

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

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

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**FINAL ORDER ON  
AMENDMENT #1**

The Oregon Energy Facility Siting Council

September 11, 2009

SHEPHERDS FLAT WIND FARM:  
FINAL ORDER ON AMENDMENT #1

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**LIST OF ABBREVIATIONS**

Applicants	North Hurlburt Wind LLC, South Hurlburt Wind LLC and Horseshoe Bend Wind LLC
BLM	Bureau of Land Management
BPA	Bonneville Power Administration
Council	Energy Facility Siting Council
CSF	Caithness Shepherds Flat LLC
CUP	Conditional Use Permit
Department	Oregon Department of Energy
DEQ	Oregon Department of Environmental Quality
DSL	Oregon Department of State Lands
FAA	Federal Aviation Administration
GCZO	Gilliam County Zoning Ordinance
LCDC	Land Conservation and Development Commission
MCZO	Morrow County Zoning Ordinance
MW	megawatt or megawatts
NRCS	U.S. Department of Agriculture, Natural Resources Conservation Service
ODFW	Oregon Department of Fish and Wildlife
OPRD	Oregon Parks and Recreation Department
SCADA	Supervisory, Control and Data Acquisition (the control system for the energy facility)
SHPO	State Historic Preservation Office
SFC	Shepherds Flat Central
SFN	Shepherds Flat North
SFS	Shepherds Flat South
SFWF	Shepherds Flat Wind Farm
Transferees	North Hurlburt Wind LLC, South Hurlburt Wind LLC and Horseshoe Bend Wind LLC
USFWS	U.S. Fish and Wildlife Service
WMMP	Wildlife Monitoring and Mitigation Plan

**SHEPHERDS FLAT WIND FARM:  
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 transferees,  
3 North Hurlburt Wind LLC, South Hurlburt Wind LLC and Horseshoe Bend Wind LLC  
4 (referred to herein collectively as the “transferees” or “applicants”) for amendment of the site  
5 certificate for the Shepherds Flat Wind Farm (SFWF). The applicants are each wholly-owned  
6 subsidiaries of the current certificate holder, Caithness Shepherds Flat LLC (CSF).

7           The Council issued a Site Certificate to CSF for the SFWF in July 2008. The Site  
8 Certificate authorized construction and operation of up to 303 wind turbines and related  
9 facility components. The facility would have a peak generating capacity of up to 909  
10 megawatts. The facility site is entirely on private lands located in Morrow County and Gilliam  
11 County south of Interstate Highway 84 and east of Arlington, Oregon, between State  
12 Highways 19 and 74. The certificate holder has not begun construction of the facility.

13           Caithness Shepherds Flat LLC has notified the Department of a pending transfer of  
14 ownership and control of the SFWF to the transferees.<sup>1</sup> A transfer of the site certificate is  
15 necessary when there is a transfer of the facility (OAR 345-027-0100). The transferees have  
16 submitted this amendment request for a transfer of the site certificate. If approved by the  
17 Council, this amendment would divide the SFWF into three separate facilities, each having an  
18 individual site certificate. The three facilities would be known as Shepherds Flat North,  
19 Shepherds Flat Central and Shepherds Flat South.

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

**II. PROCEDURAL HISTORY AND AMENDMENT PROCESS**

22           On June 15, 2009, the applicants submitted their “Request to Amend the Site  
23 Certificate for the Shepherds Flat Wind Farm” (Request for Amendment #1). On June 19,  
24 2009, the applicants sent copies of the amendment request to a list of reviewing agencies  
25 provided by the Oregon Department of Energy (Department) with a memorandum from the  
26 Department requesting agency comments by July 20, 2009. On June 18, the Department sent  
27 notice of the amendment request to all persons on the Council’s mailing list, to the special list  
28 established for the facility and to an updated list of property owners supplied by the  
29 applicants, requesting public comments by July 20, 2009. In the memorandum to reviewing  
30 agencies and in the public notice, the Department announced that the Council would hold the  
31 informational hearing on the transfer request on July 31, 2009.

32           By letter dated June 19, the Department notified the applicants that the proposed order  
33 would be issued no later than August 18, 2009.

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<sup>1</sup> Letter from Derrel Grant, May 20, 2009.

1 In response to the public and agency notices of the amendment request, the  
2 Department received written comments from the following reviewing agencies and members  
3 of the public:

4 · Reviewing Agencies

5 Jerry Sauter, Oregon Water Resources Department  
6 Jan Houck, Oregon Parks & Recreation Department  
7 Rose Owens, Oregon Department of Fish and Wildlife  
8 Scott White, Oregon Water Resources Department  
9 Susan Lynn White, State Historic Preservation Office

10 · Public Comments

11 John Vanden Brink and Duane Neiffer (cosigned)  
12 Sherry and Mike Eaton  
13 Casey Beard  
14 Henry Davies  
15 Arman and Sandra Kluehe

16 The Department considered all of the comments in preparing the Proposed Order.  
17 Jerry Sauter and Scott White addressed the water needed for construction and advised that the  
18 water could be obtained from municipal sources or under limited licenses but that new water  
19 wells would require a new water right.<sup>2</sup> Construction water sources are discussed herein at  
20 page 62, and the option to use third-party contracts to obtain water for construction is  
21 discussed at page 15. Rose Owens stated that the Oregon Department of Fish and Wildlife has  
22 no concerns about dividing the SFWF into three separate projects, as long as the applicants  
23 mitigate for the additional disturbance from building the additional substation and field  
24 workshop.<sup>3</sup> She also expressed concern for ensuring proper classification of habitat. Habitat  
25 classification and mitigation for temporary and permanent disturbances are discussed herein  
26 beginning at page 44. Jan Houck stated that Oregon Parks & Recreation had no comments  
27 regarding the proposed amendment.<sup>4</sup> Susan White stated that the State Historic Preservation  
28 Office had no comments regarding the proposed amendment except that the standard  
29 regulations to protect archaeological resources should apply.<sup>5</sup> A summary of the public  
30 comments received and the Department's responses are included in Attachment D,  
31 incorporated herein by this reference.

32 On July 31, 2009, the Council held an informational hearing on the site certificate  
33 transfer request, as required under OAR 345-027-0100(7). No one present at the hearing  
34 commented on the proposed transfer, and the Council concluded the hearing.

35 The Department has analyzed the Request for Amendment #1 for compliance with all  
36 applicable Council standards. The Department's recommended findings and conclusions are  
37 discussed herein. The Department recommended that the Council approve the amendment  
38 request, subject to revisions of the Site Certificate described in Attachment E and  
39 incorporated herein by this reference.

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<sup>2</sup> Response form from Jerry Sauter, Oregon Water Resources Department, June 22, 2009; email from Scott White, Oregon Water Resources Department, July 20, 2009.

<sup>3</sup> Email from Rose Owens, Oregon Department of Fish and Wildlife, July 15, 2009.

<sup>4</sup> Email from Jan Houck, Oregon Parks & Recreation Department, June 23, 2009.

<sup>5</sup> Response form from Susan White, State Historic Preservation Office, July 24, 2009.

1 After issuing the Proposed Order on August 6, the Department issued a public notice  
2 as required under OAR 345-027-0070(5) and posted the notice on the Department’s Internet  
3 website. The notice invited public comment and gave a deadline of September 7, 2009, for  
4 comments or contested case requests. The Department received one comment but no  
5 contested case requests by the deadline of September 7.

6 The comment came from Sally Bird, the Cultural Resource Manager for the  
7 Confederated Tribes of the Warm Springs Reservation of Oregon, who expressed concern  
8 about “the cumulative effect to the view scape.”<sup>6</sup> She requested the opportunity for the Tribes  
9 to conduct a cultural property study and asked that her comment be forwarded to the  
10 applicants. The Department has forwarded the comment letter to the applicants. The  
11 Department advised the Council that an extensive cultural resources survey was conducted on  
12 the SFWF site in 2008, including consultation with the Warm Springs Tribes and the  
13 Confederated Tribes of the Umatilla Indian Reservation.

14 At a public meeting in Hood River, Oregon, on September 11, 2009, the Council  
15 considered the Department’s recommendations and voted to approve the amendment request.

### III. DESCRIPTION OF THE PROPOSED AMENDMENT

16 The applicants request amendments to the Site Certificate for the Shepherds Flat Wind  
17 Farm (Site Certificate) that, if approved, would authorize three separate site certificates. North  
18 Hurlburt Wind LLC would be the certificate holder for Shepherds Flat North (SFN), a wind  
19 energy facility consisting of up to 318 megawatts (MW) of peak generating capacity; South  
20 Hurlburt Wind LLC would be the certificate holder for Shepherds Flat Central (SFC) a wind  
21 energy facility consisting of up to 231 MW of peak generating capacity; and Horseshoe Bend  
22 Wind LLC would be the certificate holder for Shepherds Flat South (SFS), a wind energy  
23 facility consisting of up to 360 MW of peak generating capacity.

24 The current Site Certificate for the SFWF authorizes construction of two facility  
25 substations and two field workshops. The proposed amendment would authorize construction  
26 of one additional field workshop to serve Shepherds Flat North and one additional substation  
27 to serve Shepherds Flat Central.

28 The proposed amendment would not enlarge the SFWF site that the Council approved  
29 in the *Final Order on the Application* (July 25, 2008). The three proposed facilities (SFN,  
30 SFC and SFS) would be located within the previously-approved site boundary. The proposed  
31 amendment would not increase the cumulative generating capacity or number of wind  
32 turbines authorized for the three proposed facilities compared with the generating capacity  
33 and number of turbines authorized for the previously-approved SFWF.

#### 1. Amendment Procedure

34 An amendment that transfers the site certificate is subject to the procedures described  
35 in OAR 345-027-0100. To request a transfer, the transferees must submit a written request to  
36 the Department that includes the information described in OAR 345-021-0010(1)(a)  
37 (information about the applicant), (d) (organizational expertise) and (m) (financial capability),

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<sup>6</sup> Letter from Sally Bird, Confederated Tribes of the Warm Springs Reservation, August 27, 2009.

1 a certification that the transferee agrees to abide by all terms and conditions of the site  
2 certificate currently in effect and, if known, the date of the transfer of ownership.<sup>7</sup>

3 The amendment request contains an explicit certification that North Hurlburt Wind  
4 LLC, South Hurlburt Wind LLC and Horseshoe Bend Wind LLC agree to abide by all terms  
5 and conditions of the site certificate currently in effect.<sup>8</sup> The amendment request does not  
6 state the date of the transfer of ownership of the proposed facilities to the transferees. If  
7 approved by the Council, Amendment #1 would authorize the transferees to construct and  
8 operate SFN, SFC and SFS upon the effective dates of the individual site certificates.  
9 Approval of the amendment would transfer all rights and obligations of CSF under the current  
10 site certificate to the new certificate holders upon execution of the new site certificates. Upon  
11 execution of the new site certificates for SFN, SFC and SFS, the original site certificate  
12 granted by the Council on July 25, 2008, will be considered rescinded and void in its entirety.

13 As described in OAR 345-027-0100(12), the Council may act concurrently on the  
14 requests to transfer the site certificate and on the proposed modifications regarding the  
15 additional components (a field workshop and a substation) and third-party contracting for  
16 construction services. The Department and the Council must follow the procedures of OAR  
17 345-027-0100 and the procedures of OAR 345-027-0070 in reviewing the combined  
18 amendment requests.

19 The proposed addition of a field workshop and a substation would require changes to  
20 current conditions. Accordingly, a site certificate amendment is required under OAR 345-027-  
21 0050(1). For these proposed modifications, the Council must consider whether the  
22 amendment would affect any finding made by the Council in the *Final Order on the*  
23 *Application*. In addition, for all site certificate amendments, the Council must consider  
24 whether the amount of the bond or letter of credit required under OAR 345-022-0050 is  
25 adequate (OAR 345-027-0070(10)(d)). We address compliance with these requirements in  
26 Sections IV and V.

27 The Council must hold a public informational hearing before acting on the transfer  
28 request (OAR 345-027-0100(7)). To approve a partial transfer of the site certificate, OAR  
29 345-027-0100(8) requires the Council to find that:

- 30 (a) The transferee complies with the standards described in OAR 345-022-0010,  
31 OAR 345-022-0050 and, if applicable, OAR 345-024-0710(1); and  
32 (b) The transferee is lawfully entitled to possession or control of the site or the  
33 facility described in the site certificate.

34 OAR 345-024-0710(1) pertains to the carbon dioxide emissions standard and is not  
35 applicable in this case. OAR 345-022-0010 is the Organizational Expertise Standard and OAR  
36 345-022-0050 is the Retirement and Financial Assurance Standard. The compliance of the  
37 transferees with these standards is discussed herein at pages 14 and 16.

38 In the amendment request, the transferees state that Caithness Shepherds Flat LLC  
39 “has formed three wholly-owned, single-purpose subsidiaries, in which to vest the legal right

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<sup>7</sup> These requirements are set forth in OAR 345-027-0100(4), which also requires, if applicable, the information described in OAR 345-021-0010(1)(y)(O)(iv) (carbon dioxide emissions). Information relating to the carbon dioxide emissions standard is not applicable to wind energy facilities.

<sup>8</sup> Request for Amendment #1, Section II (attachment).



1 to possession and control of a portion of the previously approved facility” and that the  
2 transferees “will possess and control separate power purchase agreements, interconnect  
3 agreements, land lease agreements and other facility assets.”<sup>9</sup> The transfer will occur when the  
4 financing for the three facilities is completed.<sup>10</sup> The target date for closing the financial  
5 arrangements is December 1, 2009. Once the transfer has been completed, the transferees will  
6 be “lawfully entitled to possession or control of the site of the facility” (the former SFWF).  
7 The proposed site certificates for SFN, SFC and SFS, as revised according to the  
8 Department’s recommended Revisions discussed herein, do not address the terms of the  
9 separate transfer agreements between Caithness Shepherds Flat and the transferees.

## 2. Amendments to the Site Certificate as Proposed by the Applicants

10 In an attachment to the Request for Amendment #1, the applicants propose specific  
11 changes, additions and deletions to the *Site Certificate for the Shepherds Flat Wind Farm*  
12 (July 25, 2008) as applicable to each of the three proposed new facilities.<sup>11</sup> The attachment is  
13 incorporated herein by this reference. The Department recommended that the Council approve  
14 the substance of the site certificate amendments proposed by the applicants and other  
15 modifications consistent with the amendment request. The Department’s recommended  
16 revisions are discussed in Attachment E.

17 In addition to the changes to the language of the Site Certificate, the amendment  
18 request proposes revisions to the *Shepherds Flat Wind Farm: Wildlife Monitoring and*  
19 *Mitigation Plan*, to the *Shepherds Flat Wind Farm: Revegetation Plan* and to the *Shepherds*  
20 *Flat Wind Farm: Habitat Mitigation Plan*.<sup>12</sup> These plans would be modified as applicable to  
21 each of the three proposed facilities. The *Wildlife Monitoring and Mitigation Plan* is  
22 incorporated in Condition 83 of the Site Certificate. The Department’s recommended  
23 modifications of the *Wildlife Monitoring and Mitigation Plan* are addressed in Revision 39  
24 and in Attachments SFN-A, SFC-A and SFS-A. The *Revegetation Plan* is incorporated in  
25 Condition 84 of the Site Certificate. The Department’s recommended modifications of the  
26 *Revegetation Plan* are addressed in Revision 40 and in Attachments SFN-B, SFC-B and SFS-  
27 B. The *Habitat Mitigation Plan* is incorporated in Condition 85 of the Site Certificate. The  
28 Department’s recommended modifications of the *Habitat Mitigation Plan* are addressed in  
29 Revision 41 and in Attachments SFN-C, SFC-C and SFS-C.

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

30 If the Council approves Amendment #1, three new site certificates would be issued.  
31 North Hurlburt Wind LLC would be authorized to construct and operate the SFN facility  
32 described below. South Hurlburt Wind LLC would be authorized to construct and operate the  
33 SFC facility described below. Horseshoe Bend Wind LLC would be authorized to construct  
34 and operate the SFS facility described below. Each certificate holder may allow shared use of  
35 related or supporting facilities by the other certificate holders, subject to compliance with site  
36 certificate conditions.

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<sup>9</sup> Request for Amendment #1, Section I, p. 2.

<sup>10</sup> Email from Patricia Pilz, July 8, 2009.

<sup>11</sup> Request for Amendment #1, Attachment 1.

<sup>12</sup> Request for Amendment #1, Attachments 2, 3 and 4.

**(a) Shepherds Flat North (SFN)**

**Turbines**

SFN consists of up to 106 wind turbines, each having a peak generating capacity of up to 3.3 MW.<sup>13</sup> The combined peak generating capacity of the facility would not exceed 318 MW.<sup>14</sup> Foundation design for each turbine tower would be determined based on site-specific geotechnical information and structural loading requirements of the selected turbine model.<sup>15</sup>

**Power Collection System**

The wind turbines generate power at 690 volts. A step-up transformer would be located adjacent to each tower or within the turbine nacelle and would transform the power to 34.5 kV. Up to 46 miles of 34.5-kV electric collector cables would connect the turbines to a facility substation.<sup>16</sup> Most of the collector system would be installed underground, but up to 17.6 miles of collector system runs would be located aboveground on separate poles or understrung on the supports for the 230-kV transmission line described below. Up to 30 surface junction boxes would be installed to provide service access to the underground collector lines.<sup>17</sup>

**Substation and Interconnection**

A facility substation would be constructed within the SFN site boundary. The substation would occupy an area of approximately 3 acres.<sup>18</sup> The previously-approved SFWF included a similar substation in the north project area, within the site boundary of the proposed SFN.

Power from the collector system would be stepped-up to 230 kV at the substation. An aboveground 230-kV transmission line up to 5.9 miles long would connect the SFN facility to the regional transmission grid through the Bonneville Power Administration (BPA) Slatt Switching Station located west of the main project area.<sup>19</sup> The interconnect facility would be designed, constructed, owned and maintained by BPA, and is not a related or supporting facility.<sup>20</sup> The 230-kV transmission line would be supported on steel monopole structures.<sup>21</sup>

Segments of the 230-kV interconnection route for SFC and SFS would run across the SFN site. The 230-kV lines for SFN, SFC and SFS would be jointly-owned by the certificate holders for the three facilities, and the power from the three facilities would be carried on the same lines.<sup>22</sup> Power would be sold at the bus bar of each facility substation. Contracts among the three certificate holders or with a third party would address transmission line maintenance.

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<sup>13</sup> Under Condition 26 of the Site Certificate, the certificate holder may make the final turbine selection after a site certificate has been issued but before beginning construction. The amendment request describes specifications for several possible turbine types (Request for Amendment #1, Section III, p. 14).

<sup>14</sup> Request for Amendment #1, Section III, p. 1.

<sup>15</sup> Foundations may be cylindrical or slab foundations (Request for Amendment #1, Section III, p. 2).

<sup>16</sup> Request for Amendment #1, Appendix A, Facility Retirement and Site Restoration (table).

<sup>17</sup> Request for Amendment #1, Appendix A, Facility Retirement and Site Restoration (table).

<sup>18</sup> Request for Amendment #1, Section III, p. 3.

<sup>19</sup> Request for Amendment #1, Appendix A, Facility Retirement and Site Restoration (table).

<sup>20</sup> *Final Order on the Application* (July 25, 2008), p. 8.

<sup>21</sup> The electrical load between the SFN substation and Slatt requires the use of steel monopoles instead of wooden H-type support structures (email from Patricia Pilz, July 9, 2009).

<sup>22</sup> Email from Patricia Pilz, June 22, 2009.

1           **Meteorological Towers**

2           The SFN facility would include two permanent meteorological (met) towers to  
3 measure wind conditions.<sup>23</sup>

4           **Field Workshop**

5           The SFN facility would include a new field workshop (approximately 125 feet by 50  
6 feet in size) on a 1.6-acre site.<sup>24</sup> The previously-approved SFWF did not include a field  
7 workshop in the area now proposed for SFN.

8           **Control System**

9           A fiber optic communications network would link the control panels within each wind  
10 turbine to a host computer located in the field workshop.<sup>25</sup> The Supervisory, Control and Data  
11 Acquisition (SCADA) system at the field workshop would collect operating and performance  
12 data from the turbines and the facility's met towers. Up to 46 miles of communication lines  
13 would be installed, mostly underground.<sup>26</sup> Where underground, communications lines would  
14 be placed in the same trenches as the collector lines, and aboveground communications lines  
15 would run on the same power poles as the collector lines. Separate communication lines  
16 would run underground to the met towers.

17           **Access Roads**

18           Approximately 19 miles (but not more than 31 miles) of new roads would be  
19 constructed to provide access to the turbine strings.<sup>27</sup> In addition, approximately 9 miles (but  
20 not more than 13 miles) of existing ranch roads would be improved.<sup>28</sup> The finished roads  
21 would be 16 feet wide.<sup>29</sup> The new roads and the improved existing roads would have a  
22 compacted base of native soil and a graveled surface to a depth of four to six inches  
23 (Condition 65). The access roads would connect to graveled turbine turnouts about 27.5 feet  
24 long and 10 feet wide at the base of each turbine for cylindrical foundations and turnouts  
25 about 46.5 feet long and 10 feet wide for slab foundations.<sup>30</sup>

26           **Construction Disturbance Areas**

27           During facility construction, access roads would be temporarily widened up to 66 feet  
28 wide to accommodate crane travel. In addition, there would be a 5-acre temporary staging and  
29 storage area.<sup>31</sup>

30           **SFN Site and Site Boundary**

31           The SFN site is located in Gilliam County, Oregon, south of Interstate 84 about 4  
32 miles east of Arlington, between State Highways 19 and 74. Except for a portion of the  
33 interconnection corridor, the SFN site is north of Rhea Road. The facility would be located

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<sup>23</sup> Request for Amendment #1, Section III, p. 1. The SFWF included six met towers. Under the proposed amendment, a total of six met towers would be built for SFN, SFC and SFS.

<sup>24</sup> Request for Amendment #1, Appendix A, Description of the Facility (table).

<sup>25</sup> Request for Amendment #1, Section III, p. 4.

<sup>26</sup> Request for Amendment #1, Appendix A, Facility Retirement and Site Restoration (table).

<sup>27</sup> Request for Amendment #1, Appendix A, Facility Retirement and Site Restoration (table).

<sup>28</sup> The combined length of new and existing roads would not exceed 31 miles (Request for Amendment #1, Appendix A, Facility Retirement and Site Restoration (table)).

<sup>29</sup> Request for Amendment #1, Section III, p. 4.

<sup>30</sup> Email from Patricia Pilz, July 9, 2009.

<sup>31</sup> Request for Amendment #1, Section III, p. 4.

1 entirely on private land subject to long-term wind energy leases that CSF has negotiated with  
2 the landowners. There are approximately 8,103 acres within the SFN site boundary. The  
3 amendment request includes a “typical layout” of the SFN facility in a figure labeled  
4 “Shepherds Flat North.”<sup>32</sup>

5 The SFN facility would be located entirely within the site boundary of the previously-  
6 approved SFWF. The site boundary lines of SFN would be straightened in some locations, but  
7 the straightened boundary lines would lie within the boundary lines of the SFWF. No  
8 additional land would be affected by the proposed amendment. A preliminary legal  
9 description was provided in the site certificate application for the SFWF.

## **(b) Shepherds Flat Central (SFC)**

### **Turbines**

10 SFC consists of up to 77 wind turbines, each having a peak generating capacity of up  
11 to 3.3 MW.<sup>33</sup> The combined peak generating capacity of the facility would not exceed 231  
12 MW.<sup>34</sup> Foundation design for each turbine tower would be determined based on site-specific  
13 geotechnical information and structural loading requirements of the selected turbine model.<sup>35</sup>

### **Power Collection System**

14 The wind turbines generate power at 690 volts. A step-up transformer would be  
15 located adjacent to each tower or within the turbine nacelle and would transform the power to  
16 34.5 kV. Up to 34.4 miles of 34.5-kV electric collector cables would connect the turbines to a  
17 facility substation.<sup>36</sup> Most of the collector system would be installed underground, but up to  
18 13.8 miles of collector system runs would be located aboveground on separate poles or  
19 understrung on the supports for the 230-kV transmission line described below. Up to 20  
20 surface junction boxes would be installed to provide service access to the underground  
21 collector lines.<sup>37</sup>

### **Substation and Interconnection**

22 A new facility substation would be constructed within the SFC site boundary. The  
23 substation would occupy an area of approximately 3 acres.<sup>38</sup> The previously-approved SFWF  
24 did not include a substation in the area now proposed for SFC.

25 Power from the collector system would be stepped-up to 230 kV at the substation. An  
26 aboveground 230-kV transmission line up to 8.6 miles long would run from SFC substation to  
27 the SFN substation and from there to regional transmission grid through the BPA Slatt  
28 Switching Station located west of the main project area.<sup>39</sup> The interconnect facility would be

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<sup>32</sup> Request for Amendment #1, Appendix A, Location of the Facility.

<sup>33</sup> Under Condition 26 of the Site Certificate, the certificate holder may make the final turbine selection after a site certificate has been issued but before beginning construction. The amendment request describes specifications for several possible turbine types (Request for Amendment #1, Section III, p. 14).

<sup>34</sup> Request for Amendment #1, Section III, p. 5.

<sup>35</sup> Foundations may be cylindrical or slab foundations (Request for Amendment #1, Section III, pp. 5-6).

<sup>36</sup> Request for Amendment #1, Appendix B, Facility Retirement and Site Restoration (table).

<sup>37</sup> Request for Amendment #1, Appendix B, Facility Retirement and Site Restoration (table).

<sup>38</sup> Request for Amendment #1, Section III, p. 7.

<sup>39</sup> Request for Amendment #1, Appendix B, Facility Retirement and Site Restoration (table).

1 designed, constructed, owned and maintained by BPA, and is not a related or supporting  
2 facility.<sup>40</sup> The 230-kV transmission line would be supported on steel monopole structures.<sup>41</sup>

3 The 230-kV interconnection line micro-siting corridor would overlap the SFN site.<sup>42</sup>  
4 Segments of the 230-kV interconnection route for SFC and SFS would run across the SFN  
5 site. The 230-kV lines for SFN, SFC and SFS would be jointly-owned by the certificate  
6 holders for the three facilities, and the power from the three facilities would be carried on the  
7 same lines.<sup>43</sup> Power would be sold at the bus bar of each facility substation. Contracts among  
8 the three certificate holders or with a third party would address transmission line maintenance.

#### 9 **Meteorological Towers**

10 The SFC facility would include two permanent meteorological (met) towers to  
11 measure wind conditions.<sup>44</sup>

#### 12 **Field Workshop**

13 The SFC facility would include a field workshop (approximately 125 feet by 50 feet in  
14 size) on a 1.6-acre site.<sup>45</sup> The previously-approved SFWF included a similar field workshop in  
15 the area now proposed for SFC.

#### 16 **Control System**

17 A fiber optic communications network would link the control panels within each wind  
18 turbine to a host computer located in the field workshop.<sup>46</sup> The SCADA system at the field  
19 workshop would collect operating and performance data from the turbines and the facility's  
20 met towers. Up to 34.4 miles of communication lines would be installed, mostly  
21 underground.<sup>47</sup> Where underground, communications lines would be placed in the same  
22 trenches as the collector lines, and aboveground communications lines would run on the same  
23 power poles as the collector lines. Separate communication lines would run underground to  
24 the met towers.

#### 25 **Access Roads**

26 Approximately 21 miles (but not more than 25 miles) of new roads would be  
27 constructed to provide access to the turbine strings.<sup>48</sup> In addition, approximately 4 miles (but  
28 not more than 7 miles) of existing ranch roads would be improved.<sup>49</sup> The finished roads  
29 would be 16 feet wide.<sup>50</sup> The new roads and the improved existing roads would have a  
30 compacted base of native soil and a graveled surface to a depth of four to six inches

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<sup>40</sup> *Final Order on the Application* (July 25, 2008), p. 8.

<sup>41</sup> The electrical load between the SFC substation and Slatt requires the use of steel monopoles instead of wooden H-type support structures (email from Patricia Pilz, July 9, 2009).

<sup>42</sup> The transmission corridor micro-siting area is illustrated on the figure labeled "Shepherds Flat Central" showing the typical SFC layout (Request for Amendment #1, Appendix B, Location of the Facility).

<sup>43</sup> Email from Patricia Pilz, June 22, 2009.

<sup>44</sup> Request for Amendment #1, Section III, p. 6. The SFWF included six met towers. Under the proposed amendment, a total of six met towers would be built for SFN, SFC and SFS.

<sup>45</sup> Request for Amendment #1, Appendix B, Description of the Facility (table).

<sup>46</sup> Request for Amendment #1, Section III, pp. 7-8.

<sup>47</sup> Request for Amendment #1, Appendix B, Facility Retirement and Site Restoration (table).

<sup>48</sup> Request for Amendment #1, Appendix B, Facility Retirement and Site Restoration (table).

<sup>49</sup> The combined length of new and existing roads would not exceed 28 miles (Request for Amendment #1, Appendix B, Facility Retirement and Site Restoration (table)).

<sup>50</sup> Request for Amendment #1, Section III, p. 8.

1 (Condition 65). The access roads would connect to graveled turbine turnouts about 27.5 feet  
2 long and 10 feet wide at the base of each turbine for cylindrical foundations and turnouts  
3 about 46.5 feet long and 10 feet wide for slab foundations.<sup>51</sup>

#### 4 **Construction Disturbance Areas**

5 During facility construction, access roads would be temporarily widened up to 66 feet  
6 wide to accommodate crane travel.

#### 7 **SFC Site and Site Boundary**

8 The SFC site is located in Gilliam and Morrow counties, south of Interstate 84  
9 approximately 5 miles southeast of Arlington, between State Highways 19 and 74. Except for  
10 a portion of the interconnection corridor, the SFC site is south of Rhea Road and north of  
11 Fairview Lane. The facility would be located entirely on private land subject to long-term  
12 wind energy leases that CSF has negotiated with the landowners. There are approximately  
13 6,935 acres within the SFC site boundary. The amendment request includes a “typical layout”  
14 of the SFC facility in a figure labeled “Shepherds Flat Central.”<sup>52</sup>

15 The SFC facility would be located entirely within the site boundary of the previously-  
16 approved SFWF. The site boundary lines of SFC would be straightened in some locations, but  
17 the straightened boundary lines would lie within the boundary lines of the SFWF. No  
18 additional land would be affected by the proposed amendment. A preliminary legal  
19 description was provided in the site certificate application for the SFWF.

### (c) **Shepherds Flat South (SFS)**

#### 20 **Turbines**

21 SFS consists of up to 120 wind turbines, each having a peak generating capacity of up  
22 to 3.3 MW.<sup>53</sup> The combined peak generating capacity of the facility would not exceed 360  
23 MW.<sup>54</sup> Foundation design for each turbine tower would be determined based on site-specific  
24 geotechnical information and structural loading requirements of the selected turbine model.<sup>55</sup>

#### 25 **Power Collection System**

26 The wind turbines generate power at 690 volts. A step-up transformer would be  
27 located adjacent to each tower or within the turbine nacelle and would transform the power to  
28 34.5 kV. Up to 61.4 miles of 34.5-kV electric collector cables would connect the turbines to a  
29 facility substation.<sup>56</sup> Most of the collector system would be installed underground, but up to  
30 22.4 miles of collector system runs would be located aboveground on separate poles or  
31 understrung on the supports for the 230-kV transmission line described below. Up to 30  
32 surface junction boxes would be installed to provide service access to the underground  
33 collector lines.<sup>57</sup>

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<sup>51</sup> Email from Patricia Pilz, July 9, 2009.

<sup>52</sup> Request for Amendment #1, Appendix B, Location of the Facility.

<sup>53</sup> Under Condition 26 of the Site Certificate, the certificate holder may make the final turbine selection after a site certificate has been issued but before beginning construction. The amendment request describes specifications for several possible turbine types (Request for Amendment #1, Section III, p. 14).

<sup>54</sup> Request for Amendment #1, Section III, p. 9.

<sup>55</sup> Foundations may be cylindrical or slab foundations (Request for Amendment #1, Section III, pp. 9-10).

<sup>56</sup> Request for Amendment #1, Appendix C, Facility Retirement and Site Restoration (table).

<sup>57</sup> Request for Amendment #1, Appendix C, Facility Retirement and Site Restoration (table).

1           **Substation and Interconnection**

2           A facility substation would be constructed within the SFS site boundary. The  
3 substation would occupy an area of approximately 3 acres.<sup>58</sup> The previously-approved SFWF  
4 included a similar substation in the south project area, within the site boundary of the  
5 proposed SFS.

6           Power from the collector system would be stepped-up to 230 kV at the substation. An  
7 aboveground 230-kV transmission line up to 24.3 miles long would connect the SFS facility  
8 to the regional transmission grid through the Bonneville Power Administration (BPA) Slatt  
9 Switching Station located west of the main project area.<sup>59</sup> The interconnect facility would be  
10 designed, constructed, owned and maintained by BPA, and is not a related or supporting  
11 facility.<sup>60</sup> The 230-kV transmission line would be supported on steel monopole structures or  
12 wooden H-type support structures.<sup>61</sup>

13           The 230-kV interconnection line micrositing corridor would overlap both the SFN and  
14 SFC sites.<sup>62</sup> The 230-kV lines for SFN, SFC and SFS would be jointly-owned by the  
15 certificate holders for the three facilities, and the power from the three facilities would be  
16 carried on the same lines.<sup>63</sup> Power would be sold at the bus bar of each facility substation.  
17 Contracts among the three certificate holders or with a third party would address transmission  
18 line maintenance.

19           **Meteorological Towers**

20           The SFS facility would include two permanent meteorological (met) towers to  
21 measure wind conditions.<sup>64</sup>

22           **Field Workshop**

23           The SFS facility would include a field workshop (approximately 84 feet by 50 feet in  
24 size) on a 1.4-acre site.<sup>65</sup> The previously-approved SFWF included a similar field workshop in  
25 the south project area, within the site boundary of the proposed SFS.

26           **Control System**

27           A fiber optic communications network would link the control panels within each wind  
28 turbine to a host computer located in the field workshop.<sup>66</sup> The SCADA system at the field  
29 workshop would collect operating and performance data from the turbines and the facility's  
30 met towers. Up to 61.4 miles of communication lines would be installed, mostly  
31 underground.<sup>67</sup> Where underground, communications lines would be placed in the same  
32 trenches as the collector lines, and aboveground communications lines would run on the same

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<sup>58</sup> Request for Amendment #1, Section III, p. 11.

<sup>59</sup> Request for Amendment #1, Appendix C, Facility Retirement and Site Restoration (table).

<sup>60</sup> *Final Order on the Application* (July 25, 2008), p. 8.

<sup>61</sup> Email from Patricia Pilz, July 9, 2008.

<sup>62</sup> The transmission corridor micrositing area is illustrated on the figure labeled "Shepherds Flat Central" showing the typical SFC layout (Request for Amendment #1, Appendix C, Location of the Facility).

<sup>63</sup> Email from Patricia Pilz, June 22, 2009.

<sup>64</sup> Request for Amendment #1, Section III, p. 10. The SFWF included six met towers. Under the proposed amendment, a total of six met towers would be built for SFN, SFC and SFS.

<sup>65</sup> Request for Amendment #1, Appendix C, Description of the Facility (table), p. 1.

<sup>66</sup> Request for Amendment #1, Section III, p. 11.

<sup>67</sup> Request for Amendment #1, Appendix C, Facility Retirement and Site Restoration (table).

1 power poles as the collector lines. Separate communication lines would run underground to  
2 the met towers.

### 3 Access Roads

4 Approximately 27 miles (but not more than 31.5 miles) of new roads would be  
5 constructed to provide access to the turbine strings.<sup>68</sup> In addition, approximately 4.7 miles  
6 (but not more than 7 miles) of existing ranch roads would be improved.<sup>69</sup> The finished roads  
7 would be 16 feet wide.<sup>70</sup> The new roads and the improved existing roads would have a  
8 compacted base of native soil and a graveled surface to a depth of four to six inches  
9 (Condition 65). The access roads would connect to graveled turbine turnouts about 27.5 feet  
10 long and 10 feet wide at the base of each turbine for cylindrical foundations and turnouts  
11 about 46.5 feet long and 10 feet wide for slab foundations.<sup>71</sup>

### 12 Construction Disturbance Areas

13 During facility construction, access roads would be temporarily widened up to 66 feet  
14 wide to accommodate crane travel. In addition, there would be 15 acres of temporary laydown  
15 and construction staging areas, including areas occupied by construction offices, parking and  
16 fenced storage.<sup>72</sup>

### 17 SFS Site and Site Boundary

18 The SFS site is located in Gilliam County, Oregon, south of Interstate 84. The turbine  
19 micrositing area is approximately 12 miles southeast of Arlington, between State Highways  
20 19 and 74. The facility would be located entirely on private land subject to long-term wind  
21 energy leases that CSF has negotiated with the landowners. There are approximately 11,411  
22 acres within the SFS site boundary. The amendment request includes a “typical layout” of the  
23 SFS facility in a figure labeled “Shepherds Flat South.”<sup>73</sup>

24 The SFS facility would be located entirely within the site boundary of the previously-  
25 approved SFWF. The site boundary lines of SFS would be straightened in some locations, but  
26 the straightened boundary lines would lie within the boundary lines of the SFWF. No  
27 additional land would be affected by the proposed amendment. A preliminary legal  
28 description was provided in the site certificate application for the SFWF.

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

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

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<sup>68</sup> Request for Amendment #1, Appendix C, Facility Retirement and Site Restoration (table).

<sup>69</sup> The combined length of new and existing roads would not exceed 34.5 miles (Request for Amendment #1, Appendix C, Facility Retirement and Site Restoration (table)).

<sup>70</sup> Request for Amendment #1, Section III, p. 12.

<sup>71</sup> Email from Patricia Pilz, July 9, 2009.

<sup>72</sup> Request for Amendment #1, Section III, p. 12, and email from Patricia Pilz, July 8, 2009.

<sup>73</sup> Request for Amendment #1, Appendix C, Location of the Facility.



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

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

8 In making its decision on an amendment of a site certificate, the Council applies the  
9 applicable State statutes, administrative rules and local government ordinances that are in  
10 effect on the date the Council makes its decision, except when applying the Land Use  
11 Standard. In making findings on the Land Use Standard, the Council applies the applicable  
12 substantive criteria in effect on the date the certificate holder (in this case, the applicants)  
13 submitted the request for amendment. OAR 345-027-0070(10).

## 1. General Standard of Review

### OAR 345-022-0000

14 *(1) To issue a site certificate for a proposed facility or to amend a site certificate,*  
15 *the Council shall determine that the preponderance of evidence on the record*  
16 *supports the following conclusions:*  
17

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

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

33 \* \* \*

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

## 2. Standards about the Applicants

### (a) Organizational Expertise

#### OAR 345-022-0010

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

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

18 (3) If the applicant does not itself obtain a state or local government permit or  
19 approval for which the Council would ordinarily determine compliance but  
20 instead relies on a permit or approval issued to a third party, the Council, to issue  
21 a site certificate, must find that the third party has, or has a reasonable likelihood  
22 of obtaining, the necessary permit or approval, and that the applicant has, or has  
23 a reasonable likelihood of entering into, a contractual or other arrangement with  
24 the third party for access to the resource or service secured by that permit or  
25 approval.

26 (4) If the applicant relies on a permit or approval issued to a third party and the  
27 third party does not have the necessary permit or approval at the time the Council  
28 issues the site certificate, the Council may issue the site certificate subject to the  
29 condition that the certificate holder shall not commence construction or operation  
30 as appropriate until the third party has obtained the necessary permit or approval  
31 and the applicant has a contract or other arrangement for access to the resource  
32 or service secured by that permit or approval.

#### Findings of Fact

##### A. Organizational Expertise

33 In the *Final Order on the Application*, the Council found that Caithness Energy, LLC  
34 (Caithness), the corporate parent of CSF, has experience in construction and operation of  
35 wind energy facilities.<sup>74</sup> Caithness has engaged in the permitting, design and construction of  
36 energy facilities throughout the United States. CSF is the sole member and manager of each

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<sup>74</sup> *Final Order on the Application* (July 25, 2008), p. 12.

1 of the applicants, and the applicants are each wholly-owned subsidiaries of CSF.<sup>75</sup> Caithness  
2 Energy and its wind energy subsidiaries have not received any regulatory citations in the  
3 course of constructing and operating wind energy facilities.<sup>76</sup> The applicants would be bound  
4 by Condition 32 of the Site Certificate to hire qualified contractors with direct experience in  
5 wind energy facility construction to design and build the proposed facilities.

6 Based on evidence provided by the applicants, including the past experience of  
7 Caithness Energy with other wind projects and the qualifications and experience of personnel  
8 upon whom the applicants would rely, the Council finds that the applicants have demonstrated  
9 the ability to design, construct and operate the proposed SFN, SFC and SFS facilities in  
10 compliance with site certificate conditions and in a manner that protects public health and  
11 safety and have demonstrated the ability to restore the sites to a useful, non-hazardous  
12 condition.

#### B. Third-Party Permits

13 The applicants propose the option to obtain the water, concrete and vehicle fuel  
14 needed for construction from two new “service areas” that would be permitted, constructed  
15 and operated by third-party contractors.<sup>77</sup> Alternatively, the applicants may obtain  
16 construction water from the City of Arlington, as had been proposed for the SFWF, and may  
17 obtain fuel and concrete from existing, permitted, off-site sources or providers that currently  
18 serve other customers. One of the proposed service areas would be located within the site  
19 boundary of SFC and would serve both SFC and SFN.<sup>78</sup> The other proposed service area  
20 would be located near the SFS site boundary (but not inside the site boundary) and would  
21 serve SFS, SFC and the planned Saddle Butte Wind Park. Because each service area would  
22 serve more than one facility, the Council finds that the proposed service areas are not related  
23 or supporting facilities as defined in OAR 345-001-0010.

24 To obtain concrete, water and fuel from the proposed service areas, the applicants  
25 would rely on third-party permits. The primary construction contractor under consideration  
26 and a local concrete batch plant operator both have extensive experience in wind facility  
27 construction.<sup>79</sup> Both companies have extensive, local, experience in securing the types of  
28 permits required for the service areas. The necessary permits include conditional use permits  
29 for the operation of batch plants, Department of Environmental Quality (DEQ) air quality  
30 permits (for batch plant dust emissions) and permits from the Oregon Water Resources  
31 Department (OWRD) for well drilling and limited water use.<sup>80</sup> In preliminary discussions  
32 with the applicants, the Planning Directors of Gilliam County and Morrow County have not  
33 identified any significant issues regarding land use permits for the proposed service areas.<sup>81</sup>  
34 The Council finds that the applicants’ contractors have a reasonable likelihood of getting the

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<sup>75</sup> Request for Amendment #1, Section II, Written Consent of the Manager of North Hurlburt Wind, LLC, South Hurlburt Wind, LLC, and Horseshoe Bend Wind, LLC, and Section III, p. 15.

<sup>76</sup> *Final Order on the Application* (July 25, 2008), p. 12, and email from Patricia Pilz, July 8, 2009.

<sup>77</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>78</sup> Email from Patricia Pilz, July 10, 2009.

<sup>79</sup> These companies worked on the recently completed Pebble Springs and Willow Creek Wind facilities (email from Patricia Pilz, July 12, 2009).

<sup>80</sup> The counties, DEQ and OWRD are not bound by the site certificate to issue these permits under ORS 469.401. The Council makes no decision as to whether or not these permits should be issued.

<sup>81</sup> Email from Patricia Pilz, July 12, 2009.

1 necessary permits and that the applicants have a reasonable likelihood of entering into a  
2 contractual or other arrangement with these contractors for access to concrete, water and fuel  
3 necessary for construction of the SFN, SFC and SFS.

#### Conclusions of Law

4 Based on the findings discussed above, the Council concludes that applicants would  
5 meet the Council's Organizational Expertise Standard if Amendment #1 were approved.

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

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

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

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

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

#### Findings of Fact

14 In the *Final Order on the Application*, the Council found that the site of the SFWF  
15 could be restored adequately to a useful, non-hazardous condition following permanent  
16 cessation of construction or operation of the facility.<sup>82</sup> Those findings are incorporated herein  
17 by this reference. The Council found that the certificate holder had demonstrated a reasonable  
18 likelihood of obtaining a bond or letter of credit, satisfactory to the Council, in an amount  
19 adequate to restore the site. The Council found that the value of the financial assurance bond  
20 or letter of credit for restoring the site would not exceed \$19.346 million in 2007 dollars  
21 adjusted annually as described in Condition 30.<sup>83</sup>

22 The proposed division of the SFWF would not increase the cumulative total of wind  
23 turbines compared to the SFWF. Likewise, the related or supporting facilities for the SFWF,  
24 as shown in Table 2 of the *Final Order on the Application*, would be divided among the three  
25 new facilities proposed by this amendment. The amendment would authorize construction of a  
26 substation for the SFC facility and the construction of a field workshop for the SFN facility,  
27 which were not components of the previously-approved SFWF.

28 The actions necessary to restore the site of the SFWF to a useful, non-hazardous  
29 condition are described in the *Final Order on the Application*.<sup>84</sup> The same types of actions  
30 would be necessary to restore the sites of the SFN, SFC and SFS. The Council finds that the  
31 actions necessary to restore the sites of the three facilities are feasible and that restoration of  
32 the sites to a useful, non-hazardous condition could be achieved.

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<sup>82</sup> *Final Order on the Application* (July 25, 2008), p. 14.

<sup>83</sup> The site restoration cost estimate was calculated based on unit costs shown in Table 2 (*Final Order on the Application* (July 25, 2008), pp. 15-16).

<sup>84</sup> *Final Order on the Application* (July 25, 2008), pp. 13-14.

## A. Estimated Cost of Site Restoration

1 The applicants estimated the site restoration costs for SFN, SFC and SFS by adding  
2 the estimated cost of removing the proposed SFC substation, SFN field workshop and  
3 additional collector system junction boxes to the \$19.346 million restoration cost described in  
4 the *Final Order on the Application*, resulting in an estimated total cost of \$20 million.<sup>85</sup> The  
5 applicants divided this total cost among the three new facilities in proportion to the number of  
6 turbines in each facility and proposed the following site restoration costs for the three  
7 facilities:

- 8 • Shepherds Flat North: \$7 million
- 9 • Shepherds Flat Central: \$5 million
- 10 • Shepherds Flat South: \$8 million

11 The Department calculated independent cost estimates for SFN, SFC and SFS,  
12 following the estimating procedure outlined in its draft “Facility Retirement Cost Estimating  
13 Guide.” The estimate assumed facility configurations that would result in the highest site  
14 restoration cost consistent with the maximum design flexibility requested by the applicants.

### Shepherds Flat North

15 The assumptions underlying the SFN cost estimate are as follows:

- 16 • 106 GE 2.5-MW turbines, each weighing 302 U.S. tons (including the weight  
17 of steel in the towers, nacelles, internal ladders and platforms).<sup>86</sup>
- 18 • Turbine foundations containing 66 cubic yards of concrete above three feet  
19 below grade.<sup>87</sup>
- 20 • 106 pad-mounted step-up transformers near the base of each turbine tower.
- 21 • Two meteorological towers, one field workshop, one substation.<sup>88</sup>
- 22 • 12.9 miles of single-circuit aboveground 34.5-kV transmission line consisting  
23 of three wires and one fiber-optic cable mounted on up to 456 poles.<sup>89</sup>
- 24 • 4.7 miles of 34.5-kV transmission line understrung on 230-kV supports.<sup>90</sup>
- 25 • 5.9 miles of double-circuit 230-kV transmission line mounted on up to 49  
26 steel monopoles.<sup>91</sup>
- 27 • 30 junction boxes.<sup>92</sup>
- 28 • 31 miles of access roads.<sup>93</sup>
- 29

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<sup>85</sup> Request for Amendment #1, Section III, p. 16.

<sup>86</sup> Request for Amendment #1, Section III, p. 14, Wind Turbine Specifications (table).

<sup>87</sup> Request for Amendment #1, Section III, p. 14, Wind Turbine Specifications (table).

<sup>88</sup> Request for Amendment #1, Section III, p. 1, and Appendix A, Description of the Facility (table).

<sup>89</sup> Request for Amendment #1, Appendix A, Facility Retirement and Site Restoration (table).

<sup>90</sup> Request for Amendment #1, Appendix A, Facility Retirement and Site Restoration (table).

<sup>91</sup> Request for Amendment #1, Appendix A, Facility Retirement and Site Restoration (table), and email from Patricia Pilz, July 9, 2009 (response to question 7).

<sup>92</sup> Request for Amendment #1, Appendix A, Facility Retirement and Site Restoration (table).

<sup>93</sup> Request for Amendment #1, Appendix A, Facility Retirement and Site Restoration (table). Additional area

1 Using these highest-cost assumptions, the Department estimated the site restoration  
 2 cost for SFN as shown in Table 1.<sup>94</sup>

**Table 1: Cost Estimate for SFN Site Restoration (3<sup>rd</sup> Quarter 2009 dollars)**

	Quantity	Unit Cost	Extension
<b><u>Turbines</u></b>			
Disconnect electrical and ready for disassembly (per tower)	106	\$1,061	\$112,466
Remove turbine hubs and blades (per tower)	106	\$4,106	\$435,236
Remove turbine nacelles and towers (per net ton of steel)	32,012	\$76.67	\$2,454,360
Remove tower foundations (per cubic yard of concrete)	6,996	\$38.68	\$270,605
Remove and load pad-mounted transformers (per tower)	106	\$2,410	\$255,460
Restore turbine turnouts (per tower)	90	\$97	\$8,730
<b><u>Met Towers</u></b>			
Dismantle and dispose of met towers (per tower)	2	\$9,483	\$18,966
<b><u>Substations and Field Workshops</u></b>			
Dismantle and dispose of substation	1	\$88,577	\$88,577
Dismantle and dispose of field workshop	1	\$29,509	\$29,509
<b><u>Transmission Line</u><sup>95</sup></b>			
Remove 230-kV double-circuit transmission line (per mile)	5.9	\$16,938	\$99,934
Remove 34.5-kV single-circuit transmission line (per mile)	12.9	\$5,832	\$75,233
Remove understrung 34.5-kV transmission line (per mile)	4.7	\$849	\$3,990
Remove junction boxes & electrical to 4' below grade (each)	30	\$1,416	\$42,480
<b><u>Access Roads</u></b>			
Remove roads, grade and seed (per mile)	31	\$17,460	\$541,260
<b><u>Restore Additional Areas Disturbed by Facility Removal</u></b>			
Around turbine pads (per acre)	52.6	\$5,988	\$314,969
Around turnarounds and turning radii	10.88	\$5,988	\$65,149
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)	2.09	\$2,973	\$6,214
Around 230-kV transmission line poles (per acre)	0.45	\$2,973	\$1,338
Around access roads (per acre)	187.88	\$5,988	\$1,125,025

disturbed during site restoration includes widening access roads by 50 feet beyond finished width (Request for Amendment #1, Appendix A, Description of the Facility (table).

<sup>94</sup> The Facility Retirement Cost Estimating Guide computes the retirement and site restoration cost in terms of mid-2004 dollars. The computation has been adjusted to reflect preliminary 3<sup>rd</sup> Quarter 2009 dollars by application of a multiplier of 1.1359. The multiplier is generated by dividing the preliminary 3<sup>rd</sup> Quarter 2009 Gross Domestic Product Implicit Price Deflator (GDP) of 124.3791 by the average of the 2<sup>nd</sup> Quarter 2004 GDP (109.185) and 3<sup>rd</sup> Quarter 2004 GDP (109.807).

<sup>95</sup> Includes removal of aboveground SCADA lines.

<b>General Costs</b>			
Permits, mobilization, engineering, overhead, utility disconnects (unit cost)	1	\$475,517	\$475,517
<b>Subtotal</b>			<b>\$6,437,293</b>
Performance Bond		1%	\$64,373
<b>Gross Cost</b>			<b>\$6,501,666</b>
Administration and Project Management		10%	\$650,167
Future Developments Contingency		10%	\$650,167
<b>Total Site Restoration Cost (rounded to nearest \$1,000)</b>			<b>\$7,802,000</b>

1 **Shepherds Flat Central**

2 The assumptions underlying the SFC cost estimate are as follows:

- 3 · 77 GE 2.5-MW turbines, each weighing 302 U.S. tons (including the weight  
4 of steel in the towers, nacelles, internal ladders and platforms).<sup>96</sup>
- 5 · Turbine foundations containing 66 cubic yards of concrete above three feet  
6 below grade.<sup>97</sup>
- 7 · 77 pad-mounted step-up transformers near the base of each turbine tower.
- 8 · Two meteorological towers, one field workshop, one substation.<sup>98</sup>
- 9 · 7.1 miles of single-circuit aboveground 34.5-kV transmission line consisting  
10 of three wires and one fiber-optic cable mounted on up to 251 poles.<sup>99</sup>
- 11 · 6.7 miles of 34.5-kV transmission line understrung on 230-kV supports.<sup>100</sup>
- 12 · 8.6 miles of double-circuit 230-kV transmission line mounted on up to 71  
13 steel monopoles.<sup>101</sup>
- 14 · 20 junction boxes.<sup>102</sup>
- 15 · 25 miles of access roads.<sup>103</sup>

16 Using these highest-cost assumptions, the Department estimated the site restoration  
17 cost for SFC as shown in Table 2.

<sup>96</sup> Request for Amendment #1, Section III, p. 14, Wind Turbine Specifications (table).

<sup>97</sup> Request for Amendment #1, Section III, p. 14, Wind Turbine Specifications (table).

<sup>98</sup> Request for Amendment #1, Section III, p. 5, and Appendix B, Description of the Facility (table).

<sup>99</sup> Request for Amendment #1, Appendix B, Facility Retirement and Site Restoration (table).

<sup>100</sup> Request for Amendment #1, Appendix B, Facility Retirement and Site Restoration (table).

<sup>101</sup> Request for Amendment #1, Appendix B, Facility Retirement and Site Restoration (table) and email from Patricia Pilz, July 9, 2009 (response to question 7). For the purposes of a “highest-cost” estimate, this includes the 230-kV transmission line segment from the SFN substation to the BPA Slatt interconnection site.

<sup>102</sup> Request for Amendment #1, Appendix B, Facility Retirement and Site Restoration (table).

<sup>103</sup> Request for Amendment #1, Appendix B, Facility Retirement and Site Restoration (table). Additional area disturbed during site restoration includes widening access roads by 50 feet beyond finished width (Request for Amendment #1, Appendix B, Description of the Facility (table)).

**Table 2: Cost Estimate for SFC Site Restoration (3<sup>rd</sup> Quarter 2009 dollars)**

	Quantity	Unit Cost	Extension
<b><u>Turbines</u></b>			
Disconnect electrical and ready for disassembly (per tower)	77	\$1,061	\$81,697
Remove turbine hubs and blades (per tower)	77	\$4,106	\$316,162
Remove turbine nacelles and towers (per net ton of steel)	23,254	\$76.67	\$1,782,884
Remove tower foundations (per cubic yard of concrete)	5,082	\$38.68	\$196,572
Remove and load pad-mounted transformers (per tower)	77	\$2,410	\$185,570
Restore turbine turnouts (per tower)	53	\$97	\$5,141
<b><u>Met Towers</u></b>			
Dismantle and dispose of met towers (per tower)	2	\$9,483	\$18,966
<b><u>Substations and Field Workshops</u></b>			
Dismantle and dispose of substation	1	\$88,577	\$88,577
Dismantle and dispose of field workshop	1	\$29,509	\$29,509
<b><u>Transmission Line</u><sup>104</sup></b>			
Remove 230-kV double-circuit transmission line (per mile)	8.6	\$16,938	\$145,667
Remove 34.5-kV single-circuit transmission line (per mile)	7.1	\$5,832	\$41,407
Remove understrung 34.5-kV transmission line (per mile)	6.7	\$849	\$5,688
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)	25	\$17,460	\$436,500
<b><u>Restore Additional Areas Disturbed by Facility Removal</u></b>			
Around turbine pads (per acre)	37.95	\$5,988	\$227,245
Around turnarounds and turning radii	11.45	\$5,988	\$68,563
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)	1.15	\$2,973	\$3,419
Around 230-kV transmission line poles (per acre)	0.65	\$2,973	\$1,932
Around access roads (per acre)	151.52	\$5,988	\$907,302
<b><u>General Costs</u></b>			
Permits, mobilization, engineering, overhead, utility disconnects (unit cost)	1	\$475,517	\$475,517
<b>Subtotal</b>			<b>\$5,058,913</b>
Performance Bond		1%	\$50,589
<b>Gross Cost</b>			<b>\$5,109,502</b>
Administration and Project Management		10%	\$510,950
Future Developments Contingency		10%	\$510,950
<b>Total Site Restoration Cost (rounded to nearest \$1,000)</b>			<b>\$6,131,000</b>

1 **Shepherds Flat South**

2 The assumptions underlying the SFS cost estimate are as follows:

- 3 · 120 GE 2.5-MW turbines, each weighing 302 U.S. tons (including the weight  
4 of steel in the towers, nacelles, internal ladders and platforms).<sup>105</sup>

<sup>104</sup> Includes removal of aboveground SCADA lines.

<sup>105</sup> Request for Amendment #1, Section III, p. 14, Wind Turbine Specifications (table).



- 1           · Turbine foundations containing 66 cubic yards of concrete above three feet
- 2           below grade.<sup>106</sup>
- 3           · 120 pad-mounted step-up transformers near the base of each turbine tower.
- 4           · Two meteorological towers, one field workshop, one substation.<sup>107</sup>
- 5           · 19.9 miles of single-circuit aboveground 34.5-kV transmission line consisting
- 6           of three wires and one fiber-optic cable mounted on up to 702 poles.<sup>108</sup>
- 7           · 2.5 miles of 34.5-kV transmission line understrung on 230-kV supports.<sup>109</sup>
- 8           · 8.6 miles of double-circuit 230-kV transmission line mounted on up to 71
- 9           steel monopoles.<sup>110</sup>
- 10          · 15.8 miles of single-circuit 230-kV transmission line mounted on up to 130 H-
- 11          type pole sets.<sup>111</sup>
- 12          · 30 junction boxes.<sup>112</sup>
- 13          · 31.5 miles of access roads.<sup>113</sup>

14           Using these highest-cost assumptions, the Department estimated the site restoration  
 15           cost for SFS as shown in Table 3.

**Table 3: Cost Estimate for SFS Site Restoration (3<sup>rd</sup> Quarter 2009 dollars)**

	Quantity	Unit Cost	Extension
<b><u>Turbines</u></b>			
Disconnect electrical and ready for disassembly (per tower)	120	\$1,061	\$127,320
Remove turbine hubs and blades (per tower)	120	\$4,106	\$492,720
Remove turbine nacelles and towers (per net ton of steel)	36,240	\$76.67	\$2,778,521
Remove tower foundations (per cubic yard of concrete)	7,920	\$38.68	\$306,346
Remove and load pad-mounted transformers (per tower)	120	\$2,410	\$289,200
Restore turbine turnouts (per tower)	92	\$97	\$8,924
<b><u>Met Towers</u></b>			
Dismantle and dispose of met towers (per tower)	2	\$9,483	\$18,966
<b><u>Substations and Field Workshops</u></b>			
Dismantle and dispose of substation	1	\$88,577	\$88,577
Dismantle and dispose of field workshop	1	\$27,798	\$27,798

<sup>106</sup> Request for Amendment #1, Section III, p. 14, Wind Turbine Specifications (table).

<sup>107</sup> Request for Amendment #1, Section III, p. 9, and Appendix C, Description of the Facility (table).

<sup>108</sup> Request for Amendment #1, Appendix C, Facility Retirement and Site Restoration (table).

<sup>109</sup> Request for Amendment #1, Appendix C, Facility Retirement and Site Restoration (table).

<sup>110</sup> Request for Amendment #1, Appendix C, Facility Retirement and Site Restoration (table) and email from Patricia Pilz, July 9, 2009 (response to question 7). For the purposes of a “highest-cost” estimate for SFS, the 230-kV transmission line segments from the SFN substation to the BPA Slatt interconnection site and from the SFC substation to the SFN substation are included.

<sup>111</sup> Request for Amendment #1, Appendix C, Facility Retirement and Site Restoration (table) and email from Patricia Pilz, July 9, 2009 (response to question 7).

<sup>112</sup> Request for Amendment #1, Appendix C, Facility Retirement and Site Restoration (table).

<sup>113</sup> Request for Amendment #1, Appendix C, Facility Retirement and Site Restoration (table). Additional area disturbed during site restoration includes widening access roads by 50 feet beyond finished width (Request for Amendment #1, Appendix C, Description of the Facility (table)).

<b><u>Transmission Line</u></b> <sup>114</sup>			
Remove 230-kV single-circuit transmission line (per mile)	15.8	\$16,357	\$258,441
Remove 230-kV double-circuit transmission line (per mile)	8.6	\$16,938	\$145,667
Remove 34.5-kV single-circuit transmission line (per mile)	19.9	\$5,832	\$116,057
Remove understrung 34.5-kV transmission line (per mile)	2.5	\$849	\$2,123
Remove junction boxes & electrical to 4' below grade (each)	30	\$1,416	\$42,480
<b><u>Access Roads</u></b>			
Remove roads, grade and seed (per mile)	31.5	\$17,460	\$549,990
<b><u>Restore Additional Areas Disturbed by Facility Removal</u></b>			
Around turbine pads (per acre)	59.37	\$5,988	\$355,508
Around turnarounds and turning radii	13.02	\$5,988	\$77,964
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)	3.22	\$2,973	\$9,573
Around 230-kV transmission line H-type pole sets (per acre)	1.19	\$2,973	\$3,538
Around 230-kV transmission line poles (per acre)	0.65	\$2,973	\$1,932
Around access roads (per acre)	190.91	\$5,988	\$1,143,169
<b><u>General Costs</u></b>			
Permits, mobilization, engineering, overhead, utility disconnects (unit cost)	1	\$475,517	\$475,517
<b>Subtotal</b>			<b>\$7,332,606</b>
Performance Bond		1%	\$73,326
<b>Gross Cost</b>			<b>\$7,405,932</b>
Administration and Project Management		10%	\$740,593
Future Developments Contingency		10%	\$740,593
<b>Total Site Restoration Cost (rounded to nearest \$1,000)</b>			<b>\$8,887,000</b>

B. Ability of the Applicant to Obtain a Bond or Letter of Credit

1 Based on the information in Tables 1, 2 and 3 above, the Council finds that the  
2 following site restoration cost estimates for the three facilities proposed by Amendment #1 are  
3 reasonable:

- 4 • Shepherds Flat North: \$7.802 million
- 5 • Shepherds Flat Central: \$6.131 million
- 6 • Shepherds Flat South: \$8.887 million

7 The Department's proposed Revision 17, shown in Attachment E, would modify  
8 Condition 30 of the *Site Certificate for the Shepherds Flat Wind Farm* as applicable to each of  
9 the three new facilities.

10 OAR 345-022-0050(2) requires the Council to decide whether the applicants have a  
11 reasonable likelihood of obtaining bonds or letters of credit, in a form and amount satisfactory  
12 to the Council, to restore the sites to a useful, non-hazardous condition. In the site certificate  
13 application for the SFWF, CSF provided a letter from JPMorgan Chase Bank, N.A.

<sup>114</sup> Includes removal of aboveground SCADA lines.

1 (Chase).<sup>115</sup> Chase stated that “there is a reasonable likelihood that Chase would be inclined to  
2 issue” a letter of credit (LC) in an amount up to \$20 million “by application of Caithness  
3 Sherpherds [sic] Flat” if “the reimbursement obligations under the LC would be collateralized  
4 and documented in the same manner that Chase has previously issued letters of credit on  
5 behalf of other subsidiaries of Caithness Energy.” The letter does not constitute a firm  
6 commitment from Chase to issue the letter of credit, but it is evidence that CSF could obtain  
7 the necessary letters of credit for SFN, SFC and SFS.

8 On August 3, 2009, the applicants submitted three updated letters from Chase.<sup>116</sup> A  
9 letter referencing North Hurlburt Wind, LLC, indicated that “there is a reasonable likelihood  
10 that Chase would be inclined to issue” a letter of credit (LC) in an amount up to \$7.802  
11 million (for SFN), provided that “the reimbursement obligations under the LC would be  
12 collateralized and documented in the same manner that Chase has previously issued letters of  
13 credit on behalf of other subsidiaries of Caithness Energy LLC.” Similar letters from Chase  
14 referencing South Hurlburt Wind LLC and Horseshoe Bend Wind LLC addressed letters of  
15 credit in the amounts of \$6.131 million (for SFC) and \$8.887 million (for SFS) respectively.  
16 These letters do not constitute firm commitments from Chase to issue the letters of credit, but  
17 they are evidence that the applicants, as subsidiaries of Caithness Energy, could obtain the  
18 necessary letters of credit for SFN, SFC and SFS.

### Conclusions of Law

19 For the reasons discussed above and subject to the conditions and revisions discussed  
20 herein, the Council finds that the SFN, SFC and SFS sites, taking into account mitigation, can  
21 be restored adequately to a useful, non-hazardous condition following permanent cessation of  
22 construction or operation of the facilities. The Council finds that \$7.802 million (3rd Quarter  
23 2009 dollars) adjusted annually as described in revised Condition 30 is a reasonable estimate  
24 of the cost to restore SFN to a useful, non-hazardous condition, that \$6.131 million (3rd  
25 Quarter 2009 dollars) adjusted annually as described in revised Condition 30 is a reasonable  
26 estimate of the cost to restore SFC to a useful, non-hazardous condition, and that \$8.887  
27 million (3<sup>rd</sup> Quarter 2009 dollars) adjusted annually as described in revised Condition 30 is a  
28 reasonable estimate of the cost to restore SFS to a useful, non-hazardous condition. The  
29 Council finds that the applicants have demonstrated a reasonable likelihood of obtaining  
30 bonds or letters or credit, satisfactory to the Council, in amounts adequate to restore the SFN,  
31 SFC and SFS sites to a useful, non-hazardous condition. Based on these findings and the  
32 recommended conditions, the Council concludes that the applicants would meet the Council’s  
33 Retirement and Financial Assurance Standard if Amendment #1 were approved.

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

### **(a) Land Use**

#### **OAR 345-022-0030**

34 *(1) To issue a site certificate, the Council must find that the proposed facility*  
35 *complies with the statewide planning goals adopted by the Land Conservation and*  
36 *Development Commission.*  
37

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<sup>115</sup> *Final Order on the Application* (July 25, 2008), p. 16.

<sup>116</sup> Email from Patricia Pilz, August 3, 2009.

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

2                     \*\*\*

3                     (b) *The applicant elects to obtain a Council determination under ORS*  
4                     *469.504(1)(b) and the Council determines that:*

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

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

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

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

26                     (4) *The Council may find goal compliance for a proposed facility that does not*  
27                     *otherwise comply with one or more statewide planning goals by taking an*  
28                     *exception to the applicable goal. Notwithstanding the requirements of ORS*  
29                     *197.732, the statewide planning goal pertaining to the exception process or any*  
30                     *rules of the Land Conservation and Development Commission pertaining to the*  
31                     *exception process, the Council may take an exception to a goal if the Council*  
32                     *finds:*

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

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

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

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

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

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

7 \* \* \*

### Findings of Fact

8 In the *Final Order on the Application*, the Council found that the SFWF did not  
9 comply with all of the applicable substantive criteria in Gilliam County or in Morrow County.  
10 Specifically, the Council found that the SFWF did not comply with Gilliam County Zoning  
11 Ordinance (GCZO) Section 4.020(D)(14) and Morrow County Zoning Ordinance (MCZO)  
12 Section 3.010(D)(16), which limit the area that a “commercial utility facility” may occupy in  
13 an Exclusive Farm Use (EFU) zone.<sup>117</sup> The Council considered, under ORS 469.504(1)(b)(B),  
14 whether the SFWF otherwise complied with the applicable statewide planning goal (Goal 3).  
15 The Council found that the proposed principal use and access roads would “preclude more  
16 than 20 acres from use as a commercial agricultural enterprise” and that the SFWF, therefore,  
17 would not comply with OAR 660-033-0130(22), which implements Goal 3.<sup>118</sup> To find  
18 compliance under ORS 469.504(1)(b)(B), the Council determined that an exception to Goal 3  
19 was justified under ORS 469.504(2).<sup>119</sup>

20 In acting on this amendment request, the Council applies the applicable substantive  
21 criteria in effect on the date the applicants submitted the request for amendment. The Planning  
22 Directors of Gilliam County and Morrow County have confirmed that neither County has  
23 changed its applicable substantive criteria for the evaluation of wind energy facilities since  
24 February 1, 2007 (the date the SFWF preliminary application was submitted).<sup>120</sup> Accordingly,  
25 the local land use criteria that the Council applied in the *Final Order on the Application* are  
26 applicable to this amendment request.

27 The SFN, SFC and SFS facilities proposed by Amendment #1 would occupy the same  
28 land as the SFWF and would involve identical land uses. The Council finds that the findings  
29 made in the *Final Order on the Application* with respect to the SFWF apply also to the  
30 proposed SFN, SFC and SFS.

31 The Council found that the SFWF did not comply with GCZO Section 4.020(D)(14)  
32 and MCZO Section 3.010(D)(16) based in part on Table 3 (Area Occupied by the Power  
33 Generation Facility) in the *Final Order*. The areas occupied by SFN, SFC and SFS are shown  
34 in the following tables. SFN is located entirely within Gilliam County. SFC and SFS have  
35 components in Gilliam County and Morrow County.

36 GCZO Section 4.020(D)(14) provides that a power generation facility not located on  
37 high value farmland must not “preclude more than 20 acres from use as a commercial

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<sup>117</sup> *Final Order on the Application* (July 25, 2008), p. 50.

<sup>118</sup> *Final Order on the Application* (July 25, 2008), p. 55.

<sup>119</sup> *Final Order on the Application* (July 25, 2008), p. 58.

<sup>120</sup> Request for Amendment #1, Section III, p. 16.

1 agricultural enterprise” and a power generation facility located on high value farmland must  
 2 not “preclude more than 12 acres from use as a commercial agricultural enterprise.”

3 MCZO Section 3.010(D)(16) provides that a power generation facility must not  
 4 “preclude more than 12 acres of high value farmland or 20 acres of other land from  
 5 commercial use.”<sup>121</sup>

**Table 4: Area Occupied by SFN<sup>122</sup>**

<b>Structure</b>	<b>Gilliam County (acres)</b>
Principal use	
Turbine towers, including pad areas and turnouts	4.2
Meteorological towers	< 0.1
Field workshop	1.6
34.5-kV collector line structures	< 0.1
Access roads	43.3
Subtotal	49.2
Substation	3.2
230-kV transmission line structures	< 0.1
<b>Total</b>	<b>52.4</b>

**Table 5: Area Occupied by SFC<sup>123</sup>**

<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	3.0	0	3.0
Meteorological towers	< 0.1	0	< 0.1
Field workshop	1.6	0	1.6
34.5-kV collector line structures	< 0.1	0	< 0.1
Access roads	42.7	1.0	43.7
Subtotal	47.4	1.0	48.4
Substation	3.2	0	3.2
230-kV transmission line structures	< 0.1	0	<0.1
<b>Total</b>	<b>50.5</b>	<b>1.0</b>	<b>51.5</b>

<sup>121</sup> The Council interprets the Morrow County ordinance as protective of the use of farmland for commercial agricultural use.

<sup>122</sup> Based on supplemental information in the amendment request (Request for Amendment #1, Appendix A, Land Use).

<sup>123</sup> Based on supplemental information in the amendment request (Request for Amendment #1, Appendix B, Land Use).

**Table 6: Area Occupied by SFS<sup>124</sup>**

<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	2.1	3.0	5.1
Meteorological towers	< 0.1	< 0.1	< 0.1
Field workshop	0	1.4	1.4
34.5-kV collector line structures	< 0.1	< 0.1	0.1
Access roads	21.8	34.3	56.2
Subtotal	24.0	38.8	62.8
Substation	0	3.2	3.2
230-kV transmission line structures	< 0.1	< 0.1	0.1
<b>Total</b>	<b>24.1</b>	<b>42.0</b>	<b>66.0</b>

1 OAR 660-033-0020(1)(a)(A) defines “agricultural land” in Eastern Oregon as NRCS  
 2 Soil Classes I-VI. Class VII soils have very severe limitations that make them unsuitable for  
 3 cultivation; Class VIII soils have limitations that nearly preclude their use for commercial  
 4 crop production.<sup>125</sup> The definition of “agricultural land” nevertheless provides that land in  
 5 capability classes other than I-VI “that is adjacent to or intermingled with” lands in classes I-  
 6 VI “within a farm unit” may be inventoried as agricultural land.

7 ORS 215.710(1) and OAR 660-033-0020(8) define “high value farmland” as land “in  
 8 a tract composed predominantly of soils that are... [either irrigated or not irrigated and]  
 9 classified prime, unique, Class I or II” by the Natural Resources Conservation Service  
 10 (NRCS).<sup>126</sup> “Tract” means one or more contiguous lots or parcels in the same ownership.<sup>127</sup>

11 In the *Final Order on the Application*, the Council found that although there are  
 12 pockets of “Kimberly fine sandy loam” (rated Class I when irrigated) and “Ritzville silt loam”  
 13 (on 2 to 7 percent slopes rated subclass IIe when irrigated) in the two counties, there are no  
 14 “tracts” that are composed predominantly of these soil types within the SFWF site boundary  
 15 in Gilliam County or Morrow County.<sup>128</sup>

16 As shown in Table 4, SFN would occupy more than 20 acres of land in Gilliam  
 17 County and therefore would not comply with GCZO Section 4.020(D)(14). As shown in  
 18 Table 5, SFC would occupy more than 20 acres of land in Gilliam County but only one acre  
 19 of land (for part of an access road) in Morrow County. The SFC facility, therefore, would not  
 20 comply with GCZO Section 4.020(D)(14) but would comply with MCZO Section  
 21 3.010(D)(16). As shown in Table 6, SFS would occupy more than 20 acres of land in Gilliam

<sup>124</sup> Based on supplemental information in the amendment request (Request for Amendment #1, Appendix C, Land Use).

<sup>125</sup> NRCS, “Land Capability Classification,” Soil Survey Report of Umatilla County Area (November 1988).

<sup>126</sup> ORS 215.710(6) provides that the applicable “soil classes, soil ratings or other soil designations” are those of the NRCS “in its most recent publication for that class, rating or designation before November 4, 1993.”

<sup>127</sup> OAR 660-033-0020(10).

<sup>128</sup> *Final Order on the Application* (July 25, 2008), pp. 20-21 and 41. Although there are areas of Kimberly fine sandy loam along Fourmile Canyon Road, these areas are not irrigated and are therefore classified as Class III (email from Patricia Pilz, July 7, 2009).

1 County and more than 20 acres of land in Morrow County. The SFS facility, therefore, would  
2 not comply with either GCZO Section 4.020(D)(14) or MCZO Section 3.010(D)(16).

3 Because each of the facilities does not comply with one or more local substantive  
4 criteria, the Council must determine whether the facilities otherwise comply with the  
5 statewide planning goals or if an exception to any applicable statewide planning goal is  
6 justified. The applicable statewide planning goal is Goal 3 (Agricultural Lands).

7 Under Goal 3, non-farm uses are permitted within a farm use zone as provided under  
8 ORS 215.283. To find compliance with ORS 215.283, the Council must determine whether  
9 the proposed energy facility and its related or supporting facilities are uses that fit within the  
10 scope of the uses permitted on EFU land described in ORS 215.283(1), (2) or (3).

11 In the *Final Order on the Application*, the Council found that, for the SFWF, the  
12 principal use is a “commercial utility facility for the purpose of generating power for public  
13 use by sale” that is allowable under ORS 215.283(2)(g).<sup>129</sup> The Council found that the  
14 substations and transmission interconnection line are “utility facilities necessary for public  
15 service” that are allowable under ORS 215.283(1)(d).<sup>130</sup> The Council found that the access  
16 roads are allowable “transportation improvements” under ORS 215.283(3). The Council  
17 makes the same findings for the same components of the SFN, SFC and SFS.

18 ORS 215.283(2)(g) authorizes “commercial utility facilities for the purpose of  
19 generating power for public use by sale” on land in an EFU zone. OAR Chapter 660, Division  
20 33, contains the Land Conservation and Development Commission (LCDC) administrative  
21 rules for implementing the requirements for agricultural land as defined by Goal 3. OAR 660-  
22 033-0120 (Table 1) lists the “commercial utility facility” use as a type “R” use (“use may be  
23 approved, after required review”). Prior to the effective date of OAR 660-033-0130(37), the  
24 standards found in OAR 660-033-0130(5) and (22) applied to wind power facilities proposed  
25 to be located on non-high-value farmland and OAR 660-033-0130(5) and (17) applied to such  
26 a facility proposed to be located on high-value farmland.

27 OAR 660-033-0130(37) became effective on January 2, 2009.<sup>131</sup> At the same time,  
28 LCDC adopted amendments to OAR 660-033-0120 (Table 1) that added reference to a “wind  
29 power generation facility” as a distinct type “R” use. The amendments provided that OAR  
30 660-033-0130(5) and (37) applied to wind power generation facilities. The effect of these  
31 amendments was to eliminate the 12-acre and 20-acre restrictions on wind power generation  
32 facilities that are contained in OAR 660-033-0130(17) and (22) and to impose, instead, new  
33 restrictions on wind power generation facilities contained in OAR 660-033-0130(37).

34 The applicability of OAR 660-033-0130(5) did not change. In the *Final Order on the*  
35 *Application*, the Council found that the SFWF would not force a significant change in  
36 accepted farm practices on surrounding farmland and would not significantly increase the cost  
37 of accepted farm practices.<sup>132</sup> Accordingly, the Council found that the SFWF complies with  
38 OAR 660-033-0130(5). The Council findings regarding the effect of the SFWF on accepted

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<sup>129</sup> *Final Order on the Application* (July 25, 2008), p. 51. The Council found that the “principal use” includes the wind turbines, power collection system, meteorological towers, control system and field workshops.

<sup>130</sup> Alternatively, a wind project substation might be considered a part of the principal use, as the Council recently found in the *Final Order on the Application for the Helix Wind Power Facility* (July 31, 2009).

<sup>131</sup> The provision became effective upon filing (OAR 660-033-0160).

<sup>132</sup> *Final Order on the Application* (July 25, 2008), p. 51.



1 farm practices and the cost of those practices, as discussed in the *Final Order*, apply also to  
2 SFN, SFC and SFS.<sup>133</sup>

3 As of the date the applicants submitted this amendment request, neither Gilliam  
4 County nor Morrow County had incorporated the changes to OAR 660-033-0120 and OAR  
5 660-033-0130 into the local zoning ordinances. Therefore, GCZO Section 4.020(D)(14) and  
6 MCZO Section 3.010(D)(16) apply as discussed above. Because ORS 469.504(1)(b)(B)  
7 authorizes the Council to determine compliance with the statewide planning goals directly, the  
8 Department believes that the Council may conclude that the SFN, SFC and SFS facilities  
9 comply with the statewide planning goals if the Council finds that the facilities comply with  
10 OAR 660-033-0120 and OAR 660-033-0130, as amended January 2, 2009. Nevertheless, for  
11 completeness and in case the Department is later found to be incorrect about the applicability  
12 of the amended LCDC rules, an analysis of both the “old” (before the January 2009  
13 amendments) and “new” rules is presented below.

14 **The Old Rules**

15 OAR 660-033-0130(17)

16 (17) A power generation facility shall not preclude more than 12 acres from use as  
17 a commercial agricultural enterprise unless an exception is taken pursuant to  
18 OAR chapter 660, division 4.

19 OAR 660-033-0130(22)

20 (22) A power generation facility shall not preclude more than 20 acres from use as  
21 a commercial agricultural enterprise unless an exception is taken pursuant to ORS  
22 197.732 and OAR chapter 660, division 004.

23 Under OAR 660-033-0120, the 12-acre limitation described in OAR 660-033-  
24 0130(17) applies to components of a power generation facility located on high-value  
25 farmland. The 20-acre limitation described in OAR 660-033-0130(22) applies to agricultural  
26 land that is not high-value farmland. Definitions of “agricultural land” and “high-value  
27 farmland” are discussed above at page 27.

28 The Council finds that “non-high-value farmland” in Gilliam County and Morrow  
29 County is agricultural land in other than Class I or Class II soils. For the purpose of analysis  
30 under OAR 660-033-0130(22) and in the absence of information in the record to the contrary,  
31 the Council finds that all Class VII and Class VIII soils within the site boundaries of SFN,  
32 SFC and SFS are inventoried as agricultural land and therefore are included within the  
33 category of non-high-value farmland.

34 In the *Final Order on the Application*, the Council found that there is no high-value  
35 farmland within the SFWF site boundary in Gilliam County or Morrow County.<sup>134</sup> Because  
36 the proposed SFN, SFC and SFS lie entirely within the site boundary of the SFWF, the

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<sup>133</sup> For example, the Council found that the SFWF would occupy less than one-half of one percent of the land area devoted to farm use within the analysis area in Gilliam County (*Final Order on the Application*, p. 31). The SFN, SFC and SFS facilities would likewise occupy less than one-half of one percent of the land area devoted to farm use within the respective analysis areas for each facility (the area within the site boundary and one-half mile from the site boundary), based on data provided in the amendment request (Request for Amendment #1, Appendices A, B and C, Land Use).

<sup>134</sup> *Final Order on the Application* (July 25, 2008), pp. 20-21 and 41.

1 facilities would not occupy any high-value farmland. The applicants provided maps showing  
2 the soil capability classes within the SFN, SFC and SFS site boundaries.<sup>135</sup> The maps confirm  
3 that the facilities do not occupy any high-value farmland soils.

4 As shown in Tables 4, 5 and 6, above, each of the new facilities proposed by  
5 Amendment #1 would occupy more than 20 acres of agricultural land that is not high-value  
6 farmland. The Council finds SFN, SFC and SFS do not comply with OAR 660-033-0130(22),  
7 because the principal use and access roads of each proposed facility would preclude more  
8 than 20 acres of farmland from use “as a commercial agricultural enterprise.” Based on this  
9 finding, the proposed facilities do not comply with the rules implementing Goal 3.

10 In the *Final Order on the Application*, the Council found that the principal use and  
11 access roads of the SFWF would not comply with OAR 660-033-0130(22).<sup>136</sup> To find  
12 compliance under ORS 469.504(1)(b)(B), the Council determined that an exception to Goal 3  
13 was justified under ORS 469.504(2). The SFN, SFC and SFS facilities proposed by  
14 Amendment #1 would occupy the same land as the SFWF and would involve identical land  
15 uses. The Council finds that exceptions to Goal 3 are justified for the SFN, SFC and SFS  
16 facilities for the same reasons as discussed in the *Final Order* with respect to the SFWF.<sup>137</sup>

#### 17 The New Rules

18 OAR 660-033-0130(37) defines a “wind power generating facility” and provides  
19 criteria for the approval of a wind power generating facility sited on farmland. The Council  
20 finds that the SFN, SFC and SFS components fit entirely within the definition of “wind power  
21 generating facility” in OAR 660-033-0130(37). The Council finds that SFN, SFC and SFS  
22 meet the approval criteria for a wind power generating facility, for the reasons discussed  
23 below.

#### 24 OAR 660-033-0130(37)

25 *(37) For purposes of this rule a wind power generation facility includes, but is not*  
26 *limited to, the following system components: all wind turbine towers and concrete*  
27 *pads, permanent meteorological towers and wind measurement devices, electrical*  
28 *cable collection systems connecting wind turbine towers with the relevant power*  
29 *substation, new or expanded private roads (whether temporary or permanent)*  
30 *constructed to serve the wind power generation facility, office and operation and*  
31 *maintenance buildings, temporary lay-down areas and all other necessary*  
32 *appurtenances. A proposal for a wind power generation facility shall be subject to*  
33 *the following provisions:*

34 *(a) For high-value farmland soils described at ORS 195.300(10), the*  
35 *governing body or its designate must find that all of the following are*  
36 *satisfied:*

37 *(A) Reasonable alternatives have been considered to show that siting the*  
38 *wind power generation facility or component thereof on high-value*  
39 *farmland soils is necessary for the facility or component to function*

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<sup>135</sup> Email from Patricia Pilz, July 7, 2009.

<sup>136</sup> *Final Order on the Application* (July 25, 2008), p. 55.

<sup>137</sup> The reasons justifying a Goal 3 exception are discussed at pages 55-58 of the *Final Order*.

1 *properly or if a road system or turbine string must be placed on such soils*  
2 *to achieve a reasonably direct route considering the following factors:*

3 *(i) Technical and engineering feasibility;*

4 *(ii) Availability of existing rights of way; and*

5 *(iii) The long term environmental, economic, social and energy*  
6 *consequences of siting the facility or component on alternative sites, as*  
7 *determined under OAR 660-033-0130(37)(a)(B).*

8 *(B) The long-term environmental, economic, social and energy*  
9 *consequences resulting from the wind power generation facility or any*  
10 *components thereof at the proposed site with measures designed to reduce*  
11 *adverse impacts are not significantly more adverse than would typically*  
12 *result from the same proposal being located on other agricultural lands*  
13 *that do not include high-value farmland soils.*

14 *(C) Costs associated with any of the factors listed in OAR 660-033-*  
15 *0130(37)(a)(A) may be considered, but costs alone may not be the only*  
16 *consideration in determining that siting any component of a wind power*  
17 *generation facility on high-value farmland soils is necessary.*

18 *(D) The owner of a wind power generation facility approved under OAR*  
19 *660-033-0130(37)(a) shall be responsible for restoring, as nearly as*  
20 *possible, to its former condition any agricultural land and associated*  
21 *improvements that are damaged or otherwise disturbed by the siting,*  
22 *maintenance, repair or reconstruction of the facility. Nothing in this*  
23 *subsection shall prevent the owner of the facility from requiring a bond or*  
24 *other security from a contractor or otherwise imposing on a contractor the*  
25 *responsibility for restoration.*

26 *(E) The criteria of OAR 660-033-0130(37)(b) are satisfied.*

27 *(b) For arable lands, meaning lands that are cultivated or suitable for*  
28 *cultivation, including high-value farmland soils described at ORS*  
29 *195.300(10), the governing body or its designate must find that:*

30 *(A) The proposed wind power facility will not create unnecessary negative*  
31 *impacts on agricultural operations conducted on the subject property.*  
32 *Negative impacts could include, but are not limited to, the unnecessary*  
33 *construction of roads, dividing a field or multiple fields in such a way that*  
34 *creates small or isolated pieces of property that are more difficult to farm,*  
35 *and placing wind farm components such as meteorological towers on lands*  
36 *in a manner that could disrupt common and accepted farming practices;*  
37 *and*

38 *(B) The presence of a proposed wind power facility will not result in*  
39 *unnecessary soil erosion or loss that could limit agricultural productivity*  
40 *on the subject property. This provision may be satisfied by the submittal*  
41 *and county approval of a soil and erosion control plan prepared by an*  
42 *adequately qualified individual, showing how unnecessary soil erosion will*

1 *be avoided or remedied and how topsoil will be stripped, stockpiled and*  
2 *clearly marked. The approved plan shall be attached to the decision as a*  
3 *condition of approval; and*

4 *(C) Construction or maintenance activities will not result in unnecessary*  
5 *soil compaction that reduces the productivity of soil for crop production.*  
6 *This provision may be satisfied by the submittal and county approval of a*  
7 *plan prepared by an adequately qualified individual, showing how*  
8 *unnecessary soil compaction will be avoided or remedied in a timely*  
9 *manner through deep soil decompaction or other appropriate practices.*  
10 *The approved plan shall be attached to the decision as a condition of*  
11 *approval; and*

12 *(D) Construction or maintenance activities will not result in the unabated*  
13 *introduction or spread of noxious weeds and other undesirable weeds*  
14 *species. This provision may be satisfied by the submittal and county*  
15 *approval of a weed control plan prepared by an adequately qualified*  
16 *individual that includes a long-term maintenance agreement. The approved*  
17 *plan shall be attached to the decision as a condition of approval.*

18 *(c) For nonarable lands, meaning lands that are not suitable for cultivation,*  
19 *the governing body or its designate must find that the requirements of OAR*  
20 *660-033-0130(37)(b)(D) are satisfied.*

21 *(d) In the event that a wind power generation facility is proposed on a*  
22 *combination of arable and nonarable lands as described in OAR 660-033-*  
23 *0130(37)(b) and (c) the approval criteria of OAR 660-033-0130(37)(b)*  
24 *shall apply to the entire project.*

25 High-value Farmland Soils

26 OAR 660-033-0130(37)(a) provides criteria for locating a wind power generating  
27 facility on high-value farmland soils. The rule references ORS 195.300(10) for the definition  
28 of “high-value farmland soils.” ORS 195.300(10), in turn, references ORS 215.710. The  
29 definition of “high-value farmland” in ORS 215.710 is discussed above at page 27. There is  
30 no high-value farmland within the SFWF site boundary in Gilliam County or Morrow  
31 County.<sup>138</sup> Therefore, the proposed SFN, SFC and SFS would not be located on high-value  
32 farmland soils and OAR 660-033-0130(37)(a) is inapplicable.

33 Arable and Nonarable Lands

34 Subsections (b), (c) and (d) of OAR 660-033-0130(37) provide additional criteria for  
35 wind power generation facilities located on “arable” or “nonarable” land. Subsection (b)  
36 defines “arable land” as “lands that are cultivated or suitable for cultivation, including high-  
37 value farmland soils” and provides criteria for locating a facility on arable land. Subsection  
38 (c) defines “nonarable land” as land “not suitable for cultivation” and identifies the criteria  
39 applicable on nonarable land. Subsection (d) provides that when a proposed wind power  
40 generation facility is located on a combination of arable and nonarable lands, then the criteria  
41 in subsection (b) apply to the entire facility.

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<sup>138</sup> *Final Order on the Application* (July 25, 2008), pp. 20-21 and 41.

1 The SFN components would be located entirely on nonarable lands.<sup>139</sup> The SFC and  
2 SFS components would be located on combination of arable and nonarable lands.<sup>140</sup>  
3 Accordingly, the criteria in subsection OAR 660-033-0130(37)(b)(D) apply to SFN and the  
4 criteria in OAR 660-033-0130(37)(b)(A) through (D) apply to SFC and SFS.

5 Impacts on Agricultural Operations

6 OAR 660-033-0130(37)(b)(A) provides that the proposed wind power facility must  
7 not “create unnecessary negative impacts on agricultural operations conducted on the subject  
8 property.” This requirement is substantially similar to the approval standards the local  
9 ordinances of Gilliam County and Morrow County. In the *Final Order on the Application*, the  
10 Council found that the SFWF complied with GCZO Section 4.020(H), GCZO Section  
11 7.020(Q) and MCZO Section 3.010(D).<sup>141</sup> Each of these local ordinances require that a  
12 conditional use on EFU land must not “force a significant change in accepted farm or forest  
13 practices on surrounding lands devoted to farm or forest use” and must not “significantly  
14 increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or  
15 forest use.” For the reasons discussed in the *Final Order*, the Council finds that the SFC and  
16 SFS components located on arable lands in Gilliam County and Morrow County will not  
17 result in unnecessary negative impacts on agricultural operations.

18 Soil Erosion and Compaction

19 OAR 660-033-0130(37)(b)(B) provides that the proposed wind power facility must  
20 not result in unnecessary soil erosion or loss that could limit agricultural productivity. OAR  
21 660-033-0130(37)(b)(C) provides that facility construction or maintenance activities must not  
22 result in unnecessary soil compaction that reduces the productivity of soil for crop production.  
23 Potential adverse impacts to soils and measures to avoid or control soil erosion and  
24 compaction within the SFWF site boundary were addressed by the Council in the *Final Order*  
25 *on the Application*.<sup>142</sup> For the reasons discussed in the *Final Order* and subject to Conditions  
26 11, 36, 73, 75, 76 and 84, the Council finds that the SFC and SFS components located on  
27 arable lands in Gilliam County and Morrow County will not result in unnecessary soil erosion  
28 or loss.

29 Weed Control

30 OAR 660-033-0130(37)(b)(D) provides that construction or maintenance activities  
31 must not result in the “unabated introduction or spread of noxious weeds and other  
32 undesirable weeds species.” Site Certificate Condition 38 requires the certificate holder to  
33 implement a weed control program, which would reduce the risk of weed infestation in  
34 cultivated land and the associated cost to the farmer for weed control. Condition 84 addresses  
35 construction impacts to agricultural land and requires the certificate holder to implement  
36 *Revegetation Plan*, which includes weed control measures. The Council finds that, subject to  
37 the site certificate conditions, the construction and operation of the SFN, SFC and SFS  
38 components would not result in unabated introduction or spread of weeds.

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<sup>139</sup> Based on the table, “Agricultural Use by County” (Request for Amendment #1, Appendix A, Land Use).

<sup>140</sup> Based on the tables, “Agricultural Use by County” (Request for Amendment #1, Appendices B and C, Land Use).

<sup>141</sup> *Final Order on the Application* (July 25, 2008), pp. 22, 30-32 and 42.

<sup>142</sup> *Final Order on the Application* (July 25, 2008), pp. 58-60.

## Conclusions of Law

1 Based on the foregoing findings of fact, reasoning, conditions and conclusions, the  
2 Council finds that the SFN, SFC and SFS facilities proposed by Amendment #1 would  
3 comply with all applicable substantive criteria from Gilliam County and Morrow County  
4 except GCZO Section 4.020(D)(14) and MCZO Section 3.010(D)(16). Accordingly, the  
5 Council must proceed with the land use analysis under ORS 469.504(1)(b)(B).

6 If the old rules apply, the Council finds that the SFN, SFC and SFS facilities as  
7 described in the amendment request do not comply with OAR 660-033-0130(22) and  
8 therefore do not comply with the applicable statewide planning goal (Goal 3). The Council  
9 finds that an exception to Goal 3 is justified under ORS 469.504(2)(c). If the new rules apply,  
10 the Council finds that the proposed SFN, SFC and SFS facilities comply with OAR 660-033-  
11 0130(37) and otherwise complies with all applicable statewide planning goals.<sup>143</sup>

12 Based on these findings and the site certificate conditions described herein, the  
13 Council concludes that the SFN, SFC and SFS facilities would comply with the Land Use  
14 Standard if Amendment #1 were approved.

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

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

15 *To issue a site certificate, the Council must find that the design, construction and*  
16 *operation of the facility, taking into account mitigation, are not likely to result in a*  
17 *significant adverse impact to soils including, but not limited to, erosion and*  
18 *chemical factors such as salt deposition from cooling towers, land application of*  
19 *liquid effluent, and chemical spills.*  
20

## Findings of Fact

21 In the *Final Order on the Application*, the Council found that the design, construction  
22 and operation of the SFWF would not result in a significant adverse impact to soils.<sup>144</sup> Those  
23 findings are incorporated herein by this reference. Amendment #1 would divide the SFWF  
24 into three separate facilities within the previously-approved site boundary of the SFWF.  
25 Approval of the amendment request would not result in any soil impacts that have not been  
26 addressed by the Council.

27 The changes that would be allowed if Amendment #1 were approved would not  
28 substantially change the facts on which the Council relied in its previous findings regarding  
29 impact to soils. The Council modifies Condition 84 to incorporate modifications to the  
30 *Revegetation Plan* as applicable to each facility. The Council finds that no changes to the  
31 other site certificate conditions related to soil protection (Conditions 11, 36, 73, 75 and 76)  
32 are needed. The Council finds that the design, construction and operation of the proposed  
33 SFN, SFC and SFS facilities would not likely result in significant adverse impact to soils,  
34 taking into account the mitigation required by the site certificate conditions.

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<sup>143</sup> If the new rules apply and SFN, SFC 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>144</sup> *Final Order on the Application* (July 25, 2008), p. 60.

Conclusions of Law

1           The Council concludes that the proposed SFN, SFC and SFS facilities would comply  
2 with the Council's Soil Protection Standard if Amendment #1 were approved.

**(c) Protected Areas**

3           **OAR 345-022-0040**

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

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

14           *(b) National monuments, including but not limited to John Day Fossil Bed*  
15 *National Monument, Newberry National Volcanic Monument and Oregon Caves*  
16 *National Monument;*

17           *(c) Wilderness areas established pursuant to The Wilderness Act, 16 U.S.C.*  
18 *1131 et seq. and areas recommended for designation as wilderness areas pursuant*  
19 *to 43 U.S.C. 1782;*

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

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

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

29           *(g) National recreation and scenic areas, including but not limited to Oregon*  
30 *Dunes National Recreation Area, Hell's Canyon National Recreation Area, and*  
31 *the Oregon Cascades Recreation Area, and Columbia River Gorge National*  
32 *Scenic Area;*

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

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

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

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

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

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

9           Coastal Oregon Marine Experiment Station, Astoria

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

11          Agriculture Research and Extension Center, Hermiston

12          Columbia Basin Agriculture Research Center, Pendleton

13          Columbia Basin Agriculture Research Center, Moro

14          North Willamette Research and Extension Center, Aurora

15          East Oregon Agriculture Research Center, Union

16          Malheur Experiment Station, Ontario

17          Eastern Oregon Agriculture Research Center, Burns

18          Eastern Oregon Agriculture Research Center, Squaw Butte

19          Central Oregon Experiment Station, Madras

20          Central Oregon Experiment Station, Powell Butte

21          Central Oregon Experiment Station, Redmond

22          Central Station, Corvallis

23          Coastal Oregon Marine Experiment Station, Newport

24          Southern Oregon Experiment Station, Medford

25          Klamath Experiment Station, Klamath Falls;

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

30           (o) Bureau of Land Management areas of critical environmental concern,  
31 outstanding natural areas and research natural areas;

32           (p) State wildlife areas and management areas identified in OAR chapter  
33 635, Division 8.

34           \* \* \*



## Findings of Fact

1            *In the Final Order on the Application*, the Council found that the design, construction  
2 and operation of the SFWF, taking mitigation into account and subject to the Site Certificate  
3 Conditions, were not likely to result in significant adverse impact to protected areas.<sup>145</sup> Those  
4 findings are incorporated herein by this reference. The changes that would be allowed if  
5 Amendment #1 were approved would not substantially change the facts on which the Council  
6 relied in its previous findings regarding adverse impacts to protected areas. The Council finds  
7 that the proposed SFN, SFC and SFS components are not located in any protected area listed  
8 in OAR 345-022-0040 and that the design, construction and operation of these facilities are  
9 not likely to result in significant adverse impact to any protected area.

## Conclusions of Law

10            For the reasons discussed above, the Council concludes that the proposed SFN, SFC  
11 and SFS facilities would comply with the Council's Protected Areas Standard if Amendment  
12 #1 were approved.

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

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

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

19            \* \* \*

## Findings of Fact

21            *In the Final Order on the Application*, the Council found that the design, construction  
22 and operation of the SFWF, taking mitigation into account and subject to the Site Certificate  
23 conditions, were not likely to result in significant adverse impact to scenic resources and  
24 values identified as significant or important in applicable federal land management plans or in  
25 local land use plans in the analysis area.<sup>146</sup> Those findings are incorporated herein by this  
26 reference.

27            The changes that would be allowed if Amendment #1 were approved would not  
28 substantially change the facts on which the Council relied in its previous findings regarding  
29 visual impacts on identified scenic resources or values. Approval of the amendment would not  
30 change the most visible elements of the wind facility—the wind turbines. The total number of  
31 wind turbines and the authorized maximum blade tip height of wind turbines would be the  
32 same as previously-approved for the SFWF. Approval of Amendment #1 would authorize the  
33 construction of an additional substation (in SFC) and an additional field workshop (in SFN),  
34 but these structures, if visible at all, are not likely to have significant adverse effect on the  
35 scenic resources discussed in the *Final Order on the Application*.<sup>147</sup> The Council finds that the

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<sup>145</sup> *Final Order on the Application* (July 25, 2008), p. 64.

<sup>146</sup> *Final Order on the Application* (July 25, 2008), p. 76.

<sup>147</sup> The cumulative length of 230-kV transmission line for SFN, SFC and SFS could be up to 24.4 miles, which is

1 design, construction and operation of the proposed SFN, SFC and SFS facilities are not likely  
2 to result in significant adverse impacts to scenic and aesthetic values identified as significant  
3 or important in applicable federal land management plans or in local land use plans in the  
4 analysis area.

Conclusions of Law

5 For the reasons discussed above, the Council concludes that the proposed SFN, SFC  
6 and SFS facilities would comply with the Council’s Scenic Resources Standard if  
7 Amendment #1 were approved.

**(e) Recreation**

**OAR 345-022-0100**

8  
9 *(1) Except for facilities described in section (2), to issue a site certificate, the*  
10 *Council must find that the design, construction and operation of a facility, taking*  
11 *into account mitigation, are not likely to result in a significant adverse impact to*  
12 *important recreational opportunities in the analysis area as described in the*  
13 *project order. The Council shall consider the following factors in judging the*  
14 *importance of a recreational opportunity:*

- 15 *(a) Any special designation or management of the location;*
- 16 *(b) The degree of demand;*
- 17 *(c) Outstanding or unusual qualities;*
- 18 *(d) Availability or rareness;*
- 19 *(e) Irreplaceability or irretrievability of the opportunity.*

20 \* \* \*

Findings of Fact

21 In the *Final Order on the Application*, the Council found that none of the recreational  
22 opportunities in the analysis area are important, based on the factors listed in OAR 345-022-  
23 0100.<sup>148</sup> Therefore, the Council found that the design, construction and operation of the  
24 SFWF were not likely to result in significant adverse impacts to recreational opportunities in  
25 the analysis area. Those findings are incorporated herein by this reference.

26 The division of the SFWF into three separate facilities as requested in Amendment #1  
27 would not affect any recreational opportunities that were not previously addressed by the

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slightly more than the maximum length of 230-kV transmission line proposed for SFWF (up to 21 miles). Similarly, the cumulative length of aboveground 34.5-kV collector line installed on single pole structures could be up to 39.9 miles for the new facilities, compared to the maximum length of aboveground 34.5-kV collector line installed on single pole structures proposed for the SFWF (28 miles). The final design lengths of aboveground transmission lines for the proposed facilities and for the previously-approved SFWF would likely be less than these maxima. See additional discussion below at page 42. The cumulative visual impact of aboveground transmission lines for the proposed facilities would be comparable to, and not significantly greater than, the visual impact of the transmission lines already approved for the SFWF considering other transmission infrastructure that is already present in the area.

<sup>148</sup> *Final Order on the Application* (July 25, 2008), pp. 76-77.

1 Council. Approval of Amendment #1 would not change the facts or circumstances upon  
2 which the Council relied in making findings regarding impacts on recreational opportunities.

Conclusions of Law

3 For the reasons discussed above, the Council concludes that the proposed SFN, SFC  
4 and SFS facilities would comply with the Council’s Recreation Standard if Amendment #1  
5 were approved.

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

**OAR 345-024-0010**

6 *To issue a site certificate for a proposed wind energy facility, the Council must*  
7 *find that the applicant:*  
8

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

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

Findings of Fact

15 In the *Final Order on the Application*, the Council found that the certificate holder  
16 could design, construct and operate the SFWF to exclude members of the public from close  
17 proximity to the turbine blades and electrical equipment, to preclude structural failure of the  
18 tower or blades that could endanger the public safety and to have adequate safety devices and  
19 testing procedures.<sup>149</sup> Those findings are incorporated herein by this reference. To ensure  
20 public safety, the Council included Conditions 12, 26, 40, 47, 59, 60, 61, 62, 63, 64 and 93 in  
21 the Site Certificate.

22 In the Request for Amendment #1, the applicants do not propose any significant  
23 change in the design, size or location of facility components allowed under the Site  
24 Certificate. Approval of Amendment #1 would not change the facts or circumstances upon  
25 which the Council relied in making findings regarding public health and safety at the SFWF  
26 site. Because the proposed SFN, SFC and SFS facilities would be located within the  
27 previously-approved SFWF site boundary and would be subject to the same site certificate  
28 conditions, the division of the SFWF into three separate facilities would not result in any new  
29 or increased risk of harm to public safety. The Council modifies the facility descriptions in  
30 Conditions 26, 60, 64 and 93 as appropriate for SFN, SFC and SFS as shown in Revisions 15,  
31 28, 29 and 45.

32 Both the Federal Aviation Administration (FAA) and the Oregon Department of  
33 Aviation are responsible for determining whether any turbine tower presents a hazard to  
34 aviation in Oregon.<sup>150</sup> Condition 57 requires the certificate holder to submit a Notice of

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<sup>149</sup> *Final Order on the Application* (July 25, 2008), pp. 78-79.

<sup>150</sup> ORS 836.530 authorizes the Oregon Department of Aviation to adopt rules to “define physical hazards to air navigation and determine whether specific types or classes of objects or structures constitute hazards.” The agency has adopted rules in OAR Chapter 738, Division 70, regarding physical hazards to air safety.

1 Proposed Construction or Alteration to the FAA when the final design configuration of the  
2 facility is known.<sup>151</sup> If the FAA finds that a proposed turbine would not present a safety  
3 hazard, the FAA issues a “Determination of No Hazard to Air Navigation” letter. The  
4 certificate holder must receive the FAA determination before beginning construction of each  
5 turbine. In Revision 27, the Department recommended modification of Condition 57 to  
6 require the submission of Notices of Proposed Construction or Alteration to the Oregon  
7 Department of Aviation, as required under OAR 738-070-0080. In response to a Notice of  
8 Proposed Construction or Alteration, the Oregon Department of Aviation makes a  
9 determination whether the proposed construction would be a hazard to air navigation and  
10 whether further aeronautical study is necessary.<sup>152</sup>

### Conclusions of Law

11 For the reasons discussed above, the Council concludes that the proposed SFN, SFC  
12 and SFS facilities would comply with the Council’s Public Health and Safety Standards for  
13 Wind Energy Facilities if Amendment #1 were approved.

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

#### **OAR 345-024-0015**

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

18  
19 *(1) Using existing roads to provide access to the facility site, or if new roads are*  
20 *needed, minimizing the amount of land used for new roads and locating them to*  
21 *reduce adverse environmental impacts.*

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

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

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

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

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

### Findings of Fact

32 In the *Final Order on the Application*, the Council found that the certificate holder  
33 could design and construct the SFWF to reduce visual impact, to restrict public access and to  
34 reduce cumulative adverse environmental impacts in the vicinity to the extent practicable in

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<sup>151</sup> *Final Order on the Application* (July 25, 2008), p.141.

<sup>152</sup> OAR 738-070-0090.

1 accordance with the requirements of OAR 345-024-0015.<sup>153</sup> Those findings are incorporated  
2 herein by this reference. The proposed amendment would divide the SFWF into three separate  
3 facilities. Approval of Amendment #1 would authorize the construction of an additional  
4 substation (in SFC) and an additional field workshop (in SFN) but would not otherwise  
5 substantially change the cumulative effects of the components authorized for construction  
6 within the previously-approved SFWF site boundary. Approval of the amendment would not  
7 change the total number of wind turbines or the authorized blade tip height of wind turbines  
8 compared to the turbines approved for the SFWF.

9 To address cumulative impacts, the Council included Conditions 58, 63, 86, 90, 91, 94  
10 and 95 in the Site Certificate. Condition 95 addresses limitations on lighting. The applicants  
11 anticipate that, in some circumstances, construction work may occur at night and lighting  
12 would be necessary for safety.<sup>154</sup> The circumstances requiring construction activities at night  
13 are similar to the circumstances addressed by the Council in the *Final Order on Amendment*  
14 *#3 for the Biglow Wind Farm* (October 31, 2008), in which the Council approved limited use  
15 of lighting for nighttime construction.<sup>155</sup> For structural integrity of the turbine towers, the  
16 concrete foundation base and pedestal are each placed as monolithic pours of concrete. At  
17 certain times of the year, foundation and pedestal placements may have to start before  
18 daylight in order to complete the work in a single pour in one day. Also, for safety, turbine  
19 installation and the lifting of rotor assemblies must be done during periods of low wind. Often  
20 the local winds die down late at night. The applicants propose to modify Condition 95 to  
21 include the same exception for nighttime construction that the Council approved for the  
22 Biglow facility. The Council adopts the modification to Condition 95 as described in Revision  
23 47.

### Conclusions of Law

24 Based on these findings and subject to the conditions of the site certificate, the Council  
25 concludes that the proposed SFN, SFC and SFS facilities would comply with the Council's  
26 Siting Standards for Wind Energy Facilities if Amendment #1 were approved.

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

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

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

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

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

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<sup>153</sup> *Final Order on the Application* (July 25, 2008), pp. 79-85.

<sup>154</sup> Email from Patricia Pilz, July 22, 2009.

<sup>155</sup> *Final Order on Amendment #3 for the Biglow Wind Farm* (October 31, 2008), p. 29.

## Findings of Fact

1           In the *Final Order on the Application*, the Council found that the certificate holder  
2 could design, construct and operate the proposed transmission line components of the SFWF  
3 in accordance with the standards described in OAR 345-024-0090.<sup>156</sup> Those findings are  
4 incorporated herein by this reference. Based on the “Typical Project Layout,” the Council  
5 found that the SFWF would have approximately 16.3 miles of aboveground 230-kV  
6 transmission lines and approximately 32.5 miles of aboveground 34.5-kV collector lines.<sup>157</sup> In  
7 comparison, the SFN, SFC and SFS facilities, combined, would have approximately 16.3  
8 miles of aboveground 230-kV transmission line and 38.26 miles of aboveground collector  
9 line, based on the typical layouts.<sup>158</sup>

10           The Council has found that underground 34.5-kV collector lines do not produce any  
11 measurable electric field at one meter above ground and do not pose a potential hazard from  
12 induced voltage.<sup>159</sup> The Council has found that the aboveground 230-kV transmission lines  
13 and 34.5-kV collector lines would produce electric fields well below the 9 kV per meter  
14 standard required by OAR 345-024-0090(1).<sup>160</sup> The Council included Conditions 71 and 80 in  
15 the Site Certificate to reduce the potential risk of electric shock from induced currents.  
16 Approval of Amendment #1 would not change the facts or circumstances upon which the  
17 Council relied in making findings regarding compliance with the standards in OAR 345-024-  
18 0090. The Council modifies Condition 71 as shown in Revision 33 and modifies Condition 80  
19 as shown in Revision 37 as applicable to SFN, SFC and SFS.

## Conclusions of Law

20           For the reasons discussed above, the Council concludes that the proposed SFN, SFC  
21 and SFS facilities would comply with the Council’s Siting Standards for Transmission Lines  
22 if Amendment #1 were approved.

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

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

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

23           *To issue a site certificate, the Council, after consultation with appropriate state*  
24           *agencies, must find that:*  
25

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

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

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

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<sup>156</sup> *Final Order on the Application* (July 25, 2008), p. 87.

<sup>157</sup> *Final Order on the Application* (July 25, 2008), p. 86.

<sup>158</sup> Request for Amendment #1, Appendices A, B and C, Facility Retirement and Site Restoration (tables).

<sup>159</sup> *Final Order on the Application* (July 25, 2008), p. 87.

<sup>160</sup> *Final Order on the Application* (July 25, 2008), pp. 86-87.

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

### Findings of Fact

6 In the *Final Order on the Application*, the Council found that the design, construction  
7 and operation of the SFWF, taking mitigation into account and subject to the site certificate  
8 conditions adopted in the orders, did not have the potential to significantly reduce the  
9 likelihood of the survival or recovery of any threatened or endangered plant or wildlife  
10 species listed under Oregon law.<sup>161</sup> Those findings are incorporated herein by this reference.  
11 The proposed amendment would divide the SFWF into three separate facilities but would not  
12 significantly change the wind facility components that would be authorized for construction  
13 and operation within the previously-approved SFWF site boundary.

14 The Council found that one State-listed threatened plant species (Laurent's milk-vetch)  
15 has the potential to occur within the analysis area, but recent reported occurrences are outside  
16 the analysis area.<sup>162</sup> The species was not observed during on-site plant surveys, and there is no  
17 suitable habitat for the plant within the SFWF site boundary. The Council found that  
18 construction and operation of the SFWF would not be likely to cause a significant reduction in  
19 the likelihood of survival or recovery of this threatened species. In addition, Condition 86  
20 requires avoidance of any disturbance to seeps, riparian area or vernal pools, which may  
21 provide suitable habitat for disappearing monkeyflower, hepatic monkeyflower and sessile  
22 mousetail, which are State-listed candidate plant species.<sup>163</sup>

23 The Council found that two State-listed endangered wildlife species (gray wolf and  
24 Washington ground squirrel) and two threatened species (bald eagle and chinook salmon)  
25 have the potential to occur within the SFWF site boundary.<sup>164</sup> The Council found that the  
26 design, construction and operation of the wind facility components proposed for the SFWF  
27 were not likely to cause a significant reduction in the likelihood of survival or recovery of any  
28 of these protected wildlife species.<sup>165</sup>

29 The Council found that Washington ground squirrels (WGS) were present near the site  
30 boundary.<sup>166</sup> The location of the colony is near the site boundary of the proposed SFS facility.  
31 Condition 86 includes construction restrictions near the identified WGS colony that would  
32 apply to the SFS facility, as discussed in Revision 42 in Attachment E. In addition, Condition  
33 83 requires the certificate holder to implement the *Wildlife Monitoring and Mitigation Plan*  
34 (WMMP), which includes assessment of the status of the WGS colony within the site

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<sup>161</sup> *Final Order on the Application* (July 25, 2008), p. 96.

<sup>162</sup> *Final Order on the Application* (July 25, 2008), p. 90. The species is shown as "Laurence's milk-vetch" in the *Final Order*.

<sup>163</sup> A "candidate species" is "any plant species designated for study by the director [of the Oregon Department of Agriculture] whose numbers are believed low or declining, or whose habitat is sufficiently threatened and declining in quantity and quality, so as to potentially qualify for listing as a threatened or endangered species in the foreseeable future." OAR 603-073-0002.

<sup>164</sup> *Final Order on the Application* (July 25, 2008), p. 94.

<sup>165</sup> *Final Order on the Application* (July 25, 2008), p. 96.

<sup>166</sup> *Final Order on the Application* (July 25, 2008), p. 94.

1 boundary beginning in the first WGS activity period after the effective date of the site  
2 certificate and annually thereafter through the second year after the facility becomes  
3 commercially operational. Revision 39 incorporates the Departments recommended revisions  
4 of WMMPs for each of the three new facilities that would be created if Amendment #1 is  
5 approved. The WGS assessment is included in the WMMP for SFS (Attachment SFS-A)  
6 incorporated herein.

### Conclusions of Law

7 For the reasons discussed above and subject to the site certificate conditions described  
8 herein, the Council concludes that the proposed SFN, SFC and SFS facilities would comply  
9 with the Council's Threatened and Endangered Species Standard if Amendment #1 were  
10 approved.

### **(b) Fish and Wildlife Habitat**

#### **OAR 345-022-0060**

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

### Findings of Fact

16 In the *Final Order on the Application*, the Council found that the design, construction  
17 and operation of the SFWF would be consistent with the ODFW habitat mitigation goals and  
18 standards.<sup>167</sup> The Council made findings regarding the characteristics of the habitat types  
19 within the site boundary and the State sensitive species observed within or near the lease  
20 boundaries during avian point-counts and other wildlife surveys.<sup>168</sup> Those findings are  
21 incorporated herein by this reference.

22 The proposed amendment would divide the SFWF into three separate facilities but  
23 would not significantly change the wind facility components authorized for construction and  
24 operation within the previously-approved SFWF site boundary. The proposed SFN, SFC and  
25 SFS facilities would potentially affect the same habitat as would have been affected by the  
26 SFWF. The “worst-case” and “typical project layout” habitat impacts of the SFWF were  
27 identified in Tables 11 and 12 of the *Final Order*.

#### A. Habitat Assessments

##### Shepherds Flat North

28  
29 The applicants estimated the habitat impacts of the SFN facility based on a “typical  
30 project layout” as shown in Table 7.<sup>169</sup> The applicants have updated the habitat assessment of  
31 the areas within the site boundaries of SFN, SFC and SFS based on recent site visits. For the  
32 SFN area, some firebreak areas that previously existed have been revegetated, resulting in

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<sup>167</sup> *Final Order on the Application* (July 25, 2008), p. 115.

<sup>168</sup> *Final Order on the Application* (July 25, 2008), 102-106.

<sup>169</sup> Request for Amendment #1, Appendix A, Table P-6a SF North (revised, email from Patricia Pilz, July 10, 2009), and SF North Figures 1-4.



1 improved habitat and a higher-value habitat category for these areas.<sup>170</sup> Road area has  
 2 decreased. The total area of curlew habitat and grassland habitat has increased. Exclusion  
 3 areas in SFN include a 250-foot setback from bluff edges along the northern site boundary  
 4 above the Columbia River and along the eastern site boundary above Willow Creek. In  
 5 addition, the certificate holder would avoid disturbance of 17 mapped Category 1 and 2 raptor  
 6 habitats and an area of Category 2 shrub-steppe-sage habitat on the southeast edge of the site.

**Table 7: Typical Layout Habitat Impacts (SFN)**

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	0.162		
<b>Subtotal</b>		<b>0.162</b>	<b>0</b>	<b>0</b>
<b>Category 2</b>				
Raptor nests	RN	0.227		
Shrub-steppe -- sage	SS-S	33.568		
<b>Subtotal</b>		<b>33.795</b>	<b>0</b>	<b>0</b>
<b>Category 3</b>				
Curlew	CUR	6,467.82	116.205	36.84
<b>Subtotal</b>		<b>6,467.82</b>	<b>116.205</b>	<b>36.84</b>
<b>Category 4</b>				
Grassland	GL	1339.163	31.155	13.735
Rock and soil	RS	64.612	1.028	0.199
<b>Subtotal</b>		<b>1,403.775</b>	<b>32.183</b>	<b>13.934</b>
<b>Category 5</b>				
Shrub-steppe -- broom snakeweed	SS-B	48.483	1.16	0.434
<b>Subtotal</b>		<b>48.483</b>	<b>1.16</b>	<b>0.434</b>
<b>Category 6</b>				
Animal facility	AF	76.307	7.712	0.815
Road and parking	RP	72.928	1.743	0.357
<b>Subtotal</b>		<b>149.235</b>	<b>9.455</b>	<b>1.172</b>
<b>Total Area</b>		<b>8,103.27</b>	<b>159.003</b>	<b>52.38</b>

7 For micro-siting purposes, the applicants estimated the maximum habitat impacts of the  
 8 SFN facility based on a “worst-case layout.”<sup>171</sup> The estimated areas of affected habitat are  
 9 shown in Table 8.<sup>172</sup>

<sup>170</sup> Request for Amendment #1, Appendix A, Wildlife Habitat, p. 1.

<sup>171</sup> Request for Amendment #1, Appendix A, figure labeled “SF North: Worst-case Layout.”

<sup>172</sup> Request for Amendment #1, Appendix A, Table P-6a SF North (revised, email from Patricia Pilz, July 10, 2009).

**Table 8: Maximum Habitat Impacts (SFN)**

Habitat Type	Habitat Subtype	Areas of temporary impact (acres)	Areas of permanent impact (acres)
<b>Category 1</b> Raptor nests <b>Subtotal</b>	RN	<b>0</b>	<b>0</b>
<b>Category 2</b> Raptor nests Shrub-steppe -- sage <b>Subtotal</b>	RN SS-S	<b>0</b>	<b>0</b>
<b>Category 3</b> Curlew <b>Subtotal</b>	CUR	207.08 <b>207.08</b>	43.001 <b>43.001</b>
<b>Category 4</b> Grassland Rock and soil <b>Subtotal</b>	GL RS	23.9 0.701 <b>24.601</b>	8.514 0.169 <b>8.683</b>
<b>Category 5</b> Shrub-steppe -- broom snakeweed <b>Subtotal</b>	SS-B	<b>0</b>	<b>0</b>
<b>Category 6</b> Animal facility Road and parking <b>Subtotal</b>	AF RP	9.027 2.021 <b>11.048</b>	0.752 0.329 <b>1.081</b>
<b>Total Area</b>		<b>242.729</b>	<b>52.765</b>

1        **Shepherds Flat Central**

2            The applicants estimated the habitat impacts of the SFC facility based on a “typical  
3 project layout” as shown in Table 9.<sup>173</sup> Based on recent on-site evaluation, the applicants  
4 found that area previously rated as Category 4 “rock and soil” is actually an area of  
5 disturbance from a sheep watering station (Category 6 “animal facility”).<sup>174</sup> The applicants  
6 found an area of ground disturbance and rock piles from an old quarry and assigned the area  
7 to a new habitat subtype (Category 6 “quarry”). The area of disturbance from livestock trucks  
8 (Category 6 “animal facility”) has increased. The area rated as Category 3 shrub-steppe-  
9 purshia increased, but the area of Category 5 shrub-steppe-broom snakeweed decreased.  
10 Based on habitat improvement in some areas, the acreages of grassland and shrub-steppe-sage  
11 have increased.

12            Exclusion areas in SFC include 109 mapped Category 1 and 2 raptor habitats and a  
13 250-foot setback from the bluff edge above Willow Creek. The certificate holder would avoid  
14 an area of Category 2 grassland habitat along Rhea Road, a nearby patch of Category 3 shrub-  
15 steppe-rabbitbrush and two nearby patches of Category 3 shrub-steppe-sage. The applicants

<sup>173</sup> Request for Amendment #1, Appendix B, Table P-6a SF Central, and SF Central Figures 1-5.

<sup>174</sup> Request for Amendment #1, Appendix B, Wildlife Habitat, p. 1.

1 have adjusted the sizes of several patches of shrub-steppe habitat.<sup>175</sup> The applicants propose to  
 2 avoid all mapped areas of Category 3 shrub-steppe-sage habitat that are smaller than 5 acres  
 3 (3 patches), one mapped area of Category 3 shrub-steppe-purshia habitat and one mapped area  
 4 of Category 3 shrub-steppe rabbitbrush. As described in Revision 42, the Department  
 5 recommended modification of Condition 86 to reflect the proposed avoidance of these shrub-  
 6 steppe habitat areas in SFC.

**Table 9: Typical Layout Habitat Impacts (SFC)**

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	0.007		
<b>Subtotal</b>		<b>0.007</b>	<b>0</b>	<b>0</b>
<b>Category 2</b>				
Grassland	GL	19.152		
Raptor nests	RN	1.635		
Shrub-steppe -- sage	SS-S	11.484		
Wetland-wash	WL-W	0.429		
<b>Subtotal</b>		<b>32.7</b>	<b>0</b>	<b>0</b>
<b>Category 3</b>				
Curlew	CUR	90.728	0	0
Grassland	GL	598.062	8.628	2.64
Shrub-steppe -- purshia	SS-P	6.115	0	0
Shrub-steppe -- rabbitbrush	SS-R	170.074	1.555	0.658
Shrub-steppe -- sage	SS-S	187.704	5.064	1.62
<b>Subtotal</b>		<b>1,052.683</b>	<b>15.247</b>	<b>4.918</b>
<b>Category 4</b>				
Grassland	GL	4756.746	96.496	37.407
Previously cultivated	PC	38.748	1.014	0.241
Rock and soil	RS	110.003	0.397	0.115
<b>Subtotal</b>		<b>4,905.497</b>	<b>97.907</b>	<b>37.763</b>
<b>Category 5</b>				
Previously cultivated	PC	104.704	2.914	1.006
Shrub-steppe -- broom snakeweed	SS-B	44.24	1.388	0.48
<b>Subtotal</b>		<b>148.944</b>	<b>4.302</b>	<b>1.486</b>
<b>Category 6</b>				
Animal Facility	AF	50.556	0.449	0.116
Dryland wheat	DW	680.837	15.375	6.979
Road and parking	RP	57.008	0.981	0.296
Structures	ST	3.874	0.014	0
Quarry	Q	2.65	0	0
<b>Subtotal</b>		<b>794.925</b>	<b>16.819</b>	<b>7.391</b>
<b>Total Area</b>		<b>6,934.756</b>	<b>134.275</b>	<b>51.558</b>

<sup>175</sup> Request for Amendment #1, Appendix B, Wildlife Habitat, pp. 1-2.

1 For micro-siting purposes, the applicants estimated the maximum habitat impacts of the  
 2 SFC facility based on a “worst-case layout.”<sup>176</sup> The estimated areas of affected habitat are  
 3 shown in Table 10.<sup>177</sup>

**Table 10: Maximum Habitat Impacts (SFC)**

Habitat Type	Habitat Subtype	Areas of temporary impact (acres)	Areas of permanent impact (acres)
<b>Category 1</b>			
Raptor nests	RN		
<b>Subtotal</b>		<b>0</b>	<b>0</b>
<b>Category 2</b>			
Grassland	GL		
Raptor nests	RN		
Shrub-steppe -- sage	SS-S		
Wetland-wash	WL-W		
<b>Subtotal</b>		<b>0</b>	<b>0</b>
<b>Category 3</b>			
Curlew	CUR	0	0
Grassland	GL	13.063	2.656
Shrub-steppe -- purshia	SS-P	0	0
Shrub-steppe -- rabbitbrush	SS-R	5.941	1.049
Shrub-steppe -- sage	SS-S	9.818	2.132
<b>Subtotal</b>		<b>28.822</b>	<b>5.837</b>
<b>Category 4</b>			
Grassland	GL	141.876	36.419
Previously cultivated	PC	2.46	0.407
Rock and soil	RS	0.503	0.115
<b>Subtotal</b>		<b>144.839</b>	<b>36.941</b>
<b>Category 5</b>			
Previously cultivated	PC	4.231	1.032
Shrub-steppe -- broom snakeweed	SS-B	1.32	0.43
<b>Subtotal</b>		<b>5.551</b>	<b>1.462</b>
<b>Category 6</b>			
Animal Facility	AF	0	0
Dryland Wheat	DW	21.863	6.976
Road and parking	RP	1.144	0.299
Structures	ST	0.041	0
Quarry	Q	0	0
<b>Subtotal</b>		<b>23.048</b>	<b>7.275</b>
<b>Total Area</b>		<b>202.260</b>	<b>51.515</b>

<sup>176</sup> Request for Amendment #1, Appendix B, figure labeled “SF Central: Worst-case Layout.”

<sup>177</sup> Request for Amendment #1, Appendix B, Table P-6a SF Central.

**Shepherds Flat South**

The applicants estimated the habitat impacts of the SFS facility based on a “typical project layout” as shown in Table 11.<sup>178</sup> Based on recent on-site evaluation, the areas rated Category 1 and Category 2 “Washington ground squirrel” have increased. The WGS colonies observed in 2009 are larger and more active than they were in 2007. Exclusion areas in SFS include 35 mapped Category 1 and 2 raptor habitats. The applicants have adjusted the sizes of several patches of shrub-steppe habitat.<sup>179</sup> In addition, the applicants have identified small areas of Category 2 grassland and Category 2 shrub-steppe-sage that were not shown in previous habitat mapping. The applicants propose to avoid all mapped areas of Category 3 shrub-steppe-sage habitat that are smaller than 5 acres (8 patches). As described in Revision 42, the Department recommended modification of Condition 86 to reflect the proposed avoidance of these shrub-steppe habitat areas in SFS.

**Table 11: Typical Layout Habitat Impacts (SFS)**

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	0.043		
Washington ground squirrel	WGS	1.642		
<b>Subtotal</b>		<b>1.685</b>	<b>0</b>	<b>0</b>
<b>Category 2</b>				
Grassland	GL	2.646		
Raptor nests	RN	0.894		
Shrub-steppe -- sage	SS-S	53.517		
Washington ground squirrel	WGS	19.162		
Wetland-wash	WL-W	6.251		
<b>Subtotal</b>		<b>82.47</b>	<b>0</b>	<b>0</b>
<b>Category 3</b>				
Curlew	CUR	90.73		
Grassland	GL	225.213	2.49	0.865
Shrub-steppe -- rabbitbrush	SS-R	11.477	0.428	0.127
Shrub-steppe -- sage	SS-S	165.02	0.033	0.001
<b>Subtotal</b>		<b>492.44</b>	<b>2.951</b>	<b>0.993</b>
<b>Category 4</b>				
Grassland	GL	2723.914	9.288	1.786
Previously cultivated	PC	530.508	8.955	2.637
Rock and soil	RS	47.953	0.004	
<b>Subtotal</b>		<b>3302.375</b>	<b>18.247</b>	<b>4.423</b>
<b>Category 5</b>				
Previously cultivated	PC	676.387	34.354	8.045
<b>Subtotal</b>		<b>676.387</b>	<b>34.354</b>	<b>8.045</b>

<sup>178</sup> Request for Amendment #1, Appendix C, Table P-6a SF South (revised, email from Patricia Pilz, July 10, 2009), and SF South Figures 1-8.

<sup>179</sup> Request for Amendment #1, Appendix C, Wildlife Habitat, pp. 1-2.

<b>Category 6</b>				
Animal Facility	AF	13.254	0	0
Dryland wheat	DW	6719.98	168.964	52.206
Road and parking	RP	82.779	1.044	0.382
Structures	ST	39.944		
<b>Subtotal</b>		<b>6855.957</b>	<b>170.008</b>	<b>52.588</b>
<b>Total Area</b>		<b>11,411.314</b>	<b>225.560</b>	<b>66.049</b>

1 For micro-siting purposes, the applicants estimated the maximum habitat impacts of the  
2 SFS facility based on a “worst-case layout.”<sup>180</sup> The estimated areas of affected habitat are  
3 shown in Table 12.<sup>181</sup>

**Table 12: Maximum Habitat Impacts (SFS)**

Habitat Type	Habitat Subtype	Areas of temporary impact (acres)	Areas of permanent impact (acres)
<b>Category 1</b>			
Raptor nests	RN		
Washington ground squirrel	WGS		
<b>Subtotal</b>		<b>0</b>	<b>0</b>
<b>Category 2</b>			
Grassland	GL		
Raptor nests	RN		
Shrub-steppe -- sage	SS-S		
Washington ground squirrel	WGS		
Wetland-wash	WL-W		
<b>Subtotal</b>		<b>0</b>	<b>0</b>
<b>Category 3</b>			
Curlew	CUR	0	0
Grassland	GL	5.602	1.05
Shrub-steppe -- rabbitbrush	SS-R	0.434	0.111
Shrub-steppe -- sage	SS-S	0.06	0.002
<b>Subtotal</b>		<b>6.096</b>	<b>1.163</b>
<b>Category 4</b>			
Grassland	GL	13.269	1.972
Previously cultivated	PC	12.825	3.088
Rock and soil	RS	0.004	0
<b>Subtotal</b>		<b>26.098</b>	<b>5.06</b>
<b>Category 5</b>			
Previously cultivated	PC	40.735	8.375
<b>Subtotal</b>		<b>40.735</b>	<b>8.375</b>

<sup>180</sup> Request for Amendment #1, Appendix C, figures labeled “SF South: Worst-case Layout Figure 1a” and “SF South: Worst-case Layout Figure 1b.”

<sup>181</sup> Request for Amendment #1, Appendix C, Table P-6a SF South (revised, email from Patricia Pilz, July 10, 2009).

<b>Category 6</b>			
Animal Facility	AF	0	0
Dryland wheat	DW	218.607	50.248
Road and parking	RP	1.17	0.351
Structures	ST	0.001	0
<b>Subtotal</b>		<b>219.778</b>	<b>50.599</b>
<b>Total Area</b>		<b>292.707</b>	<b>65.197</b>

## B. Habitat Impacts

1 The maximum habitat impacts analysis for each facility, shown in Tables 8, 10 and 12,  
2 allows for facility micrositing while ensuring that the certificate holders could mitigate for the  
3 habitat impacts of any micrositing configuration. Although the actual permanent and  
4 temporary impacts of each facility would not be determined until the final design layouts are  
5 known, the maximum habitat impacts analysis shapes the upper bounds of the quantity and  
6 quality of mitigation acres that would be required. Under Condition 29, the certificate holders  
7 must provide to the Department descriptions of the final proposed layouts and assessments of  
8 the affected habitats before beginning construction. The actual habitat impacts would be  
9 determined according to the final layouts of facility components.

10 Condition 29 specifically addresses a habitat assessment to be completed before  
11 beginning construction. The applicants, in keeping with Condition 29, have re-evaluated the  
12 habitat within the SFN, SFC and SFS site boundaries and have presented a revised habitat  
13 assessment in the Request for Amendment #1. The applicants made adjustments to habitat  
14 categories as described above for each facility. The applicants understand that Condition 29,  
15 nevertheless, requires a final habitat assessment prior to construction based on the final design  
16 configuration of each facility. Condition 29 requires consultation with ODFW at the time of  
17 the pre-construction habitat assessment and allows the Department to employ a qualified  
18 contractor to confirm the habitat assessment by on-site inspection. ODFW policy guidance for  
19 assigning habitat categories that was in place when the SFWF site certificate was issued (July  
20 25, 2008) will be applied to determine habitat categories under Condition 29 on lands lying  
21 within the original SFWF site boundary.<sup>182</sup>

22 Based on the habitat assessments presented in the amendment request, the Department  
23 compared the cumulative habitat impacts of the proposed SFN, SFC and SFS with the habitat  
24 impacts estimated for the SFWF.<sup>183</sup> Overall, the cumulative permanent habitat disturbance for  
25 the SFN, SFC and SFS (approximately 170 acres) would be less than the permanent habitat  
26 disturbance estimated for the SFWF (approximately 184 acres), based on the typical project  
27 layout impacts (see Table 13 below). The cumulative temporary habitat disturbance for the  
28 SFN, SFC and SFS (approximately 519 acres) is significantly greater than the temporary  
29 habitat disturbance estimated for the SFWF (approximately 180 acres).

<sup>182</sup> Any new policy guidance issued after July 25, 2008, will not be applied (teleconference with ODFW, the applicants and the Department, July 29, 2009).

<sup>183</sup> Estimated habitat impacts for the SFWF are shown in the *Final Order on the Application* (July 25, 2008), Tables 11 and 12.

1 The applicants have explained that the large increase in temporary construction  
2 disturbance almost entirely due to different construction techniques.<sup>184</sup> The applicants  
3 consulted with a construction contractor in preparing the estimates of temporary disturbance  
4 for the amendment request. A different contractor had been consulted for the estimates  
5 presented in the site certificate application.

6 Most of the estimated increase in temporary disturbance is due to access road  
7 construction. In the site certificate application, the applicant calculated the impacts based on  
8 access roads having a finished width of 18 feet and a temporary width during construction of  
9 28 feet. Based on the requirements of the new construction contractor, the applicants  
10 calculated the impacts for SFN, SFC and SFS based on access roads having a finished width  
11 of 16 feet but a temporary width of 51 feet (and up to 66 feet in the maximum impacts  
12 estimate) for both newly constructed roads and improvement of existing farm roads. As a  
13 result of the changes in proposed construction techniques for access roads, the estimated area  
14 of temporary disturbance increased by approximately 248 acres, compared to the estimates for  
15 SFWF.<sup>185</sup>

16 The new construction contractor has proposed slab turbine tower foundations. The  
17 temporary disturbance estimates for SFWF were, instead, based on the use of cylindrical  
18 foundations. The area of temporary disturbance for each slab foundation varies, depending on  
19 whether soil compaction is required. For the typical project layout estimates, the applicants  
20 assumed that slab foundations would be used for all SFS turbine towers and that soil  
21 compaction would be needed for 1/3 of the foundations. Compared to the temporary  
22 disturbance estimated for the SFWF turbine tower foundations, the use of slab foundations  
23 increased the temporary disturbance by approximately 26.6 acres.<sup>186</sup>

24 Additional areas of temporary disturbance based on the new contractor's requirements  
25 include turnaround areas at the end of each turbine string to allow construction trucks to turn  
26 around without backing up (26 acres), temporary office facilities and additional staging and  
27 storage areas (20 acres), increased turning radii at access road intersections (9.4 acres), wider  
28 disturbance areas for off-road trenching (7.3 acres) and increased temporary disturbance  
29 around facility substations (4.6 acres, including the addition of a new substation for SFC).<sup>187</sup>  
30 Other differences in construction techniques added to the overall increase in temporary  
31 disturbance. A correction in the spacing of support structures for the 230-kV transmission line  
32 resulted in a decrease in the overall area of temporary disturbance for the transmission line.

33 In addition to the differences in construction techniques, a small part of the increase in  
34 temporary disturbance (less than one acre) is due to including the entire length of 230-kV  
35 transmission line for each facility from the project substation to the point of interconnection at  
36 the Slatt Switching Station. That is, the segment from the SFN substation to Slatt was counted  
37 in each of the habitat impact tables for SFN, SFC and SFS (triple-counting), and the segment  
38 from the SFC to the SFN substation was counted in the habitat impact tables for SFC and SFS  
39 (double-counting).

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<sup>184</sup> Email from Patricia Pilz, July 11, 2009.

<sup>185</sup> Estimates for SFWF were based on a revised temporary footprint table (email from Carol Weisskopf, March 10, 2008).

<sup>186</sup> Email from Patricia Pilz, July 11, 2009.

<sup>187</sup> Email from Patricia Pilz, July 11, 2009.



1 The cumulative impacts of the proposed SFN, SFC and SFS on habitat, compared with  
 2 the habitat impacts of the previously-approved SFWF are shown in Table 13. The table shows  
 3 a significant increase in temporary impact, explained above. Most of the increase would affect  
 4 Category 6 habitat (194 acres) but the proposed facilities would also increase temporary  
 5 impacts on Category 3 habitat (82 acres) and Category 4 habitat (89.8 acres).

**Table 13: Cumulative Typical Habitat Impacts (SFN, SFC, SFS)**

Habitat Type	SFN, SFC & SFS Cumulative Impacts	SFWF Impacts	Change in acres
Areas of temporary impact (acres):			
Category 3	134.40	52.33	82.07
Category 4	148.34	58.53	89.81
Category 5	39.82	67.38	(27.56)
Category 6	196.28	2.16	194.12
<b>Total</b>	<b>518.84</b>	<b>180.40</b>	<b>338.44</b>
Areas of permanent impact (acres):			
Category 3	42.75	49.17	(6.42)
Category 4	56.12	55.97	0.15
Category 5	9.97	76.86	(66.89)
Category 6	61.15	2.19	58.96
<b>Total</b>	<b>169.99</b>	<b>184.19</b>	<b>(14.20)</b>

6 The cumulative permanent footprint of SFN, SFC and SFS would affect 14 fewer  
 7 acres than were estimated for the permanent footprint of the SFWF. The proposed facilities  
 8 would affect more Category 6 habitat (59 acres) but less Category 5 habitat (a reduction by  
 9 approximately 67 acres) and less Category 3 habitat (a reduction by approximately 6 acres).

### C. Mitigation

10 In the *Final Order on the Application*, the Council made findings regarding the  
 11 potential impacts of construction and operation of the SFWF on habitat within the site  
 12 boundary.<sup>188</sup> Those findings are incorporated herein by this reference. Construction and  
 13 operation of SFN, SFC and SFS would have the same types of potential impacts on wildlife  
 14 habitat.

15 The *Final Order on the Application* describes site certificate conditions for mitigation  
 16 of potential adverse impacts to wildlife and wildlife habitat.<sup>189</sup> These conditions would apply  
 17 to each of the three proposed facilities, subject to the modifications discussed herein.

18 Condition 83 requires the certificate holder to conduct wildlife monitoring during  
 19 operation of the facility as described in the *Wildlife Monitoring and Mitigation Plan*  
 20 (WMMP). The Council adopts modifications of the WMMP previously adopted for the  
 21 SFWF. These modifications are incorporated in Revision 39 and in separate WMMPs for each  
 22 of the three proposed facilities (Attachments SFN-A, SFC-A and SFS-A).

<sup>188</sup> *Final Order on the Application* (July 25, 2008), pp. 106-108.

<sup>189</sup> *Final Order on the Application* (July 25, 2008), pp. 109-114.

1 Condition 84 requires the certificate holder to restore vegetation in areas temporarily  
2 disturbed during construction as described in the *Revegetation Plan*. The Council adopts  
3 modifications of the *Revegetation Plan* previously adopted for the SFWF. These  
4 modifications are incorporated in Revision 40 and in separate revegetation plans for each of  
5 the three proposed facilities (Attachments SFN-B, SFC-B and SFS-B).

6 Condition 85 requires the certificate holder to protect and enhance a mitigation area as  
7 described in the *Habitat Mitigation Plan*. The Council adopts modifications of the *Habitat*  
8 *Mitigation Plan* previously adopted for the SFWF. These modifications are incorporated in  
9 Revision 41 and in separate habitat mitigation plans for each of the three proposed facilities  
10 (Attachments SFN-C, SFC-C and SFS-C).

11 Condition 86 requires the certificate holder to avoid areas of high-value wildlife  
12 habitat within the site boundary, including avoidance of all Category 1 and Category 2  
13 habitat. The avoidance of temporary and permanent impacts in Category 2 habitat was  
14 proposed by the applicant in the site certificate application for SFWF based on the applicant's  
15 assessment of habitat at that time.<sup>190</sup> To clarify the intent that this restriction applies to  
16 Category 2 habitat identified at the time of the site certificate application (and not to habitat  
17 that might be assessed as Category 2 at a later date), the Council modifies Condition 86 as  
18 described in Revision 42.<sup>191</sup>

19 To reduce the risk of injury to raptors that may soar along bluffs, Condition 87  
20 requires the certificate holder to avoid placing turbines within 250 feet of bluff edges, which  
21 occur along the site boundary above the Columbia River and above Willow Creek. Condition  
22 88 requires the certificate holder to survey the area within a half-mile of the construction area  
23 before beginning any construction activities during raptor nesting season. If active raptor nests  
24 are found, the certificate holder must not engage in construction activity within a half-mile  
25 buffer around the nest site during the sensitive breeding period or until the young have  
26 fledged. Condition 89 prohibits removal of any trees greater than three feet in height, because  
27 such trees might be suitable for construction of raptor nests.

28 Other site certificate conditions that would further mitigate the impacts of the  
29 proposed facilities on wildlife and wildlife habitat are described in the *Final Order on the*  
30 *Application*.<sup>192</sup> The Council applies these conditions to SFN, SFC and SFS or modifies the  
31 conditions appropriate to each of the proposed facilities as described in the Revisions shown  
32 in Attachment E.

### Conclusions of Law

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

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<sup>190</sup> Shepherds Flat Wind Farm Application Supplement (November 19, 2007), Amended Exhibit P, pp. 40-42.

<sup>191</sup> ODFW has agreed to this modification (teleconference with ODFW, the applicants and the Department, July 29, 2009).

<sup>192</sup> *Final Order on the Application* (July 25, 2008), p. 114.

## 5. Standards Not Applicable to Site Certificate Eligibility

1 Under ORS 469.501(4), the Council may issue a site certificate without making the  
2 findings required by the standards discussed in this section (Structural Standard, Historic,  
3 Cultural and Archaeological Resources Standard, Public Services Standard and Waste  
4 Minimization Standard).<sup>193</sup> Nevertheless, the Council may impose site certificate conditions  
5 based on the requirements of these standards.

### (a) Structural Standard

#### 6 OAR 345-022-0020

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

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

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

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

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

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

30 \* \* \*

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<sup>193</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.

1           Related Conditions

2           In the *Final Order on the Application*, the Council made findings regarding the  
3 seismic, geological and soil hazards in the area of the SFWF.<sup>194</sup> Those findings are  
4 incorporated herein by this reference. The site certificate includes conditions addressing  
5 structural safety (Conditions 12, 13, 14, 47, 48 and 49). Amendment #1 would divide the  
6 SFWF into three separate facilities within the previously-approved site boundary of the SFWF  
7 but would not result in placement of facility components within geologic areas that have not  
8 been addressed by the Council. The Council finds that no changes to the site certificate  
9 conditions related to the Structural Standard are needed.

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

10           **OAR 345-022-0090**

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

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

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

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

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

24           \* \* \*

Related Conditions

25           In the *Final Order on the Application*, the Council reviewed cultural resource surveys  
26 of the areas where the SFWF components would be located.<sup>195</sup> The Council’s previous  
27 findings are incorporated herein by this reference. The cultural resource surveys were  
28 conducted in consultation with the State Historic Preservation Office (SHPO), the  
29 Confederated Tribes of Warm Springs and the Confederated Tribes of the Umatilla Indian  
30 Reservation. The Council adopted Conditions 43, 44, 45 and 46 to safeguard cultural  
31 resources. Amendment #1 would divide the SFWF into three separate facilities within the  
32 previously-approved site boundary of the SFWF but would not result in placement of facility  
33 components within areas that were not addressed by the Council. As discussed in Revision 20,  
34 the Department recommended modification of Condition 43 as applicable to SFN, SFC and  
35 SFS. As shown in Revision 21, the Council removes Condition 46 from the site certificate for  
36 SFN because the presumed alignments of the Oregon Trail do not cross the SFN site  
37 boundary.

<sup>194</sup> *Final Order on the Application* (July 25, 2008), pp. 115-117.

<sup>195</sup> *Final Order on the Application* (July 25, 2008), pp. 118-122.

**(c) Public Services**

**OAR 345-022-0110**

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

*(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 the Application*, the Council addressed the potential impacts of construction and operation of the SFWF on the ability of public and private providers within the analysis area to provide public services.<sup>196</sup> The Council’s previous findings are incorporated herein by this reference. The site certificate includes conditions addressing public services (Conditions 27, 52, 53, 54, 55, 56, 65, 66, 67, 68, 69, 70, 73, 75, 78, 99 and 100). Amendment #1 would divide the SFWF into three separate facilities within the previously-approved site boundary of the SFWF but would not change the analysis of affected public services. As discussed in Attachment E, the Council modifies Conditions 53, 54, 55, 56, 65, 67, 70, 78 and 100 as appropriate to the facility descriptions for SFN, SFC and SFS. The Council finds that no other changes to the site certificate conditions related to the Public Services Standard are needed.

**(d) Waste Minimization**

**OAR 345-022-0120**

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

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

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

*(2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in*

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<sup>196</sup> *Final Order on the Application* (July 25, 2008), pp. 122-127.

1            *section (1). However, the Council may apply the requirements of section (1) to*  
2            *impose conditions on a site certificate issued for such a facility.*

Related Conditions

3            In the *Final Order on the Application*, the Council made findings and adopted site  
4            certificate conditions regarding the solid waste and wastewater likely to be generated during  
5            the construction, operation and retirement of SFWF and the impact on surrounding  
6            communities.<sup>197</sup> The Council’s previous findings are incorporated herein by this reference.  
7            The Council adopted Conditions 50, 51, 99, 100, 101 and 102 to address waste management  
8            concerns. Amendment #1 would divide the SFWF into three separate facilities within the  
9            previously-approved site boundary of the SFWF but would not change the analysis of waste  
10           minimization. The Council modifies Conditions 51 and 100 as shown in Revisions 22 and 49  
11           as appropriate for the facility descriptions of SFS, SFC and SFS. The Council finds that no  
12           other changes to the site certificate conditions related to the Waste Minimization Standard are  
13           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 #4 include the  
19           DEQ noise control regulations, the regulations adopted by the Department of State Lands  
20           (DSL) for removal or fill of material affecting waters of the state, the Oregon Water  
21           Resources Department’s (OWRD) regulations for appropriating ground water and the  
22           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:

**OAR 340-035-0035**

**Noise Control Regulations for Industry and Commerce**

*(1) Standards and Regulations:*

\* \* \*

*(b) New Noise Sources:*

\* \* \*

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

*(i) No person owning or controlling a new industrial or commercial noise source located on a previously unused industrial or commercial site shall cause or permit the operation of that noise source if the noise levels generated or indirectly caused by that noise source increase the ambient statistical noise levels, L10 or L50, by*

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<sup>197</sup> *Final Order on the Application* (July 25, 2008), pp. 76-77.

1 *more than 10 dBA in any one hour, or exceed the levels specified in Table 8, as*  
2 *measured at an appropriate measurement point, as specified in subsection (3)(b)*  
3 *of this rule, except as specified in subparagraph (1)(b)(B)(iii).*

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

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

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

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

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

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

40 *(V) For purposes of determining whether an operating wind energy facility*  
41 *complies with the ambient noise standard where a landowner has not waived the*  
42 *standard, noise levels at the appropriate measurement point are measured when*  
43 *the facility’s nearest wind turbine is operating over the entire range of wind*

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

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

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

18 \* \* \*

### Findings of Fact

19 In the *Final Order on the Application*, the Council concluded that the SFWF, subject  
20 to site certificate conditions, would comply with the State noise control regulations.<sup>198</sup> In the  
21 *Final Order*, the Council reviewed a noise analysis that was based on a “default layout” that  
22 included 280 Siemens SWT-93 turbines in the northern project area and 23 Vestas V90  
23 turbines in the southern project area and that included two substations contributing to  
24 predicted noise levels. The Council found that the SFWF would comply with the applicable  
25 noise regulations if it were constructed according to the default layout and if the certificate  
26 holder acquired noise waivers from the owners of five properties where the ambient  
27 degradation limit would be exceeded.<sup>199</sup>

28 Amendment #1 would divide the SFWF into three separate facilities within the  
29 previously-approved site boundary of the SFWF but would not increase the combined  
30 maximum number of turbines that could be built in SFN, SFC and SFS, compared to the  
31 SFWF. The addition of a substation in SFC would not significantly change the noise  
32 analysis.<sup>200</sup> The noise analysis for the SFWF addresses the cumulative noise emissions from  
33 the three proposed facilities. Based on the previous finding that the SFWF would comply with  
34 the applicable noise regulations, the Council finds that the cumulative noise emissions of

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<sup>198</sup> Final Order on the Application (July 25, 2008), p. 136.

<sup>199</sup> Final Order on the Application (July 25, 2008), p. 135.

<sup>200</sup> Information contained in the Application Supplement, Exhibit X, suggests that the additional substation would not significantly contribute to noise levels at the nearest residences (more than 2 miles away) assuming conservatively that all transformers would generate 105 dBA (the highest sound power analyzed for the SFWF transformers). For the SFWF noise analysis, the north substation was assumed to have 4 transformers, each with a sound power level of 105 dBA, and the south substation was assumed to have 1 transformer with a sound power of 101 dBA. For SFN, SFC and SFS, each facility would have its own substation containing two transformers (email from Patricia Pilz, July 17, 2009)



1 SFN, SFC and SFS would comply with the noise regulations and that the separate noise  
2 emissions from each of the proposed facilities would also comply with the regulations.<sup>201</sup> The  
3 Council finds that each of the proposed facilities would comply with the noise regulations if  
4 each facility were constructed according to the previously-analyzed default layout and if the  
5 certificate holder acquired noise waivers from the owners of properties where the ambient  
6 degradation limit would be exceeded.

7 Condition 97 ensures that each facility as built would comply with the noise control  
8 regulations. This condition requires the certificate holder to provide information about the  
9 turbines selected and about the final design layout to the Department before beginning  
10 construction. The condition requires the certificate holder to demonstrate to the satisfaction of  
11 the Department that the facility as built according to the final design layout would comply  
12 with the applicable noise control regulations.

13 In the *Final Order on the Application*, the Council found that the Council has the  
14 authority to act in the place of the DEQ to enforce OAR 340-035-0035(4)(a) and require the  
15 owner of an operating noise source to monitor and record the statistical noise levels upon  
16 written notification.<sup>202</sup> Condition 98 requires the certificate holder to notify the Department of  
17 any complaints received about noise from the facility as well as the actions taken to address  
18 them. In the event of a complaint regarding noise levels during operation of SFN, SFC or  
19 SFS, the Council may require the certificate holder to verify that the facility is operating in  
20 compliance with the noise control regulations.

#### Conclusions of Law

21 For the reasons discussed above and subject to the conditions discussed herein, the  
22 Council concludes that the proposed SFN, SFC and SFS facilities would comply with the  
23 applicable noise control regulations in OAR 340-035-0035 if Amendment #1 were approved.

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

24 The Oregon Removal-Fill Law (ORS 196.800 through .990) and DSL regulations  
25 (OAR 141-085-0005 through 141-085-0090) require a Removal/Fill Permit if 50 cubic yards  
26 or more of material is removed, filled or altered within any “waters of the state” at the  
27 proposed site.<sup>203</sup> The U.S. Army Corps of Engineers administers Section 404 of the Clean Water  
28 Act, which regulates the discharge of fill into waters of the United States, and determines  
29 whether a Nationwide or Individual Section 404 fill permit is required.

#### Findings of Fact

30 In the *Final Order on the Application*, the Council found that a Removal/Fill Permit  
31 was not needed for construction of the SFWF.<sup>204</sup> Those findings are incorporated herein by  
32 this reference. The Council found that the SFWF 230-kV transmission line would cross one  
33 potentially State-jurisdictional water (Eightmile Creek). Impacts would be avoided by placing

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<sup>201</sup> This may be an overly-conservative analysis, considering that compliance for each separate facility would be based on only those turbines and substation transformers that are contained within that facility. Noise emissions from other two facilities would not be included in the analysis.

<sup>202</sup> *Final Order on the Application* (July 25, 2008), p. 136.

<sup>203</sup> OAR 141-085-0010(225) defines “Waters of this State.” The term includes wetlands and certain other water bodies.

<sup>204</sup> *Final Order on the Application* (July 25, 2008), p. 138.

1 transmission line support structures outside a 10-foot buffer bordering the creek. No material  
2 would be removed from the creek channel or added as fill within the creek channel. Condition  
3 72 ensures that the certificate holder would avoid impacts to the creek.

4 Amendment #1 would divide the SFWF into three separate facilities within the  
5 previously-approved site boundary of the SFWF but would not affect any areas that were not  
6 previously addressed by the delineation report on the wetlands and waters within the SFWF  
7 analysis area.

#### Conclusions of Law

8 For the reasons discussed above, the Council concludes that a Removal/Fill Permit  
9 would not be required for the proposed SFN, SFC and SFS if Amendment #1 were approved.

#### **(c) Ground Water Act**

10 Through the provisions of the Ground Water Act of 1955, ORS 537.505 to ORS  
11 537.796, and OAR Chapter 690, the Oregon Water Resources Commission administers the  
12 rights of appropriation and use of the ground water resources of the state. Under OAR 345-  
13 022-0000(1), the Council must determine whether the proposed SFN, SFC and SFS comply  
14 with these statutes and administrative rules.

#### Findings of Fact

15 In the *Final Order on the Application*, the Council found that a new water right was  
16 not needed for construction or operation of the SFWF.<sup>205</sup> Those findings are incorporated  
17 herein by this reference. The applicant estimated that up to 70 million gallons of water would  
18 be needed to complete construction of the SFWF and provided a letter from the City of  
19 Arlington indicating that the city was willing to supply sufficient water to meet construction  
20 needs. The Council found that water use during operation would not exceed 5,000 gallons per  
21 day and would be supplied from on-site wells, one at each SFWF field workshop. ORS  
22 537.545(1)(f) provides that a new water right is not required for industrial and commercial  
23 uses of up to 5,000 gallons per day.

24 The applicants estimate that up to 23,320,000 gallons of water would be needed for  
25 construction of SFN, up to 16,940,000 gallons of water would be needed for construction of  
26 SFC and up to 26,400,000 gallons of water would be needed for construction of SFS.<sup>206</sup> The  
27 cumulative use of water for construction of the three proposed facilities (up to 66,660,000  
28 gallons) is less than the amount that had been estimated for construction of SFWF. The  
29 applicants propose to obtain the water needed for construction from wells located in two  
30 “service areas” that would be permitted, constructed and operated by third-party  
31 contractors.<sup>207</sup> Alternatively, construction water might be obtained from the City of Arlington.

32 During operation, water would be supplied from on-site wells located at each facility’s  
33 field workshop. Condition 78 ensures that each facility would use less than 5,000 gallons of  
34 water per day for operational uses. Accordingly, the facilities would not need new water  
35 rights for water used during operation.

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<sup>205</sup> *Final Order on the Application* (July 25, 2008), p. 138.

<sup>206</sup> Email from Patricia Pilz, July 8, 2009.

<sup>207</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).

## Conclusions of Law

1           Based on the findings discussed, the Council concludes that the proposed SFN, SFC  
2 and SFS would comply with applicable regulations pertaining to water rights if Amendment  
3 #1 were approved.

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

4           Under ORS 469.310, the Council is charged with ensuring that the “siting,  
5 construction and operation of energy facilities shall be accomplished in a manner consistent  
6 with protection of the public health and safety....” State law further provides that “the site  
7 certificate shall contain conditions for the protection of the public health and safety....” ORS  
8 469.401(2).

### Findings of Fact

9           We discuss the Council’s Public Health and Safety Standards for wind energy  
10 facilities above at page 38. In this section, we discuss the issues of fire protection, magnetic  
11 fields and coordination with the Oregon Public Utility Commission and the Boardman  
12 Military Operating Area.

#### A. Fire Protection

13           In the *Final Order on the Application*, the Council made findings and adopted  
14 conditions regarding fire prevention and response for the SFWF.<sup>208</sup> Those findings are  
15 incorporated herein by this reference. Amendment #1 would divide the SFWF into three  
16 separate facilities within the previously-approved site boundary of the SFWF. The fire risks  
17 for the proposed SFN, SFC and SFS are similar to the risks previously considered by the  
18 Council. The site certificate includes conditions that address fire protection and response  
19 (Conditions 53, 54, 55, 56, 58 and 60).

#### B. Magnetic Fields

20           Electric transmission lines create both electric and magnetic fields. The electric fields  
21 associated with the proposed transmission lines are addressed above at page 41.

22           In the *Final Order on the Application*, the Council made findings regarding the  
23 different transmission line configurations that were proposed for the SFWF, including single-  
24 circuit or double-circuit aboveground 230-kV lines, aboveground 34.5-kV collector lines on  
25 separate poles, aboveground 34.5-kV collector lines understrung on the support structures for  
26 the 230-kV transmission lines and underground 34.5-kV collector lines.<sup>209</sup> Those findings are  
27 incorporated herein by this reference. The same types of transmission line configurations may  
28 be used for the proposed SFN, SFC and SFS. The *Final Order* includes references to the  
29 scientific literature on the biological effects of exposure to electric and magnetic fields. The  
30 Council has not found sufficient information upon which to set health-based limits for  
31 exposure to magnetic fields. Nevertheless, given the uncertainty about possible health  
32 consequences, the Council has encouraged applicants to implement low-cost measures to  
33 reduce or manage public exposure to magnetic fields from transmission lines under the  
34 Council’s jurisdiction. Condition 81 requires the certificate holder to take reasonable steps to

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<sup>208</sup> *Final Order on the Application* (July 25, 2008), p. 139.

<sup>209</sup> *Final Order on the Application* (July 25, 2008), pp. 139-141.

1 reduce or manage human exposure to electromagnetic fields, including specific measures  
2 listed in the condition.

C. Coordination with the PUC

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

D. Boardman Military Operating Area

11 In the *Final Order on the Application*, the Council made findings regarding the  
12 Boardman Military Operating Area (BMOA), which lies to the east of the SFWF site  
13 boundary.<sup>210</sup> Those findings are incorporated herein by this reference. The certificate holder  
14 (CSF) agreed to provide the proposed final project layout to the Navy before construction and  
15 to work with the Navy to accommodate the Navy's interest in safe aviation training routes,  
16 which may include adjusting turbine locations where feasible. The applicants have made the  
17 same commitment.<sup>211</sup>

Conclusions of Law

18 Based on the findings discussed above and subject to the site certificate conditions  
19 discussed herein, the Council concludes that the proposed SFN, SFC and SFS would comply  
20 with requirements to protect public health and safety if Amendment #1 were approved.

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

**(a) Federally-Delegated Programs**

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

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

27 Under ORS 469.401(4), the Council does not have authority to preempt the  
28 jurisdiction of any state agency or local government over matters that are not included in and  
29 governed by the site certificate or amended site certificate. Such matters include  
30 design-specific construction or operating standards and practices that do not relate to siting.  
31 Nevertheless, the Council may rely on the determinations of compliance and the conditions in

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<sup>210</sup> *Final Order on the Application* (July 25, 2008), p. 141.

<sup>211</sup> Email from Patricia Pilz, July 17, 2009.

1 the permits issued by these state agencies and local governments in deciding whether the  
2 facility meets other standards and requirements under its jurisdiction.

## VI. GENERAL APPLICATION OF CONDITIONS

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

12 In addition to all other conditions referenced or included in this order, the site  
13 certificate holders are subject to all conditions and requirements contained in the rules of the  
14 Council and in local ordinances and state law in effect on the date the amended site certificate  
15 is executed.<sup>212</sup> Under ORS 469.401(2), upon a clear showing of a significant threat to the  
16 public health, safety or the environment that requires application of later-adopted laws or  
17 rules, the Council may require compliance with such later-adopted laws or rules.

18 The Council recognizes that many specific tasks related to the design, construction,  
19 operation and retirement of the facility will be undertaken by the certificate holders' agents or  
20 contractors. Nevertheless, the certificate holders are responsible for ensuring that all agents  
21 and contractors comply with all provisions of the site certificate.

## VII. GENERAL CONCLUSION

22 The proposed amendment would transfer the current Site Certificate for the Shepherds  
23 Flat Wind Farm to three separate entities under three separate site certificates. The  
24 amendment would divide the SFWF into three separate facilities within the previously-  
25 approved site boundary of the SFWF. North Hurlburt Wind LLC would be the certificate  
26 holder for SFN, South Hurlburt Wind LLC would be the certificate holder for SFC and  
27 Horseshoe Bend Wind LLC would be the certificate holder for SFS. In addition, the  
28 amendment would authorize the additional facility components and modifications described  
29 herein. The Council adopts revisions to the Site Certificate as described in Attachment E.

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

- 32 1. The transferee, North Hurlburt Wind LLC, complies with the standards described  
33 in OAR 345-022-0010 and OAR 345-022-0050 and, upon completion of a transfer  
34 agreement with CSF, will be lawfully entitled to possession or control of  
35 Shepherds Flat North as described in the site certificate as amended by this order.
- 36 2. The transferee, South Hurlburt Wind LLC, complies with the standards described  
37 in OAR 345-022-0010 and OAR 345-022-0050 and, upon completion of a transfer

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<sup>212</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 agreement with CSF, will be lawfully entitled to possession or control of  
2 Shepherds Flat Central as described in the site certificate as amended by this order.
- 3 3. The transferee, Horseshoe Bend Wind LLC, complies with the standards described  
4 in OAR 345-022-0010 and OAR 345-022-0050 and, upon completion of a transfer  
5 agreement with CSF, will be lawfully entitled to possession or control of  
6 Shepherds Flat South as described in the site certificate as amended by this order.
- 7 4. The proposed Amendment #1 complies with the requirements of the Oregon  
8 Energy Facility Siting statutes, ORS 469.300 to ORS 469.570 and 469.590 to  
9 469.619.
- 10 5. The proposed Amendment #1 complies with the applicable standards adopted by  
11 the Council pursuant to ORS 469.501.
- 12 6. The proposed Amendment #1 complies with all other Oregon statutes and  
13 administrative rules applicable to the amendment of the SFWF site certificate that  
14 are within the Council's jurisdiction.

15 Accordingly, the Council finds that the proposed SFN, SFC and SFS facilities comply  
16 with the General Standard of Review (OAR 345-022-0000). The Council concludes, based on  
17 a preponderance of the evidence on the record, that the site certificate may be amended as  
18 requested by the applicants, subject to the revisions described in Attachment E.

### VIII. ORDER

19 The Council approves Amendment #1 and issues three new site certificates, subject to  
20 the terms and conditions set forth above.

Issued this 11<sup>th</sup> day of September, 2009.

THE OREGON ENERGY FACILITY SITING COUNCIL

By: \_\_\_\_\_  
Robert Shiprack, Chair  
Oregon Energy Facility Siting Council

#### Attachments

Attachment SFN-A: Shepherds Flat North Wildlife Monitoring and Mitigation Plan  
Attachment SFC-A: Shepherds Flat Central Wildlife Monitoring and Mitigation Plan  
Attachment SFS-A: Shepherds Flat South Wildlife Monitoring and Mitigation Plan  
Attachment SFN-B: Shepherds Flat North Revegetation Plan  
Attachment SFC-B: Shepherds Flat Central Revegetation Plan  
Attachment SFS-B: Shepherds Flat South Revegetation Plan  
Attachment SFN-C: Shepherds Flat North Habitat Mitigation Plan  
Attachment SFC-C: Shepherds Flat Central Habitat Mitigation Plan  
Attachment SFS-C: Shepherds Flat South Habitat Mitigation Plan  
Attachment D: Amendment Request Comments and Department Responses  
Attachment E: The Department's Recommended Site Certificate Revisions

**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.*

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