved.

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

OAR 345-024-0010

15 *To issue a site certificate for a proposed wind energy facility, the Council must*
16 *find that the applicant:*
17

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

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

Findings of Fact

24 In the *Final Order on Amendment #1 (SFWF)*, the Council found that the certificate
25 holder could design, construct and operate SFC to exclude members of the public from close
26 proximity to the turbine blades and electrical equipment, to preclude structural failure of the
27 tower or blades that could endanger public safety and to have adequate safety devices and
28 testing procedures.⁷⁴ Those findings are incorporated herein by this reference. To ensure
29 public safety, the Council included Conditions 12, 26, 40, 47, 59, 60, 61, 62, 63, 64 and 93 in
30 the site certificate.

31 In the Request for Amendment #1, the certificate holder proposes to increase the
32 maximum number of wind turbines at the facility from 77 to 116. The additional wind
33 turbines would be designed and built with the same features to protect public safety as the

⁷³ *Final Order on Amendment #1 (SFWF)*, p. 38 (incorporating findings from the *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), pp. 76-77).

⁷⁴ *Final Order on Amendment #1 (SFWF)*, pp. 39-40 (incorporating findings from the *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), pp. 78-79).

1 previously-approved turbines and would be subject to the same site certificate conditions. The
2 certificate holder would have the option to locate the 230-kV transmission line in the alternate
3 corridor described herein, but use of the alternate corridor would not result in any new or
4 increased risk of harm to public safety. Likewise, reconfiguration of facility components
5 within the expansion areas requested by the amendment, would not adversely affect public
6 safety.

7 In Amendment #1, the certificate holder is requesting a modification of Condition 40,
8 which specifies setback distances for facility components. Condition 40(d) requires a
9 minimum setback distance of 110-percent of maximum blade tip height from facility wind
10 turbines to “the nearest boundary of the certificate holder’s lease area.” This requirement was
11 intended to protect the property of neighboring landowners. The certificate holder requests an
12 exception to Condition 40(d) that would apply to two isolated areas: “Area A,” which is a
13 cultural or historic resource area (approximately 17.5 acres), and “Area B,” which is an area
14 occupied by the landowner’s drill-rig and used for storage (approximately 18.5 acres).⁷⁵ These
15 two areas are on private property and are not accessible to the general public. The approval of
16 exceptions to the setback requirement would not have an adverse effect on public safety. Both
17 of these areas are excluded from the certificate holder’s lease with the landowner. The
18 excluded areas and the surrounding land are owned by the same landowner, who is in
19 agreement with the proposed exception to the setback requirement for these two areas. The
20 Council approves the modification of Condition 40 as discussed in Revision 10 below at page
21 53.

Conclusions of Law

22 For the reasons discussed above, the Council concludes that SFC would comply with
23 the Council’s Public Health and Safety Standards for Wind Energy Facilities if Amendment
24 #1 were approved.

(g) Siting Standards for Wind Energy Facilities

OAR 345-024-0015

25 *To issue a site certificate for a proposed wind energy facility, the Council must*
26 *find that the applicant can design and construct the facility to reduce cumulative*
27 *adverse environmental effects in the vicinity by practicable measures including,*
28 *but not limited to, the following:*
29

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

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

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

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

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

⁷⁵ Request for Amendment #1, Section I, pp. 3-4, and Section V, Map 5.

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

Findings of Fact

5 In the *Final Order on Amendment #1 (SFWF)*, the Council found that the certificate
6 holder could design and construct SFC to reduce visual impact, to restrict public access and to
7 reduce cumulative adverse environmental impacts in the vicinity to the extent practicable in
8 accordance with the requirements of OAR 345-024-0015.⁷⁶ Those findings are incorporated
9 herein by this reference. To address cumulative impacts, the Council included Conditions 58,
10 63, 86, 90, 91, 94 and 95 in the site certificate.

11 The proposed amendment would expand the SFC site to accommodate additional wind
12 turbines and related components as well as an alternative route for a 230-kV transmission line.
13 The amendment would increase the maximum combined length of new access roads and
14 improvements to existing roads (which would be widened) from 28 miles to 37.5 miles.⁷⁷ The
15 amendment would reduce the maximum allowed length of the 230-kV interconnection line
16 from 8.6 miles to 7.0 miles and would increase the maximum allowed length of aboveground
17 collector line segments (which may be single or double circuit lines) from 13.8 miles to 15
18 miles. Altogether, the amendment would increase the permanent footprint of facility
19 components by approximately 20 acres while increasing the generating capacity of the facility
20 by about 25 percent. The amendment would reduce turbine density from 90 acres per turbine
21 (77 turbines within a 6,935-acre site) to 101.5 acres per turbine (116 turbines within an
22 11,769-acre site).

23 The certificate holder addressed cumulative impacts to avian and bat species in the
24 amendment request.⁷⁸ The certificate holder noted that the cumulative maximum generating
25 capacity of SFN, SFC and SFS would be reduced from 909 MW to 845 MW if the Council
26 approves all three amendment requests. In the cumulative impact studies that have been done
27 within the Columbia Plateau region, estimates of avian and bat fatalities associated with wind
28 energy facilities are related to facility generating capacity and to cumulative regional
29 generating capacity of multiple facilities.⁷⁹ The reduction in the cumulative generating
30 capacity of the three Shepherds Flat facilities would, therefore, result in a reduced impact of
31 these three facilities on avian and bat fatalities in the region.

32 The Council find that SFC, with the changes proposed by Amendment #1, can be
33 designed and constructed to reduce visual impact, to restrict public access and to reduce
34 cumulative adverse environmental impacts in the vicinity to the extent practicable in
35 accordance with the requirements of OAR 345-024-0015.

⁷⁶ *Final Order on Amendment #1 (SFWF)*, pp. 40-41 (incorporating findings from the *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), pp. 79-85).

⁷⁷ Table of typical and maximum components (email from Carol Weisskopf, December 21, 2009).

⁷⁸ Request for Amendment #1, Appendix 1, p. 5.

⁷⁹ Cumulative impacts within the Columbia Plateau region are discussed in the *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), pp. 79-84.

Conclusions of Law

1 Based on these findings and subject to the conditions of the site certificate, the Council
2 concludes that SFC would comply with the Council’s Siting Standards for Wind Energy
3 Facilities if Amendment #1 were approved.

(h) Siting Standards for Transmission Lines

OAR 345-024-0090

4 *To issue a site certificate for a facility that includes any transmission line under*
5 *Council jurisdiction, the Council must find that the applicant:*
6

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

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

Findings of Fact

13 In the *Final Order on Amendment #1 (SFWF)*, the Council found that the certificate
14 holder could design, construct and operate the proposed transmission line components of SFC
15 in accordance with the standards described in OAR 345-024-0090.⁸⁰ Those findings are
16 incorporated herein by this reference. The proposed amendment would allow the certificate
17 holder the option to use a different route for the 230-kV interconnection line, but under either
18 Option A or Option B, the line would be located on private property with limited public
19 access. The Council has found that the aboveground 230-kV transmission line would produce
20 an electric field well below the 9 kV per meter standard required by OAR 345-024-0090(1).⁸¹
21 Condition 81 requires the certificate holder to design all transmission lines to comply with the
22 electric field standard. Condition 80 requires the certificate holder to ground fencing to reduce
23 the potential risk of electric shock from induced currents. Condition 17 requires the certificate
24 holder to design and construct transmission lines in accordance with the requirements of the
25 National Electrical Safety Code and to implement a program that provides reasonable
26 assurance that all fences, gates, cattle guards, trailers, or other objects or structures of a
27 permanent nature that could become inadvertently charged are properly grounded. Approval
28 of Amendment #1 would not change the facts or circumstances upon which the Council relied
29 in making findings regarding compliance with the standards in OAR 345-024-0090.

Conclusions of Law

30 For the reasons discussed above, the Council concludes that SFC would comply with
31 the Council’s Siting Standards for Transmission Lines if Amendment #1 were approved.

⁸⁰ *Final Order on Amendment #1 (SFWF)*, p. 42 (incorporating findings from the *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), pp. 86-87).

⁸¹ *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), pp. 86-87.

4. Standards to Protect Wildlife

(a) Threatened and Endangered Species

OAR 345-022-0070

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

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

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

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

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

Findings of Fact

In the *Final Order on Amendment #1 (SFWF)*, the Council found that the design, construction and operation of SFC would not have the potential to significantly reduce the likelihood of the survival or recovery of any threatened or endangered plant or wildlife species listed under Oregon law.⁸² Those findings are incorporated herein by this reference. The proposed amendment would increase the maximum number of wind turbines authorized for construction at the facility. The certificate holder's current layout includes the 39 new wind turbines that would be located within the area previously approved for turbines in SFS.⁸³ The certificate holder requests the option to locate wind turbines in the new lands that border the previously approved transmission and access road corridor.⁸⁴

In the *Final Order on the Application for the Shepherds Flat Wind Farm*, the Council found that one State-listed threatened plant species, Laurent's milk-vetch, has the potential to occur within the five-mile analysis area around the former SFWF site boundary.⁸⁵ The species was not observed within the SFWF site boundary and was considered not likely to occur within the site boundary because its range was believed to lie at elevations above 1,970 feet. The species was recently observed, however, at elevations between 800 to 860 feet.⁸⁶ Suitable

⁸² *Final Order on Amendment #1 (SFWF)*, pp. 42-44. A discussion of threatened or endangered plant and animal species that could potentially occur within the Shepherds Flat Wind Farm site (which encompassed the sites of SFN, SFC and SFS) and information about wildlife surveys conducted in the area are included in the *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), pp. 88-96.

⁸³ Request for Amendment #1, Section V, Maps 1 and 2.

⁸⁴ Request for Amendment #1, Section IV, p. 2.

⁸⁵ The species is identified as "Laurence's milk-vetch" in the *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), p. 89.

⁸⁶ *Final Order on Amendment #1 for the Leaning Juniper II Wind Power Facility* (November 20, 2009), p. 61.

1 habitat for Laurent’s milk-vetch may exist in that elevation range within the proposed
2 expansion areas that lie outside the previously-approved site boundaries for SFC. The
3 certificate holder has agreed to survey the area and to avoid impact to threatened or
4 endangered plant species.⁸⁷ In Revision 15 discussed below at page 55, the Council modifies
5 Condition 86 to require a pre-construction survey for threatened or endangered plant species
6 and to require exclusion fencing during construction if Laurent’s milk-vetch or any other
7 threatened or endangered plant species is found.

8 In the *Final Order on the Application for the Shepherds Flat Wind Farm*, the Council
9 found that that two State-listed endangered wildlife species (gray wolf and Washington
10 ground squirrel) and two State-listed threatened species (bald eagle and chinook salmon) have
11 the potential to occur within the five-mile analysis area around the former SFWF site
12 boundary.⁸⁸

13 Gray wolves may have historically been present in Gilliam or Morrow Counties, but
14 there have been no recent observations of the species within the analysis area. There is
15 evidence of natural dispersion of the species into the state in areas close to the border with
16 Idaho.⁸⁹

17 Bald eagles forage and roost along the Columbia River. Eagles are unlikely to forage
18 in the upland areas within the site boundary due to the lack of suitable perch trees. Conditions
19 63, 90 and 91 include measures to mitigate the risk of injury to bald eagles.

20 The Council has previously found that there is no suitable habitat for chinook salmon
21 within the former SFWF site boundary, which includes the previously-approved SFN, SFC
22 and SFS sites.⁹⁰ The new lands proposed to be added to the SFC site do not contain aquatic
23 habitat.⁹¹

24 In the *Final Order on Amendment #1 (SFWF)*, the Council found that Washington
25 ground squirrels (WGS) were present near the SFS site boundary and that a portion of the
26 burrow area was within the site boundary.⁹² This area is part of the land proposed to be
27 removed from SFS and added to SFC. Conditions in the site certificate for SFS would be
28 added to the SFC site certificate to ensure protection of WGS habitat. The Council modifies
29 Condition 86 as described in Revision 15 at page 55 to include subsection (h), which requires
30 construction restrictions near the identified WGS colony to mitigate potential risks to the
31 species. In Revision 13, the Council modifies Condition 83 to incorporate the revisions to the

⁸⁷ Email from Patricia Pilz, January 12, 2010.

⁸⁸ *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), p. 91. The federally-listed threatened grizzly bear historically occurred in Gilliam and Morrow counties, but is now considered extirpated from Oregon (Request for Amendment #1, Appendix 1, p. 1). The federally-listed threatened Canada lynx is considered a very rare species in Oregon (Oregon Natural Heritage Information Center, *Rare, Threatened and Endangered Species in Oregon*, March 2007). Although the lynx potentially occurs in Morrow County (<http://www.fws.gov/oregonfwo/Species/Data/CanadaLynx/>), the USFWS Oregon Fish & Wildlife Office does not include the species on current lists of threatened species occurring in Morrow County or Gilliam County (<http://www.fws.gov/oregonfwo/Species/Lists/>).

⁸⁹ *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), p. 94.

⁹⁰ *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), p. 95. This finding applied as well to the federally-listed threatened steelhead and endangered sockeye salmon.

⁹¹ Request for Amendment #1, Appendix 1, p. 3.

⁹² *Final Order on Amendment #1 (SFWF)*, p. 43; *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), p. 94.

1 *Wildlife Monitoring and Mitigation Plan* (WMMP) shown in Attachment A. The revisions
2 include an assessment of the status of the WGS colony for two years after the facility
3 becomes commercially operational.

4 Surveys of suitable habitat within the former SFWF site boundary (plus a 1,000-foot
5 buffer) were conducted in 2007 and 2008.⁹³ In May and June 2009, the certificate holder
6 conducted surveys for WGS within suitable habitat in the area of the proposed Saddle Butte
7 Wind Park, which included approximately 2,396 acres now proposed to be added to SFC
8 under this amendment.⁹⁴ No active WGS colonies were found.⁹⁵ Four areas containing burrow
9 entrances were found but showed no sign of recent WGS activity.⁹⁶ ODFW has requested pre-
10 construction surveys for threatened, endangered or sensitive wildlife species, including WGS,
11 in areas having suitable habitat on lands that the Council has not previously approved for a
12 site certificate.⁹⁷ The certificate holder has agreed to conduct pre-construction surveys for
13 WGS using a protocol approved by ODFW and to avoid impacts to the area within 1,000 feet
14 of any Category 1 WGS habitat that is found within the area during the period in which the
15 squirrels are active. In Revision 15, the Council modifies Condition 86 to require pre-
16 construction surveys for State-listed threatened, endangered or sensitive wildlife species in the
17 new areas within 1,000 feet of any area potentially disturbed by facility construction,
18 including WGS surveys, and to require avoidance of the area within 1,000 feet of any
19 Category 1 WGS habitat during the period that WGS are active.

20 In Revision 16, the Council modifies Condition 92 to include a lower speed limit on
21 facility roads near Category 1 or Category 2 WGS habitat.

22 For the reasons discussed above, the Council finds that the State-listed threatened bald
23 eagle and the State-listed endangered WGS may at some times be present in some locations
24 within the SFC site boundary, including the areas that would be added by Amendment #1, but
25 that the design, construction and operation of the SFC are unlikely to cause a significant
26 reduction in the likelihood of survival or recovery of either species, taking into account the
27 mitigation required by the site certificate conditions.

Conclusions of Law

28 For the reasons discussed above and subject to the site certificate conditions described
29 herein, the Council concludes that SFC would comply with the Council's Threatened and
30 Endangered Species Standard if Amendment #1 were approved.

⁹³ Shepherds Flat Wind Farm Application Supplement, Attachment P-5a; *Addendum to the Surveys for Washington Ground Squirrels and Burrowing Owls at the Shepherds Flat Wind Farm*, March 17, 2008, Fig. 1 (email from Patricia Pilz, March 17, 2008).

⁹⁴ The certificate holder provided maps showing the areas searched for WGS within and near the proposed expanded SFC site boundary (email from Patricia Pilz, December 15, 2009).

⁹⁵ Request for Amendment #1, Attachment 1, p. 4.

⁹⁶ One of the burrow areas is located in the lands proposed to be added to SFC; three of the burrow areas are located in the lands proposed to be added to SFS (email from Carol Weisskopf, January 14, 2010).

⁹⁷ Email from Steve Cherry, ODFW, December 17, 2009.

(b) Fish and Wildlife Habitat

OAR 345-022-0060

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

Findings of Fact

In the *Final Order on Amendment #1 (SFWF)*, the Council found that the design, construction and operation of SFC would be consistent with the ODFW habitat mitigation goals and standards.⁹⁸ The Council made findings regarding the characteristics of the habitat types within the SFC site boundary.⁹⁹ The Council made findings regarding potential habitat impacts and mitigation requirements.¹⁰⁰ Those findings are incorporated herein by this reference.

The proposed amendment would add approximately 4,834 acres to the SFC site, of which approximately 2,413 acres lie within the previously-approved SFS site.¹⁰¹ The balance of the expansion area (approximately 2,421 acres) would be new lands that have not been previously approved by the Council for an energy facility site. The certificate holder estimated the habitat impacts of SFC, including the expansion area, based on a “typical project layout” as shown in Table 3.¹⁰²

Table 3: Typical Layout Habitat Impacts

Habitat Type	Habitat Subtype	Acres Within the Site Boundary	Areas of temporary impact (acres)	Areas of permanent impact (acres)
Category 1				
Raptor nests	RN	0.01	0	0
Washington ground squirrel	WGS	1.64	0	0
Subtotal		1.65	0	0
Category 2				
Grassland	GL	190.47	0.16	0.04
Raptor nests	RN	1.63	0	0
Shrub-steppe – sage	SS-S	13.00	0	0
Washington ground squirrel	WGS	19.16	0	0
Wetland-wash	WL-W	0.93	0	0
Subtotal		225.19	0.16	0.04

⁹⁸ *Final Order on Amendment #1 (SFWF)*, p. 54.

⁹⁹ *Final Order on Amendment #1 (SFWF)*, pp. 46-48.

¹⁰⁰ *Final Order on Amendment #1 (SFWF)*, pp. 51-54.

¹⁰¹ The areas that would be added to SFC under this amendment are shown in the Request for Amendment #1, Section V, Map 1.

¹⁰² Based on the habitat disturbance impact table (email from Carol Weisskopf, December 22, 2009).

Category 3				
Curlew	CUR	93.69	0	0
Grassland	GL	621.81	12.08	2.65
Shrub-steppe – purshia	SS-P	6.12	0	0
Shrub-steppe – rabbitbrush	SS-R	519.32	3.35	0.55
Shrub-steppe – sage	SS-S	208.97	8.41	1.73
Subtotal		1,449.91	23.84	4.93
Category 4				
Grassland	GL	5,009.38	171.9	39.13
Previously cultivated	PC	52.95	0	0
Rock and soil	RS	110.1	0.96	0.07
Subtotal		5,172.43	172.86	39.2
Category 5				
Previously cultivated	PC	324.5	9.38	1.39
Shrub-steppe – broom snakeweed	SS-B	44.24	2.82	0.37
Subtotal		368.74	12.2	1.76
Category 6				
Animal Facility	AF	50.56	3.06	0
Dryland wheat	DW	4,397.32	96.27	25.55
Quarry	Q	2.65	0	0
Road and parking	RP	88.65	3.51	0.4
Structures	ST	12.07	0	0
Subtotal		4,551.25	102.84	25.95
Total Area		11,769.17	311.9	71.88

1 For micro-siting purposes, the certificate holder estimated the maximum habitat
2 impacts of SFC on high-value wildlife habitat based on a “worst-case layout.” The estimated
3 maximum habitat impacts of the facility, including the proposed expansion areas, are shown
4 in Table 4.¹⁰³

Table 4: Maximum Habitat Impacts

Habitat Type	Habitat Subtype	Areas of temporary impact (acres)	Areas of permanent impact (acres)
Category 1			
Raptor nests	RN	0	0
Washington ground squirrel	WGS	0	0
Subtotal		0	0

¹⁰³ Based on the Based on the habitat disturbance impact table (email from Carol Weisskopf, December 22, 2009).

Category 2			
Grassland	GL	0.22	0.04
Raptor nests	RN	0	0
Shrub-steppe – sage	SS-S	0	0
Washington ground squirrel	WGS	0	0
Wetland-wash	WL-W	0	0
Subtotal		0.22	0.04
Category 3			
Curlew	CUR	0	0
Grassland	GL	15.25	2.65
Shrub-steppe – purshia	SS-P	0	0
Shrub-steppe – rabbitbrush	SS-R	3.83	0.56
Shrub-steppe – sage	SS-S	10.34	1.73
Subtotal		29.42	4.94
Category 4			
Grassland	GL	213.47	39.17
Previously cultivated	PC	0	0
Rock and soil	RS	1.11	0.07
Subtotal		214.58	39.24
Category 5			
Previously cultivated	PC	10.69	1.39
Shrub-steppe – broom snakeweed	SS-B	3.13	0.37
Subtotal		13.82	1.76
Category 6			
Animal Facility	AF	2.98	0
Dryland Wheat	DW	118.72	25.55
Quarry	Q	0	0
Road and parking	RP	4.02	0.4
Structures	ST	0	0
Subtotal		125.72	25.95
Total Area		383.76	71.93

1 The maximum habitat impacts analysis allows for facility micrositing while ensuring
2 that the certificate holder can mitigate for the habitat impacts of any micrositing
3 configuration. The maximum habitat impacts analysis shapes the upper bounds of the quantity
4 and quality of mitigation acres that would be required. Under Condition 29, the certificate
5 holder must provide to the Department a description of the final design configuration and an
6 assessment of the affected habitats before beginning construction. The actual habitat impacts
7 and the size of the mitigation area required under Condition 85 and the incorporated *Habitat*
8 *Mitigation Plan* are determined according to the final configuration of facility components.
9 Condition 29 requires consultation with ODFW at the time of the pre-construction habitat
10 assessment and allows the Department to employ a qualified contractor to confirm the habitat
11 assessment by on-site inspection. ODFW policy guidance for assigning habitat categories that
12 was in place when the SFWF site certificate was issued (July 25, 2008) will be applied to

1 determine habitat categories under Condition 29 on lands lying within the original SFWF site
2 boundary.¹⁰⁴

3 Compared with the previously-approved site, the typical project layout would increase
4 the permanent footprint by approximately 20 acres. Temporary disturbance would increase by
5 approximately 178 acres due to the increased area needed for construction of 39 additional
6 wind turbines and for the reasons discussed above at page 19. In the maximum habitat
7 impacts layout, temporary disturbance would increase by about 181.5 acres. All temporary
8 disturbance areas must be restored after completion of construction, as required by the
9 *Revegetation Plan* that is incorporated in Condition 84. No Category 1 habitat and less than
10 0.3 acres of Category 2 habitat would be affected by the permanent footprint of the facility or
11 by temporary construction disturbance. In the typical layout, 93 percent of the permanent
12 footprint of the facility would be on lower-value habitat (Category 4, 5 or 6).

13 The *Final Order on Amendment #1 (SFWF)*, the Council made findings regarding
14 mitigation of potential adverse impacts to wildlife and wildlife habitat.¹⁰⁵ Those findings are
15 incorporated herein by this reference. Condition 83 requires the certificate holder to
16 implement the *Wildlife Monitoring and Mitigation Plan (WMMP)*. In Revision 13, discussed
17 at page 54, the Department recommended modification of the WMMP as shown in
18 Attachment A to include monitoring of the WGS colony located in the area that would be
19 removed from SFS and added to SFC under this amendment. Condition 84 requires the
20 certificate holder to implement the *Revegetation Plan* as incorporated in the *Final Order on*
21 *Amendment #1 (SFWF)* as Attachment SFC-B. The proposed amendment would increase the
22 area within the site boundary from approximately 6,935 acres to approximately 11,769 acres
23 as shown in Table 3 above but would otherwise require no substantive changes to the
24 *Revegetation Plan*.¹⁰⁶ Condition 85 requires the certificate holder to implement the *Habitat*
25 *Mitigation Plan*. In Revision 14, the Department recommended modification of the *Habitat*
26 *Mitigation Plan* as shown in Attachment C to reflect changes in the habitat acreages
27 potentially affected as shown in Table 4. The size of the habitat mitigation area will be
28 determined based on the final design configuration of the facility and the habitat assessment
29 that is required by Condition 29. In Revision 15, the Department recommended modification
30 of Condition 86 to require the pre-construction surveys for State-listed threatened, endangered
31 or sensitive wildlife species recommended by ODFW.

Conclusions of Law

32 For the reasons discussed above and subject to the site certificate conditions described
33 herein, the Council concludes that SFC would comply with the Council's Fish and Wildlife
34 Habitat Standard if Amendment #1 were approved.

¹⁰⁴ Any new policy guidance issued after July 25, 2008, will not be applied to the previously-approved areas (teleconference with ODFW, the applicants and the Department, July 29, 2009).

¹⁰⁵ *Final Order on Amendment #1 (SFWF)*, pp. 53-54 (incorporating the findings from the *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), pp. 109-114).

¹⁰⁶ The micrositing acreages shown on page 1, lines 21-22, of the previously-approved *Revegetation Plan* for SFC does not reflect the area added by this amendment.

5. Standards Not Applicable to Site Certificate Eligibility

1 Under ORS 469.501(4), the Council may issue a site certificate without making the
2 findings required by the standards discussed in this section (Structural Standard, Historic,
3 Cultural and Archaeological Resources Standard, Public Services Standard and Waste
4 Minimization Standard).¹⁰⁷ Nevertheless, the Council may impose site certificate conditions
5 based on the requirements of these standards.

(a) Structural Standard

OAR 345-022-0020

6 *(1) Except for facilities described in sections (2) and (3), to issue a site certificate,*
7 *the Council must find that:*
8

9 *(a) The applicant, through appropriate site-specific study, has adequately*
10 *characterized the site as to Maximum Considered Earthquake Ground Motion*
11 *identified at International Building Code (2003 Edition) Section 1615 and*
12 *maximum probable ground motion, taking into account ground failure and*
13 *amplification for the site specific soil profile under the maximum credible and*
14 *maximum probable seismic events; and*

15 *(b) The applicant can design, engineer, and construct the facility to avoid dangers*
16 *to human safety presented by seismic hazards affecting the site that are expected to*
17 *result from maximum probable ground motion events. As used in this rule “seismic*
18 *hazard” includes ground shaking, ground failure, landslide, liquefaction, lateral*
19 *spreading, tsunami inundation, fault displacement, and subsidence;*

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

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

26 *(2) The Council may issue a site certificate for a facility that would produce power*
27 *from wind, solar or geothermal energy without making the findings described in*
28 *section (1). However, the Council may apply the requirements of section (1) to*
29 *impose conditions on a site certificate issued for such a facility.*

30 * * *

¹⁰⁷ 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 Related Conditions

2 In the *Final Order on Amendment #1 (SFWF)*, the Council made findings regarding
3 the seismic, geological and soil hazards within the SFC site boundary.¹⁰⁸ Those findings are
4 incorporated herein by this reference. The site certificate includes conditions addressing
5 structural safety (Conditions 12, 13, 14, 47, 48 and 49). The expansion of the site to
6 accommodate additional wind turbines and related components as well as an alternative route
7 for a 230-kV transmission line as requested in Amendment #1 would not result in placement
8 of facility components within geologic areas dissimilar to those that have been addressed by
9 the Council for the approved site. The Council finds that no changes to the site certificate
10 conditions related to the Structural Standard are needed.

(b) Historic, Cultural and Archaeological Resources

11 **OAR 345-022-0090**

12 *(1) Except for facilities described in sections (2) and (3), to issue a site certificate,*
13 *the Council must find that the construction and operation of the facility, taking*
14 *into account mitigation, are not likely to result in significant adverse impacts to:*

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

17 *(b) For a facility on private land, archaeological objects, as defined in ORS*
18 *358.905(1)(a), or archaeological sites, as defined in ORS 358.905(1)(c); and*

19 *(c) For a facility on public land, archaeological sites, as defined in ORS*
20 *358.905(1)(c).*

21 *(2) The Council may issue a site certificate for a facility that would produce power*
22 *from wind, solar or geothermal energy without making the findings described in*
23 *section (1). However, the Council may apply the requirements of section (1) to*
24 *impose conditions on a site certificate issued for such a facility.*

25 * * *

Related Conditions

26 In the *Final Order on the Application for the Shepherds Flat Wind Farm*, the Council
27 reviewed cultural resource surveys of the areas within the SFC site boundary and the areas
28 within the SFS site boundary that would be added to SFC by this amendment.¹⁰⁹ The
29 Council’s previous findings are incorporated herein by this reference. The cultural resource
30 surveys were conducted in consultation with the State Historic Preservation Office (SHPO),
31 the Confederated Tribes of Warm Springs and the Confederated Tribes of the Umatilla Indian
32 Reservation. The Council adopted Conditions 43, 44 and 45 to safeguard cultural resources in
33 the SFC area. These conditions would apply as well to the proposed expansion area.

¹⁰⁸ *Final Order on Amendment #1 (SFWF)*, p. 56 (incorporating the findings in the *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), pp. 115-117).

¹⁰⁹ *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), pp. 118-122.

1 The Request for Amendment #1 includes a cultural resource overview of the proposed
2 site of the Saddle Butte Wind Park.¹¹⁰ The Saddle Butte overview is relevant because most of
3 the new lands that would be added to SFC by this amendment lie within the proposed Saddle
4 Butte site. The overview consisted of a literature review and records search of the area, a
5 discussion of the historical, cultural and ethnographic setting, and recommendations for field
6 surveys of locations considered to have moderate to high potential for prehistoric or historic
7 period resources. The overview did not include any on-site ground survey for historic, cultural
8 or archaeological resources. Condition 43(d) requires the certificate holder to conduct a field
9 investigation for historic, cultural or archaeological resources prior to construction in any
10 areas of potential construction disturbance that have not been previously surveyed. The
11 Council finds that no changes to the site certificate conditions related to the Historic, Cultural
12 and Archaeological Resources Standard are needed.

(c) Public Services

OAR 345-022-0110

13 *(1) Except for facilities described in sections (2) and (3), to issue a site certificate,*
14 *the Council must find that the construction and operation of the facility, taking*
15 *into account mitigation, are not likely to result in significant adverse impact to the*
16 *ability of public and private providers within the analysis area described in the*
17 *project order to provide: sewers and sewage treatment, water, storm water*
18 *drainage, solid waste management, housing, traffic safety, police and fire*
19 *protection, health care and schools.*

21 *(2) The Council may issue a site certificate for a facility that would produce power*
22 *from wind, solar or geothermal energy without making the findings described in*
23 *section (1). However, the Council may apply the requirements of section (1) to*
24 *impose conditions on a site certificate issued for such a facility.*

25 * * *

Related Conditions

26 In the *Final Order on Amendment #1 (SFWF)*, the Council addressed the potential
27 impacts of construction and operation of SFC on the ability of public and private providers
28 within the analysis area to provide public services.¹¹¹ The Council's previous findings are
29 incorporated herein by this reference. The site certificate includes conditions addressing
30 public services (Conditions 27, 52, 53, 54, 55, 56, 65, 66, 67, 68, 69, 70, 73, 75, 78, 99 and
31 100). Amendment #1 would expand the facility site to accommodate additional wind turbines
32 and related components as well as an alternative route for a 230-kV transmission line but
33 would not change the analysis of affected public services. The Council finds that no changes
34 to the site certificate conditions related to the Public Services Standard are needed.

¹¹⁰ "Cultural Resource Overview of the Proposed Saddle Butte Wind Park Project, Gilliam and Morrow Counties, Oregon" (October 8, 2009), Request for Amendment #1, Appendix 2.

¹¹¹ *Final Order on Amendment #1 (SFWF)*, p. 57 (incorporating the findings in the *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), pp. 122-127).

(d) Waste Minimization

OAR 345-022-0120

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

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

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

(2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

Related Conditions

In the *Final Order on Amendment #1 (SFWF)*, the Council made findings and adopted site certificate conditions regarding the solid waste and wastewater likely to be generated during the construction, operation and retirement of SFC and the impact on surrounding communities.¹¹² The Council’s previous findings are incorporated herein by this reference. The Council adopted Conditions 50, 51, 99, 100, 101 and 102 to address waste management concerns. Amendment #1 would expand the facility site to accommodate additional wind turbines and related components as well as an alternative route for a 230-kV transmission line but would not change the analysis of waste minimization. The Council finds that no changes to the site certificate conditions related to the Waste Minimization Standard are needed.

V. OTHER APPLICABLE REGULATORY REQUIREMENTS: FINDINGS AND CONCLUSIONS

1. Requirements under Council Jurisdiction

Under ORS 469.503(3) and under the Council’s General Standard of Review (OAR 345-022-0000), the Council must determine that a facility complies with “all other Oregon statutes and administrative rules identified in the project order, as amended, as applicable to the issuance of a site certificate for the proposed facility.” Other Oregon statutes and administrative rules that are applicable to the changes requested in Amendment #1 include the Department of Environmental Quality (DEQ) noise control regulations, the regulations adopted by the Department of State Lands (DSL) for removal or fill of material affecting waters of the state, the Oregon Water Resources Department’s (OWRD) regulations for appropriating ground water and the Council’s statutory authority to consider protection of public health and safety.

¹¹² *Final Order on Amendment #1 (SFWF)*, p. 58 (incorporating the findings from the *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), pp. 76-77).

(a) Noise Control Regulations

The applicable noise control regulations are as follows:

OAR 340-035-0035

Noise Control Regulations for Industry and Commerce

(1) Standards and Regulations:

* * *

(b) New Noise Sources:

* * *

(B) New Sources Located on Previously Unused Site:

(i) No person owning or controlling a new industrial or commercial noise source located on a previously unused industrial or commercial site shall cause or permit the operation of that noise source if the noise levels generated or indirectly caused by that noise source increase the ambient statistical noise levels, L10 or L50, by more than 10 dBA in any one hour, or exceed the levels specified in Table 8, as measured at an appropriate measurement point, as specified in subsection (3)(b) of this rule, except as specified in subparagraph (1)(b)(B)(iii).

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

(iii) For noise levels generated or caused by a wind energy facility:

(I) The increase in ambient statistical noise levels is based on an assumed background L50 ambient noise level of 26 dBA or the actual ambient background level. The person owning the wind energy facility may conduct measurements to determine the actual ambient L10 and L50 background level.

(II) The “actual ambient background level” is the measured noise level at the appropriate measurement point as specified in subsection (3)(b) of this rule using generally accepted noise engineering measurement practices. Background noise measurements shall be obtained at the appropriate measurement point, synchronized with windspeed measurements of hub height conditions at the nearest wind turbine location. “Actual ambient background level” does not include noise generated or caused by the wind energy facility.

(III) The noise levels from a wind energy facility may increase the ambient statistical noise levels L10 and L50 by more than 10 dBA (but not above the limits specified in Table 8), if the person who owns the noise sensitive property executes a legally effective easement or real covenant that benefits the property on which the wind energy facility is located. The easement or covenant must authorize the wind energy facility to increase the ambient statistical noise levels, L10 or L50 on the sensitive property by more than 10 dBA at the appropriate measurement point.

1 (IV) For purposes of determining whether a proposed wind energy facility
2 would satisfy the ambient noise standard where a landowner has not waived the
3 standard, noise levels at the appropriate measurement point are predicted
4 assuming that all of the proposed wind facility’s turbines are operating between
5 cut-in speed and the wind speed corresponding to the maximum sound power level
6 established by IEC 61400-11 (version 2002-12). These predictions must be
7 compared to the highest of either the assumed ambient noise level of 26 dBA or to
8 the actual ambient background L10 and L50 noise level, if measured. The facility
9 complies with the noise ambient background standard if this comparison shows
10 that the increase in noise is not more than 10 dBA over this entire range of wind
11 speeds.

12 (V) For purposes of determining whether an operating wind energy facility
13 complies with the ambient noise standard where a landowner has not waived the
14 standard, noise levels at the appropriate measurement point are measured when
15 the facility’s nearest wind turbine is operating over the entire range of wind
16 speeds between cut-in speed and the windspeed corresponding to the maximum
17 sound power level and no turbine that could contribute to the noise level is
18 disabled. The facility complies with the noise ambient background standard if the
19 increase in noise over either the assumed ambient noise level of 26 dBA or to the
20 actual ambient background L10 and L50 noise level, if measured, is not more than
21 10 dBA over this entire range of wind speeds.

22 (VI) For purposes of determining whether a proposed wind energy facility
23 would satisfy the Table 8 standards, noise levels at the appropriate measurement
24 point are predicted by using the turbine’s maximum sound power level following
25 procedures established by IEC 61400-11 (version 2002-12), and assuming that all
26 of the proposed wind facility’s turbines are operating at the maximum sound
27 power level.

28 (VII) For purposes of determining whether an operating wind energy facility
29 satisfies the Table 8 standards, noise generated by the energy facility is measured
30 at the appropriate measurement point when the facility’s nearest wind turbine is
31 operating at the windspeed corresponding to the maximum sound power level and
32 no turbine that could contribute to the noise level is disabled.

33 * * *

Findings of Fact

34 In the *Final Order on the Application for the Shepherds Flat Wind Farm*, the Council
35 concluded that the proposed SFWF, subject to site certificate conditions, would comply with
36 the State noise control regulations.¹¹³ The Council’s findings were based on analysis of
37 predicted noise levels from a “default layout” that included 280 Siemens SWT-93 2.3-MW
38 turbines in the northern project area and 23 Vestas V90 3.0-MW turbines in the southern
39 project area and that included two substations contributing to predicted noise levels. The
40 Council found that the SFWF would comply with the applicable noise regulations if it were
41 constructed according to the default layout and if the certificate holder acquired noise waivers

¹¹³ *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), p. 136.

1 from the owners of five properties where the predicted noise levels exceeded the ambient
2 degradation limit.¹¹⁴

3 In the *Final Order on Amendment #1 (SFWF)*, the Council found that the division of
4 the SFWF into three separate facilities within the previously-approved site boundary of the
5 SFWF with no increase in the combined maximum number of turbines would not significantly
6 change the noise analysis.¹¹⁵ The Council found that the cumulative noise emissions from
7 SFN, SFC and SFS would comply with the noise regulations and that the separate noise
8 emissions from each of the proposed facilities would also comply with the regulations if each
9 facility were constructed according to the previously-analyzed default layout and if the
10 certificate holder acquired noise waivers from the owners of properties where the ambient
11 degradation limit would be exceeded.

12 The changes to SFC requested in the present amendment include expansion of the site
13 and potential micro-siting area for SFC turbines. Approval of the amendment would authorize
14 construction of up to 39 additional turbines. The Department requested a new noise analysis
15 based on the maximum number of turbines that would be authorized at the facility if the
16 amendment were approved. The certificate holder provided a noise analysis based on
17 selection of GE 2.5xl turbines and a revised turbine layout (different from the layout used in
18 the original noise analysis for SFWF).¹¹⁶ The certificate holder's noise analysis was
19 conducted by Mr. Bruce Walker, PhD of Channel Island Acoustics, the same consultant who
20 performed the original SFWF noise study. Mr. Kerrie Standlee, P.E. of Daly-Standlee &
21 Associates, Inc., reviewed the SFC study for the Department and confirmed Walker's
22 findings.

23 The original noise study conducted for SFWF did not include sound attenuation
24 factors for ground absorption and topographical barriers, and so the results were considered to
25 be very conservative. For the SFC noise analysis, Walker accounted for ground and
26 topographical attenuation along with atmospheric attenuation and distance attenuation.¹¹⁷ At
27 the request of the Department, Walker predicted sound levels at 39 noise sensitive receivers
28 (Receivers R-1 through R-39) using the manufacturer's stated "apparent sound power level"
29 data increased by what was believed to be the "uncertainty" factor. Upon review of the
30 manufacturer's specification data, however, Standlee determined that the certificate holder's
31 analysis had used the standard deviation of 1.5 decibels (dB) associated with the turbine test
32 reproducibility rather than the 3 dB associated with the "uncertainty" factor.¹¹⁸

33 The certificate holder elected to use the assumed ambient hourly L₅₀ noise level of 26
34 dBA for the background ambient noise level at each noise sensitive receiver as allowed under
35 OAR 340-035-0035(1)(b)(B)(iii)(I) rather than to conduct noise measurements at the
36 receivers. Accordingly, to show compliance with the ambient noise degradation test, the noise
37 generated by the operation of the proposed SFC wind turbines between cut-in wind speed and
38 maximum sound power level wind speed must not cause the hourly L₅₀ noise level at any
39 noise sensitive receiver to exceed 36 dBA.

¹¹⁴ *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), p. 135.

¹¹⁵ *Final Order on Amendment #1 (SFWF)*, p. 60.

¹¹⁶ Email from Patricia Pilz, January 16, 2010.

¹¹⁷ Walker utilized SoundPLAN 7.0, an ISO 9613-2 compliant noise propagation modeling program.

¹¹⁸ The manufacturer refers to this adjustment factor as the "K" factor.

1 The certificate holder proposes to construct up to 116 wind turbines within the site
2 boundary. The certificate holder requests the flexibility to locate the turbines anywhere within
3 the proposed site boundary, subject to the conditions of the site certificate. A potential layout
4 of turbines was provided for 116 GE 2.5-MW turbines.¹¹⁹ The certificate holder provided A-
5 weighted overall sound power level and octave band data for the GE wind turbine model that
6 was used in the noise modeling.¹²⁰ To support the conclusion that the submitted layout would
7 be in compliance with the noise regulations, Walker modeled the sound pressure levels that
8 would be found at each noise sensitive receiver based on this turbine layout.

9 The noise study results show that the noise radiating from the turbines would not
10 exceed the DEQ maximum allowable hourly L₅₀ noise level limit of 50 dBA or the hourly L₁₀
11 noise level limit of 55 dBA at any of the 39 noise sensitive receivers. Standlee considered this
12 finding to be valid even if the total 3-dBA “uncertainty” factor had been added to the sound
13 power level in the noise predictions. The results of the study show that, with or without the
14 inclusion of the additional sound power level adjustment factor, the noise levels at five of the
15 39 receivers (R-12, R-13, R-14, R-15 and R-31) would exceed the ambient hourly L₅₀ noise
16 degradation limit of 36 dBA. Therefore, the certificate holder would be required to either alter
17 the layout of the turbines in the final layout to reduce noise levels to 36 dBA (or less) at each
18 residence or obtain waivers from the owners of all five noise sensitive properties allowing the
19 noise levels to rise above the 36 dBA limit.¹²¹

20 Walker’s noise study showed the noise radiating from SFC would be in compliance
21 with the DEQ ambient noise degradation rule at the remaining 34 of 39 noise sensitive
22 receivers (R-1 through R-11, R-16 through R-30 and R-32 through R-39). After reviewing the
23 results of the SoundPLAN calculations, Standlee concluded, however, that turbine noise
24 levels would likely exceed the ambient noise degradation limit of 36 dBA at receivers R-37
25 and R-38.¹²² Thus, Standlee concluded that the certificate holder would be required to either
26 alter the layout of the turbines in the final layout to reduce noise levels to 36 dBA (or less) at
27 each residence or obtain waivers from the owners of these properties.¹²³

28 Condition 3 requires the certificate holder to operate the facility in accordance with all
29 applicable state laws and administrative rules. Condition 97 ensures that the final design
30 configuration of SFC would comply with the noise control regulations. This condition
31 requires the certificate holder to provide information about the turbines selected and about the
32 final design layout to the Department before beginning construction. The condition requires

¹¹⁹ Email from Patricia Pilz, January 19, 2010.

¹²⁰ Email from Patricia Pilz, January 26, 2010.

¹²¹ The certificate holder would have the option to conduct measurements to determine the actual ambient L₁₀ and L₅₀ background levels rather than using an assumed background L₅₀ ambient noise level of 26 dBA.

¹²² Standlee determined that the predicted noise level at R-37 would be 35.7 dBA and that the predicted noise level at R-38 would be 34.9, if the total 3-dBA “uncertainty” factor were included in the calculations. Nevertheless, he concluded that the levels would likely exceed the ambient noise degradation limit of 36 dBA based on field measurements of noise from the nearby Willow Creek Wind Energy Center conducted by Daly-Standlee & Associates. At three residences north of R-37 and R-38, the predicted sound levels using the SoundPLAN program were 2 to 4 dB lower than the levels actually measured at the residences. Standlee noted that the ISO 9613-2 standard, which serves as a guide for predicting the attenuation of sound propagated outdoors (and with which SoundPlan complies) has an estimated accuracy of ± 3 dB for the source to receiver distances associated with R-37 and R-38.

¹²³ As with the other five receivers where noise is expected to exceed the 36-dBA limit, the certificate holder would have the option to conduct measurements to determine the actual ambient L₁₀ and L₅₀ background levels.

1 the certificate holder to provide a noise analysis based on that final design and to demonstrate
2 to the satisfaction of the Department that the facility would comply with the applicable noise
3 control regulations.

4 The Council has the authority to act in the place of the DEQ to enforce OAR 340-035-
5 0035(4)(a) and require the owner of an operating noise source to monitor and record the
6 statistical noise levels upon written notification.¹²⁴ Condition 98 requires the certificate holder
7 to notify the Department of any complaints received about noise from the facility as well as
8 the actions taken to address them. In the event of a complaint regarding noise levels during
9 operation of SFC, the Council may require the certificate holder to verify that the facility is
10 operating in compliance with the noise control regulations.

Conclusions of Law

11 For the reasons discussed above and subject to the conditions discussed herein, the
12 Council concludes that SFC would comply with the applicable noise control regulations in
13 OAR 340-035-0035 if Amendment #1 were approved.

(b) Removal-Fill Law

14 The Oregon Removal-Fill Law (ORS 196.795 through 196.990) and regulations (OAR
15 141-085-0500 through 141-085-0785) adopted by DSL require a permit if 50 cubic yards or
16 more of material is removed, filled or altered within any “waters of the state” at the proposed
17 site.¹²⁵ The Council must determine whether a permit is needed and should be issued. The
18 U.S. Army Corps of Engineers administers Section 404 of the Clean Water Act, which
19 regulates the discharge of fill into waters of the United States (including wetlands), and
20 Section 10 of the Rivers and Harbors Appropriation Act of 1899, which regulates placement
21 of fill in navigable waters. Federal law may require a Nationwide or Individual fill permit for
22 the proposed facility if waters of the United States are affected. A single application form (a
23 Joint Permit Application Form) is used to apply for both the State and federal permits.

Findings of Fact

24 In the *Final Order on the Application for the Shepherds Flat Wind Farm*, the Council
25 found that a Removal/Fill Permit was not needed for construction of the SFWF.¹²⁶ Those
26 findings are incorporated herein by this reference. The Council found that the SFWF 230-kV
27 transmission line would cross one State-jurisdictional water (Eightmile Creek).¹²⁷ Impacts
28 would be avoided by placing transmission line support structures outside a 10-foot buffer
29 bordering the creek. No material would be removed from the creek channel or added as fill
30 within the creek channel. In the *Final Order on Amendment #1 (SFWF)*, the Council found
31 that the division of the SFWF into three separate facilities within the previously-approved site
32 boundary of the SFWF would not affect any areas that were not previously addressed by the
33 delineation report on the wetlands and waters within the SFWF analysis area.¹²⁸

¹²⁴ *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), p. 136.

¹²⁵ ORS 196.800(14) defines “Waters of this state.” The term includes wetlands and certain other water bodies.

¹²⁶ *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), p. 138.

¹²⁷ DSL has confirmed that Eightmile Creek is a State-jurisdictional waterway (letter from Jess Jordan, DSL, February 19, 2008, attached to email a from Jess Jordan, March 4, 2008).

¹²⁸ *Final Order on Amendment #1 (SFWF)*, p. 62.

1 The proposed amendment would enlarge the site of SFC. The areas that would be
2 added to the SFC site by this amendment include approximately 2,413 acres that lie within the
3 previously-approved SFS site boundary. This SFS area was addressed by the delineation
4 survey that was done for the SFWF.¹²⁹ No State-jurisdictional waters were found in this area.

5 The amendment would add approximately 2,396 acres of new lands bordering the
6 previously-approved transmission corridor between SFC and SFS. This land was included
7 within the site of the proposed Saddle Butte Wind Park but would instead be added to SFC
8 under this amendment. Aquatic Contracting conducted a delineation survey for the lands that
9 were proposed for the Saddle Butte Wind Park.¹³⁰ In the delineation report, the lands that
10 would be added to SFC are included in the North Project Study Area. Aquatic Contracting
11 found three “highly ephemeral drainages” but no State-jurisdictional waters in this area.¹³¹
12 DSL has concurred that the ephemeral waterways that were identified in the Saddle Butte
13 delineation report are not State-jurisdictional.¹³²

14 In addition, the amendment would add approximately 8.8 acres within the proposed
15 alternate transmission corridor between SFC and BPA’s new Slatt substation and
16 approximately 16.2 acres within the proposed alternate transmission corridor crossing
17 Eightmile Canyon (a State-jurisdictional waterway). Condition 72 ensures that the certificate
18 holder would avoid impacts to Eightmile Creek.

19 DSL has reviewed the amendment request and the three delineation reports that cover
20 the areas of the three Shepherds Flat projects.¹³³ DSL has confirmed that, if the project areas
21 are covered by the three delineations, no further information would be needed.¹³⁴ If
22 construction would occur in any areas outside the previously-surveyed areas, the delineation
23 might need to be amended.¹³⁵ The certificate holder has agreed to conduct a delineation
24 survey before beginning construction for areas not covered by earlier surveys.¹³⁶ In Revision
25 17, the Council adopts new Condition 103 that would require a preconstruction survey for
26 potential waters of the state in areas not previously investigated and avoidance of impact on
27 any jurisdictional waters that are found.

Conclusions of Law

28 For the reasons discussed above, the Council concludes that a Removal/Fill
29 authorization would not be needed for SFC if Amendment #1 were approved.

¹²⁹ Mason, Bruce & Girard, Inc, *Wetlands/Waters Delineation Report for Shepherds Flat Wind Farm Project, Gilliam and Morrow Counties, Oregon* (June 8, 2007), Figure 1.

¹³⁰ Aquatic Contracting, *Wetland and Waters Delineation Report, Saddle Butte Wind Park, Gilliam and Morrow Counties, Oregon* (August 30, 2009), Request for Amendment #1, Appendix 3.

¹³¹ The certificate holder provided a map showing the locations of the ephemeral drainages within the proposed SFC site boundary (email from Patricia Pilz, December 29, 2009).

¹³² Letter from Lynne McAllister, DSL, November 9, 2009 (attached to email from Patricia Pilz, November 11, 2009).

¹³³ The certificate holder provided a map showing the three project areas and the three delineation study areas (email from Patricia Pilz, January 14, 2010).

¹³⁴ Email from Sarah Kelly, DSL, January 20, 2010.

¹³⁵ Email from Sarah Kelly, DSL, November 30, 2009.

¹³⁶ Email from Patricia Pilz, January 2, 2010.

(c) Water Rights

1 Under ORS Chapters 537 and 540 and OAR Chapter 690, OWRD administers water
2 rights for appropriation and use of the water resources of the state. Under OAR 345-022-
3 0000(1), the Council must determine whether SFC would comply with these statutes and
4 administrative rules.

Findings of Fact

5 In the *Final Order on Amendment #1 (SFWF)*, the Council found that the certificate
6 holder would not need to obtain a new water right for the water needed by the SFC facility
7 during construction or operation.¹³⁷ The Council found that up to 16,940,000 gallons of water
8 would be needed for construction of SFC, assuming construction of 77 wind turbines. The
9 certificate holder would obtain construction water from the City of Arlington or alternatively
10 from a “service area” that would be permitted, constructed and operated by third-party
11 contractors.¹³⁸ During operation, water would be supplied from an on-site well located at the
12 SFC field workshop. Condition 78 ensures that less than 5,000 gallons of water per day would
13 be taken from the on-site well for operational uses.¹³⁹

14 The certificate holder estimates that up to 25,520,000 gallons of water would be
15 needed for construction of SFC, including the additional turbines requested by this
16 amendment.¹⁴⁰ The possible sources of this water would be the same as previously considered
17 by the Council in the *Final Order on Amendment #1 (SFWF)*. The proposed amendment
18 would not change the water use during operation. The Council finds that the certificate holder
19 would not need to obtain any new water rights for the facility as a result of the changes
20 requested by this amendment.

Conclusions of Law

21 Based on the findings discussed above, the Council concludes that SFC would comply
22 with applicable regulations pertaining to water rights if Amendment #1 were approved.

(d) Public Health and Safety

23 Under ORS 469.310, the Council is charged with ensuring that the “siting,
24 construction and operation of energy facilities shall be accomplished in a manner consistent
25 with protection of the public health and safety...” State law further provides that “the site
26 certificate shall contain conditions for the protection of the public health and safety...” ORS
27 469.401(2).

Findings of Fact

28 We discuss the Council’s Public Health and Safety Standards for Wind Energy
29 Facilities above at page 24. In this section, we discuss the issues of fire protection, magnetic

¹³⁷ Final Order on Amendment #1 (SFWF), pp. 62-63.

¹³⁸ Each service area would include a portable concrete batch plant, a refueling station and a water well (email from Patricia Pilz, July 12, 2009).

¹³⁹ ORS 537.545 provides a water right exemption for industrial and commercial uses of up to 5,000 gallons per day. The statute was amended in 2009 to require the owner of land on which an exempt well is drilled to provide a map to WRD showing the exact location of the well and to file the exempt water use with WRD for recording with submittal of a fee.

¹⁴⁰ Email from Patricia Pilz, December 16, 2009.

1 fields and coordination with the Oregon Public Utility Commission and the Boardman
2 Military Operating Area.

A. Fire Protection

3 In the *Final Order on Amendment #1(SFWF)*, the Council made findings and adopted
4 conditions regarding fire prevention and response for SFC.¹⁴¹ Those findings are incorporated
5 herein by this reference. The proposed amendment would enlarge the SFC site to
6 accommodate additional wind turbines and related components as well as an alternative route
7 for a 230-kV transmission line. The changes requested by the amendment would not result in
8 new fire risks that would be different from the types of risk already considered by the
9 Council. The site certificate includes conditions that address fire protection and response
10 (Conditions 53, 54, 55, 56, 58 and 60), and the Council finds that no new fire protection
11 conditions are necessary.

B. Magnetic Fields

12 Electric transmission lines create both electric and magnetic fields. The electric fields
13 associated with the proposed transmission lines are addressed above at page 27. The
14 certificate holder proposes to construct aboveground 230-kV lines and aboveground, single or
15 double-circuit, 34.5-kV collector lines as described in the amendment request.¹⁴² In the *Final*
16 *Order on the Application for the Shepherds Flat Wind Farm*, the Council made findings
17 regarding the magnetic fields that could be produced by these transmission line
18 configurations.¹⁴³ Those findings are incorporated herein by this reference. The *Final Order*
19 includes references to the scientific literature on the biological effects of exposure to electric
20 and magnetic fields. The Council has not found sufficient information upon which to set
21 health-based limits for exposure to magnetic fields.¹⁴⁴ Nevertheless, the Council has
22 encouraged applicants to implement low-cost measures to reduce or manage public exposure
23 to magnetic fields from transmission lines under the Council’s jurisdiction. Condition 81
24 requires the certificate holder to take reasonable steps to reduce or manage human exposure to
25 electromagnetic fields, including specific measures listed in the condition.

C. Coordination with the PUC

26 The Oregon Public Utility Commission Safety and Reliability Section (PUC) has
27 requested that the Council ensure that certificate holders coordinate with PUC staff on the
28 design and specifications of electrical transmission lines and the natural gas pipelines. The
29 PUC has explained that others in the past have made inadvertent, but costly, mistakes in the
30 design and specifications of power lines and pipelines that could have easily been corrected
31 early if the developer had consulted with the PUC staff responsible for the safety codes and
32 standards. Condition 82 requires the certificate holder to coordinate the design of electric
33 transmission lines with the PUC.

¹⁴¹ Final Order on Amendment #1 (SFWF), p. 63 (incorporating findings from the *Final Order on the Application* (July 25, 2008), p. 139).

¹⁴² Request for Amendment #1, Section IV, p. 1.

¹⁴³ *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), pp. 139-141.

¹⁴⁴ A recent review of the scientific literature confirmed the Council’s earlier findings (Golder Associates, *EMF Report*, November 23, 2009).

D. Boardman Military Operating Area

1 In the *Final Order on the Application for the Shepherds Flat Wind Farm*, the Council
2 made findings regarding the Boardman Military Operating Area (BMOA), which lies to the
3 east of the SFC site boundary.¹⁴⁵ Those findings are incorporated herein by this reference. The
4 certificate holder has agreed to provide the proposed final project layout to the Navy before
5 construction and to work with the Navy to accommodate the Navy's interest in safe aviation
6 training routes, which may include adjusting turbine locations where feasible.¹⁴⁶

Conclusions of Law

7 Based on the findings discussed above and subject to the site certificate conditions
8 discussed herein, the Council concludes that SFC would comply with requirements to protect
9 public health and safety if Amendment #1 were approved.

2. Requirements That Are Not Under Council Jurisdiction

(a) Federally-Delegated Programs

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

(b) Requirements That Do Not Relate to Siting

16 Under ORS 469.401(4), the Council does not have authority to preempt the
17 jurisdiction of any state agency or local government over matters that are not included in and
18 governed by the site certificate or amended site certificate. Such matters include
19 design-specific construction or operating standards and practices that do not relate to siting.
20 Nevertheless, the Council may rely on the determinations of compliance and the conditions in
21 the permits issued by these state agencies and local governments in deciding whether the
22 facility meets other standards and requirements under its jurisdiction.

VI. GENERAL APPLICATION OF CONDITIONS

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

¹⁴⁵ *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), p. 141.

¹⁴⁶ Email from Patricia Pilz, July 17, 2009.

1 In addition to all other conditions referenced or included in this order, the site
2 certificate holder is subject to all conditions and requirements contained in the rules of the
3 Council and in local ordinances and state law in effect on the date the amended site certificate
4 is executed.¹⁴⁷ Under ORS 469.401(2), upon a clear showing of a significant threat to the
5 public health, safety or the environment that requires application of later-adopted laws or
6 rules, the Council may require compliance with such later-adopted laws or rules.

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

VII. GENERAL CONCLUSION

11 The proposed amendment would expand the facility site to accommodate additional
12 wind turbines and related components as well as an alternative route for a 230-kV
13 transmission line. The amendment would increase the maximum number of turbines at the
14 facility to 116 and would increase the facility's maximum peak generating capacity to 290
15 MW. The amendment would create an exception to Condition 40(d) regarding the minimum
16 setback distance from facility wind turbines to the nearest boundary of the certificate holder's
17 lease area. The Council adopts revisions to the site certificate as described in the section that
18 follows.

19 Based on the findings and conclusions discussed above regarding the proposed
20 amendment, the Council makes the following findings:

- 21 1. The proposed Amendment #1 complies with the requirements of the Oregon
22 Energy Facility Siting statutes, ORS 469.300 to ORS 469.570 and 469.590 to
23 469.619.
- 24 2. The proposed Amendment #1 complies with the applicable standards adopted by
25 the Council pursuant to ORS 469.501.
- 26 3. The proposed Amendment #1 complies with all other Oregon statutes and
27 administrative rules applicable to the amendment of the site certificate that are
28 within the Council's jurisdiction.

29 Accordingly, the Council finds that the facility complies with the General Standard of
30 Review (OAR 345-022-0000). The Council concludes, based on a preponderance of the
31 evidence on the record, that the site certificate may be amended as requested by the certificate
32 holder, subject to the revisions recommended by the Department and set forth below.

1. The Department's Recommended Revisions

33 New text proposed by the Department is shown with a single underline. New text
34 proposed by the certificate holder with concurrence by the Department is shown with a double
35 underline. Text proposed by the certificate holder but not recommended by the Department is
36 not shown.¹⁴⁸ Deletions are shown with a strikethrough. The parenthetical references in

¹⁴⁷ With regard to land use, the applicable local criteria are those in effect on the date the certificate holder submitted the request for amendment.

¹⁴⁸ The certificate holder proposed changes to the site certificate as shown in a red-line markup of the Site

1 square brackets follow standard practice and provide a historical reference of when changes
2 were made to the site certificate. Page references are to the *Site Certificate for Shepherds Flat*
3 *Central* (September 11, 2009).

Revision 1

4 *Page 1, lines 7-15:*

5 The findings of fact, reasoning and conclusions of law underlying the terms and conditions of
6 this site certificate are set forth in the following documents, incorporated herein by this
7 reference: (a) the Council’s *Final Order on the Application for the Shepherds Flat Wind Farm*
8 issued on July 25, 2008, ~~and~~ (b) the *Final Order on Amendment #1 for the Shepherds Flat*
9 *Wind Farm*, and (c) the *Final Order on Amendment #1*. In interpreting this site certificate, any
10 ambiguity will be clarified by reference to the following, in order of priority: (1) this First
11 Amended Site Certificate, (2) the Final Order on Amendment #1, (23) the Final Order on
12 Amendment #1 for the Shepherds Flat Wind Farm, (34) the Final Order on the Application for
13 the Shepherds Flat Wind Farm and (45) the record of the proceedings that led to the Final
14 Orders on the Application and Amendment #1 for the Shepherds Flat Wind Farm and to the
15 Final Order on Amendment #1. [Amendment #1 (SFWF): Amendment #1]

Revision 1 Explanation

16 This revision adds a reference in the site certificate to the findings of fact, reasoning
17 and conclusions in support of the present amendment. The revision establishes the order of
18 priority in which the underlying documents should be considered in resolving any ambiguity.
19 The present amendment of the site certificate for SFC is designated as “Amendment #1” and
20 is distinguished from Amendment #1 for the Shepherds Flat Wind Farm, which is designated
21 as “Amendment #1 (SFWF).”

Revision 2

22 *Page 1, lines 16-22:*

23 ~~This site certificate is issued concurrently with site certificates for Shepherds Flat North and~~
24 ~~Shepherds Flat South, as described in the Final Order on Amendment #1 for the Shepherds~~
25 ~~Flat Wind Farm, each of the three relating to a physically and geographically discrete portion~~
26 ~~of the facility authorized by the Site Certificate for the Shepherds Flat Wind Farm (July 25,~~
27 ~~2008). Effective upon execution of all three new site certificates, the new site certificates will~~
28 ~~supersede the Site Certificate for the Shepherds Flat Wind Farm, which will be of no further~~
29 ~~force and effect. [Text added by Amendment #1 (SFWF) was removed by Amendment #1.]~~

Revision 2 Explanation

30 For the purposes of the original site certificate for SFC, the deleted text explained that
31 Amendment #1 for the Shepherds Flat Wind Farm created SFC as a separate facility with its
32 own site certificate. Concurrently, Amendment #1 (SFWF) created SFN and SFS. Separate
33 site certificates for each of the new facilities were executed and became effective on
34 September 11, 2009, and superseded the previous site certificate for the SFWF, which has no
35 further force or effect. Because that effective date has occurred, the deleted text is no longer
36 necessary or appropriate for the SFC site certificate. Future amendments of this site certificate
37 may or may not occur concurrently with amendments of the site certificates for SFN and SFS.

Certificate in the Request for Amendment #1, Section IV, following p. 4.

Revision 3

Page 1, line 33, through page 2, line 3:

- 3. This site certificate does not address, and is not binding with respect to, matters that were not addressed in the Council’s Final Orders on the Application and Amendment #1 for the Shepherds Flat Wind Farm and in the Final Order on Amendment #1. Such matters include, but are not limited to: building code compliance, wage, hour and other labor regulations, local government fees and charges and other design or operational issues that do not relate to siting the facility (ORS 469.401(4)) and permits issued under statutes and rules for which the decision on compliance has been delegated by the federal government to a state agency other than the Council. 469.503(3). [Amendment #1 (SFWF); Amendment #1]

Revision 3 Explanation

This revision adds the matters addressed in the *Final Order on Amendment #1* to the scope of matters addressed in the site certificate.

Revision 4

Page 2, lines 30-34:

The energy facility is an electric power generating facility with an average electric generating capacity of up to ~~9777~~ megawatts and a peak generating capacity of not more than ~~290231~~ megawatts that produces power from wind energy. The facility consists of not more than ~~11677~~ wind turbines. The energy facility is described further in the *Final Order on Amendment #1 for the Shepherds Flat Wind Farm and in the Final Order on Amendment #1 on the Application*. [Amendment #1 (SFWF); Amendment #1]

Revision 4 Explanation

This revision increases the maximum number of wind turbines and the maximum generating capacity of the facility. The revision adds cross-references to descriptions of the facility in the present order and in the Council’s earlier *Final Order on Amendment #1 (SFWF)*.

Revision 5

Page 2, line 35, through page 3, line 7:

The facility includes the following related or supporting facilities described below and in greater detail in the *Final Order on Amendment #1 for the Shepherds Flat Wind Farm and in the Final Order on Amendment #1*:

- Power Collection System
- Collector Substation
- Meteorological towers
- Field workshop
- Control system
- Access roads
- Additional construction areas

[Amendment #1 (SFWF); Amendment #1]

Revision 5 Explanation

1 The revision adds a cross-reference to descriptions of the related or supporting
2 facilities in the present order.

Revision 6

3 *Page 3, lines 9-13:*

4 A power collection system operating at 34.5 kilovolts (kV) transports power from each turbine
5 to a collector substation. To the extent practicable, the collection system is installed
6 underground at a depth of at least three feet. Segments of the collector system are
7 aboveground. Aboveground segments are installed on single-pole, cross-arm structures ~~or~~
8 ~~understrung on the 230-kV transmission line support structures (described below).~~

9 [Amendment #1]

Revision 6 Explanation

10 This revision eliminates the option to understring collector lines on the 230-kV
11 transmission line structures.

Revision 7

12 *Page 3, lines 29-31:*

13 The facility includes up to ~~3325~~ miles of new roads that provide access to the turbine strings.
14 The access roads connect to graveled turbine turnouts at the base of each turbine. [Amendment
15 #1 (SFWF); Amendment #1]

Revision 7 Explanation

16 This revision increases the maximum combined length of new access roads to 33
17 miles.

Revision 8

18 *Page 10, lines 6-26:*

19 26 The certificate holder shall construct a facility substantially as described in the site
20 certificate and may select turbines of any type, subject to the following restrictions and
21 compliance with all other site certificate conditions. Before beginning construction, the
22 certificate holder shall provide to the Department a description of the turbine types
23 selected for the facility demonstrating compliance with this condition.

24 (a) The total number of turbines at the facility must not exceed ~~11677~~ turbines.

25 (b) The combined peak generating capacity of the facility must not exceed ~~290234~~
26 megawatts.

27 (c) The turbine hub height must not exceed 105 meters and the maximum blade tip
28 height must not exceed 150 meters.

29 (d) The minimum blade tip clearance must be 25 meters above ground.

30 (e) The maximum volume of concrete above three feet below grade in the turbine
31 foundations must not exceed 66 cubic yards.

32 (f) The maximum combined weight of metals in the tower (including ladders and
33 platforms) and nacelle must not exceed 393 U.S. tons per turbine.

34 (g) The certificate holder shall request an amendment of the site certificate to
35 increase the combined peak generating capacity of the facility beyond ~~290234~~
36 megawatts, to increase the number of wind turbines to more than ~~11677~~ wind turbines or

1 to install wind turbines with a hub height greater than 105 meters, a blade tip height
2 greater than 150 meters or a blade tip clearance less than 25 meters above ground.

3 [Amendment #1 (SFWF): Amendment #1]

4 Revision 8 Explanation

5 This revision increases the maximum number of wind turbines and the maximum
6 generating capacity of the facility.

7 Revision 9

8 *Page 11, lines 4-42:*

9 30 Before beginning construction, the certificate holder shall submit to the State of Oregon
10 through the Council a bond or letter of credit in the amount described herein naming the
11 State of Oregon, acting by and through the Council, as beneficiary or payee. The initial
12 bond or letter of credit amount is either ~~\$6.1349.076~~ million (~~3rd~~ 1st Quarter ~~2009~~2010
13 dollars), to be adjusted to the date of issuance as described in (b), or the amount
14 determined as described in (a). The certificate holder shall adjust the amount of the bond
15 or letter of credit on an annual basis thereafter as described in (b).

16 (a) The certificate holder may adjust the amount of the bond or letter of credit based
17 on the final design configuration of the facility and turbine types selected by applying
18 the unit costs and general costs illustrated in Table 2 in the Final Order on the
19 Amendment #1 for the Shepherds Flat Wind Farm and calculating the financial
20 assurance amount as described in that order, adjusted to the date of issuance as described
21 in (b) and subject to approval by the Department.

22 (b) The certificate holder shall adjust the amount of the bond or letter of credit, using
23 the following calculation and subject to approval by the Department:

24 (i) Adjust the Subtotal component of the bond or letter of credit amount
25 (expressed in 3rd Quarter 2009 dollars) to present value, using the U.S. Gross Domestic
26 Product Implicit Price Deflator, Chain-Weight, as published in the Oregon Department
27 of Administrative Services' "Oregon Economic and Revenue Forecast" or by any
28 successor agency (the "Index") and using the index value for 3rd Quarter 2009 dollars
29 and the quarterly index value for the date of issuance of the new bond or letter of credit.
30 If at any time the Index is no longer published, the Council shall select a comparable
31 calculation to adjust 3rd Quarter 2009 dollars to present value.

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

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

37 (iv) Add the adjusted Gross Cost (ii) to the sum of the percentages (iii) and round
38 the resulting total to the nearest \$1,000 to determine the adjusted financial assurance
39 amount.

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

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

44 (e) The certificate holder shall describe the status of the bond or letter of credit in the
45 annual report submitted to the Council under Condition 21.

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

1 [Amendment #1 (SFWF); Amendment #1]

2 Revision 9 Explanation

3 This revision adjusts the initial financial assurance amount based on the changes
4 requested in Amendment #1 and expresses the total in 1st Quarter 2010 dollars.

5 Revision 10

6 *Page 12, line 40, through page 13, line 13:*

7 40 The certificate holder shall construct all facility components in compliance with the
8 following setback requirements:

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

12 (b) Where (a) does not apply, the certificate holder shall maintain a minimum
13 distance of 110-percent of maximum blade tip height, measured from the centerline of
14 the turbine tower to the nearest edge of any public road right-of-way. The certificate
15 holder shall assume a minimum right-of-way width of 60 feet.

16 (c) Where (a) does not apply, the certificate holder shall maintain a minimum
17 distance of 1,320 feet, measured from the centerline of the turbine tower to the center of
18 the nearest residence existing at the time of tower construction.

19 (d) Where (a) does not apply, the certificate holder shall maintain a minimum
20 distance of 110-percent of maximum blade tip height, measured from the centerline of
21 the turbine tower to the nearest boundary of the certificate holder's lease area, except as
22 provided in (e).

23 (e) The turbine tower setback distance described in (d) does not apply to the two
24 isolated areas excluded from the certificate holder's lease with the landowner identified
25 as "Area A" and "Area B" in the Final Order on Amendment #1.

26 [Amendment #1]

27 Revision 10 Explanation

28 This revision modifies Condition 40 to allow an exception to the minimum setback
29 distance of 110-percent of maximum blade tip height from a turbine tower to the nearest
30 boundary of the certificate holder's lease area. New subsection (e) allows an exception for
31 two isolated areas that are specifically identified in this order. As described at page 25, these
32 two areas are contained within larger parcels of land that are owned by the same landowner.
33 The areas are not accessible to the general public. The exception does not conflict with the
34 requirements of subsections (a), (b) and (c).

35 Revision 11

36 *Page 17, lines 8-10:*

37 65 The certificate holder shall construct access roads with a finished width of
38 approximately 16 feet, a compacted base of native soil and a gravel surface to a depth of
39 four to ~~six~~ ten inches. [Amendment #1 (SFWF); Amendment #1]

40 Revision 11 Explanation

41 This revision modifies Condition 65 to allow up to 10 inches of gravel on access
42 roads, as requested by the certificate holder.

Revision 12

1 *Page 18, lines 33-39:*

2 79 The certificate holder shall install the 34.5-kV collector system underground to the
3 extent practicable. The certificate holder shall install underground lines at a minimum
4 depth of three feet. Based on geotechnical conditions or other engineering
5 considerations, the certificate holder may install segments of the collector system
6 aboveground on single-pole, cross-arm structures ~~or understrung on the 230-kV~~
7 ~~transmission line support structures~~, but the total length of aboveground double-circuit
8 ~~segments installed on single pole structures~~ must not exceed 97.4 miles and the total
9 length of aboveground single-circuit segments must not exceed 6 miles. [Amendment #1
10 (SFWF); Amendment #1]

Revision 12 Explanation

11 This revision modifies Condition 79 to eliminate the option to understring collector
12 line on the 230-kV support structures. The revision modifies the limits on the length of
13 aboveground collector segments.

Revision 13

14 *Page 19, lines 26-29:*

15 83 The certificate holder shall conduct wildlife monitoring as described in the *Wildlife*
16 *Monitoring and Mitigation Plan* that is incorporated in the *Final Order on Amendment*
17 *#1 for the Shepherds Flat Wind Farm* as Attachment ~~SFC-A~~ and as amended from time
18 to time. [Amendment #1 (SFWF); Amendment #1]

Revision 13 Explanation

19 This revision incorporates the revised *Wildlife Monitoring and Mitigation Plan* that is
20 attached to this order as Attachment A. The WMMP is revised to include the WGS colony
21 assessment that was previously included in the WMMP for SFS.

Revision 14

22 *Page 19, lines 35-41:*

23 85 The certificate holder shall acquire the legal right to create, enhance, maintain and
24 protect a habitat mitigation area as long as the site certificate is in effect by means of an
25 outright purchase, conservation easement or similar conveyance and shall provide a copy
26 of the documentation to the Department. Within the habitat mitigation area, the
27 certificate holder shall improve the habitat quality as described in the *Habitat Mitigation*
28 *Plan* that is incorporated in the *Final Order on Amendment #1 for the Shepherds Flat*
29 ~~Wind Farm~~ as Attachment ~~SFC-C~~ and as amended from time to time. [Amendment #1
30 (SFWF); Amendment #1]

Revision 14 Explanation

31 This revision incorporates the revised *Habitat Mitigation Plan* that is attached to this
32 order as Attachment C. The *Habitat Mitigation Plan* is revised to reflect the changes in
33 acreages of habitats potentially affected by construction of the facility.

Revision 15

Page 20, lines 1-25:

- 86 The certificate holder shall avoid permanent and temporary disturbance to the areas described in (a) through (g) and, during the times indicated, shall avoid construction disturbance in the areas described in (h) ~~and (i)~~ through (k). The certificate holder shall flag these areas for the duration of construction activities nearby and shall ensure that construction personnel avoid disturbance of the areas. The avoidance areas are:
- (a) All Category 1 habitat and those areas of Category 2 habitat shown on the “ODFW-2” Figures 1 through 12 in the Shepherds Flat Wind Farm Application. [Amendment #1 (SFWF)]
 - (b) Areas of Category 3 shrub-steppe habitat as described in the *Final Order on Amendment #1 for the Shepherds Flat Wind Farm*, Section IV.4.(b)A, including three small areas of sage shrub-steppe habitat, one small area of purshia shrub-steppe habitat and one small area of shrub-steppe rabbitbrush habitat. [Amendment #1 (SFWF)]
 - (c) All seeps, riparian areas and vernal pools.
 - (d) All water sources for wildlife, including perennial and intermittent streams, stock ponds and watering stations.
 - (e) All faces of bluffs or rock outcroppings.
 - (f) All trees or other structures that contain active raptor nests.
 - (g) For the facility substation and field workshop, all Category 3 habitat. [Amendment #1 (SFWF)]
 - (h) The area within 1,000 feet of Category 2 Washington ground squirrel (WGS) habitat (as shown on “ODFW-2” Figure 8 in the Shepherds Flat Wind Farm Application) during the period in which the squirrels are active. To determine when the WGS are active, the certificate holder shall hire a qualified independent professional biologist to monitor the on-site colony within the Category 1 WGS habitat area described in the Final Order on the Application. The biologist shall begin monitoring the colony on January 15 if construction activity is occurring within 0.5 miles of the Category 2 WGS habitat at that time. Otherwise, the biologist shall begin monitoring upon the start of construction activity within 0.5 miles of the Category 2 WGS habitat at any time between January 15 and June 30. The biologist shall conduct weekly monitoring to detect signs of WGS activity. If signs of WGS activity are observed, the certificate holder shall halt construction activities within the avoidance area and shall notify the Department. The certificate holder shall flag the avoidance area and ensure that construction personnel avoid disturbance of the area until the biologist has determined that the WGS are no longer active. While the WGS are active, the biologist may suspend weekly monitoring until May 1. The certificate holder may resume construction activities within the avoidance area when the WGS are no longer active, as determined by the absence of WGS activity during three consecutive weeks of monitoring by the biologist. [This text had been removed by Amendment #1 (SFWF) and was restored by Amendment #1.]
 - (i) The area within 0.5 miles of Category 3 curlew nesting habitat and the area within 0.5 miles the BLM Horn Butte Wildlife Area during the nesting season (March 8 through June 15). Before beginning construction, the certificate holder shall provide to the Department a map showing these avoidance areas relative to areas of potential construction disturbance. The certificate holder may engage in construction activities in these areas at times other than the nesting season.
 - (j) The area within 1,000 feet of any essential, limited and irreplaceable Washington ground squirrel (WGS) habitat within the new areas added to the site by Amendment #1 (excluding the areas within the site boundaries of Shepherds Flat North, Shepherds Flat

1 Central and Shepherds Flat South as approved on September 11, 2009) during the period
2 in which the squirrels are active. The certificate holder shall hire a qualified independent
3 professional biologist to conduct pre-construction surveys for State-listed threatened,
4 endangered or sensitive wildlife species in these new areas within 1,000 feet of any area
5 potentially disturbed by facility construction. To determine whether WGS habitat exists
6 and to determine whether WGS are active, the biologist shall search for WGS in suitable
7 habitat using a two-survey protocol approved by the Oregon Department of Fish and
8 Wildlife (ODFW). The certificate holder shall submit the results of the survey to ODFW
9 and to the Department. If signs of WGS activity are observed, the certificate holder shall
10 flag the avoidance area and ensure that construction personnel avoid disturbance of the
11 area until the biologist has determined that the WGS are no longer active.

12 (k) Areas within a suitable buffer around confirmed populations of Laurent’s milk-
13 vetch or any other State-listed threatened or endangered plant species within the new
14 areas added to the site by Amendment #1 (excluding the area within the site boundaries
15 of Shepherds Flat North, Shepherds Flat Central and Shepherds Flat South as approved
16 on September 11, 2009). The certificate holder shall not install facility components or
17 cause temporary disturbance within these areas. The certificate holder shall hire a
18 qualified independent professional biologist to conduct pre-construction surveys for
19 State-listed threatened or endangered plant species in these new areas within 1,000 feet
20 of any area potentially disturbed by facility construction. The certificate holder shall
21 submit the results of the survey to the Department.

22 [Amendment #1]

Revision 15 Explanation

23 This revision modifies Condition 86 to restore subsection (h) to protect previously-
24 identified WGS habitat on land that would be added to SFC by this amendment and removed
25 from SFS under a companion amendment. The revision adds new subsection (j), which
26 requires a pre-construction survey for State-listed threatened, endangered and sensitive
27 wildlife species in the new lands added to SFC by this amendment, as recommended by
28 ODFW. In particular, the certificate-holder would use an ODFW-approved protocol to search
29 for WGS. Any Category 1 WGS habitat identified during the survey would be avoided under
30 subsection (a) of this condition. In addition, the area within a 1,000-foot buffer would be
31 avoided during construction when WGS are active. The revision adds new subsection (k) to
32 ensure avoidance of impact to populations of Laurent’s milk-vetch or other State-listed
33 threatened or endangered plant species that are found during a pre-construction survey.

Revision 16

34 *Page 21, lines 27-30:*

35 92 The certificate holder shall impose and enforce construction and operation speed limits
36 of 5 miles per hour on roads within 1,000 feet of Category 1 or Category 2 Washington
37 ground squirrel habitat and 20 miles per hour on all other facility roads and shall ensure
38 that all construction and operations personnel are instructed on the importance of
39 cautious driving practices while on facility roads. [Amendment #1 (SFWF); Amendment #1]

Revision 16 Explanation

40 This revision modifies Condition 92 to require a reduced speed limit in areas near
41 WGS habitat.

Revision 17

1 Page 24, following line 4:

2 103 Before beginning construction, the certificate holder shall determine whether any
3 construction disturbance would occur in locations not previously investigated for
4 potential jurisdictional waters as described in the Final Order on Amendment #1. The
5 certificate holder shall conduct pre-construction investigations in these new areas within
6 1,000 feet of any area potentially disturbed by facility construction to determine whether
7 any State-jurisdictional waters exist in those locations. The certificate holder shall
8 submit a written report on the pre-construction investigation to the Department of
9 Energy and to the Department of State Lands for approval before beginning construction
10 and shall ensure that construction would have no impact on any jurisdictional water
11 identified in the report. [Amendment #1]

Revision 17 Explanation

12 This revision would add new Condition 103 to the site certificate to require pre-
13 construction survey of any areas not previously surveyed for waters of the state potentially
14 subject to the Removal/Fill law. If any jurisdictional waters are identified, the certificate
15 holder is required to take appropriate measures to avoid impacts on those areas.

VIII. ORDER

16 The Council approves Amendment #1 and issues an amended site certificate, subject
17 to the terms and conditions set forth above.

Issued this 12th day of March, 2010.

THE OREGON ENERGY FACILITY SITING COUNCIL

By: _____
Robert Shiprack, Chair
Oregon Energy Facility Siting Council

Attachments

- Attachment A: Wildlife Monitoring and Mitigation Plan
- Attachment C: Habitat Mitigation Plan
- Attachment D: Amendment Request Comments and Department Responses

Notice of the Right to Appeal

You have the right to appeal this order to the Oregon Supreme Court pursuant to ORS 469.403. 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.