

**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 South

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**FINAL ORDER ON  
AMENDMENT #1**

Oregon Energy Facility Siting Council

March 12, 2010

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

BPA	Bonneville Power Administration
Certificate Holder	Horseshoe Bend 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 SOUTH:  
FINAL ORDER ON AMENDMENT #1**

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**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, Horseshoe Bend Wind LLC for amendment of the site certificate for Shepherds Flat  
4 South (SFS).

5           The Council issued a site certificate for SFS in September 2009. The site certificate  
6 authorized construction and operation of up to 120 wind turbines and related facility  
7 components. The facility would have a peak generating capacity of up to 360 megawatts. The  
8 facility site is entirely on private lands located in Morrow County and Gilliam County south  
9 of Interstate Highway 84 and east of Arlington, Oregon, between State Highways 19 and 74.  
10 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 5, 2009, the certificate holder submitted a “Request to Amend the Site  
14 Certificate for Shepherds Flat South” (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           Joe Misek, Oregon Department of Forestry  
28           Sarah Kelly, Oregon Department of State Lands  
29           Jerry Sauter, Oregon Water Resources Department  
30           Rose Owens, Oregon Department of Fish and Wildlife  
31           Todd Hesse, Oregon Department of Environmental Quality
- 32           · Public Comments  
33           Johnson Meninick, Confederated Tribes and Bands of the Yakama Nation  
34           Marisa Meyer / Gary Miller, U.S. Fish and Wildlife Service  
35           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 47.

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 SFS 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 comments 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.”<sup>1</sup> The Department responded to the comment by email, noting that the  
23 protections are incorporated in Condition 46 of the SFS site certificate and  
24 would continue to apply to the facility if the amendment were approved.<sup>2</sup>
- 25 • Andre Meyer expressed concern about turbine noise impacts and the potential  
26 negative impact on the value of his property. He requested that “Caithness be  
27 required to pay a more fair monetary ‘value’ for the noise easement prior to the  
28 ‘Request for Amendment’ being granted.”<sup>3</sup> Condition 97 of the site certificate  
29 requires the certificate holder to demonstrate compliance with the noise control  
30 regulations in OAR 340-035-0035(1)(b)(B) based on the final design  
31 configuration of the facility. The certificate holder may or may not need a  
32 noise easement to demonstrate compliance with respect to the Meyer property.  
33 If the certificate holder needs a noise easement, obtaining the easement is a  
34 matter of private negotiation between the certificate holder and the landowner.  
35 The Council is not a party to the negotiation and has no authority to impose  
36 payment terms for a noise easement. The Department provided this  
37 information in response to the comment.<sup>4</sup>

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

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

<sup>2</sup> Email from John White, Oregon Department of Energy, March 8, 2010. The condition also applies to  
Shepherds Flat Central.

<sup>3</sup> Email from Andre Meyer, Kalex Farms, March 8, 2010.

<sup>4</sup> Email from John White, Oregon Department of Energy, March 9, 2010.

### III. DESCRIPTION OF THE PROPOSED AMENDMENT

1 The amendment request describes an expansion of the site boundary to accommodate  
2 an alternative route for a 230-kV transmission line to connect the facility to the regional  
3 transmission system operated by the Bonneville Power Administration (BPA). The alternative  
4 route would terminate at the same point of interconnection as described in the site certificate:  
5 a BPA substation currently under construction next to BPA's Slatt Switching Station. The  
6 alternative route for the transmission line would run from the SFS substation north to the  
7 Shepherds Flat Central (SFC) substation and then west to the BPA substation. The certificate  
8 holder proposes to construct the transmission line within either the previously-approved  
9 corridor or the proposed alternative corridor.

10 Companion amendment requests were submitted to the Council by North Hurlburt  
11 Wind LLC for Shepherds Flat North (SFN) and by South Hurlburt Wind LLC for SFC. The  
12 230-kV interconnection lines for SFN, SFC and SFS would be jointly owned by the certificate  
13 holders for the three facilities, and the power from the three facilities would be carried on the  
14 same lines. Contracts among the three certificate holders or with a third party would address  
15 transmission line maintenance. All three facilities would use the same transmission line  
16 corridor. Use of the alternative route would eliminate the need for the interconnection line to  
17 cross an existing high-voltage power line and a County road within the SFN site.

18 The amendment would remove approximately 1,123 acres from the facility site.<sup>5</sup>  
19 These 1,123 acres would be added to the SFC site to accommodate new turbine locations in  
20 SFC.<sup>6</sup> In addition, approximately 1,290 acres of land within the previously-approved SFS site  
21 would be added to the SFC site but would not be removed from SFS. These 1,290 acres  
22 would be retained in SFS for a transmission corridor (no SFS turbines would be located  
23 within the area).<sup>7</sup>

24 Approximately 785 acres within the previously-approved SFC site would be added to  
25 the SFS site as part of the alternate transmission corridor for SFS. In addition, the amendment  
26 would add new lands (lands lying outside the previously-approved SFS or SFC site  
27 boundaries) to the facility site totaling approximately 4,855 acres.<sup>8</sup> This expansion of the  
28 facility site would allow the certificate holder to reconfigure the transmission line and turbine  
29 layout. The new lands include approximately 1,030 acres that are also proposed to be added to  
30 SFC under a companion amendment request.<sup>9</sup> This land would be used as a 230-kV  
31 transmission line corridor for SFS, adjacent to the previously-approved transmission corridor,  
32 so that the line can be reconfigured to reduce the impact on a cultivated field.<sup>10</sup>

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<sup>5</sup> The areas proposed to be removed from the SFS site are shown in the Request for Amendment #1, Section V, Map 1.

<sup>6</sup> A companion amendment request is being submitted to the Council by the SFC certificate holder.

<sup>7</sup> The shared 1,290-acre area lies between Fairview Lane and Cecil Road and is shown as part of the shaded area identified as "Transmission Corridor Option A" in the Request for Amendment #1, Section V, Map 2.

<sup>8</sup> Most of this land 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 SFC site boundary and the BPA Slatt substation (approximately 8.8 acres) and a transmission corridor crossing Eightmile Canyon (approximately 16.2 acres).

<sup>9</sup> Email from Patricia Pilz, January 21, 2010.

<sup>10</sup> Request for Amendment #1, Section I, p. 2).

1 The amendment would reduce the maximum number of turbines at the facility to 116  
2 and would reduce the facility’s maximum peak generating capacity to 290 MW.

3 The Request for Amendment #1 included a request for a general exception to  
4 Condition 40(d) where the adjacent land (outside of the certificate holder’s lease area) is  
5 subject to a separate wind development lease and the wind leaseholders on both parcels have  
6 entered into a setback agreement acceptable to the Department. The certificate holder  
7 withdrew this exception request.<sup>11</sup>

## 1. Amendment Procedure

8 Under OAR 345-027-0050, a site certificate amendment is needed because the  
9 certificate holder proposes to design, construct or operate SFS in a manner different from the  
10 description in the current site certificate. In particular, the certificate holder proposes to  
11 expand the site boundary, which could result in significant adverse impacts that the Council  
12 has not previously addressed and in the need to revise the conditions of the site certificate.

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

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

24 The certificate holder described the proposed changes to the facility in Section III of  
25 the amendment request. The amendment would reduce the maximum generating capacity of  
26 the facility to 290 MW and would reduce the maximum number of wind turbines to 116. The  
27 amendment would change the facility description and location by enlarging the facility site to  
28 increase the micro-siting area for wind turbines and other components and to allow the option  
29 of constructing the 230-kV interconnection line in an alternative corridor. The amendment  
30 would remove other land from the facility site.

31 In Section IV of the amendment request, the certificate holder proposed specific  
32 changes to the site certificate.<sup>12</sup> The Department recommended that the Council approve the  
33 substance of the site certificate amendments proposed by the certificate holder and other  
34 modifications consistent with the amendment request. The Department’s recommended site  
35 certificate revisions are discussed below at page 47. The *Wildlife Monitoring and Mitigation*  
36 *Plan* is incorporated in Condition 83 of the site certificate. The Department’s recommended  
37 modifications of the *Wildlife Monitoring and Mitigation Plan* are addressed in Revision 12  
38 and in Attachment A. The *Habitat Mitigation Plan* is incorporated in Condition 85 of the site

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<sup>11</sup> Email from Patricia Pilz, January 1, 2010.

<sup>12</sup> Request for Amendment #1, Section IV, following p. 3.

1 certificate. The Department’s recommended modifications of the *Habitat Mitigation Plan* are  
2 addressed in Revision 13 and in Attachment C.

### 3. Description of the Facilities Authorized by Amendment #1

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

#### 7 Turbines

8 The Council previously approved construction of up to 120 turbines at SFS. The  
9 amendment would reduce the number of turbines to not more than 116. The certificate holder  
10 has selected a 2.5-MW turbine for the facility.<sup>13</sup> The combined peak generating capacity of  
11 the facility would not exceed 290 MW.

#### 12 Power Collection System

13 Approximately 61 miles of 34.5-kV electric collector cables would connect the  
14 turbines to a facility substation.<sup>14</sup> Most of the collector system would be installed  
15 underground, but segments of the collector system could be located aboveground. The  
16 certificate holder has determined that collector lines would not be understrung on the 230-kV  
17 transmission line structures.<sup>15</sup> The maximum length of double-circuit aboveground segments  
18 would be 3.2 miles (6.4 miles of 3-conductor lines).<sup>16</sup> There would be no single-circuit  
19 segments aboveground. Up to 20 surface junction boxes would be installed to provide service  
20 access to the underground collector lines.<sup>17</sup>

#### 21 Substation and Interconnection

22 A facility substation would be constructed within the SFS site boundary. Power from  
23 the collector system would be stepped-up to 230 kV at the substation. An aboveground 230-  
24 kV transmission line would connect the SFS facility to the regional transmission grid through  
25 the Bonneville Power Administration (BPA) Slatt Switching Station located west of the main  
26 project area. The previously-approved transmission line route (described in the amendment  
27 request as “Option A”) would require a transmission line approximately 17.4 miles long that  
28 would run from the SFS substation north to the SFN substation and then west to the BPA  
29 substation.<sup>18</sup> The proposed alternative transmission line route (“Option B”) would run from  
30 the SFS substation north to the SFC substation and then west to the BPA substation. Under  
31 Option B, the transmission line would be approximately 14.5 miles in length. The amendment  
32 request includes a map showing the Option A and Option B transmission line routes.<sup>19</sup> The  
33 certificate holder would be authorized to use either the previously-approved interconnection  
34 line corridor or the alternative corridor. Under either option, the transmission route would

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<sup>13</sup> Request for Amendment #1, Section I, p. 1.

<sup>14</sup> Email from Patricia Pilz, January 12, 2010.

<sup>15</sup> Email from Patricia Pilz, December 16, 2009.

<sup>16</sup> Table of typical and maximum components (email from Carol Weisskopf, December 22, 2009).

<sup>17</sup> Email from Carol Weisskopf, December 22, 2009.

<sup>18</sup> Length of transmission line based on typical layout (Request for Amendment #1, Section III, p. 1).

<sup>19</sup> Request for Amendment #1, Section V, Map 3.



1 overlap the SFC and SFN sites in a shared corridor. The 230-kV transmission line would be  
2 supported on steel monopole structures.

### 3 **Control System**

4 The Supervisory, Control and Data Acquisition (SCADA) system is a fiber optic  
5 communications network that follows the same segment routes as the collector system. Where  
6 underground, communications lines would be placed in the same trenches as the collector  
7 lines, and aboveground communications lines would run on the same power poles as the  
8 collector lines. The overall length of the SCADA system is the same as the overall length of  
9 the collector system, described above.

### 10 **Access Roads**

11 The amendment would decrease the overall length of new roads to 27.5 miles (from  
12 the previously-approved maximum of 31.5 miles).<sup>20</sup> In addition, approximately 3.1 miles (but  
13 not more than 3.6 miles) of existing ranch roads would be improved. In total, the combined  
14 length of access roads would not exceed 31.1 miles, including both new roads and improved  
15 existing roads. The finished roads would be approximately 16 feet wide. The new roads and  
16 the improved existing roads would have a compacted base of native soil and a graveled  
17 surface to a depth of four to ten inches.<sup>21</sup>

### 18 **Construction Disturbance Areas**

19 During facility construction, there would be approximately 334 acres of temporary  
20 disturbance, based on the typical layout (an increase of up to 106 acres compared to the  
21 previously-approved facility).<sup>22</sup> The certificate holder's estimate of the area of construction  
22 disturbance increased based on discussions with the construction contractor regarding final  
23 design details, which occurred after the Request for Amendment #1 was submitted.<sup>23</sup> The  
24 reasons for the increase are described herein at page 18.

25 Temporary disturbance includes approximately 25.4 miles of new access roads and 3.2  
26 miles of existing ranch roads that would be temporarily widened up to 71 feet wide to  
27 accommodate crane travel. Areas of temporary construction disturbance also include a 7-acre  
28 temporary staging and storage area, approximately 72 acres of temporary construction area at  
29 turbine sites, approximately 57 acres of temporary disturbance for trenching and  
30 approximately 34.5 acres of temporary disturbance associated with construction of  
31 aboveground collector and 230-kV transmission lines.

### 32 **Site and Site Boundary**

33 The *Final Order on Amendment #1 (SFWF)* describes the SFS site and site boundary  
34 as previously approved. If the Council approves Amendment #1, the area within the site  
35 boundary would increase by approximately 4,517 acres to a total of approximately 15,928

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<sup>20</sup> Table of typical and maximum components (email from Carol Weisskopf, December 22, 2009).

<sup>21</sup> Email from Patricia Pilz, January 12, 2010.

<sup>22</sup> Temporary project construction footprint, typical layout (email from Carol Weisskopf, December 22, 2009). There could be up to 409 acres of temporary disturbance under maximum habitat disturbance layout, as shown in Table 4 herein.

<sup>23</sup> Email from Carol Weisskopf, December 22, 2009.

1 acres.<sup>24</sup> The amendment request includes a map of the expanded site boundary, showing the  
2 areas removed and the areas added to the site by the proposed amendment.<sup>25</sup>

#### IV. THE COUNCIL’S SITING STANDARDS: FINDINGS AND CONCLUSIONS

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

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

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

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

##### 1. General Standard of Review

###### **OAR 345-022-0000**

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

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

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

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<sup>24</sup> Approximately 1,123 acres would be removed from the site boundary, and approximately 5,640 acres would be added, for a net increase of 4,517 acres.

<sup>25</sup> Request for Amendment #1, Section V, Map 1.

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.*

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.<sup>26</sup> 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 SFS.<sup>27</sup>

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

### Conclusions of Law

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

### **(b) Retirement and Financial Assurance**

#### **OAR 345-022-0050**

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

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

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

### Findings of Fact

25           In the *Final Order on Amendment #1 (SFWF)*, the Council found that the SFS site  
26 could be restored adequately to a useful, non-hazardous condition following permanent  
27 cessation of construction or operation of the facility.<sup>28</sup> The Council found that the cost of site  
28 restoration would not exceed \$8.887 million in 3<sup>rd</sup> Quarter 2009 dollars.<sup>29</sup> The Council found  
29 that the certificate holder, Horseshoe Bend Wind LLC, had demonstrated a reasonable  
30 likelihood of obtaining a bond or letter of credit for that amount.

31           As described herein, the proposed amendment would enlarge the facility site and  
32 would reduce the maximum number of wind turbines. It would reduce the maximum

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<sup>26</sup> *Final Order on Amendment #1 (SFWF)*, p. 15.

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

<sup>28</sup> *Final Order Amendment #1 (SFWF)*, p. 16.

<sup>29</sup> *Final Order Amendment #1 (SFWF)*, p. 23.

1 combined length of aboveground segments of the collector and SCADA system and would  
2 reduce the number of junction boxes. It would decrease the maximum combined length of  
3 new access roads but would increase the area of temporary disturbance during construction.  
4 The amendment would reduce the maximum length of the 230-kV transmission line.<sup>30</sup>

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

- 10 · 116 GE 2.5-MW turbines, each weighing 302 U.S. tons (including the weight  
11 of steel in the towers, nacelles, internal ladders and platforms).<sup>31</sup>
- 12 · Turbine foundations containing 66 cubic yards of concrete above three feet  
13 below grade.<sup>32</sup>
- 14 · 116 step-up transformers located within the turbine towers.<sup>33</sup>
- 15 · 89 turbine turnouts.<sup>34</sup>
- 16 · Two meteorological towers, one field workshop, one substation.<sup>35</sup>
- 17 · 3.2 miles of double-circuit 34.5-kV transmission segments (6.4 miles of line)  
18 and SCADA lines mounted on up to 58 poles.<sup>36</sup>
- 19 · 20 miles of single-circuit 230-kV transmission line mounted on up to 152 steel  
20 monopoles.<sup>37</sup>
- 21 · 20 junction boxes.<sup>38</sup>
- 22 · 27.5 miles of access roads.<sup>39</sup>
- 23 · Removal of facility components would disturb additional area around the  
24 component footprints. The estimated areas affected and the unit costs to

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

<sup>31</sup> Table of typical and maximum components (email from Carol Weisskopf, December 22, 2009) and wind turbine specifications, Request for Amendment #1 for the Shepherds Flat Wind Farm, Section III, p. 14.

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

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

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

<sup>35</sup> Permanent facilities footprint (email from Carol Weisskopf, December 22, 2009).

<sup>36</sup> Table of typical and maximum components (email from Carol Weisskopf, December 22, 2009).

<sup>37</sup> Table of typical and maximum components (email from Carol Weisskopf, December 22, 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 22, 2009).

<sup>38</sup> Email from Carol Weisskopf, December 22, 2009.

<sup>39</sup> Table of typical and maximum components (email from Carol Weisskopf, December 22, 2009).

1 restore these areas, based on the severity of disturbance expected, are shown  
 2 in the table below.<sup>40</sup>

3 Using these highest-cost assumptions, the Department estimated the site restoration  
 4 cost for SFS as shown in Table 1.<sup>41</sup>

**Table 1: Cost Estimate for Facility Site Restoration (1<sup>st</sup> Quarter 2010 Dollars)**

	Quantity	Unit Cost	Extension
<b><u>Turbines</u></b>			
Disconnect electrical and ready for disassembly (per tower)	116	\$1,061	\$123,067
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 tower foundations (per cubic yard of concrete)	7656	\$38.68	\$296,134
Remove transformers (per transformer)	116	\$2,407	\$279,212
Restore turbine turnouts (per turnout)	89	\$97	\$8,633
<b><u>Met Towers</u></b>			
Dismantle and dispose of met towers (per tower)	2	\$9,483	\$18,966
<b><u>Substation and Field Workshop</u></b>			
Dismantle and dispose of substation	1	\$88,577	\$88,577
Dismantle and dispose of field workshop	1	\$27,798	\$27,798
<b><u>Transmission Line</u></b>			
Remove 230-kV transmission line (per mile)	20	\$15,270	\$305,400
Remove 34.5-kV transmission line and SCADA (per mile)	6.4	\$2,132	\$13,645
Remove junction boxes & electrical to 4' below grade (each)	20	\$1,416	\$28,320
<b><u>Access Roads</u></b>			
Remove roads, grade and seed (per mile)	27.5	\$17,460	\$480,150

<sup>40</sup> 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 22, 2009).

<sup>41</sup> 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 3<sup>rd</sup> Quarter 2009 dollars. Table 1 shows unit costs in 3<sup>rd</sup> Quarter 2009 dollars and an adjustment of the subtotal to 1<sup>st</sup> 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.

<b><u>Restore Additional Areas Disturbed by Facility Removal</u></b>			
Around turbine pads (per acre)	72.25	\$5,988	\$432,633
Around turnarounds and turning radii (per acre)	12.24	\$5,988	\$73,293
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 transmission line poles (per acre)	3.34	\$2,973	\$9,930
Around 230-kV power line poles and pulling disturbance (per acre)	28.74	\$2,973	\$85,444
Around access roads (per acre)	216.11	\$5,988	\$1,294,067
Around temporary transmission access and cross-country crane paths (per acre)	81.07	\$2,973	\$241,021
Laydown and storage areas (per acre)	7.0	\$2,973	\$20,811
<b><u>General Costs</u></b>			
Permits, mobilization, engineering, overhead, utility disconnects (unit cost)	1	\$475,517	\$475,517
<b>Subtotal</b>			<b>\$7,477,101</b>
<b>Subtotal Adjusted to 1<sup>st</sup> Quarter 2010 Dollars</b>			<b>\$7,515,235</b>
Performance Bond		1%	\$75,152
<b>Gross Cost</b>			<b>\$7,590,387</b>
Administration and Project Management		10%	\$759,039
Future Developments Contingency		10%	\$759,039
<b>Total Site Restoration Cost (rounded to nearest \$1,000)</b>			<b>\$9,108,000</b>

1           The Council finds that the SFS 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 \$9.108 million (1<sup>st</sup> Quarter 2010 dollars) adjusted annually as described in  
5 revised Condition 30 is a conservative estimate of the cost to restore the SFS site to a useful,  
6 non-hazardous condition. The Department’s estimate is higher than the amount the Council  
7 previously found to be a reasonable cost to restore SFS to a useful, non-hazardous condition  
8 (\$8.887 million in 3rd Quarter 2009 dollars). The increase in the estimated site restoration  
9 cost is due primarily to the increase in acres of temporary disturbance.

10           The certificate holder provided a letter from JPMorgan Chase Bank, N.A. (Chase)  
11 stating that Chase “would be interested in issuing a letter of credit in the stated amount of up  
12 to \$9,108,000 for the benefit of The Oregon Department of Energy by application of  
13 Horseshoe Bend Wind, LLC.”<sup>42</sup> Chase stated that “there is a reasonable likelihood that Chase  
14 would be inclined to issue” the letter of credit (LC) if “the reimbursement obligations under  
15 the LC would be collateralized and documented in the same manner that Chase has previously  
16 issued letters of credit on behalf of other subsidiaries of Caithness Energy.” The letter does  
17 not constitute a firm commitment by Chase to issue the letter of credit, but it is evidence that  
18 the certificate holder could obtain the necessary letter of credit for SFS. The Council finds  
19 that the certificate holder has demonstrated a reasonable likelihood of obtaining a bond or  
20 letter of credit, satisfactory to the Council, in an amount adequate to restore the SFS site to a  
21 useful, non-hazardous condition.

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

Conclusions of Law

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

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

**(a) Land Use**

**OAR 345-022-0030**

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

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

9 \*\*\*

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

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

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

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

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

33 *(4) The Council may find goal compliance for a proposed facility that does not*  
34 *otherwise comply with one or more statewide planning goals by taking an*  
35 *exception to the applicable goal. Notwithstanding the requirements of ORS*  
36 *197.732, the statewide planning goal pertaining to the exception process or any*  
37 *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           *(a) 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           *(b) 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           *(c) 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           SFS (November 5, 2009).<sup>43</sup> 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 SFS.<sup>44</sup> The  
29           Council found that SFS would occupy more than 20 acres of land in Gilliam County and more  
30           than 20 acres of land in Morrow County and therefore would not comply with Gilliam County  
31           Zoning Ordinance (GCZO) Section 4.020(D)(14) and Morrow County Zoning Ordinance  
32           (MCZO) Section 3.010(D)(16).<sup>45</sup> The Council's previous land use findings are incorporated  
33           herein by this reference. All land within the previously-approved site boundaries of SFS, SFC  
34           and SFN is zoned Exclusive Farm Use (EFU).<sup>46</sup>

35           When a facility does not comply with all of the applicable substantive criteria in the  
36           local jurisdiction, the Council must determine whether the facility otherwise complies with

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

<sup>44</sup> *Final Order on Amendment #1 (SFWF)*, p. 25.

<sup>45</sup> *Final Order on Amendment #1 (SFWF)*, pp. 27-28.

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

1 the applicable statewide planning goals or if an exception to any applicable statewide  
2 planning goal is justified. The Council analyzed SFS for compliance with the requirements of  
3 ORS 215.283 and implementing regulations, specifically OAR 660-033-0120 and -0130, and  
4 the analysis is incorporated herein by this reference.<sup>47</sup>

5 The *Final Order on Amendment #1 (SFWF)* includes the Department’s analysis of  
6 compliance with OAR 660-033-0120 and OAR 660-033-0130, as amended January 2, 2009  
7 (the new rules), as well as analysis under these regulations in effect before the January 2009  
8 amendments (the old rules). As of the date the certificate holder submitted the present  
9 amendment request, neither Gilliam County nor Morrow County had incorporated the January  
10 2009 changes to OAR 660-033-0120 and OAR 660-033-0130 into the local zoning  
11 ordinances. Therefore, the land use analysis must address the old rules and the new rules.

12 Under the old rules, a power generation facility must not occupy more than 12 acres of  
13 high-value farmland or more than 20 acres of non-high-value farmland.<sup>48</sup> The Council has  
14 found that there is no high-value farmland within the previously-approved SFS and SFC site  
15 boundaries.<sup>49</sup> To the extent that the proposed amendment would add areas to the SFS site that  
16 are already included in the previously-approved SFC site boundary, the proposed expansion  
17 of the SFS site occupies non-high-value farmland. Approximately 4,855 acres lying outside  
18 the previously-approved SFS or SFC site boundaries (new lands) would be added to SFS by  
19 the proposed amendment.<sup>50</sup> In the amendment request, the certificate holder provided a map  
20 showing the Land Capability Classifications of all new lands proposed to be added to the SFS  
21 site.<sup>51</sup> The map demonstrates that there is no high-value farmland in these areas.

22 The area that would be occupied by SFS components is shown in Table 2 below:<sup>52</sup>

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

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

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

<sup>50</sup> 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.

<sup>51</sup> Request for Amendment #1, Section V, Map 6.

<sup>52</sup> Based on table of the facility footprint by county (email from Carol Weisskopf, December 23, 2009).

**Table 2: Area Occupied by the Facility**

<b>Structure</b>	<b>Gilliam County (acres)</b>	<b>Morrow County (acres)</b>	<b>Total</b>
Principal use			
Turbine towers, including pad areas and turnouts	2.7	2.3	5
Meteorological towers	<0.1	0	< 0.1
Field workshop	1.4	0	1.4
34.5-kV collector line structures	< 0.1	<0.1	0.1
Access roads	24.8	27.0	51.8
<b>Subtotal</b>	<b>29.0</b>	<b>29.3</b>	<b>58.3</b>
Substation	3.2	0	3.2
230-kV transmission line structures	0.1	<0.1	0.1
<b>Total</b>	<b>32.3</b>	<b>29.3</b>	<b>61.6</b>

1           Comparing Table 2 above with Table 6 in the *Final Order on Amendment #1 (SFWF)*,  
2 the proposed amendment would increase the area occupied by SFS components in Gilliam  
3 County and reduce the area occupied by SFS components in Morrow County. Overall, the  
4 amendment would reduce the total component footprint by approximately 4 acres.

5           Because SFS would occupy more than 20 acres of non-high-value farmland, the  
6 facility does not comply with OAR 660-033-0130 (old rule).<sup>53</sup> In the *Final Order on*  
7 *Amendment #1 (SFWF)*, the Council found that a Goal 3 exception was justified for SFN, SFC  
8 and SFS under ORS 469.504(2)(c) for the same reasons as discussed in the *Final Order on the*  
9 *Application for the Shepherds Flat Wind Farm* with respect to the SFWF.<sup>54</sup> Those findings  
10 are incorporated herein by this reference. The amendment would potentially affect 4,855 acres  
11 outside of the area previously approved for SFS or SFC, but the amendment would reduce the  
12 total land area occupied by the facility components. The proposed amendment does not  
13 change the nature of the land use. The effect of selecting Option A or Option B for the  
14 interconnection route would be a difference in location of the transmission line. It would not  
15 significantly increase the land use impacts associated with the transmission line or change the  
16 nature of those impacts.<sup>55</sup> Likewise, the amendment would reduce the number of turbines, and  
17 the reconfiguration of turbine locations, access roads and other components within a larger  
18 micro-siting area would not significantly increase the impacts of the wind energy facility  
19 compared to the impacts already considered by the Council in the previous orders mentioned  
20 above. The Council finds that a Goal 3 exception is justified for SFS, including the changes  
21 requested in this amendment, for the same reasons discussed in the Council’s previous orders.

22           Under the new rules, OAR 660-033-0130(37)(a) requires a finding that “reasonable  
23 alternatives” to siting a wind power facility on high-value farmland soils have been  
24 considered. As discussed above, SFS, including areas added by the proposed amendment,  
25 would not be located on high-value farmland soils. OAR 660-033-0130(37)(b) applies to

<sup>53</sup> Former OAR 660-033-0130 does not specify whether or not the 20-acre limit applies to a single county.

<sup>54</sup> 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).

<sup>55</sup> Selection of Option B would reduce the length of the 230-kV transmission line distance (and the area occupied by support structures) between SFS and the BPA Slatt substation compared to Option A (Request for Amendment #1, Section III, p. 1).

1 “arable” land and requires specific findings regarding “unnecessary negative impacts on  
2 agricultural operations,” “unnecessary soil erosion or loss that could limit agricultural  
3 productivity,” “unnecessary soil compaction that reduces the productivity of soil for crop  
4 production” and “unabated introduction or spread of noxious weeds and other undesirable  
5 weeds species.”<sup>56</sup> The SFS components would be located on combination of arable and  
6 nonarable lands.<sup>57</sup> Accordingly, the criteria in OAR 660-033-0130(37)(b)(A) through (D)  
7 apply to SFS.

8 OAR 660-033-0130(37)(b)(A) requires that the proposed wind power facility must not  
9 “create unnecessary negative impacts on agricultural operations conducted on the subject  
10 property.” This requirement is substantially similar to the approval standards the local  
11 ordinances of Gilliam County and Morrow County. In the *Final Order on the Application for*  
12 *the Shepherds Flat Wind Farm*, the Council found that the SFWF complied with GCZO  
13 Section 4.020(H), GCZO Section 7.020(Q) and MCZO Section 3.010(D).<sup>58</sup> Each of these  
14 local ordinances require that a conditional use on EFU land must not “force a significant  
15 change in accepted farm or forest practices on surrounding lands devoted to farm or forest  
16 use” and must not “significantly increase the cost of accepted farm or forest practices on  
17 surrounding lands devoted to farm or forest use.” In the *Final Order on Amendment #1*  
18 *(SFWF)*, the Council applied its earlier reasoning and found that the SFC and SFS  
19 components located on arable lands in Gilliam County and Morrow County would not result  
20 in unnecessary negative impacts on agricultural operations.<sup>59</sup> Those findings are incorporated  
21 herein by this reference.

22 OAR 660-033-0130(37)(b)(B) requires that the proposed wind power facility must not  
23 “result in unnecessary soil erosion or loss that could limit agricultural productivity.” OAR  
24 660-033-0130(37)(b)(C) requires that facility construction or maintenance activities must not  
25 “result in unnecessary soil compaction that reduces the productivity of soil for crop  
26 production.” In the *Final Order on Amendment #1 (SFWF)*, the Council found that the SFC  
27 and SFS components located on arable lands in Gilliam County and Morrow County would  
28 not result in unnecessary soil erosion or loss. Potential adverse impacts to soils and measures  
29 to avoid or control soil erosion and compaction are addressed by the Council’s Soil Protection  
30 Standard, discussed below at page 18. Subject to Conditions 11, 36, 73, 75, 76 and 84, the  
31 Council finds that SFS, including the changes proposed by Amendment #1, would comply  
32 with OAR 660-033-0130(37)(b)(B) and OAR 660-033-0130(37)(b)(C).

33 OAR 660-033-0130(37)(b)(D) requires a finding that construction or maintenance  
34 activities would not result in the “unabated introduction or spread of noxious weeds and other  
35 undesirable weeds species.” This requirement may be met by submission of a county-  
36 approved weed control plan. Condition 38 requires the certificate holder to implement a weed  
37 control program that is consistent with the Gilliam County and Morrow County weed control  
38 programs. Condition 84 addresses construction impacts to agricultural land and requires the  
39 certificate holder to implement the *Revegetation Plan*, which includes weed control measures  
40 recommended by Gilliam County and Morrow County weed control authorities. The Council

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<sup>56</sup> 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).”

<sup>57</sup> “Agricultural use by county” (table), Request for Amendment #1, Section IV, p. 3.

<sup>58</sup> *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), pp. 22, 30-32 and 42.

<sup>59</sup> *Final Order on the Amendment #1 (SFWF)*, p. 33.

1 finds that, subject to the site certificate conditions, the construction and operation of SFS,  
2 including components within the expansion areas proposed by Amendment #1, would not  
3 result in unabated introduction or spread of weeds.

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

#### Conclusions of Law

7 Based on the findings of fact, reasoning and conditions discussed above, the Council  
8 finds that SFS, with the changes proposed by Amendment #1, would comply with all  
9 applicable substantive criteria from Gilliam County and Morrow County except GCZO  
10 Section 4.020(D)(14) and MCZO Section 3.010(D)(16). Accordingly, the Council must  
11 proceed with the land use analysis under ORS 469.504(1)(b)(B).

12 If the old rules apply, the Council finds that SFS does not comply with OAR 660-033-  
13 0130(22) because it would occupy more than 20 acres of non-high-value farmland. Therefore,  
14 the facility does not comply with the applicable statewide planning goal (Goal 3). The  
15 Council finds that an exception to Goal 3 is justified under ORS 469.504(2)(c). If the new  
16 rules apply, the Council finds that SFS, with the changes proposed by Amendment #1,  
17 complies with OAR 660-033-0130(37) and otherwise complies with all applicable statewide  
18 planning goals.<sup>60</sup>

19 Based on these findings and the site certificate conditions described herein, the  
20 Council concludes that SFS would comply with the Land Use Standard if Amendment #1  
21 were approved.

#### **(b) Soil Protection**

##### **OAR 345-022-0022**

22 *To issue a site certificate, the Council must find that the design, construction and*  
23 *operation of the facility, taking into account mitigation, are not likely to result in a*  
24 *significant adverse impact to soils including, but not limited to, erosion and*  
25 *chemical factors such as salt deposition from cooling towers, land application of*  
26 *liquid effluent, and chemical spills.*  
27

#### Findings of Fact

28 In the *Final Order on Amendment #1 (SFWF)*, the Council found that the design,  
29 construction and operation of SFS would not result in a significant adverse impact to soils.<sup>61</sup>  
30 Those findings are incorporated herein by this reference. Amendment #1 would add  
31 approximately 5,640 acres to the site boundary, but approval of the amendment request would  
32 not result in any soil impacts of a kind that have not been addressed by the Council.<sup>62</sup>

33 A larger area of temporary disturbance could occur during construction under the  
34 proposed amendment. In the *Final Order on Amendment #1 (SFWF)*, the Council found that

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<sup>60</sup> 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.

<sup>61</sup> *Final Order on Amendment #1 (SFWF)*, p. 34.

<sup>62</sup> Approximately 785 acres of the area added to the SFS site lies within the previously-approved SFC site.

1 approximately 226 acres of land could be temporarily disturbed during construction of SFS,  
2 based on the typical layout.<sup>63</sup> The certificate holder now estimates that temporary disturbance  
3 would affect approximately 334 acres under the typical layout.<sup>64</sup> The increase is primarily due  
4 to the certificate holder's ongoing discussions with the construction contractor, the final  
5 selection of a turbine type for the project and on-site geotechnical investigations. The  
6 certificate holder listed the following considerations affecting the estimate of temporary  
7 disturbance:<sup>65</sup>

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

35           Aside from the increased area of potential construction disturbance, the changes that  
36           would be allowed if Amendment #1 were approved would not substantially change the facts  
37           on which the Council relied in its previous findings regarding impact to soils. The Council  
38           finds that no changes to the site certificate conditions related to soil protection are needed  
39           (Conditions 11, 36, 73, 75, 76 and 84). The Council finds that the design, construction and

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<sup>63</sup> *Final Order on Amendment #1 (SFWF)*, Table 11, pp. 49-50.

<sup>64</sup> Temporary project construction footprint, typical layout (email from Carol Weisskopf, December 22, 2009).

<sup>65</sup> Email from Carol Weisskopf, December 22, 2009.

1 operation of SFS, with the changes proposed by Amendment #1, would not likely result in  
2 significant adverse impact to soils, taking into account the mitigation required by the site  
3 certificate conditions.

Conclusions of Law

4 The Council concludes that SFS would comply with the Council’s Soil Protection  
5 Standard if Amendment #1 were approved.

**(c) Protected Areas**

**OAR 345-022-0040**

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

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

17 *(b) National monuments, including but not limited to John Day Fossil Bed*  
18 *National Monument, Newberry National Volcanic Monument and Oregon Caves*  
19 *National Monument;*

20 *(c) Wilderness areas established pursuant to The Wilderness Act, 16 U.S.C.*  
21 *1131 et seq. and areas recommended for designation as wilderness areas pursuant*  
22 *to 43 U.S.C. 1782;*

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

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

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

32 *(g) National recreation and scenic areas, including but not limited to Oregon*  
33 *Dunes National Recreation Area, Hell’s Canyon National Recreation Area, and*  
34 *the Oregon Cascades Recreation Area, and Columbia River Gorge National*  
35 *Scenic Area;*

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

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

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

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

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

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

13           *Coastal Oregon Marine Experiment Station, Astoria*

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

15           *Agriculture Research and Extension Center, Hermiston*

16           *Columbia Basin Agriculture Research Center, Pendleton*

17           *Columbia Basin Agriculture Research Center, Moro*

18           *North Willamette Research and Extension Center, Aurora*

19           *East Oregon Agriculture Research Center, Union*

20           *Malheur Experiment Station, Ontario*

21           *Eastern Oregon Agriculture Research Center, Burns*

22           *Eastern Oregon Agriculture Research Center, Squaw Butte*

23           *Central Oregon Experiment Station, Madras*

24           *Central Oregon Experiment Station, Powell Butte*

25           *Central Oregon Experiment Station, Redmond*

26           *Central Station, Corvallis*

27           *Coastal Oregon Marine Experiment Station, Newport*

28           *Southern Oregon Experiment Station, Medford*

29           *Klamath Experiment Station, Klamath Falls;*

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

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



1 (p) State wildlife areas and management areas identified in OAR chapter  
2 635, Division 8.

3 \* \* \*

### Findings of Fact

4 In the *Final Order on Amendment #1 (SFWF)*, the Council found that the design,  
5 construction and operation of SFS were not likely to result in significant adverse impact to  
6 protected areas.<sup>66</sup> Those findings are incorporated herein by this reference. The changes that  
7 would be allowed if Amendment #1 were approved would not substantially change the facts  
8 on which the Council relied in its previous findings regarding adverse impacts to protected  
9 areas. Some of the land proposed to be added to the site (785 acres) lies within the site  
10 boundary of SFC, which the Council has previously determined to be in compliance with the  
11 Protected Areas Standard. The amendment would also add approximately 4,855 acres of new  
12 lands to the facility site, consisting of several separate areas adjacent to the previously-  
13 approved site boundary. The amendment request includes a map of these areas.<sup>67</sup> All of the  
14 lands proposed to be added to SFS by this amendment are privately-owned and are not  
15 adjacent to any protected areas.<sup>68</sup> The new areas do not significantly enlarge the analysis area  
16 previously considered by the Council in making findings of compliance with the standard.  
17 The Council finds that SFS, including the area proposed to be added to the site by  
18 Amendment #1, is not located in any protected area listed in OAR 345-022-0040 and that the  
19 design, construction and operation of SFS are not likely to result in a significant adverse  
20 impact to any protected area.

### Conclusions of Law

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

### **(d) Scenic Resources**

#### **OAR 345-022-0080**

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

29 \* \* \*

### Findings of Fact

31 In the *Final Order on Amendment #1 (SFWF)*, the Council found that the design,  
32 construction and operation of SFS, taking mitigation into account and subject to the site  
33 certificate conditions, were not likely to result in significant adverse impact to scenic  
34 resources and values identified as significant or important in applicable federal land

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<sup>66</sup> *Final Order on Amendment #1 (SFWF)*, p. 37.

<sup>67</sup> Request for Amendment #1, Section V, Map 5. Map 1 shows the previously-approved site (in yellow) and all added areas, including areas within SFC.

<sup>68</sup> Request for Amendment #1, Section IV, p. 3.

1 management plans or in local land use plans in the analysis area.<sup>69</sup> Those findings are  
2 incorporated herein by this reference.

3 The changes that would be allowed if Amendment #1 were approved would not  
4 substantially change the facts on which the Council relied in its previous findings regarding  
5 visual impacts on identified scenic resources or values. In several respects, the potential visual  
6 impact of the facility would be reduced. Approval of the amendment would reduce the  
7 maximum number of wind turbines at the facility. The amendment would reduce the  
8 maximum allowed length of the 230-kV interconnection line and would reduce the maximum  
9 allowed length of aboveground collector lines. Although Option B would allow construction  
10 of the interconnection line along a different route than under Option A, the choice of  
11 transmission line route would not significantly affect scenic resources. The proposed  
12 amendment would reduce the maximum combined length of access roads. The Council finds  
13 that the design, construction and operation of SFS are not likely to result in significant  
14 adverse impacts to scenic resources aesthetic values identified as significant or important in  
15 applicable federal land management plans or in local land use plans in the analysis area.

#### Conclusions of Law

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

#### **(e) Recreation**

##### **OAR 345-022-0100**

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

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

26 *(b) The degree of demand;*

27 *(c) Outstanding or unusual qualities;*

28 *(d) Availability or rareness;*

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

30 \* \* \*

#### Findings of Fact

31 In the *Final Order on Amendment #1 (SFWF)*, the Council found that none of the  
32 recreational opportunities in the analysis area met the criteria to be considered "important"  
33 under the factors listed in the standard.<sup>70</sup> Therefore, the Council found that the design,  
34 construction and operation of SFS were not likely to result in significant adverse impacts to

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<sup>69</sup> *Final Order on Amendment #1 (SFWF)*, pp. 37-38.

<sup>70</sup> *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).

1 recreational opportunities in the analysis area. Those findings are incorporated herein by this  
2 reference.

3 The expansion of the site to allow for a larger micrositing area and an optional  
4 transmission line route as requested in Amendment #1 would not affect any recreational  
5 opportunities that were not previously addressed by the Council. Approval of Amendment #1  
6 would not change the facts or circumstances upon which the Council relied in making  
7 findings regarding impacts on recreational opportunities.

#### Conclusions of Law

8 For the reasons discussed above, the Council concludes that SFS would comply with  
9 the Council's Recreation Standard if Amendment #1 were approved.

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

##### **OAR 345-024-0010**

10 *To issue a site certificate for a proposed wind energy facility, the Council must*  
11 *find that the applicant:*  
12

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

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

#### Findings of Fact

19 In the *Final Order on Amendment #1 (SFWF)*, the Council found that the certificate  
20 holder could design, construct and operate SFS to exclude members of the public from close  
21 proximity to the turbine blades and electrical equipment, to preclude structural failure of the  
22 tower or blades that could endanger public safety and to have adequate safety devices and  
23 testing procedures.<sup>71</sup> Those findings are incorporated herein by this reference. To ensure  
24 public safety, the Council included Conditions 12, 26, 40, 47, 59, 60, 61, 62, 63, 64 and 93 in  
25 the site certificate.

26 Under the proposed amendment, the certificate holder would have the option to locate  
27 the 230-kV transmission line in the alternate corridor described herein, but use of the alternate  
28 corridor would not result in any new or increased risk of harm to public safety. Likewise,  
29 reconfiguration of facility components within the expansion areas requested by the  
30 amendment, would not adversely affect public safety. Approval of Amendment #1 would not  
31 change the facts or circumstances upon which the Council relied in making findings regarding  
32 public health and safety at the SFS site.

#### Conclusions of Law

33 For the reasons discussed above, the Council concludes that SFS would comply with  
34 the Council's Public Health and Safety Standards for Wind Energy Facilities if Amendment  
35 #1 were approved.

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<sup>71</sup> *Final Order on Amendment #1 (SFWF)*, pp. 39-40.

**(g) Siting Standards for Wind Energy Facilities**

**OAR 345-024-0015**

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

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

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

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

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

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

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

**Findings of Fact**

In the *Final Order on Amendment #1 (SFWF)*, the Council found that the certificate holder could design and construct SFS to reduce visual impact, to restrict public access and to reduce cumulative adverse environmental impacts in the vicinity to the extent practicable in accordance with the requirements of OAR 345-024-0015.<sup>72</sup> Those findings are incorporated herein by this reference. To address cumulative impacts, the Council included Conditions 58, 63, 86, 90, 91, 94 and 95 in the site certificate.

The proposed amendment would expand the SFS site to allow for a larger micro-siting area and an alternative transmission line route. Nevertheless, significant cumulative impacts of the proposed facility would be reduced. Approval of the amendment would reduce the maximum number of wind turbines at the facility from 120 to 116. The amendment would reduce the permanent footprint of facility components by approximately 4 acres. The amendment would reduce the maximum combined length of new access roads and improvements to existing roads (which would be widened). The amendment would reduce the maximum allowed length of the 230-kV interconnection line from 24.3 miles to 20 miles and would reduce the maximum allowed length of aboveground collector line segments from 22.4 miles to 3.2 miles.<sup>73</sup> The amendment would reduce turbine density from 95 acres per turbine (120 turbines within an 11,411-acre site) to 137 acres per turbine (116 turbines within a 15,928-acre site).

<sup>72</sup> *Final Order on Amendment #1 (SFWF)*, pp. 40-41.

<sup>73</sup> Table of typical and maximum components (email from Carol Weisskopf, December 22, 2009).

1 The certificate holder addressed cumulative impacts to avian and bat species in the  
2 amendment request.<sup>74</sup> The certificate holder noted that the cumulative maximum generating  
3 capacity of SFN, SFC and SFS would be reduced from 909 MW to 845 MW if the Council  
4 approves all three amendment requests. In the cumulative impact studies that have been done  
5 within the Columbia Plateau region, estimates of avian and bat fatalities associated with wind  
6 energy facilities are related to facility generating capacity and to cumulative regional  
7 generating capacity of multiple facilities.<sup>75</sup> The reduction in the cumulative generating  
8 capacity of the three Shepherds Flat facilities would, therefore, result in a reduced impact of  
9 these three facilities on avian and bat fatalities in the region.

10 In light of the reduced impacts of the SFS compared to the facility as previously-  
11 approved, the Council finds that SFS, with the changes proposed by Amendment #1, can be  
12 designed and constructed to reduce visual impact, to restrict public access and to reduce  
13 cumulative adverse environmental impacts in the vicinity to the extent practicable in  
14 accordance with the requirements of OAR 345-024-0015.

#### Conclusions of Law

15 Based on these findings and subject to the conditions of the site certificate, the Council  
16 concludes that SFS would comply with the Council's Siting Standards for Wind Energy  
17 Facilities if Amendment #1 were approved.

#### **(h) Siting Standards for Transmission Lines**

##### **OAR 345-024-0090**

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

20  
21 *(1) Can design, construct and operate the proposed transmission line so that*  
22 *alternating current electric fields do not exceed 9 kV per meter at one meter above*  
23 *the ground surface in areas accessible to the public;*

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

#### Findings of Fact

27 In the *Final Order on Amendment #1 (SFWF)*, the Council found that the certificate  
28 holder could design, construct and operate the proposed transmission line components of SFS  
29 in accordance with the standards described in OAR 345-024-0090.<sup>76</sup> Those findings are  
30 incorporated herein by this reference. The proposed amendment would allow the certificate  
31 holder the option to use a different route for the 230-kV interconnection line, but under either  
32 Option A or Option B, the line would be located on private property with limited public  
33 access. The Council has found that the aboveground 230-kV transmission line would produce

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<sup>74</sup> Request for Amendment #1, Appendix 1, p. 6.

<sup>75</sup> 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.

<sup>76</sup> *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).

1 an electric field well below the 9 kV per meter standard required by OAR 345-024-0090(1).<sup>77</sup>  
2 Condition 81 requires the certificate holder to design all transmission lines to comply with the  
3 electric field standard. Condition 80 requires the certificate holder to ground fencing to reduce  
4 the potential risk of electric shock from induced currents. Condition 17 requires the certificate  
5 holder to design and construct transmission lines in accordance with the requirements of the  
6 National Electrical Safety Code and to implement a program that provides reasonable  
7 assurance that all fences, gates, cattle guards, trailers, or other objects or structures of a  
8 permanent nature that could become inadvertently charged are properly grounded. Approval  
9 of Amendment #1 would not change the facts or circumstances upon which the Council relied  
10 in making findings regarding compliance with the standards in OAR 345-024-0090.

#### Conclusions of Law

11 For the reasons discussed above, the Council concludes that SFS would comply with  
12 the Council's Siting Standards for Transmission Lines if Amendment #1 were approved.

### **4. Standards to Protect Wildlife**

#### **(a) Threatened and Endangered Species**

##### **OAR 345-022-0070**

13 *To issue a site certificate, the Council, after consultation with appropriate state*  
14 *agencies, must find that:*  
15

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

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

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

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

#### Findings of Fact

29 In the *Final Order on Amendment #1 (SFWF)*, the Council found that the design,  
30 construction and operation of SFS would not have the potential to significantly reduce the  
31 likelihood of the survival or recovery of any threatened or endangered plant or wildlife  
32 species listed under Oregon law.<sup>78</sup> Those findings are incorporated herein by this reference.

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<sup>77</sup> *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), pp. 86-87.

<sup>78</sup> *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.

1 The proposed amendment would not significantly change wind facility components that  
2 would be authorized for construction and operation at SFS or otherwise significantly alter the  
3 facts upon which the Council relied in making its earlier findings.

4 In the *Final Order on the Application for the Shepherds Flat Wind Farm*, the Council  
5 found that one State-listed threatened plant species, Laurent’s milk-vetch, has the potential to  
6 occur within the five-mile analysis area around the former SFWF site boundary.<sup>79</sup> The species  
7 was not observed within the SFWF site boundary and was considered not likely to occur  
8 within the site boundary because its range was believed to lie at elevations above 1,970 feet.  
9 The species was recently observed, however, at elevations between 800 to 860 feet.<sup>80</sup> Suitable  
10 habitat for Laurent’s milk-vetch may exist in that elevation range within the proposed  
11 expansion areas that lie outside the previously-approved site boundaries for SFS. The  
12 certificate holder has agreed to survey the area and to avoid impact to threatened or  
13 endangered plant species.<sup>81</sup> In Revision 14 discussed below at page 53, the Council modifies  
14 Condition 86 to require a pre-construction survey for threatened or endangered plant species  
15 and to require exclusion fencing during construction if Laurent’s milk-vetch or any other  
16 threatened or endangered plant species is found.

17 In the *Final Order on the Application for the Shepherds Flat Wind Farm*, the Council  
18 found that that two State-listed endangered wildlife species (gray wolf and Washington  
19 ground squirrel) and two State-listed threatened species (bald eagle and chinook salmon) have  
20 the potential to occur within the five-mile analysis area around the former SFWF site  
21 boundary.<sup>82</sup>

22 Gray wolves may have historically been present in Gilliam or Morrow Counties, but  
23 there have been no recent observations of the species within the analysis area. There is  
24 evidence of natural dispersion of the species into the state from neighboring lands in Idaho.<sup>83</sup>

25 Bald eagles forage and roost along the Columbia River. Eagles are unlikely to forage  
26 in the upland areas within the site boundary due to the lack of suitable perch trees. Conditions  
27 63, 90 and 91 include measures to mitigate the risk of injury to bald eagles.

28 The Council has previously found that there is no suitable habitat for chinook salmon  
29 within the former SFWF site boundary.<sup>84</sup> The new lands proposed to be added to the SFS site  
30 do not contain aquatic habitat.<sup>85</sup>

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<sup>79</sup> 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.

<sup>80</sup> *Final Order on Amendment #1 for the Leaning Juniper II Wind Power Facility* (November 20, 2009), p. 61.

<sup>81</sup> Email from Patricia Pilz, January 13, 2010.

<sup>82</sup> *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/>).

<sup>83</sup> *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), p. 94.

<sup>84</sup> *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.

<sup>85</sup> Request for Amendment #1, Appendix 1, p. 3.

1 In the *Final Order on Amendment #1 (SFWF)*, the Council found that Washington  
2 ground squirrels (WGS) were present near the SFS site boundary and that a portion of the  
3 burrow area was within the site boundary.<sup>86</sup> This area is part of the land proposed to be  
4 removed from SFS and added to SFC. Condition 86(h) includes construction restrictions near  
5 the identified WGS colony to mitigate potential risks to the species. Condition 83 requires the  
6 certificate holder to implement the *Wildlife Monitoring and Mitigation Plan (WMMP)*, which  
7 includes an assessment of the status of the WGS colony for two years after the facility  
8 becomes commercially operational. These requirements would be removed from the SFS site  
9 certificate and added to the SFC site certificate, if the Council approves both companion  
10 amendment requests that have been submitted by the certificate holders.

11 Surveys of suitable habitat within the former SFWF site boundary (plus a 1,000-foot  
12 buffer) were conducted in 2007 and 2008.<sup>87</sup> In May and June 2009, the certificate holder  
13 conducted surveys for WGS within suitable habitat in the area of the proposed Saddle Butte  
14 Wind Park, which included approximately 4,830 acres now proposed to be added to SFS  
15 under this amendment.<sup>88</sup> No active WGS colonies were found.<sup>89</sup> Four areas containing burrow  
16 entrances were found but showed no sign of recent WGS activity.<sup>90</sup> ODFW has requested pre-  
17 construction surveys for threatened, endangered or sensitive wildlife species, including WGS,  
18 in areas having suitable habitat on lands that the Council has not previously approved for a  
19 site certificate.<sup>91</sup> The certificate holder has agreed to conduct pre-construction surveys using a  
20 protocol approved by ODFW and to avoid impacts to the area within 1,000 feet of any  
21 Category 1 WGS habitat that is found within the survey area during the period in which the  
22 squirrels are active. In Revision 14 discussed below at page 53, the Council modifies  
23 Condition 86 to require pre-construction surveys for State-listed threatened, endangered or  
24 sensitive wildlife species in the new areas within 1,000 feet of any area potentially disturbed  
25 by facility construction, including WGS surveys, and to require avoidance of the area within  
26 1,000 feet of any Category 1 WGS habitat during the period that WGS are active.

27 In Revision 15, the Council modifies Condition 92 to include a lower speed limit near  
28 any Category 1 or Category 2 WGS habitat identified during the pre-construction survey.

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

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<sup>86</sup> *Final Order on Amendment #1 (SFWF)*, p. 43; *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), p. 94.

<sup>87</sup> 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).

<sup>88</sup> The certificate holder provided maps showing the areas searched for WGS within and near the proposed expanded SFS site boundary (email from Patricia Pilz, December 16, 2009).

<sup>89</sup> Request for Amendment #1, Attachment 1, p. 4.

<sup>90</sup> 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).

<sup>91</sup> Email from Steve Cherry, ODFW, December 17, 2009.



Conclusions of Law

1 For the reasons discussed above and subject to the site certificate conditions described  
2 herein, the Council concludes that SFS would comply with the Council’s Threatened and  
3 Endangered Species Standard if Amendment #1 were approved.

**(b) Fish and Wildlife Habitat**

**OAR 345-022-0060**

4 *To issue a site certificate, the Council must find that the design, construction and*  
5 *operation of the facility, taking into account mitigation, are consistent with the fish*  
6 *and wildlife habitat mitigation goals and standards of OAR 635-415-0025 in effect*  
7 *as of September 1, 2000.*  
8

Findings of Fact

9 In the *Final Order on Amendment #1 (SFWF)*, the Council found that the design,  
10 construction and operation of SFS would be consistent with the ODFW habitat mitigation  
11 goals and standards.<sup>92</sup> The Council made findings regarding the characteristics of the habitat  
12 types within the SFS site boundary.<sup>93</sup> The Council made findings regarding potential habitat  
13 impacts and mitigation requirements.<sup>94</sup> Those findings are incorporated herein by this  
14 reference.

15 In the amendment request, the certificate holder assessed the proposed expansion areas  
16 for special status plant and wildlife species and identified habitat categories and subtypes.<sup>95</sup>  
17 The proposed amendment would add approximately 5,640 acres to the SFS site, of which  
18 approximately 785 acres lie within the previously-approved SFC site. Approximately 1,123  
19 acres would be removed from the SFS site by this amendment. The certificate holder  
20 estimated the habitat impacts of SFS, including the expansion area, based on a “typical project  
21 layout” as shown in Table 3:<sup>96</sup>

**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)
<b>Category 1</b>				
Raptor nests	RN	0.06	0	0
Wetland	WL	0.03	0	0
<b>Subtotal</b>		<b>0.09</b>	<b>0</b>	<b>0</b>

<sup>92</sup> *Final Order on Amendment #1 (SFWF)*, p. 54.

<sup>93</sup> *Final Order on Amendment #1 (SFWF)*, pp. 49-51.

<sup>94</sup> *Final Order on Amendment #1 (SFWF)*, pp. 51-54.

<sup>95</sup> Request for Amendment #1, Appendix 1.

<sup>96</sup> Based on the habitat disturbance impact table (email from Carol Weisskopf, December 22, 2009).

<b>Category 2</b>				
Grassland	GL	355.68	1.35	0.22
Raptor nests	RN	2.11	0	0
Shrub-steppe – sage	SS-S	562.21	9.42	2.33
Wetland-wash	WL-W	7.99	0	0
<b>Subtotal</b>		<b>927.99</b>	<b>10.77</b>	<b>3</b>
<b>Category 3</b>				
Curlew	CUR	93.69	0	0
Grassland	GL	1215.89	31.06	6.49
Shrub-steppe – rabbitbrush	SS-R	57.25	0.44	0.1
Shrub-steppe – sage	SS-S	203.93	2.11	0.45
<b>Subtotal</b>		<b>1,570.76</b>	<b>33.61</b>	<b>7.04</b>
<b>Category 4</b>				
Grassland	PC	3,268.53	23.96	0.35
Previously cultivated	RS	514.8	12.81	1.79
Rock and soil		53.6	0.19	0.04
<b>Subtotal</b>		<b>3,836.93</b>	<b>36.96</b>	<b>2.18</b>
<b>Category 5</b>				
Previously cultivated	PC	686.37	28.25	5.03
<b>Subtotal</b>		<b>686.37</b>	<b>28.25</b>	<b>5.03</b>
<b>Category 6</b>				
Animal Facility	AF	20.43	0.06	0
Dryland wheat	DW	8,743.2	222.78	43.84
Road and parking	RP	110.46	1.22	0.98
Structures	ST	31.8	0	0
<b>Subtotal</b>		<b>8,905.89</b>	<b>224.06</b>	<b>44.82</b>
<b>Total Area</b>		<b>15,928.03</b>	<b>333.65</b>	<b>61.62</b>

1 For micro-siting purposes, the applicants estimated the maximum habitat impacts of the  
2 SFS facility based on a “worst-case layout.” The estimated areas of affected habitat are shown  
3 in Table 4.<sup>97</sup>

**Table 4: Maximum Habitat Impacts**

Habitat Type	Habitat Subtype	Areas of temporary impact (acres)	Areas of permanent impact (acres)
<b>Category 1</b>			
Raptor nests	RN	0	0
Wetland	WL	0	0
<b>Subtotal</b>		<b>0</b>	<b>0</b>

<sup>97</sup> Based on the habitat disturbance impact table (email from Carol Weisskopf, December 22, 2009).

<b>Category 2</b>			
Grassland	GL	1.74	0.22
Raptor nests	RN	0	0
Shrub-steppe – sage	SS-S	11.53	2.33
Wetland-wash	WL-W	0	0
<b>Subtotal</b>		<b>13.27</b>	<b>3</b>
<b>Category 3</b>			
Curlew	CUR	0	0
Grassland	GL	37.97	6.49
Shrub-steppe – rabbitbrush	SS-R	0.51	0.1
Shrub-steppe – sage	SS-S	2.76	0.45
<b>Subtotal</b>		<b>41.24</b>	<b>7.04</b>
<b>Category 4</b>			
Grassland	PC	31.49	0.38
Previously cultivated	RS	15.55	1.79
Rock and soil		0.31	0.05
<b>Subtotal</b>		<b>47.35</b>	<b>2.22</b>
<b>Category 5</b>			
Previously cultivated	PC	32.38	5.03
<b>Subtotal</b>		<b>32.38</b>	<b>5.03</b>
<b>Category 6</b>			
Animal Facility	AF	0	0
Dryland wheat	DW	273.43	43.84
Road and parking	RP	1.74	0.98
Structures	ST	0	0
<b>Subtotal</b>		<b>275.17</b>	<b>44.82</b>
<b>Total Area</b>		<b>409.41</b>	<b>61.66</b>

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  
13 determine habitat categories under Condition 29 on lands lying within the original SFWF site  
14 boundary.<sup>98</sup>

<sup>98</sup> 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).

1 Compared with the previously-approved site, the typical project layout would decrease  
2 the permanent footprint by approximately 4 acres. Temporary disturbance would increase by  
3 approximately 108 acres for the reasons discussed above at page 18. In the maximum habitat  
4 impacts layout, temporary disturbance would increase by about 116.7 acres. All temporary  
5 disturbance areas must be restored after completion of construction, as required by the  
6 *Revegetation Plan* that is incorporated in Condition 84. No Category 1 habitat would be  
7 affected by the permanent footprint of the facility or by temporary construction disturbance.  
8 Approximately 13 acres Category 2 habitat could be affected temporarily during construction  
9 or by placement of permanent components. In the typical layout, 84 percent of the permanent  
10 footprint of the facility would be on lower-value habitat (Category 4, 5 or 6).

11 The *Final Order on Amendment #1 (SFWF)*, the Council made findings regarding  
12 mitigation of potential adverse impacts to wildlife and wildlife habitat.<sup>99</sup> Those findings are  
13 incorporated herein by this reference. Condition 83 requires the certificate holder to  
14 implement the *Wildlife Monitoring and Mitigation Plan (WMMP)*. In Revision 12 discussed  
15 below at page 52, the Department recommended modification of the WMMP as shown in  
16 Attachment A to remove the WGS colony monitoring component. Because the colony area is  
17 part of the land that would be removed from the SFS site and added to the SFC site, the WGS  
18 monitoring component would apply to SFC under the proposed amendments. Condition 84  
19 requires the certificate holder to implement the *Revegetation Plan* as incorporated in the *Final*  
20 *Order on Amendment #1 (SFWF)* as Attachment SFC-B. The proposed amendment would  
21 increase the area within the site boundary from approximately 11,411 acres to approximately  
22 15,928 acres as shown in Table 3 above but would otherwise require no substantive changes  
23 to the *Revegetation Plan*.<sup>100</sup> Condition 85 requires the certificate holder to implement the  
24 *Habitat Mitigation Plan*. In Revision 13, the Department recommended modification of the  
25 *Habitat Mitigation Plan* as shown in Attachment C to reflect changes in the habitat acreages  
26 potentially affected as shown in Table 4. The size of the habitat mitigation area will be  
27 determined based on the final design configuration of the facility and the habitat assessment  
28 that is required by Condition 29. In Revision 14, the Department recommended modification  
29 of Condition 86 to require the pre-construction surveys for State-listed threatened, endangered  
30 or sensitive wildlife species recommended by ODFW.

#### Conclusions of Law

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

#### **5. Standards Not Applicable to Site Certificate Eligibility**

34 Under ORS 469.501(4), the Council may issue a site certificate without making the  
35 findings required by the standards discussed in this section (Structural Standard, Historic,  
36 Cultural and Archaeological Resources Standard, Public Services Standard and Waste

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<sup>99</sup> *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).

<sup>100</sup> The acreages shown on page 1, lines 21-22, of the previously-approved *Revegetation Plan* for SFS do not reflect the area added by this amendment.

1 Minimization Standard).<sup>101</sup> Nevertheless, the Council may impose site certificate conditions  
2 based on the requirements of these standards.

**(a) Structural Standard**

**OAR 345-022-0020**

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

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

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

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

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

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

\* \* \*

Related Conditions

In the *Final Order on Amendment #1 (SFWF)*, the Council made findings regarding  
the seismic, geological and soil hazards within the SFS site boundary.<sup>102</sup> Those findings are  
incorporated herein by this reference. The site certificate includes conditions addressing  
structural safety (Conditions 12, 13, 14, 47, 48 and 49). The expansion of the site to

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<sup>101</sup> 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.

<sup>102</sup> *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).

1 accommodate a reconfiguration of the wind turbines and related components as well as an  
2 alternative route for a 230-kV transmission line as requested in Amendment #1 would not  
3 result in placement of facility components within geologic areas dissimilar to those that have  
4 been addressed by the Council for the approved site. The Council finds that no changes to the  
5 site certificate conditions related to the Structural Standard are needed.

**(b) Historic, Cultural and Archaeological Resources**

**OAR 345-022-0090**

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

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

11 (b) For a facility on private land, archaeological objects, as defined in ORS  
12 358.905(1)(a), or archaeological sites, as defined in ORS 358.905(1)(c); and

13 (c) For a facility on public land, archaeological sites, as defined in ORS  
14 358.905(1)(c).

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

19 \* \* \*

Related Conditions

20  
21 In the *Final Order on the Application for the Shepherds Flat Wind Farm*, the Council  
22 reviewed cultural resource surveys of the areas within the SFS site boundary and the areas  
23 within the SFC site boundary that would be added to SFS by this amendment.<sup>103</sup> The  
24 Council’s previous findings are incorporated herein by this reference. The cultural resource  
25 surveys were conducted in consultation with the State Historic Preservation Office (SHPO),  
26 the Confederated Tribes of Warm Springs and the Confederated Tribes of the Umatilla Indian  
27 Reservation. The Council adopted Conditions 43, 44 and 45 to safeguard cultural resources in  
28 the SFS area. These conditions would apply as well to the proposed expansion area.

29 The Request for Amendment #1 includes a cultural resource overview of the proposed  
30 site of the Saddle Butte Wind Park.<sup>104</sup> The Saddle Butte overview is relevant because most of  
31 the new lands that would be added to SFS by this amendment lie within the proposed Saddle  
32 Butte Wind Park site. The overview consisted of a literature review and records search of the  
33 area, a discussion of the historical, cultural and ethnographic setting, and recommendations  
34 for field surveys of locations considered to have moderate to high potential for prehistoric or  
35 historic period resources. The overview did not include any on-site ground survey for historic,  
36 cultural or archaeological resources. Condition 43(d) requires the certificate holder to conduct

<sup>103</sup> *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), pp. 118-122.

<sup>104</sup> “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.

1 a field investigation for historic, cultural or archaeological resources prior to construction in  
2 any areas of potential construction disturbance that have not been previously surveyed. The  
3 Council finds that no changes to the site certificate conditions related to the Historic, Cultural  
4 and Archaeological Resources Standard are needed.

**(c) Public Services**

**OAR 345-022-0110**

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

12  
13 *(2) The Council may issue a site certificate for a facility that would produce power*  
14 *from wind, solar or geothermal energy without making the findings described in*  
15 *section (1). However, the Council may apply the requirements of section (1) to*  
16 *impose conditions on a site certificate issued for such a facility.*

17 \* \* \*

Related Conditions

18 In the *Final Order on Amendment #1 (SFWF)*, the Council addressed the potential  
19 impacts of construction and operation of SFS on the ability of public and private providers  
20 within the analysis area to provide public services.<sup>105</sup> The Council's previous findings are  
21 incorporated herein by this reference. The site certificate includes conditions addressing  
22 public services (Conditions 27, 52, 53, 54, 55, 56, 65, 66, 67, 68, 69, 70, 73, 75, 78, 99 and  
23 100). Amendment #1 would expand the facility site to allow for a larger micro-siting area and  
24 an optional transmission line route but would not change the analysis of affected public  
25 services. The Council finds that no changes to the site certificate conditions related to the  
26 Public Services Standard are needed.

**(d) Waste Minimization**

**OAR 345-022-0120**

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

29  
30 *(a) The applicant's solid waste and wastewater plans are likely to minimize*  
31 *generation of solid waste and wastewater in the construction and operation of the*  
32 *facility, and when solid waste or wastewater is generated, to result in recycling*  
33 *and reuse of such wastes;*

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

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<sup>105</sup> *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).

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

Related Conditions

5           In the *Final Order on Amendment #1 (SFWF)*, the Council made findings and adopted  
6 site certificate conditions regarding the solid waste and wastewater likely to be generated  
7 during the construction, operation and retirement of SFS and the impact on surrounding  
8 communities.<sup>106</sup> The Council’s previous findings are incorporated herein by this reference.  
9 The Council adopted Conditions 50, 51, 99, 100, 101 and 102 to address waste management  
10 concerns. Amendment #1 would expand the facility site to allow for a larger micro-siting area  
11 and an optional transmission line route but would not change the analysis of waste  
12 minimization. The Council finds that no changes to the site certificate conditions related to the  
13 Waste Minimization Standard are needed.

**V. OTHER APPLICABLE REGULATORY REQUIREMENTS: FINDINGS AND CONCLUSIONS**

**1. Requirements under Council Jurisdiction**

14           Under ORS 469.503(3) and under the Council’s General Standard of Review (OAR  
15 345-022-0000), the Council must determine that a facility complies with “all other Oregon  
16 statutes and administrative rules identified in the project order, as amended, as applicable to  
17 the issuance of a site certificate for the proposed facility.” Other Oregon statutes and  
18 administrative rules that are applicable to the changes requested in Amendment #1 include the  
19 Department of Environmental Quality (DEQ) noise control regulations, the regulations  
20 adopted by the Department of State Lands (DSL) for removal or fill of material affecting  
21 waters of the state, the Oregon Water Resources Department’s (OWRD) regulations for water  
22 rights and the Council’s statutory authority to consider protection of public health and safety.

**(a) Noise Control Regulations**

23           The applicable noise control regulations are as follows:

24           **OAR 340-035-0035**  
25           **Noise Control Regulations for Industry and Commerce**

26           *(1) Standards and Regulations:*

27           \* \* \*

28           *(b) New Noise Sources:*

29           \* \* \*

30           *(B) New Sources Located on Previously Unused Site:*

31           *(i) No person owning or controlling a new industrial or commercial noise source*  
32           *located on a previously unused industrial or commercial site shall cause or permit*  
33           *the operation of that noise source if the noise levels generated or indirectly caused*

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<sup>106</sup> *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).



1 by that noise source increase the ambient statistical noise levels, L10 or L50, by  
2 more than 10 dBA in any one hour, or exceed the levels specified in Table 8, as  
3 measured at an appropriate measurement point, as specified in subsection (3)(b)  
4 of this rule, except as specified in subparagraph (1)(b)(B)(iii).

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

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

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

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

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

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

41 (V) For purposes of determining whether an operating wind energy facility  
42 complies with the ambient noise standard where a landowner has not waived the  
43 standard, noise levels at the appropriate measurement point are measured when

1           *the facility’s nearest wind turbine is operating over the entire range of wind*  
2           *speeds between cut-in speed and the windspeed corresponding to the maximum*  
3           *sound power level and no turbine that could contribute to the noise level is*  
4           *disabled. The facility complies with the noise ambient background standard if the*  
5           *increase in noise over either the assumed ambient noise level of 26 dBA or to the*  
6           *actual ambient background L10 and L50 noise level, if measured, is not more than*  
7           *10 dBA over this entire range of wind speeds.*

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

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

19           \* \* \*

#### Findings of Fact

20           In the *Final Order on the Application for the Shepherds Flat Wind Farm*, the Council  
21           concluded that the proposed SFWF, subject to site certificate conditions, would comply with  
22           the State noise control regulations.<sup>107</sup> The Council’s findings were based on analysis of  
23           predicted noise levels from a “default layout” that included 280 Siemens SWT-93 2.3-MW  
24           turbines in the northern project area and 23 Vestas V90 3.0-MW turbines in the southern  
25           project area and that included two substations contributing to predicted noise levels. The  
26           Council found that the SFWF would comply with the applicable noise regulations if it were  
27           constructed according to the default layout and if the certificate holder acquired noise waivers  
28           from the owners of five properties where the ambient degradation limit would be exceeded.<sup>108</sup>

29           In the *Final Order on Amendment #1 (SFWF)*, the Council found that the division of  
30           the SFWF into three separate facilities within the previously-approved site boundary of the  
31           SFWF with no increase in the combined maximum number of turbines that could be built  
32           would not significantly change the noise analysis.<sup>109</sup> The Council found that the cumulative  
33           noise emissions from SFN, SFC and SFS would comply with the noise regulations and that  
34           the separate noise emissions from each of the proposed facilities would also comply with the  
35           regulations if each facility were constructed according to the previously-analyzed default  
36           layout and if the certificate holder acquired noise waivers from the owners of properties  
37           where the ambient degradation limit would be exceeded.

38           The changes to SFS requested in the present amendment include expansion of the site  
39           and potential micro-siting area for SFS turbines. Approval of the amendment would decrease

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<sup>107</sup> *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), p. 136.

<sup>108</sup> *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), p. 135.

<sup>109</sup> *Final Order on Amendment #1 (SFWF)*, p. 60.

1 the maximum number of turbines authorized at the facility from 120 to 116. The Department  
2 requested a new noise analysis based on the maximum number of turbines that would be  
3 authorized at the facility if the amendment were approved. The certificate holder provided a  
4 noise analysis based on 116 GE 2.5xl turbines and a revised turbine layout (different from the  
5 layout used in the original noise analysis for SFWF).<sup>110</sup> The certificate holder’s noise analysis  
6 was conducted by Mr. Bruce Walker, PhD of Channel Island Acoustics, the same consultant  
7 who performed the original SFWF noise study. Mr. Kerrie Standlee, P.E. of Daly-Standlee &  
8 Associates, Inc., reviewed the SFS study for the Department and confirmed Walker’s  
9 findings.

10 The original noise study conducted for SFWF did not include sound attenuation  
11 factors for ground absorption and topographical barriers, and so the results were considered to  
12 be very conservative. For the SFS noise analysis, Walker accounted for ground and  
13 topographical attenuation along with atmospheric attenuation and distance attenuation.<sup>111</sup> At  
14 the request of the Department, Walker predicted sound levels at 29 noise sensitive receivers  
15 (Receiver R-1 and Receivers R-12 through R-39) using the manufacturer’s stated “apparent  
16 sound power level” data increased by what was believed to be the “uncertainty” factor. Upon  
17 review of the manufacturer’s specification data, however, Standlee determined that the  
18 certificate holder’s analysis had used the standard deviation of 1.5 decibels (dB) associated  
19 with turbine test reproducibility rather than 3 dB associated with the “uncertainty” factor.<sup>112</sup>

20 The certificate holder elected to use the assumed ambient hourly L<sub>50</sub> noise level of 26  
21 dBA for the background ambient noise level at each noise sensitive receiver as allowed under  
22 OAR 340-035-0035(1)(b)(B)(iii)(I) rather than to conduct noise measurements at the  
23 receivers. Accordingly, to show compliance with the ambient noise degradation test, the noise  
24 generated by the operation of the proposed SFS wind turbines between cut-in wind speed and  
25 the wind speed associated with the maximum sound power level must not cause the hourly L<sub>50</sub>  
26 noise level at any noise sensitive receiver to exceed 36 dBA.

27 The certificate holder proposes to construct up to 116 wind turbines within the site  
28 boundary. The certificate holder requests the flexibility to locate the turbines anywhere within  
29 the proposed site boundary, subject to the conditions of the site certificate. A potential layout  
30 of turbines was provided for 116 GE 2.5-MW turbines.<sup>113</sup> The certificate holder provided A-  
31 weighted overall sound power level and octave band data for the GE wind turbine model that  
32 was used in the noise modeling.<sup>114</sup> To support the conclusion that the submitted layout would  
33 be in compliance with the noise regulations, Walker modeled the sound pressure levels that  
34 would be found at each noise sensitive receiver based on this turbine layout.

35 The noise study results show that the noise radiating from the turbines would not  
36 exceed the DEQ maximum allowable hourly L<sub>50</sub> noise level limit of 50 dBA or the hourly L<sub>10</sub>  
37 noise level limit of 55 dBA at any of the 29 noise sensitive receivers. Standlee considered this  
38 finding to be valid even if the total 3-dBA “uncertainty” factor had been added to the sound  
39 power level in the noise predictions. The results of the study show that, with or without the  
40 inclusion of the additional sound power level adjustment factor, the noise levels at 19 of the

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<sup>110</sup> Email from Patricia Pilz, January 16, 2010.

<sup>111</sup> Walker utilized SoundPLAN 7.0, an ISO 9613-2 compliant noise propagation modeling program.

<sup>112</sup> The manufacturer refers to this adjustment factor as the “K” factor.

<sup>113</sup> Email from Patricia Pilz, January 19, 2010.

<sup>114</sup> Email from Patricia Pilz, January 26, 2010.

1 29 receivers (R-1, R-16, R-17, R-18, R-19, R-20, R-21, R-22, R-24, R-25, R-26, R-27, R-28,  
2 R-29, R-30, R-33, R-34, R-35 and R-36) would exceed the ambient hourly L<sub>50</sub> noise  
3 degradation limit of 36 dBA. Therefore, the certificate holder would be required to either alter  
4 the layout of the turbines in the final layout to reduce noise levels to 36 dBA (or less) at each  
5 residence or obtain waivers from the owners of all 19 noise sensitive properties allowing the  
6 noise levels to rise above the 36 dBA limit.<sup>115</sup>

7 Walker's noise study showed the noise radiating from SFS would be in compliance  
8 with the DEQ ambient noise degradation rule at the remaining ten noise sensitive receivers  
9 (R-12 through R15, R-23, R-31, R-32 and R-37 through R-39). After reviewing the results of  
10 the SoundPLAN calculations, Standlee concluded, however, that turbine noise levels would  
11 likely exceed the ambient noise degradation limit of 36 dBA at receiver R-23.<sup>116</sup> Thus,  
12 Standlee concluded that the certificate holder would be required to either alter the layout of  
13 the turbines in the final layout to reduce noise levels to 36 dBA (or less) at this residence or  
14 obtain a waiver from the owner of the property.<sup>117</sup>

15 Condition 3 requires the certificate holder to operate the facility in accordance with all  
16 applicable state laws and administrative rules. Condition 97 ensures that the final design  
17 configuration of SFS would comply with the noise control regulations. This condition  
18 requires the certificate holder to provide information about the turbines selected and about the  
19 final design layout to the Department before beginning construction. The condition requires  
20 the certificate holder to provide a noise analysis based on that final design and to demonstrate  
21 to the satisfaction of the Department that the facility would comply with the applicable noise  
22 control regulations.

23 The Council has the authority to act in the place of the DEQ to enforce OAR 340-035-  
24 0035(4)(a) and require the owner of an operating noise source to monitor and record the  
25 statistical noise levels upon written notification.<sup>118</sup> Condition 98 requires the certificate holder  
26 to notify the Department of any complaints received about noise from the facility as well as  
27 the actions taken to address them. In the event of a complaint regarding noise levels during  
28 operation of SFS, the Council may require the certificate holder to verify that the facility is  
29 operating in compliance with the noise control regulations.

### Conclusions of Law

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

### **(b) Removal-Fill Law**

33 The Oregon Removal-Fill Law (ORS 196.795 through 196.990) and regulations (OAR  
34 141-085-0500 through 141-085-0785) adopted by DSL require a permit if 50 cubic yards or

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<sup>115</sup> The certificate holder would have the option to conduct measurements to determine the actual ambient L<sub>10</sub> and L<sub>50</sub> background levels rather than using an assumed background L<sub>50</sub> ambient noise level of 26 dBA.

<sup>116</sup> Standlee determined that the predicted noise level at the receiver would be above 36 dBA if the total 3-dBA "uncertainty" factor were included in the calculation.

<sup>117</sup> As with the other 19 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 L<sub>10</sub> and L<sub>50</sub> background levels.

<sup>118</sup> *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), p. 136.

1 more of material is removed, filled or altered within any “waters of the state” at the proposed  
2 site.<sup>119</sup> The Council must determine whether a permit is needed and should be issued. The  
3 U.S. Army Corps of Engineers administers Section 404 of the Clean Water Act, which  
4 regulates the discharge of fill into waters of the United States (including wetlands), and  
5 Section 10 of the Rivers and Harbors Appropriation Act of 1899, which regulates placement  
6 of fill in navigable waters. Federal law may require a Nationwide or Individual fill permit for  
7 the proposed facility if waters of the United States are affected. A single application form (a  
8 Joint Permit Application Form) is used to apply for both the State and federal permits.

### Findings of Fact

9 In the *Final Order on the Application for the Shepherds Flat Wind Farm*, the Council  
10 found that a Removal/Fill Permit was not needed for construction of the SFWF.<sup>120</sup> Those  
11 findings are incorporated herein by this reference. The Council found that the SFWF 230-kV  
12 transmission line would cross one State-jurisdictional water (Eightmile Creek).<sup>121</sup> Impacts  
13 would be avoided by placing transmission line support structures outside a 10-foot buffer  
14 bordering the creek. No material would be removed from the creek channel or added as fill  
15 within the creek channel. In the *Final Order on Amendment #1 (SFWF)*, the Council found  
16 that the division of the SFWF into three separate facilities within the previously-approved site  
17 boundary of the SFWF would not affect any areas that were not previously addressed by the  
18 delineation report on the wetlands and waters within the SFWF analysis area.<sup>122</sup>

19 The proposed amendment would enlarge the site of SFS by approximately 4,517 acres.  
20 Approximately 1,123 acres would be removed from the site boundary, and approximately  
21 5,640 acres would be added. The areas that would be added to the SFS site by this amendment  
22 include approximately 785 acres that lie within the previously-approved SFC site. This land  
23 would be added to the SFS site as part of the alternate transmission corridor for SFS. This  
24 SFC area was addressed by the delineation survey that was done for the SFWF.<sup>123</sup> No State-  
25 jurisdictional waters were found in this area.

26 Approximately 4,830 acres of new lands within the site of the proposed Saddle Butte  
27 Wind Park would instead be added to SFS under this amendment. Aquatic Contracting  
28 conducted a delineation survey for the lands that were proposed for the Saddle Butte Wind  
29 Park.<sup>124</sup> The Project Study Area (PSA) for the Saddle Butte delineation survey included eight  
30 sub-areas. Portions of the new lands proposed to be added to SFS by this amendment are  
31 included in seven of the eight sub-areas. Within the lands proposed to be added to SFS,  
32 Aquatic Contracting found one wetland, described as “a very small (0.02 acre) perennial  
33 palustrine emergent (PEM) seep located within a shallow tributary to Ely Canyon Creek.”<sup>125</sup>

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<sup>119</sup> ORS 196.800(14) defines “Waters of this state.” The term includes wetlands and certain other water bodies.

<sup>120</sup> *Final Order on the Application for the Shepherds Flat Wind Farm* (July 25, 2008), p. 138.

<sup>121</sup> 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).

<sup>122</sup> *Final Order on Amendment #1 (SFWF)*, p. 62.

<sup>123</sup> Mason, Bruce & Girard, Inc, *Wetlands/Waters Delineation Report for Shepherds Flat Wind Farm Project, Gilliam and Morrow Counties, Oregon* (June 8, 2007), Figure 1.

<sup>124</sup> 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.

<sup>125</sup> *Wetland and Waters Delineation Report, Saddle Butte Wind Park, Gilliam and Morrow Counties, Oregon* (August 30, 2009), p. 11.

1 DSL has concurred that the wetland is a State-jurisdictional water.<sup>126</sup> The certificate holder  
2 classified the wetland as Category 1 habitat.<sup>127</sup> The wetland lies approximately 500 feet from  
3 a County road and at least 1,650 feet from the nearest potential construction  
4 disturbance.<sup>128</sup> Aquatic Contracting found seven “highly ephemeral drainages” within the new  
5 lands proposed to be added to SFS.<sup>129</sup> DSL has concurred that the ephemeral waterways that  
6 were identified in the Saddle Butte delineation report are not State-jurisdictional.<sup>130</sup> In  
7 addition, portions of Fourmile Canyon lie within the previously-approved site boundary.  
8 Fourmile Canyon was previously identified as an ephemeral waterway.<sup>131</sup> DSL has concurred  
9 that Fourmile Canyon is not a jurisdictional water.<sup>132</sup>

10 The amendment would add approximately 8.8 acres within the proposed alternate  
11 transmission corridor between SFC and BPA’s new Slatt substation and approximately 16.2  
12 acres within the proposed alternate transmission corridor crossing Eightmile Canyon (a State-  
13 jurisdictional waterway). Condition 72 ensures that the certificate holder would avoid impacts  
14 to Eightmile Creek.

15 DSL has reviewed the amendment request and the three delineation reports that cover  
16 the areas of the three Shepherds Flat projects.<sup>133</sup> DSL has confirmed that, if the project areas  
17 are covered by the three delineations, no further information would be needed.<sup>134</sup> If  
18 construction would occur in any areas outside the previously-surveyed areas, the delineation  
19 might need to be amended.<sup>135</sup> The certificate holder has agreed to conduct a delineation  
20 survey before beginning construction for areas not covered by earlier surveys.<sup>136</sup> In Revision  
21 16, the Council adopts new Condition 103 that would require a preconstruction survey for  
22 potential waters of the state in areas not previously investigated and avoidance of impact on  
23 any jurisdictional waters that are found.

#### Conclusions of Law

24 For the reasons discussed above, the Council concludes that no Removal/Fill Permit  
25 would be required for SFS if Amendment #1 were approved.

#### **(c) Water Rights**

26 Under ORS Chapters 537 and 540 and OAR Chapter 690, OWRD administers water  
27 rights for appropriation and use of the water resources of the state. Under OAR 345-022-

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<sup>126</sup> Letter from Lynne McAllister, DSL, November 9, 2009 (attached to email from Patricia Pilz, November 11, 2009).

<sup>127</sup> Request for Amendment #1, Appendix 1, p. 4.

<sup>128</sup> Request for Amendment #1, Appendix 1, pp. 5-6.

<sup>129</sup> The certificate holder provided a map showing the locations of the ephemeral drainages within the proposed SFS site boundary (email from Patricia Pilz, December 30, 2009).

<sup>130</sup> Letter from Lynne McAllister, DSL, November 9, 2009 (attached to email from Patricia Pilz, November 11, 2009).

<sup>131</sup> Mason, Bruce & Girard, Inc, *Wetlands/Waters Delineation Report for Shepherds Flat Wind Farm Project, Gilliam and Morrow Counties, Oregon* (June 8, 2007), pp. 16-18.

<sup>132</sup> Email from Jess Jordan, DSL, March 4, 2008.

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

<sup>134</sup> Email from Sarah Kelly, DSL, January 20, 2010.

<sup>135</sup> Email from Sarah Kelly, DSL, November 30, 2009.

<sup>136</sup> Email from Patricia Pilz, January 2, 2010.

1 0000(1), the Council must determine whether SFS would comply with these statutes and  
2 administrative rules.

### Findings of Fact

3 In the *Final Order on Amendment #1 (SFWF)*, the Council found that the certificate  
4 holder would not need to obtain a new water right for the water needed by the SFS facility  
5 during construction or operation.<sup>137</sup> The Council found that up to 26,400,000 gallons of water  
6 would be needed for construction of SFS, assuming construction of 120 wind turbines. The  
7 certificate holder would obtain construction water from the City of Arlington or alternatively  
8 from a “service area” that would be permitted, constructed and operated by third-party  
9 contractors.<sup>138</sup> During operation, water would be supplied from an on-site well located at the  
10 SFS field workshop. Condition 78 ensures that less than 5,000 gallons of water per day would  
11 be taken from the on-site well for operational uses.<sup>139</sup>

12 The certificate holder estimates that up to 25,520,000 gallons of water would be  
13 needed for construction of SFS, based on the maximum number of turbines that would be  
14 authorized under this amendment.<sup>140</sup> The possible sources of this water would be the same as  
15 previously considered by the Council in the *Final Order on Amendment #1 (SFWF)*. The  
16 proposed amendment would not change the water use during operation. The Council finds  
17 that the certificate holder would not need to obtain any new water rights for the facility as a  
18 result of the changes requested by this amendment.

### Conclusions of Law

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

### **(d) Public Health and Safety**

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

### Findings of Fact

26 We discuss the Council’s Public Health and Safety Standards for wind energy  
27 facilities above at page 24. In this section, we discuss the issues of fire protection, magnetic  
28 fields and coordination with the Oregon Public Utility Commission and the Boardman  
29 Military Operating Area.

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

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

<sup>139</sup> 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.

<sup>140</sup> Email from Patricia Pilz, December 16, 2009.

### A. Fire Protection

1           In the *Final Order on Amendment #1(SFWF)*, the Council made findings and adopted  
2 conditions regarding fire prevention and response for SFS.<sup>141</sup> Those findings are incorporated  
3 herein by this reference. The proposed amendment would expand the facility site to allow for  
4 a larger micrositing area and an optional transmission line route for a 230-kV transmission  
5 line. The changes requested by the amendment would not result in new fire risks that would  
6 be different from the types of risk already considered by the Council. The site certificate  
7 includes conditions that address fire protection and response (Conditions 53, 54, 55, 56, 58  
8 and 60), and the Council finds that no new fire protection conditions are necessary.

### B. Magnetic Fields

9           Electric transmission lines create both electric and magnetic fields. The electric fields  
10 associated with the proposed transmission lines are addressed above at page 26. The  
11 certificate holder proposes to construct aboveground 230-kV lines and aboveground, single or  
12 double-circuit, 34.5-kV collector lines as described in the amendment request.<sup>142</sup> In the *Final*  
13 *Order on the Application for the Shepherds Flat Wind Farm*, the Council made findings  
14 regarding the magnetic fields that could be produced by these transmission line  
15 configurations.<sup>143</sup> Those findings are incorporated herein by this reference. The *Final Order*  
16 includes references to the scientific literature on the biological effects of exposure to electric  
17 and magnetic fields. The Council has not found sufficient information upon which to set  
18 health-based limits for exposure to magnetic fields.<sup>144</sup> Nevertheless, the Council has  
19 encouraged applicants to implement low-cost measures to reduce or manage public exposure  
20 to magnetic fields from transmission lines under the Council’s jurisdiction. Condition 81  
21 requires the certificate holder to take reasonable steps to reduce or manage human exposure to  
22 electromagnetic fields, including specific measures listed in the condition.

### C. Coordination with the PUC

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

### D. Boardman Military Operating Area

31           In the *Final Order on the Application for the Shepherds Flat Wind Farm*, the Council  
32 made findings regarding the Boardman Military Operating Area (BMOA), which lies to the  
33 east of the SFS site boundary.<sup>145</sup> Those findings are incorporated herein by this reference. The

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

<sup>142</sup> Request for Amendment #1, Section IV, p. 1.

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

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

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



1 certificate holder has agreed to provide the proposed final project layout to the Navy before  
2 construction and to work with the Navy to accommodate the Navy's interest in safe aviation  
3 training routes, which may include adjusting turbine locations where feasible.<sup>146</sup>

### Conclusions of Law

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

## **2. Requirements That Are Not Under Council Jurisdiction**

### **(a) Federally-Delegated Programs**

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

### **(b) Requirements That Do Not Relate to Siting**

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

## **VI. GENERAL APPLICATION OF CONDITIONS**

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

29 In addition to all other conditions referenced or included in this order, the site  
30 certificate holder is subject to all conditions and requirements contained in the rules of the  
31 Council and in local ordinances and state law in effect on the date the amended site certificate  
32 is executed.<sup>147</sup> Under ORS 469.401(2), upon a clear showing of a significant threat to the

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<sup>146</sup> Email from Patricia Pilz, July 17, 2009.

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

1 public health, safety or the environment that requires application of later-adopted laws or  
2 rules, the Council may require compliance with such later-adopted laws or rules.

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

## VII. GENERAL CONCLUSION

7 The proposed amendment would expand the facility site to allow a larger micrositing  
8 area for wind turbines and other components and an optional transmission line route. The  
9 amendment would reduce the maximum number of turbines at the facility to 116 and would  
10 reduce the facility’s maximum peak generating capacity to 290 MW. The Council adopts  
11 revisions to the site certificate as described in the section that follows.

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

- 14 1. The proposed Amendment #1 complies with the requirements of the Oregon  
15 Energy Facility Siting statutes, ORS 469.300 to ORS 469.570 and 469.590 to  
16 469.619.
- 17 2. The proposed Amendment #1 complies with the applicable standards adopted by  
18 the Council pursuant to ORS 469.501.
- 19 3. The proposed Amendment #1 complies with all other Oregon statutes and  
20 administrative rules applicable to the amendment of the site certificate that are  
21 within the Council’s jurisdiction.

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

### 1. The Department’s Recommended Revisions

26 New text proposed by the Department is shown with a single underline. New text  
27 proposed by the certificate holder with concurrence by the Department is shown with a double  
28 underline. Text proposed by the certificate holder but not recommended by the Department is  
29 not shown.<sup>148</sup> Deletions are shown with a strikethrough. The parenthetical references in  
30 square brackets follow standard practice and provide a historical reference of when changes  
31 were made to the site certificate. Page references are to the *Site Certificate for Shepherds Flat*  
32 *South* (September 11, 2009).

#### Revision 1

33 *Page 1, lines 7-15:*

34 The findings of fact, reasoning and conclusions of law underlying the terms and conditions of  
35 this site certificate are set forth in the following documents, incorporated herein by this

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<sup>148</sup> The certificate holder proposed changes to the site certificate as shown in a red-line markup of the Site Certificate in the Request for Amendment #1, Section IV, following p. 3.

1 reference: (a) the Council’s *Final Order on the Application for the Shepherds Flat Wind Farm*  
2 issued on July 25, 2008, ~~and~~ (b) the *Final Order on Amendment #1 for the Shepherds Flat*  
3 *Wind Farm*, and (c) the *Final Order on Amendment #1*. In interpreting this site certificate, any  
4 ambiguity will be clarified by reference to the following, in order of priority: (1) this First  
5 Amended Site Certificate, (2) the *Final Order on Amendment #1*, (23) the *Final Order on*  
6 *Amendment #1 for the Shepherds Flat Wind Farm*, (34) the *Final Order on the Application for*  
7 *the Shepherds Flat Wind Farm* and (45) the record of the proceedings that led to the Final  
8 Orders on the Application and Amendment #1 for the Shepherds Flat Wind Farm and to the  
9 Final Order on Amendment #1. [Amendment #1 (SFWF); Amendment #1]

### Revision 1 Explanation

10 This revision adds a reference in the site certificate to the findings of fact, reasoning  
11 and conclusions in support of the present amendment. The revision establishes the order of  
12 priority in which the underlying documents should be considered in resolving any ambiguity.  
13 The present amendment of the site certificate for SFS is designated as “Amendment #1” and  
14 is distinguished from Amendment #1 for the Shepherds Flat Wind Farm, which is designated  
15 as “Amendment #1 (SFWF).”

### Revision 2

16 *Page 1, lines 16-22:*

17 ~~This site certificate is issued concurrently with site certificates for Shepherds Flat North and~~  
18 ~~Shepherds Flat Central, as described in the Final Order on Amendment #1 for the Shepherds~~  
19 ~~Flat Wind Farm, each of the three relating to a physically and geographically discrete portion~~  
20 ~~of the facility authorized by the Site Certificate for the Shepherds Flat Wind Farm (July 25,~~  
21 ~~2008). Effective upon execution of all three new site certificates, the new site certificates will~~  
22 ~~supersede the Site Certificate for the Shepherds Flat Wind Farm, which will be of no further~~  
23 ~~force and effect. [Text added by Amendment #1 (SFWF) was removed by Amendment #1.]~~

### Revision 2 Explanation

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

### Revision 3

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

33 3. This site certificate does not address, and is not binding with respect to, matters that were  
34 not addressed in the Council’s Final Orders on the Application and Amendment #1 for the  
35 Shepherds Flat Wind Farm and in the Final Order on Amendment #1. Such matters  
36 include, but are not limited to: building code compliance, wage, hour and other labor  
37 regulations, local government fees and charges and other design or operational issues that  
38 do not relate to siting the facility (ORS 469.401(4)) and permits issued under statutes and  
39 rules for which the decision on compliance has been delegated by the federal government  
40 to a state agency other than the Council. 469.503(3). [Amendment #1 (SFWF); Amendment  
41 #1]

### Revision 3 Explanation

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

### Revision 4

3 *Page 2, lines 30-34:*

4 The energy facility is an electric power generating facility with an average electric generating  
5 capacity of up to ~~12097~~ megawatts and a peak generating capacity of not more than ~~360290~~  
6 megawatts that produces power from wind energy. The facility consists of not more than  
7 ~~120116~~ wind turbines. The energy facility is described further in the *Final Order on*  
8 *Amendment #1 for the Shepherds Flat Wind Farm* and in the *Final Order on Amendment #1*.  
9 [Amendment #1 (SFWF); Amendment #1]

### Revision 4 Explanation

10 This revision decreases the maximum number of wind turbines and the maximum  
11 generating capacity of the facility. The revision adds cross-references to descriptions of the  
12 facility in the present order.

### Revision 5

13 *Page 2, line 35, through page 3, line 8:*

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

- 17 · Power Collection System
- 18 · Collector Substation
- 19 · Meteorological towers
- 20 · Field workshop
- 21 · Control system
- 22 · Access roads
- 23 · Additional construction areas

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

### Revision 5 Explanation

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

### Revision 6

27 *Page 3, lines 10-14:*

28 A power collection system operating at 34.5 kilovolts (kV) transports power from each turbine  
29 to a collector substation. To the extent practicable, the collection system is installed  
30 underground at a depth of at least three feet. Segments of the collector system are  
31 aboveground. Aboveground segments are installed on single-pole, cross-arm structures ~~or~~  
32 ~~understrung on the 230 kV transmission line support structures (described below).~~  
33 [Amendment #1]

Revision 6 Explanation

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

Revision 7

3 *Page 3, lines 30-32:*

4 The facility includes up to ~~31.5~~27.5 miles of new roads that provide access to the turbine  
5 strings. The access roads connect to graveled turbine turnouts at the base of each turbine.  
6 [Amendment #1 (SFWF); Amendment #1]

Revision 7 Explanation

7 This revision reduces the maximum combined length of new access roads to 27.5  
8 miles.

Revision 8

9 *Page 10, lines 6-26:*

10 26 The certificate holder shall construct a facility substantially as described in the site  
11 certificate and may select turbines of any type, subject to the following restrictions and  
12 compliance with all other site certificate conditions. Before beginning construction, the  
13 certificate holder shall provide to the Department a description of the turbine types  
14 selected for the facility demonstrating compliance with this condition.

15 (a) The total number of turbines at the facility must not exceed ~~120~~116 turbines.

16 (b) The combined peak generating capacity of the facility must not exceed ~~360~~290  
17 megawatts.

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

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

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

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

25 (g) The certificate holder shall request an amendment of the site certificate to  
26 increase the combined peak generating capacity of the facility beyond ~~360~~290  
27 megawatts, to increase the number of wind turbines to more than ~~120~~116 wind turbines  
28 or to install wind turbines with a hub height greater than 105 meters, a blade tip height  
29 greater than 150 meters or a blade tip clearance less than 25 meters above ground.

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

Revision 8 Explanation

31 This revision decreases the maximum number of wind turbines and the maximum  
32 generating capacity of the facility.

Revision 9

33 *Page 11, lines 4-42:*

34 30 Before beginning construction, the certificate holder shall submit to the State of Oregon  
35 through the Council a bond or letter of credit in the amount described herein naming the  
36 State of Oregon, acting by and through the Council, as beneficiary or payee. The initial  
37 bond or letter of credit amount is either ~~\$8.887~~9.108 million (~~3rd~~<sup>1st</sup> Quarter ~~2009~~2010)

1 dollars), to be adjusted to the date of issuance as described in (b), or the amount  
2 determined as described in (a). The certificate holder shall adjust the amount of the bond  
3 or letter of credit on an annual basis thereafter as described in (b).

4 (a) The certificate holder may adjust the amount of the bond or letter of credit based  
5 on the final design configuration of the facility and turbine types selected by applying  
6 the unit costs and general costs illustrated in Table 3 in the Final Order on Amendment  
7 #1 for the Shepherds Flat Wind Farm and calculating the financial assurance amount as  
8 described in that order, adjusted to the date of issuance as described in (b) and subject to  
9 approval by the Department.

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

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

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

22 (iii) Add 10 percent of the adjusted Gross Cost (ii) for the adjusted administration  
23 and project management costs and 10 percent of the adjusted Gross Cost (ii) for the  
24 adjusted future developments contingency.

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

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

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

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

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

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

### Revision 9 Explanation

37 This revision adjusts the initial financial assurance amount based on the changes  
38 requested in Amendment #1 and expresses the total in 1<sup>st</sup> Quarter 2010 dollars.

### Revision 10

39 *Page 17, lines 1-3:*

40 65 The certificate holder shall construct access roads with a finished width of  
41 approximately 16 feet, a compacted base of native soil and a gravel surface to a depth of  
42 four to ~~sixten~~ sixteen inches. [Amendment #1 (SFWF); Amendment #1]

### Revision 10 Explanation

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

### Revision 11

3 *Page 18, lines 27-33:*

4 79 The certificate holder shall install the 34.5-kV collector system underground to the  
5 extent practicable. The certificate holder shall install underground lines at a minimum  
6 depth of three feet. Based on geotechnical conditions or other engineering  
7 considerations, the certificate holder may install segments of the collector system  
8 aboveground on single-pole, cross-arm structures ~~or understrung on the 230-kV~~  
9 ~~transmission line support structures~~, but the total length of aboveground double-circuit  
10 segments installed on single-pole structures must not exceed ~~19.93.2~~ miles. [Amendment  
11 #1 (SFWF); Amendment #1]

### Revision 11 Explanation

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

### Revision 12

15 *Page 19, lines 21-24:*

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

### Revision 12 Explanation

20 This revision incorporates the revised *Wildlife Monitoring and Mitigation Plan* that is  
21 attached to this order as Attachment A. The WMMP is revised to remove the WGS colony  
22 assessment, which would instead be required under the WMMP for SFC under the companion  
23 amendment request for SFC.

### Revision 13

24 *Page 19, lines 30-36:*

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

### Revision 13 Explanation

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

Revision 14

Page 19, line 37, through page 20, line 36:

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 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) Eight small 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. [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. [Amendment #1 (SFWF)]~~Text removed 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 Central and Shepherds Flat South as approved on September 11, 2009) during the period in which the squirrels are active. The certificate holder shall hire a qualified independent



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

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

20 [Amendment #1]

#### Revision 14 Explanation

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

#### Revision 15

33 *Page 21, lines 36-39:*

34 92 The certificate holder shall impose and enforce construction and operation speed limits  
35 of 5 miles per hour on roads within 1,000 feet of Category 1 or Category 2 WGS habitat  
36 and 20 miles per hour on all other facility roads and shall ensure that all construction and  
37 operations personnel are instructed on the importance of cautious driving practices while  
38 on facility roads. [Amendment #1]

#### Revision 15 Explanation

39 This revision modifies Condition 92 to include a lower speed limit near any Category  
40 1 or Category 2 Washington ground squirrel habitat that is found within the new areas lying  
41 outside previously-approved site boundaries. This would apply only if WGS are found to be

Revision 15

1 Page 21, lines 36-39:

2 92 The certificate holder shall impose and enforce construction and operation speed limits  
3 of 5 miles per hour on roads within 1,000 feet of Category 1 or Category 2 WGS habitat  
4 and 20 miles per hour on all other facility roads and shall ensure that all construction and  
5 operations personnel are instructed on the importance of cautious driving practices while  
6 on facility roads. [Amendment #1]

Revision 15 Explanation

7 This revision modifies Condition 92 to include a lower speed limit near any Category  
8 1 or Category 2 Washington ground squirrel habitat that is found within the new areas lying  
9 outside previously-approved site boundaries. This would apply only if WGS are found to be  
10 active based on the preconstruction survey that is required under Condition 86(j), discussed  
11 above.

Revision 16

12 Page 24, following line 15:

13 103 Before beginning construction, the certificate holder shall determine whether any  
14 construction disturbance would occur in locations not previously investigated for  
15 potential jurisdictional waters as described in the Final Order on Amendment #1. The  
16 certificate holder shall conduct pre-construction investigations in these new areas within  
17 1,000 feet of any area potentially disturbed by facility construction to determine whether  
18 any State-jurisdictional waters exist in those locations. The certificate holder shall  
19 submit a written report on the pre-construction investigation to the Department of  
20 Energy and to the Department of State Lands for approval before beginning construction  
21 and shall ensure that construction would have no impact on any jurisdictional water  
22 identified in the report. [Amendment #1]

Revision 16 Explanation

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

VIII. ORDER

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

Issued this 12<sup>th</sup> day of March, 2010.

THE OREGON ENERGY FACILITY SITING COUNCIL

By: Robert Shiprack  
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.*