

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

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**Site Certificate  
for the  
Shepherds Flat Wind Farm**

July 25, 2008

**The Oregon Energy Facility Siting Council**  
**SITE CERTIFICATE FOR THE SHEPHERDS FLAT WIND FARM**

**I. INTRODUCTION**

1 The Oregon Energy Facility Siting Council (Council) issues this site certificate for the  
2 Shepherds Flat Wind Farm (the facility) in the manner authorized under ORS Chapter 469. This  
3 site certificate is a binding agreement between the State of Oregon (State), acting through the  
4 Council, and Caithness Shepherds Flat, LLC (certificate holder) authorizing the certificate holder  
5 to construct and operate the facility in Gilliam County and Morrow County, Oregon.

6 The findings of fact, reasoning and conclusions of law underlying the terms and  
7 conditions of this site certificate are set forth in the Council's Final Order on the Application for  
8 the facility issued on July 25, 2008, and incorporated herein by this reference. In interpreting this  
9 site certificate, any ambiguity will be clarified by reference to the following, in order of priority:  
10 (1) this Site Certificate, (2) the Final Order on the Application and (3) the record of the  
11 proceedings that led to the Final Order on the Application.

12 The definitions in ORS 469.300 and OAR 345-001-0010 apply to terms used in this site  
13 certificate, except where otherwise stated or where the context clearly indicates otherwise.

**II. SITE CERTIFICATION**

- 14 1. To the extent authorized by state law and subject to the conditions set forth herein, the State  
15 authorizes the certificate holder to construct, operate and retire a wind energy facility,  
16 together with certain related or supporting facilities, at the site in Gilliam County and  
17 Morrow County, Oregon, as described in Section III of this site certificate. ORS 469.401(1).
- 18 2. This site certificate is effective until it is terminated under OAR 345-027-0110 or the rules in  
19 effect on the date that termination is sought or until the site certificate is revoked under ORS  
20 469.440 and OAR 345-029-0100 or the statutes and rules in effect on the date that revocation  
21 is ordered. ORS 469.401(1).
- 22 3. This site certificate does not address, and is not binding with respect to, matters that were not  
23 addressed in the Council's Final Order on the Application for the facility. Such matters  
24 include, but are not limited to: building code compliance, wage, hour and other labor  
25 regulations, local government fees and charges and other design or operational issues that do  
26 not relate to siting the facility (ORS 469.401(4)) and permits issued under statutes and rules  
27 for which the decision on compliance has been delegated by the federal government to a state  
28 agency other than the Council. 469.503(3).
- 29 4. Both the State and the certificate holder shall abide by local ordinances, state law and the  
30 rules of the Council in effect on the date this site certificate is executed. ORS 469.401(2). In  
31 addition, upon a clear showing of a significant threat to public health, safety or the  
32 environment that requires application of later-adopted laws or rules, the Council may require  
33 compliance with such later-adopted laws or rules. ORS 469.401(2).
- 34 5. For a permit, license or other approval addressed in and governed by this site certificate, the  
35 certificate holder shall comply with applicable state and federal laws adopted in the future to

- 1 the extent that such compliance is required under the respective state agency statutes and  
2 rules. ORS 469.401(2).
- 3 6. Subject to the conditions herein, this site certificate binds the State and all counties, cities and  
4 political subdivisions in Oregon as to the approval of the site and the construction, operation  
5 and retirement of the facility as to matters that are addressed in and governed by this site  
6 certificate. ORS 469.401(3).
- 7 7. Each affected state agency, county, city and political subdivision in Oregon with authority to  
8 issue a permit, license or other approval addressed in or governed by this site certificate shall,  
9 upon submission of the proper application and payment of the proper fees, but without  
10 hearings or other proceedings, issue such permit, license or other approval subject only to  
11 conditions set forth in this site certificate. ORS 469.401(3).
- 12 8. After issuance of this site certificate, each state agency or local government agency that  
13 issues a permit, license or other approval for the facility shall continue to exercise  
14 enforcement authority over such permit, license or other approval. ORS 469.401(3).
- 15 9. After issuance of this site certificate, the Council shall have continuing authority over the site  
16 and may inspect, or direct the Oregon Department of Energy (Department) to inspect, or  
17 request another state agency or local government to inspect, the site at any time in order to  
18 ensure that the facility is being operated consistently with the terms and conditions of this  
19 site certificate. ORS 469.430.

### **III. DESCRIPTION**

#### **1. The Facility**

##### **(a) The Energy Facility**

20 The energy facility is an electric power generating facility with an average electric  
21 generating capacity of up to 303 megawatts and a peak generating capacity of not more than 909  
22 megawatts that produces power from wind energy. The facility consists of not more than 303  
23 wind turbines. The energy facility is described further in the Final Order on the Application.

##### **(b) Related or Supporting Facilities**

24 The facility includes the following related or supporting facilities described below and in  
25 greater detail in the Final Order on the Application:

- 26 · Power Collection System
- 27 · Collector Substations
- 28 · Meteorological towers
- 29 · Field workshops
- 30 · Control system
- 31 · Access roads
- 32 · Additional construction areas

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

33 A power collection system operating at 34.5 kilovolts (kV) transports power from each  
34 turbine to a collector substation. To the extent practicable, the collection system is installed  
35 underground at a depth of at least three feet. Segments of the collector system are aboveground.  
36

1 Aboveground segments are installed on single-pole, cross-arm structures or understrung on the  
2 230-kV transmission line support structures (described below).

### 3 **Collector Substations and Interconnection**

4 The facility includes two collector substations, one in the southern project area and one in  
5 the northern project area. The facility includes a single-circuit, 230-kV transmission line from  
6 the south substation to the north substation and a double-circuit, 230-kV transmission line  
7 between the north substation and the interconnection site. The interconnection site is located at  
8 the Bonneville Power Administration Slatt Switching Station.

### 9 **Meteorological Towers**

10 The facility includes six permanent meteorological (met) towers.

### 11 **Field Workshops**

12 The facility includes two field workshops. Including fenced areas, the field workshop in  
13 the northern project area occupies about 1.6 acres, and the field workshop in the southern project  
14 area occupies about 1.4 acres.

### 15 **Control System**

16 A fiber optic communications network links the control panels within each wind turbine  
17 to one of two host computers (one located in each of the field workshops). Supervisory, Control  
18 and Data Acquisition (SCADA) systems at each field workshop collect operating and  
19 performance data from the turbines and the facility's met towers.

### 20 **Access Roads**

21 The facility includes up to 70 miles of new roads that provide access to the turbine  
22 strings. The access roads connect to graveled turbine turnouts at the base of each turbine.

### 23 **Temporary Construction Areas**

24 During construction, the facility includes temporary laydown areas used to stage  
25 construction and store supplies and equipment. The facility includes construction crane paths to  
26 move construction cranes between turbine strings.

## 27 **2. Location of the Facility**

28 The facility is located in Morrow County and Gilliam County south of Interstate  
29 Highway 84 and east of Arlington, Oregon, between State Highways 19 and 74. The northern  
30 and southern areas of the site are linked by the Willow Creek Valley on the east and Eightmile  
31 and Fourmile Canyons in the center. The facility is located entirely on private land subject to  
long-term wind energy leases.

## **IV. CONDITIONS REQUIRED BY COUNCIL RULES**

32 This section lists conditions required by OAR 345-027-0020 (Mandatory Conditions in  
33 Site Certificates), OAR 345-027-0023 (Site Specific Conditions), OAR 345-027-0028  
34 (Monitoring Conditions) and OAR Chapter 345, Division 26 (Construction and Operation Rules  
35 for Facilities). These conditions should be read together with the specific facility conditions  
36 listed in Section V to ensure compliance with the siting standards of OAR Chapter 345,  
37 Divisions 22 and 24, and to protect the public health and safety. In these conditions, the  
38 definitions in OAR 345-001-0010 apply.

1 The obligation of the certificate holder to report information to the Department or the  
2 Council under the conditions listed in this section and in Section V is subject to the provisions of  
3 ORS 192.502 *et seq.* and ORS 469.560. To the extent permitted by law, the Department and the  
4 Council will not publicly disclose information that may be exempt from public disclosure if the  
5 certificate holder has clearly labeled such information and stated the basis for the exemption at  
6 the time of submitting the information to the Department or the Council. If the Council or the  
7 Department receives a request for the disclosure of the information, the Council or the  
8 Department, as appropriate, will make a reasonable attempt to notify the certificate holder and  
9 will refer the matter to the Attorney General for a determination of whether the exemption is  
10 applicable, pursuant to ORS 192.450.

11 In addition to these conditions, the site certificate holder is subject to all conditions and  
12 requirements contained in the rules of the Council and in local ordinances and state law in effect  
13 on the date the certificate is executed. Under ORS 469.401(2), upon a clear showing of a  
14 significant threat to the public health, safety or the environment that requires application of later-  
15 adopted laws or rules, the Council may require compliance with such later-adopted laws or rules.

16 The Council recognizes that many specific tasks related to the design, construction,  
17 operation and retirement of the facility will be undertaken by the certificate holder's agents or  
18 contractors. Nevertheless, the certificate holder is responsible for ensuring compliance with all  
19 provisions of the site certificate.

20 1 OAR 345-027-0020(1): The Council shall not change the conditions of the site certificate  
21 except as provided for in OAR Chapter 345, Division 27.

22 2 OAR 345-027-0020(2): The certificate holder shall submit a legal description of the site to  
23 the Department of Energy within 90 days after beginning operation of the facility. The legal  
24 description required by this rule means a description of metes and bounds or a description  
25 of the site by reference to a map and geographic data that clearly and specifically identifies  
26 the outer boundaries that contain all parts of the facility.

27 3 OAR 345-027-0020(3): The certificate holder shall design, construct, operate and retire the  
28 facility:

29 (a) Substantially as described in the site certificate;

30 (b) In compliance with the requirements of ORS Chapter 469, applicable Council rules,  
31 and applicable state and local laws, rules and ordinances in effect at the time the site  
32 certificate is issued; and

33 (c) In compliance with all applicable permit requirements of other state agencies.

34 4 OAR 345-027-0020(4): The certificate holder shall begin and complete construction of the  
35 facility by the dates specified in the site certificate. (*See Conditions 24 and 25.*)

36 5 OAR 345-027-0020(5): Except as necessary for the initial survey or as otherwise allowed  
37 for wind energy facilities, transmission lines or pipelines under this section, the certificate  
38 holder shall not begin construction, as defined in OAR 345-001-0010, or create a clearing  
39 on any part of the site until the certificate holder has construction rights on all parts of the  
40 site. For the purpose of this rule, "construction rights" means the legal right to engage in  
41 construction activities. For wind energy facilities, transmission lines or pipelines, if the  
42 certificate holder does not have construction rights on all parts of the site, the certificate  
43 holder may nevertheless begin construction, as defined in OAR 345-001-0010, or create a

1 clearing on a part of the site if the certificate holder has construction rights on that part of  
2 the site and:

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

7 (b) The certificate holder would construct and operate part of a wind energy facility on  
8 that part of the site even if other parts of the facility were modified by amendment of the  
9 site certificate or were not built.

10 6 OAR 345-027-0020(6): If the Council requires mitigation based on an affirmative finding  
11 under any standards of Division 22 or Division 24 of this chapter, the certificate holder  
12 shall consult with affected state agencies and local governments designated by the Council  
13 and shall develop specific mitigation plans consistent with Council findings under the  
14 relevant standards. The certificate holder must submit the mitigation plans to the Office and  
15 receive Office approval before beginning construction or, as appropriate, operation of the  
16 facility.

17 7 OAR 345-027-0020(7): The certificate holder shall prevent the development of any  
18 conditions on the site that would preclude restoration of the site to a useful, non-hazardous  
19 condition to the extent that prevention of such site conditions is within the control of the  
20 certificate holder.

21 8 OAR 345-027-0020(8): Before beginning construction of the facility, the certificate holder  
22 shall submit to the State of Oregon, through the Council, a bond or letter of credit, in a form  
23 and amount satisfactory to the Council to restore the site to a useful, non-hazardous  
24 condition. The certificate holder shall maintain a bond or letter of credit in effect at all  
25 times until the facility has been retired. The Council may specify different amounts for the  
26 bond or letter of credit during construction and during operation of the facility. (*See*  
27 *Condition 30.*)

28 9 OAR 345-027-0020(9): The certificate holder shall retire the facility if the certificate holder  
29 permanently ceases construction or operation of the facility. The certificate holder shall  
30 retire the facility according to a final retirement plan approved by the Council, as described  
31 in OAR 345-027-0110. The certificate holder shall pay the actual cost to restore the site to a  
32 useful, non-hazardous condition at the time of retirement, notwithstanding the Council's  
33 approval in the site certificate of an estimated amount required to restore the site.

34 10 OAR 345-027-0020(10): The Council shall include as conditions in the site certificate all  
35 representations in the site certificate application and supporting record the Council deems to  
36 be binding commitments made by the applicant.

37 11 OAR 345-027-0020(11): Upon completion of construction, the certificate holder shall  
38 restore vegetation to the extent practicable and shall landscape all areas disturbed by  
39 construction in a manner compatible with the surroundings and proposed use. Upon  
40 completion of construction, the certificate holder shall remove all temporary structures not  
41 required for facility operation and dispose of all timber, brush, refuse and flammable or  
42 combustible material resulting from clearing of land and construction of the facility.

- 1 12 OAR 345-027-0020(12): The certificate holder shall design, engineer and construct the  
2 facility to avoid dangers to human safety presented by seismic hazards affecting the site that  
3 are expected to result from all maximum probable seismic events. As used in this rule  
4 “seismic hazard” includes ground shaking, landslide, liquefaction, lateral spreading,  
5 tsunami inundation, fault displacement and subsidence.
- 6 13 OAR 345-027-0020(13): The certificate holder shall notify the Department, the State  
7 Building Codes Division and the Department of Geology and Mineral Industries promptly  
8 if site investigations or trenching reveal that conditions in the foundation rocks differ  
9 significantly from those described in the application for a site certificate. After the  
10 Department receives the notice, the Council may require the certificate holder to consult  
11 with the Department of Geology and Mineral Industries and the Building Codes Division  
12 and to propose mitigation actions.
- 13 14 OAR 345-027-0020(14): The certificate holder shall notify the Department, the State  
14 Building Codes Division and the Department of Geology and Mineral Industries promptly  
15 if shear zones, artesian aquifers, deformations or clastic dikes are found at or in the vicinity  
16 of the site.
- 17 15 OAR 345-027-0020(15): Before any transfer of ownership of the facility or ownership of  
18 the site certificate holder, the certificate holder shall inform the Department of the proposed  
19 new owners. The requirements of OAR 345-027-0100 apply to any transfer of ownership  
20 that requires a transfer of the site certificate.
- 21 16 OAR 345-027-0020(16): If the Council finds that the certificate holder has permanently  
22 ceased construction or operation of the facility without retiring the facility according to a  
23 final retirement plan approved by the Council, as described in OAR 345-027-0110, the  
24 Council shall notify the certificate holder and request that the certificate holder submit a  
25 proposed final retirement plan to the Office within a reasonable time not to exceed 90 days.  
26 If the certificate holder does not submit a proposed final retirement plan by the specified  
27 date, the Council may direct the Department to prepare a proposed final retirement plan for  
28 the Council’s approval. Upon the Council’s approval of the final retirement plan, the  
29 Council may draw on the bond or letter of credit described in OAR 345-027-0020(8) to  
30 restore the site to a useful, non-hazardous condition according to the final retirement plan,  
31 in addition to any penalties the Council may impose under OAR Chapter 345, Division 29.  
32 If the amount of the bond or letter of credit is insufficient to pay the actual cost of  
33 retirement, the certificate holder shall pay any additional cost necessary to restore the site to  
34 a useful, non-hazardous condition. After completion of site restoration, the Council shall  
35 issue an order to terminate the site certificate if the Council finds that the facility has been  
36 retired according to the approved final retirement plan.
- 37 17 OAR 345-027-0023(4): If the facility includes any transmission line under Council  
38 jurisdiction:  
39 (a) The certificate holder shall design, construct and operate the transmission line in  
40 accordance with the requirements of the National Electrical Safety Code (American  
41 National Standards Institute, Section C2, 1997 Edition); and  
42 (b) The certificate holder shall develop and implement a program that provides  
43 reasonable assurance that all fences, gates, cattle guards, trailers, or other objects or

1 structures of a permanent nature that could become inadvertently charged with electricity  
2 are grounded or bonded throughout the life of the line.

3 18 OAR 345-027-0023(5): If the proposed energy facility is a pipeline or a transmission line or  
4 has, as a related or supporting facility, a pipeline or transmission line, the Council shall  
5 specify an approved corridor in the site certificate and shall allow the certificate holder to  
6 construct the pipeline or transmission line anywhere within the corridor, subject to the  
7 conditions of the site certificate. If the applicant has analyzed more than one corridor in its  
8 application for a site certificate, the Council may, subject to the Council's standards,  
9 approve more than one corridor.

10 19 OAR 345-027-0028: The following general monitoring conditions apply:

11 (a) The certificate holder shall consult with affected state agencies, local governments  
12 and tribes and shall develop specific monitoring programs for impacts to resources  
13 protected by the standards of divisions 22 and 24 of OAR Chapter 345 and resources  
14 addressed by applicable statutes, administrative rules and local ordinances. The certificate  
15 holder must submit the monitoring programs to the Department of Energy and receive  
16 Department approval before beginning construction or, as appropriate, operation of the  
17 facility.

18 (b) The certificate holder shall implement the approved monitoring programs described in  
19 OAR 345-027-0028(1) and monitoring programs required by permitting agencies and local  
20 governments.

21 (c) For each monitoring program described in OAR 345-027-0028(1) and (2), the  
22 certificate holder shall have quality assurance measures approved by the Department before  
23 beginning construction or, as appropriate, before beginning commercial operation.

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

28 20 OAR 345-026-0048: Following receipt of the site certificate or an amended site certificate,  
29 the certificate holder shall implement a plan that verifies compliance with all site certificate  
30 terms and conditions and applicable statutes and rules. As a part of the compliance plan, to  
31 verify compliance with the requirement to begin construction by the date specified in the  
32 site certificate, the certificate holder shall report promptly to the Department of Energy  
33 when construction begins. Construction is defined in OAR 345-001-0010. In reporting the  
34 beginning of construction, the certificate holder shall describe all work on the site  
35 performed before beginning construction, including work performed before the Council  
36 issued the site certificate, and shall state the cost of that work. For the purpose of this  
37 exhibit, "work on the site" means any work within a site or corridor, other than surveying,  
38 exploration or other activities to define or characterize the site or corridor. The certificate  
39 holder shall document the compliance plan and maintain it for inspection by the  
40 Department or the Council.

41 21 OAR 345-026-0080: The certificate holder shall report according to the following  
42 requirements:

43 (a) General reporting obligation for energy facilities under construction or operating:

44 (i) Within six months after beginning construction, and every six months thereafter  
45 during construction of the energy facility and related or supporting facilities, the certificate



1 holder shall submit a semiannual construction progress report to the Department of Energy.  
2 In each construction progress report, the certificate holder shall describe any significant  
3 changes to major milestones for construction. The certificate holder shall include such  
4 information related to construction as specified in the site certificate. When the reporting  
5 date coincides, the certificate holder may include the construction progress report within the  
6 annual report described in OAR 345-026-0080.

7 (ii) By April 30 of each year after beginning construction, the certificate holder shall  
8 submit an annual report to the Department addressing the subjects listed in OAR 345-026-  
9 0080. The Council Secretary and the certificate holder may, by mutual agreement, change  
10 the reporting date.

11 (iii) To the extent that information required by OAR 345-026-0080 is contained in  
12 reports the certificate holder submits to other state, federal or local agencies, the certificate  
13 holder may submit excerpts from such other reports to satisfy this rule. The Council  
14 reserves the right to request full copies of such excerpted reports.

15 (b) In the annual report, the certificate holder shall include the following information for  
16 the calendar year preceding the date of the report:

17 (i) Facility Status: An overview of site conditions, the status of facilities under  
18 construction, and a summary of the operating experience of facilities that are in operation.  
19 In this section of the annual report, the certificate holder shall describe any unusual events,  
20 such as earthquakes, extraordinary windstorms, major accidents or the like that occurred  
21 during the year and that had a significant adverse impact on the facility.

22 (ii) Reliability and Efficiency of Power Production: For electric power plants, the  
23 plant availability and capacity factors for the reporting year. The certificate holder shall  
24 describe any equipment failures or plant breakdowns that had a significant impact on those  
25 factors and shall describe any actions taken to prevent the recurrence of such problems.

26 (iii) Fuel Use: For thermal power plants:

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

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

34 (iv) Status of Surety Information: Documentation demonstrating that bonds or letters  
35 of credit as described in the site certificate are in full force and effect and will remain in full  
36 force and effect for the term of the next reporting period.

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

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

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

4 (viii) Nongenerating Facility Carbon Dioxide Emissions: For nongenerating facilities  
5 that emit carbon dioxide, a report of the annual fuel use by fuel type and annual hours of  
6 operation of the carbon dioxide emitting equipment as described in OAR 345-024-0630(4).

7 22 OAR 345-026-0105: The certificate holder and the Department of Energy shall exchange  
8 copies of all correspondence or summaries of correspondence related to compliance with  
9 statutes, rules and local ordinances on which the Council determined compliance, except for  
10 material withheld from public disclosure under state or federal law or under Council rules.  
11 The certificate holder may submit abstracts of reports in place of full reports; however, the  
12 certificate holder shall provide full copies of abstracted reports and any summarized  
13 correspondence at the request of the Department.

14 23 OAR 345-026-0170: The certificate holder shall notify the Department of Energy within 72  
15 hours of any occurrence involving the facility if:

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

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

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

## V. SPECIFIC FACILITY CONDITIONS

21 The conditions listed in this section include conditions based on representations in the  
22 site certificate application and supporting record. These conditions are required under OAR 345-  
23 027-0020(10). The certificate holder must comply with these conditions in addition to the  
24 conditions listed in Section VI. This section includes other specific facility conditions the  
25 Council finds necessary to ensure compliance with the siting standards of OAR Chapter 345,  
26 Divisions 22 and 24, and to protect the public health and safety. For conditions that require  
27 subsequent review and approval of a future action, ORS 469.402 authorizes the Council to  
28 delegate the future review and approval to the Department if, in the Council's discretion, the  
29 delegation is warranted under the circumstances of the case.

### 1. Certificate Administration Conditions

30 24 The certificate holder shall begin construction of the facility within three years after the  
31 effective date of the site certificate. Under OAR 345-015-0085(9), a site certificate is  
32 effective upon execution by the Council Chair and the applicant. The Council may grant an  
33 extension of the deadline to begin construction in accordance with OAR 345-027-0030 or  
34 any successor rule in effect at the time the request for extension is submitted.

35 25 The certificate holder shall complete construction of the facility within six years after the  
36 effective date of the site certificate. Construction is complete when: 1) the facility is  
37 substantially complete as defined by the certificate holder's construction contract  
38 documents, 2) acceptance testing has been satisfactorily completed and 3) the energy  
39 facility is ready to begin continuous operation consistent with the site certificate. The  
40 certificate holder shall promptly notify the Department of the date of completion of  
41 construction. The Council may grant an extension of the deadline for completing

1 construction in accordance with OAR 345-027-0030 or any successor rule in effect at the  
2 time the request for extension is submitted.

3 26 The certificate holder shall construct a facility substantially as described in the site  
4 certificate and may select turbines of any type, subject to the following restrictions and  
5 compliance with all other site certificate conditions. Before beginning construction, the  
6 certificate holder shall provide to the Department a description of the turbine types selected  
7 for the facility demonstrating compliance with this condition.

8 (a) The total number of turbines at the facility must not exceed 303 turbines.

9 (b) The combined peak generating capacity of the facility must not exceed 909  
10 megawatts.

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

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

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

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

18 (g) The certificate holder shall request an amendment of the site certificate to increase the  
19 combined peak generating capacity of the facility beyond 909 megawatts, to increase the  
20 number of wind turbines to more than 303 wind turbines or to install wind turbines with a  
21 hub height greater than 105 meters, a blade tip height greater than 150 meters or a blade tip  
22 clearance less than 25 meters above ground.

23 27 The certificate holder shall obtain all necessary federal, state and local permits or approvals  
24 required for construction, operation and retirement of the facility or ensure that its  
25 contractors obtain the necessary federal, state and local permits or approvals.

26 28 Before beginning construction, the certificate holder shall notify the Department in advance  
27 of any work on the site that does not meet the definition of “construction” in ORS 469.300,  
28 excluding surveying, exploration or other activities to define or characterize the site, and  
29 shall provide to the Department a description of the work and evidence that its value is less  
30 than \$250,000.

31 29 Before beginning construction and after considering all micrositing factors, the certificate  
32 holder shall provide to the Department, to the Oregon Department of Fish and Wildlife  
33 (ODFW) and to the Planning Directors of Morrow County and Gilliam County detailed  
34 maps of the facility site, showing the final locations where the certificate holder proposes to  
35 build facility components, and a table showing the acres of temporary and permanent  
36 habitat impact by habitat category and subtype, similar to Table 12 in the Final Order on the  
37 Application. The detailed maps of the facility site shall indicate the habitat categories of all  
38 areas that would be affected during construction (similar to the maps labeled “ODFW-2” in  
39 the site certificate application). In classifying the affected habitat into habitat categories, the  
40 certificate holder shall consult with the ODFW. The certificate holder shall not begin  
41 ground disturbance in an affected area until the habitat assessment has been approved by  
42 the Department. The Department may employ a qualified contractor to confirm the habitat  
43 assessment by on-site inspection.

1 30 Before beginning construction, the certificate holder shall submit to the State of Oregon  
2 through the Council a bond or letter of credit in the amount described herein naming the  
3 State of Oregon, acting by and through the Council, as beneficiary or payee. The initial  
4 bond or letter of credit amount is either \$19.346 million (in 2007 dollars), to be adjusted to  
5 the date of issuance as described in (b), or the amount determined as described in (a). The  
6 certificate holder shall adjust the amount of the bond or letter of credit on an annual basis  
7 thereafter as described in (b).

8 (a) The certificate holder may adjust the amount of the bond or letter of credit based on  
9 the final design configuration of the facility and turbine types selected by applying the unit  
10 costs and general costs illustrated in Table 2 in the Final Order on the Application and  
11 calculating the financial assurance amount as described in that order, adjusted to the date of  
12 issuance as described in (b) and subject to approval by the Department.

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

15 (i) Adjust the Subtotal component of the bond or letter of credit amount (expressed in  
16 2007 dollars) to present value, using the U.S. Gross Domestic Product Implicit Price  
17 Deflator, Chain-Weight, as published in the Oregon Department of Administrative  
18 Services' "Oregon Economic and Revenue Forecast" or by any successor agency (the  
19 "Index") and using the annual average index value for 2007 dollars and the quarterly index  
20 value for the date of issuance of the new bond or letter of credit. If at any time the Index is  
21 no longer published, the Council shall select a comparable calculation to adjust 2007 dollars  
22 to present value.

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

25 (iii) Add 10 percent of the adjusted Gross Cost (ii) for the adjusted administration and  
26 project management costs and 10 percent of the adjusted Gross Cost (ii) for the adjusted  
27 future developments contingency.

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

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

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

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

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

38 31 If the certificate holder elects to use a bond to meet the requirements of Condition 30, the  
39 certificate holder shall ensure that the surety is obligated to comply with the requirements  
40 of applicable statutes, Council rules and this site certificate when the surety exercises any  
41 legal or contractual right it may have to assume construction, operation or retirement of the  
42 energy facility. The certificate holder shall also ensure that the surety is obligated to notify  
43 the Council that it is exercising such rights and to obtain any Council approvals required by  
44 applicable statutes, Council rules and this site certificate before the surety commences any  
45 activity to complete construction, operate or retire the energy facility.

- 1 32 Before beginning construction, the certificate holder shall notify the Department of the  
2 identity and qualifications of the major design, engineering and construction contractor(s)  
3 for the facility. The certificate holder shall select contractors that have substantial  
4 experience in the design, engineering and construction of similar facilities. The certificate  
5 holder shall report to the Department any change of major contractors.
- 6 33 The certificate holder shall contractually require all construction contractors and  
7 subcontractors involved in the construction of the facility to comply with all applicable  
8 laws and regulations and with the terms and conditions of the site certificate. Such  
9 contractual provisions shall not operate to relieve the certificate holder of responsibility  
10 under the site certificate.
- 11 34 During construction, the certificate holder shall have a full-time, on-site assistant  
12 construction manager who is qualified in environmental compliance to ensure compliance  
13 with all site certificate conditions. The certificate holder shall notify the Department of the  
14 name, telephone number and e-mail address of this person.
- 15 35 Within 72 hours after discovery of conditions or circumstances that may violate the terms  
16 or conditions of the site certificate, the certificate holder shall report the conditions or  
17 circumstances to the Department.

## **2. Land Use Conditions**

- 18 36 The certificate holder shall consult with area landowners and lessees during construction  
19 and operation of the facility and shall implement measures to reduce or avoid any adverse  
20 impacts to farm practices on surrounding lands and to avoid any increase in farming costs.
- 21 37 The certificate holder shall design and construct the facility using the minimum land area  
22 necessary for safe construction and operation. The certificate holder shall locate access  
23 roads and temporary construction laydown and staging areas to minimize disturbance with  
24 farming practices and, wherever feasible, shall place turbines and transmission  
25 interconnection lines along the margins of cultivated areas to reduce the potential for  
26 conflict with farm operations.
- 27 38 During construction and operation of the facility, the certificate holder shall implement a  
28 plan to control the introduction and spread of noxious weeds. The certificate shall develop  
29 the weed control plan consistent with the Gilliam County and Morrow County Weed  
30 Control Programs.
- 31 39 Before beginning construction of the facility, the certificate holder shall record in the real  
32 property records of Gilliam County a Covenant Not to Sue with regard to generally  
33 accepted farming practices on adjacent farmland consistent with Gilliam County Zoning  
34 Ordinance 7.020(T)(4)(a)(5).
- 35 40 The certificate holder shall construct all facility components in compliance with the  
36 following setback requirements:
- 37 (a) All facility components must be at least 3,520 feet from the property line of properties  
38 zoned residential use or designated in the Gilliam County Comprehensive Plan as  
39 residential.
- 40 (b) Where (a) does not apply, the certificate holder shall maintain a minimum distance of  
41 110-percent of maximum blade tip height, measured from the centerline of the turbine

1 tower to the nearest edge of any public road right-of-way. The certificate holder shall  
2 assume a minimum right-of-way width of 60 feet.

3 (c) Where (a) does not apply, the certificate holder shall maintain a minimum distance of  
4 1,320 feet, measured from the centerline of the turbine tower to the center of the nearest  
5 residence existing at the time of tower construction.

6 (d) Where (a) does not apply, the certificate holder shall maintain a minimum distance of  
7 110-percent of maximum blade tip height, measured from the centerline of the turbine  
8 tower to the nearest boundary of the certificate holder's lease area.

9 41 Within 90 days after beginning operation, the certificate holder shall provide to the  
10 Department and to the Planning Directors of Gilliam County and Morrow County the actual  
11 latitude and longitude location or Stateplane NAD 83(91) coordinates of each turbine  
12 tower, connecting lines and transmission lines. In addition, the certificate holder shall  
13 provide to the Department and to the Planning Directors of Gilliam County and Morrow  
14 County, a summary of as-built changes in the facility compared to the original plan, if any.

15 42 The certificate holder shall install gates on all private facility access roads in Gilliam  
16 County, in accordance with Gilliam County Zoning Ordinance Section 7.020(T)(4)(d)(6).

### 3. Cultural Resource Conditions

17 43 Before beginning construction, the certificate holder shall provide to the Department a map  
18 showing the final design locations of all components of the facility and areas that would be  
19 temporarily disturbed during construction. In addition, the certificate holder shall comply  
20 with the following requirements:

21 (a) The certificate holder shall avoid disturbance within a 30-meter buffer around the two  
22 prehistoric archaeological sites and five historic-period archaeological sites identified by  
23 AINW as "possibly eligible" for listing in the National Register of Historic Places (NRHP)  
24 as described in the Final Order on the Application.

25 (b) The certificate holder shall avoid disturbance of the 36 stacked rock features  
26 identified by AINW as "possibly eligible" for listing in the NRHP as described in the Final  
27 Order on the Application and shall, to the extent practicable, maintain a 30-meter no-  
28 construction buffer around these features. If a 30-meter buffer cannot be maintained, the  
29 certificate holder shall consult with the State Historic Preservation Office (SHPO) and the  
30 Department to determine appropriate action to preserve or document the feature.

31 (c) The certificate holder shall label "no entry" areas around all identified historic,  
32 cultural or archaeological resource sites on construction maps and drawings, and if  
33 construction activities will occur within 200 feet of an identified site, the certificate holder  
34 shall flag a 30-meter buffer around the site.

35 (d) The certificate holder shall hire qualified personnel to conduct pre-construction field  
36 investigation for historic, cultural or archaeological resources in any areas of potential  
37 construction disturbance that AINW did not previously survey.

38 (e) The certificate holder shall provide written reports of the field investigation required  
39 under (d) to the Department and to the SHPO. If any historic, cultural or archaeological  
40 resources are found that the SHPO determines to be significant, the certificate holder shall  
41 consult with the Department and the SHPO to develop plan to avoid disturbance of the  
42 resources during construction and operation of the facility. The certificate holder shall

1 instruct all construction personnel to avoid areas where the resources were found and shall  
2 implement other appropriate measures to protect the resources.

3 44 The certificate holder shall ensure that a qualified archeologist, as defined in OAR 736-051-  
4 0070, instructs construction personnel in the identification of cultural materials and  
5 avoidance of accidental damage to identified resource sites.

6 45 The certificate holder shall ensure that construction personnel cease all ground-disturbing  
7 activities in the immediate area if any archaeological or cultural resources are found during  
8 construction of the facility until a qualified archeologist can evaluate the significance of the  
9 find. The certificate holder shall notify the Department and the State Historic Preservation  
10 Office (SHPO) of the find. If the SHPO determines that the resource is significant, the  
11 certificate holder shall make recommendations to the Council for mitigation, including  
12 avoidance, field documentation and data recovery, in consultation with the Department,  
13 SHPO, interested tribes and other appropriate parties. The certificate holder shall not restart  
14 work in the affected area until the certificate holder has demonstrated to the Department  
15 and the SHPO that it has complied with archaeological resource protection regulations.

16 46 In reference to the presumed alignments of the Oregon Trail described in the Final Order on  
17 the Application, the certificate holder shall comply with the following requirements:

18 (a) The certificate holder shall not locate facility components on visible remnants of the  
19 Oregon Trail and shall avoid any construction disturbance to those remnants.

20 (b) The certificate holder shall not locate facility components on undeveloped land where  
21 the trail alignment was marked by existing Oregon-California Trail Association markers as  
22 described in the October 2007 Archaeological Investigations Northwest, Inc. report (No.  
23 2012) on the Oregon Trail.

24 (c) Before beginning construction, the certificate holder shall provide to the State Historic  
25 Preservation Office (SHPO) and to the Department photographic documentation of the  
26 presumed Oregon Trail alignments within the site boundary.

27 (d) The certificate holder shall ensure that construction personnel proceed carefully in the  
28 vicinity of the presumed alignments of the Oregon Trail. If any intact physical evidence of  
29 the trail is discovered, the certificate holder shall avoid any disturbance to the intact  
30 segments, by redesign, re-engineering or restricting the area of construction activity. The  
31 certificate holder shall promptly notify the SHPO and the Department of the discovery. The  
32 certificate holder shall consult with the SHPO and the Department to determine appropriate  
33 mitigation measures.

#### **4. Geotechnical Conditions**

34 47 Before beginning construction, the certificate holder shall conduct a site-specific  
35 geotechnical investigation and shall report its findings to the Oregon Department of  
36 Geology & Mineral Industries (DOGAMI) and the Department. The certificate holder shall  
37 conduct the geotechnical investigation after consultation with DOGAMI and in general  
38 accordance with DOGAMI open file report 00-04 "Guidelines for Engineering Geologic  
39 Reports and Site-Specific Seismic Hazard Reports."

40 48 The certificate holder shall design and construct the facility in accordance with  
41 requirements set forth by the State of Oregon's Building Code Division and any other  
42 applicable codes and design procedures. The certificate holder shall design facility

1 structures to meet or exceed the minimum standards required by the 2003 International  
2 Building Code.

3 49 The certificate holder shall design, engineer and construct the facility to avoid dangers to  
4 human safety presented by non-seismic hazards. As used in this condition, “non-seismic  
5 hazards” include settlement, landslides, flooding and erosion.

## **5. Hazardous Materials, Fire Protection & Public Safety Conditions**

6 50 The certificate holder shall handle hazardous materials used on the site in a manner that  
7 protects public health, safety and the environment and shall comply with all applicable  
8 local, state and federal environmental laws and regulations. The certificate holder shall not  
9 store diesel fuel or gasoline on the facility site.

10 51 If a spill or release of hazardous material occurs during construction or operation of the  
11 facility, the certificate holder shall notify the Department within 72 hours and shall clean up  
12 the spill or release and dispose of any contaminated soil or other materials according to  
13 applicable regulations. The certificate holder shall make sure that spill kits containing items  
14 such as absorbent pads are located on equipment and at the field workshops. The certificate  
15 holder shall instruct employees about proper handling, storage and cleanup of hazardous  
16 materials.

17 52 During construction, the certificate holder shall ensure that construction personnel are  
18 trained in fire prevention and response, that construction vehicles and equipment are  
19 operated on graveled areas to the extent possible and that open flames, such as cutting  
20 torches, are kept away from dry grass areas.

21 53 During operation, the certificate holder shall ensure that all on-site employees receive  
22 annual fire prevention and response training, including tower rescue training, by qualified  
23 instructors or members of the local fire districts. The certificate holder shall ensure that all  
24 employees are instructed to keep vehicles on roads and off dry grassland, except when off-  
25 road operation is required for emergency purposes. The certificate holder shall encourage  
26 employees to become volunteer members of local fire departments and shall facilitate  
27 appropriate training.

28 54 During construction and operation of the facility, the certificate holder shall ensure that the  
29 field workshops and all service vehicles are equipped with shovels and portable fire  
30 extinguishers of a 4A50BC or equivalent rating.

31 55 During construction and operation of the facility, the certificate holder shall develop and  
32 implement fire safety plans in consultation with the local fire protection agencies (the North  
33 Gilliam County Rural Fire Protection District and the Ione Rural Fire Protection District) to  
34 minimize the risk of fire and to respond appropriately to any fires that occur on the facility  
35 site. In developing the fire safety plans, the certificate holder shall take into account the dry  
36 nature of the region and shall address risks on a seasonal basis. The certificate holder shall  
37 meet annually with local fire protection agency personnel to discuss emergency planning  
38 and shall invite local fire protection agency personnel to observe any emergency drill or  
39 tower rescue training conducted at the facility.

40 56 Upon the beginning of operation of the facility, the certificate holder shall provide a site  
41 plan to the local fire protection agencies (the North Gilliam County Rural Fire Protection



- 1 District and the Ione Rural Fire Protection District). The certificate holder shall indicate on  
2 the site plan the identification number assigned to each turbine and the location of all  
3 facility structures and shall provide an updated site plan if additional turbines or other  
4 structures are later added to the facility. During operation, the certificate holder shall ensure  
5 that appropriate fire protection agency personnel have an up-to-date list of the names and  
6 telephone numbers of facility personnel available to respond on a 24-hour basis in case of  
7 an emergency on the facility site.
- 8 57 Before beginning construction, the certificate holder shall submit a Notice of Proposed  
9 Construction or Alteration to the Federal Aviation Administration (FAA) identifying the  
10 proposed final locations of turbine towers and meteorological towers. The certificate holder  
11 shall notify the Department of the FAA's response as soon as it has been received.
- 12 58 The certificate holder shall construct turbines on concrete foundations and shall surround  
13 the base of each tower with a ten-foot pad area of washed crushed rock on all sides. The  
14 certificate holder shall cover turbine pad areas with non-erosive, non-flammable material as  
15 soon as possible following exposure during construction and shall maintain the pad area  
16 covering during operation of the facility.
- 17 59 The certificate holder shall follow manufacturers' recommended handling instructions and  
18 procedures to prevent damage to turbine or turbine tower components that could lead to  
19 failure.
- 20 60 The certificate holder shall install and maintain self-monitoring devices on each turbine,  
21 connected to a fault annunciation panel or supervisory control and data acquisition  
22 (SCADA) system at the field workshops to alert operators to potentially dangerous  
23 conditions. The certificate holder shall maintain automatic equipment protection features in  
24 each turbine that would shut down the turbine and reduce the chance of a mechanical  
25 problem causing a fire.
- 26 61 The certificate holder shall construct turbine towers with no exterior ladders or access to the  
27 turbine blades and shall install locked tower access doors. The certificate holder shall keep  
28 tower access doors locked at all times except when authorized personnel are present.
- 29 62 The certificate holder shall have an operational safety-monitoring program and shall inspect  
30 all turbine and turbine tower components on a regular basis. The certificate holder shall  
31 maintain or repair turbine and turbine tower components as necessary to protect public  
32 safety.
- 33 63 For turbine types having pad-mounted step-up transformers, the certificate holder shall  
34 install the transformers at the base of each tower in locked cabinets designed to protect the  
35 public from electrical hazards and to avoid creation of artificial habitat for raptor prey.
- 36 64 To protect the public from electrical hazards, the certificate holder shall enclose the facility  
37 substations with appropriate fencing and locked gates.
- 38 65 The certificate holder shall construct access roads with a finished width of approximately  
39 18 feet, a compacted base of native soil and a gravel surface to a depth of four to six inches.
- 40 66 During construction, the certificate holder shall implement measures to reduce traffic  
41 impacts, including:

1 (a) Providing notice to the City of Arlington Road Department, the Gilliam County Road  
2 Department and the Gilliam County Sheriff's Office in advance of deliveries that could  
3 cause traffic disruption in Arlington.

4 (b) Providing notice to the residents of Arlington in advance of deliveries that could  
5 cause traffic disruption.

6 (c) Requiring flaggers to be at appropriate locations at appropriate times during  
7 construction to direct traffic.

8 67 The certificate holder shall cooperate with the Gilliam County Road Department and the  
9 Morrow County Public Works Department to ensure that any unusual damage or wear to  
10 county roads that is caused by construction of the facility is repaired by the certificate  
11 holder. Upon completion of construction, the certificate holder shall restore county roads to  
12 pre-construction condition or better, to the satisfaction of the applicable county  
13 departments. If required by Morrow County or Gilliam County, the certificate holder shall  
14 post bonds to ensure funds are available to repair and maintain roads affected by the  
15 proposed facility.

16 68 During construction, the certificate holder shall require that all on-site construction  
17 contractors develop and implement a site health and safety plan that informs workers and  
18 others on-site what to do in case of an emergency and that includes the locations of fire  
19 extinguishers and nearby hospitals, important telephone numbers and first aid techniques.  
20 The certificate holder shall ensure that construction contractors have personnel on-site who  
21 are trained and equipped for tower rescue and who are first aid and CPR certified.

22 69 During operation, the certificate holder shall develop and implement a site health and safety  
23 plan that informs employees and others on-site what to do in case of an emergency and that  
24 includes the locations of fire extinguishers and nearby hospitals, important telephone  
25 numbers and first aid techniques.

26 70 During construction and operation of the facility, the certificate holder shall provide for on-  
27 site security and shall establish good communications between on-site security personnel  
28 and local law enforcement agencies (Gilliam County Sheriff and Morrow County Sheriff).  
29 During operation, the certificate holder shall ensure that appropriate law enforcement  
30 agency personnel have an up-to-date list of the names and telephone numbers of facility  
31 personnel available to respond on a 24-hour basis in case of an emergency on the facility  
32 site.

33 71 The certificate holder shall notify the Department and the Planning Directors of Gilliam  
34 County and Morrow County within 72 hours of any accidents including mechanical failures  
35 on the site associated with construction or operation of the facility that may result in public  
36 health and safety concerns.

## **6. Water, Soils, Streams & Wetlands Conditions**

37 72 The certificate holder shall not build any roads or construct transmission line support poles  
38 within Eightmile Creek or within a 10-foot buffer from the ordinary high water line of the  
39 creek.

40 73 The certificate holder shall conduct all construction work in compliance with an Erosion  
41 and Sediment Control Plan (ESCP) satisfactory to the Oregon Department of  
42 Environmental Quality and as required under the National Pollutant Discharge Elimination

1 System (NPDES) Storm Water Discharge General Permit #1200-C. The certificate holder  
2 shall include in the ESCP any procedures necessary to meet local erosion and sediment  
3 control requirements or storm water management requirements.

4 74 During construction, the certificate holder shall limit truck traffic to designated existing and  
5 improved road surfaces to avoid soil compaction, to the extent practicable.

6 75 During construction, the certificate holder shall implement best management practices to  
7 control any dust generated by construction activities, such as applying water to roads and  
8 disturbed soil areas.

9 76 During construction, the certificate holder shall reduce temporary disturbance impacts by  
10 making use of previously disturbed areas, including roadways and tracks, and by preserving  
11 vegetation rootstalks by crushing, rather than scraping, vegetation in areas of temporary  
12 disturbance.

13 77 During facility operation, the certificate holder shall routinely inspect and maintain all  
14 roads, pads and trenched areas and, as necessary, maintain or repair erosion and sediment  
15 control measures. The certificate holder shall restore areas that are temporarily disturbed  
16 during facility maintenance or repair activities to pre-disturbance condition or better.

17 78 During facility operation, the certificate holder shall obtain water for on-site uses from two  
18 wells, one at each field workshop, subject to compliance with applicable permit  
19 requirements. The certificate holder shall not use more than a combined total of 5,000  
20 gallons of water per day from the facility's on-site wells.

## 7. Transmission Line & EMF Conditions

21 79 The certificate holder shall install the 34.5-kV collector system underground to the extent  
22 practicable. The certificate holder shall install underground lines at a minimum depth of  
23 three feet. Based on geotechnical conditions or other engineering considerations, the  
24 certificate holder may install segments of the collector system aboveground on single-pole,  
25 cross-arm structures or understrung on the 230-kV transmission line support structures, but  
26 the total length of aboveground segments installed on single-pole structures must not  
27 exceed 28 miles.

28 80 The certificate holder shall ground appropriate sections of fencing that parallel transmission  
29 lines to reduce the risk of shock from induced voltage. In particular, the certificate holder  
30 shall ground appropriate sections of fencing located in the northern project area on the west  
31 side of Eightmile Canyon if the certificate holder builds a parallel transmission line in that  
32 location that could induce a voltage on the fence.

33 81 The certificate holder shall take reasonable steps to reduce or manage human exposure to  
34 electromagnetic fields, including but not limited to:

35 (a) Constructing all aboveground transmission lines at least 200 feet from any residence  
36 or other occupied structure, measured from the centerline of the transmission line.

37 (b) Constructing all aboveground 34.5-kV transmission lines with a minimum clearance  
38 of 20 feet from the ground.

39 (c) Constructing all aboveground 230-kV transmission lines with a minimum clearance of  
40 24 feet from the ground.

1 (d) Fencing the areas near the facility substations to ensure that substation equipment is  
2 not accessible to the public.

3 (e) Providing to landowners a map of underground and overhead transmission lines on  
4 their property and advising landowners of possible health risks.

5 (f) Designing and maintaining all transmission lines so that alternating current electric  
6 fields do not exceed 9 kV per meter at one meter above the ground surface in areas  
7 accessible to the public.

8 82 In advance of, and during, preparation of detailed design drawings and specifications for  
9 230-kV and 34.5-kV transmission lines, the certificate holder shall consult with the Utility  
10 Safety and Reliability Section of the Oregon Public Utility Commission to ensure that the  
11 designs and specifications are consistent with applicable codes and standards.

## 8. Plants, Wildlife & Habitat Protection Conditions

12 83 The certificate holder shall conduct wildlife monitoring as described in the Wildlife  
13 Monitoring and Mitigation Plan that is incorporated in the Final Order on the Application as  
14 Attachment A and as amended from time to time.

15 84 The certificate holder shall restore areas disturbed by facility construction but not occupied  
16 by permanent facility structures according to the methods and monitoring procedures  
17 described in the Revegetation Plan that is incorporated in the Final Order on the  
18 Application as Attachment B and as amended from time to time.

19 85 The certificate holder shall acquire the legal right to create, enhance, maintain and protect a  
20 habitat mitigation area as long as the site certificate is in effect by means of an outright  
21 purchase, conservation easement or similar conveyance and shall provide a copy of the  
22 documentation to the Department. Within the habitat mitigation area, the certificate holder  
23 shall improve the habitat quality as described in the Habitat Mitigation Plan that is  
24 incorporated in the Final Order on the Application as Attachment C and as amended from  
25 time to time.

26 86 The certificate holder shall avoid permanent and temporary disturbance to the areas  
27 described in (a) through (g) and, during the times indicated, shall avoid construction  
28 disturbance in the areas described in (h) and (i). The certificate holder shall flag these areas  
29 for the duration of construction activities nearby and shall ensure that construction  
30 personnel avoid disturbance of the areas. The avoidance areas are:

31 (a) All Category 1 and Category 2 habitat.

32 (b) Areas of Category 3 shrub-steppe habitat as described in the Final Order on the  
33 Application, Section IV.4.(b)F, footnote number **Error! Bookmark not defined.**, including  
34 eleven small areas of sage shrub-steppe habitat, one small area of purshia shrub-steppe  
35 habitat and one small area of shrub-steppe rabbitbrush habitat.

36 (c) All seeps, riparian areas and vernal pools.

37 (d) All water sources for wildlife, including perennial and intermittent streams, stock  
38 ponds and watering stations.

39 (e) All faces of bluffs or rock outcroppings.

40 (f) All trees or other structures that contain active raptor nests.

41 (g) For facility substations and field workshops, all Category 3 habitat.

(h) The area within 1,000 feet of Category 2 Washington ground squirrel (WGS) habitat during the period in which the squirrels are active. To determine when the WGS are active, the certificate holder shall hire a qualified independent professional biologist to monitor the on-site colony within the Category 1 WGS habitat area described in the Final Order on the Application. The biologist shall begin monitoring the colony on January 15 if construction activity is occurring within 0.5 miles of the Category 2 WGS habitat at that time. Otherwise, the biologist shall begin monitoring upon the start of construction activity within 0.5 miles of the Category 2 WGS habitat at any time between January 15 and June 30. The biologist shall conduct weekly monitoring to detect signs of WGS activity. If signs of WGS activity are observed, the certificate holder shall halt construction activities within the avoidance area and shall notify the Department. The certificate holder shall flag the avoidance area and ensure that construction personnel avoid disturbance of the area until the biologist has determined that the WGS are no longer active. While the WGS are active, the biologist may suspend weekly monitoring until May 1. The certificate holder may resume construction activities within the avoidance area when the WGS are no longer active, as determined by the absence of WGS activity during three consecutive weeks of monitoring by the biologist.

(i) The area within 0.5 miles of Category 3 curlew nesting habitat and the area within 0.5 miles the BLM Horn Butte Wildlife Area during the nesting season (March 8 through June 15). Before beginning construction, the certificate holder shall provide to the Department a map showing these avoidance areas relative to areas of potential construction disturbance. The certificate holder may engage in construction activities in these areas at times other than the nesting season.

87 The certificate holder shall microsite the facility in conformance with the industry’s best practices. The certificate holder shall follow the recommendations of a qualified wildlife biologist to avoid building turbine towers in the following locations:

- (a) Areas of increased risk to avian species due to constricted flight paths, such as narrow ridge saddles and gaps between hilltops.
- (b) Areas on slopes greater than 20 percent.
- (c) Areas within a 250-foot setback from the bluff edge along the north site boundary.
- (d) Areas within a 250-foot setback from bluff edges along the eastern site boundary above the Willow Creek Valley.

88 During construction, the certificate holder shall avoid construction activities in areas around active nests of the following species during the sensitive period, as provided in this condition:

<u>Species</u>	<u>Sensitive Period</u>	<u>Early Release Date</u>
Swainson’s hawk	April 1 to August 15	May 31
Ferruginous hawk	March 15 to August 15	May 31
Burrowing owl	April 1 to August 15	July 15

The certificate holder shall conduct pre-construction surveys, using a protocol approved by the Oregon Department of Fish and Wildlife (ODFW) to determine whether there are any active nests of these species within 0.5 miles of any areas that would be disturbed during construction. The certificate holder shall search the scheduled construction areas and all areas within 0.5 miles of the construction areas. If a nest is occupied by any of these species after the beginning of the sensitive period, the certificate holder will flag the boundaries of

1 a 0.5-mile buffer area around the nest and shall instruct construction personnel to avoid  
2 disturbance of the area. The certificate holder shall hire a qualified independent  
3 professional biologist to observe the active nest sites during the sensitive period for signs of  
4 disturbance and to notify the Department of any non-compliance with this condition. If the  
5 biologist observes nest site abandonment or other adverse impact to nesting activity, the  
6 certificate holder shall implement appropriate mitigation, in consultation with ODFW and  
7 subject to the approval of the Department, unless the adverse impact is clearly shown to  
8 have a cause other than construction activity. The certificate holder may begin or resume  
9 construction activities within a buffer area before the ending day of the sensitive period if  
10 any known nest site is not occupied by the early release date. If a nest site is occupied, then  
11 the certificate holder may begin or resume construction before the ending day of the  
12 sensitive period with the approval of ODFW, after the young are fledged. The certificate  
13 holder shall use a protocol approved by ODFW to determine when the young are fledged  
14 (the young are independent of the core nest site).

15 89 The certificate holder shall not remove any trees that are greater than three feet in height.

16 90 The certificate holder shall design all aboveground transmission line support structures  
17 following the most current suggested practices for avian protection on power lines  
18 published by the Avian Power Line Interaction Committee.

19 91 The certificate holder shall reduce the risk of injuries to avian species by:

20 (a) Installing turbine towers that are smooth steel structures that lack features that would  
21 allow avian perching.

22 (b) Installing meteorological towers that are non-guyed structures to eliminate the risk of  
23 avian collision with guy-wires.

24 (c) Avoiding installation of aboveground transmission lines across narrow saddles,  
25 ravines and similar features and, where such crossings cannot be avoided, installing line-  
26 markers to make the lines more visible to avian species.

27 92 The certificate holder shall impose and enforce construction and operation speed limits of 5  
28 miles per hour on roads within 1,000 feet of Category 2 WGS habitat and 20 miles per hour  
29 on all other facility roads and shall ensure that all construction and operations personnel are  
30 instructed on the importance of cautious driving practices while on facility roads.

## **9. Visual Effects Conditions**

31 93 To reduce the visual impact of the facility, the certificate holder shall:

32 (a) Mount nacelles on smooth, steel structures, painted uniformly in a matte-finish,  
33 neutral white color.

34 (b) Paint substation structures in a neutral color to blend with the surrounding landscape.

35 (c) Not allow any advertising to be used on any part of the facility.

36 (d) Use only those signs required for facility safety, required by law or otherwise required  
37 by this site certificate, except that the certificate holder may erect a sign to identify the  
38 facility near each field workshop, may paint turbine numbers on each tower and may allow  
39 unobtrusive manufacturers' logos on turbine nacelles.

40 (e) Not locate any facility signs along Highway 74.

41 (f) Design signs in accordance with Gilliam County Zoning Ordinance Section 8.030 and  
42 Morrow County Zoning Ordinance Section 4.070, as applicable.

1 (g) Maintain any signs allowed under this condition in good repair.

2 94 The certificate holder shall design and construct the field workshops to be generally  
3 consistent with the character of similar buildings used by commercial farmers or ranchers in  
4 the area and shall paint the buildings in a neutral color to blend with the surrounding  
5 landscape.

6 95 The certificate holder shall not use exterior nighttime lighting except:

7 (a) The minimum turbine tower lighting required or recommended by the Federal  
8 Aviation Administration.

9 (b) Security lighting at the field workshops and substations, provided that such lighting is  
10 shielded or downward-directed to reduce glare.

11 (c) Minimum lighting necessary for repairs or emergencies.

## 10. Noise Control Conditions

12 96 To reduce noise impacts at nearby residences, the certificate holder shall:

13 (a) Confine the noisiest operation of heavy construction equipment to the daylight hours.

14 (b) Require contractors to install and maintain exhaust mufflers on all combustion  
15 engine-powered equipment; and

16 (c) Establish a complaint response system at the construction manager's office to address  
17 noise complaints.

18 97 Before beginning construction, the certificate holder shall provide to the Department:

19 (a) Information that identifies the final design locations of all turbines to be built at the  
20 facility.

21 (b) The maximum sound power level for the substation transformers and the maximum  
22 sound power level and octave band data for the turbines selected for the facility based on  
23 manufacturers' warranties or confirmed by other means acceptable to the Department.

24 (c) The results of noise analysis of the facility to be built according to the final design  
25 performed in a manner consistent with the requirements of OAR 340-035-0035  
26 (1)(b)(B)(iii)(IV) and (VI) demonstrating to the satisfaction of the Department that the total  
27 noise generated by the facility (including the noise from turbines and substation  
28 transformers) would meet the ambient degradation test and maximum allowable test at the  
29 appropriate measurement point for all potentially-affected noise sensitive properties.

30 (d) For each noise-sensitive property where the certificate holder relies on a noise waiver  
31 to demonstrate compliance in accordance with OAR 340-035-0035 (1)(b)(B)(iii)(III), a  
32 copy of the a legally effective easement or real covenant pursuant to which the owner of the  
33 property authorizes the certificate holder's operation of the facility to increase ambient  
34 statistical noise levels  $L_{10}$  and  $L_{50}$  by more than 10 dBA at the appropriate measurement  
35 point. The legally-effective easement or real covenant must: include a legal description of  
36 the burdened property (the noise sensitive property); be recorded in the real property  
37 records of the county; expressly benefit the certificate holder; expressly run with the land  
38 and bind all future owners, lessees or holders of any interest in the burdened property; and  
39 not be subject to revocation without the certificate holder's written approval.

40 98 During operation, the certificate holder shall maintain a complaint response system to  
41 address noise complaints. The certificate holder shall promptly notify the Department of  
42 any complaints received regarding facility noise and of any actions taken by the certificate

1 holder to address those complaints. In response to a complaint from the owner of a noise  
2 sensitive property regarding noise levels during operation of the SFWF, the Council may  
3 require the certificate holder to monitor and record the statistical noise levels to verify that  
4 the certificate holder is operating the facility in compliance with the noise control  
5 regulations.

## 11. Waste Management Conditions

6 99 The certificate holder shall provide portable toilets for on-site sewage handling during  
7 construction and shall ensure that they are pumped and cleaned regularly by a licensed  
8 contractor who is qualified to pump and clean portable toilet facilities.

9 100 During operation, the certificate holder shall discharge sanitary wastewater generated at the  
10 field workshops to licensed on-site septic systems in compliance with county permit  
11 requirements. The certificate holder shall design each septic system for a discharge capacity  
12 of less than 2,500 gallons per day.

13 101 The certificate holder shall implement a waste management plan during construction that  
14 includes but is not limited to the following measures:

15 (a) Recycling steel and other metal scrap.

16 (b) Recycling wood waste.

17 (c) Recycling packaging wastes such as paper and cardboard.

18 (d) Collecting non-recyclable waste for transport to a local landfill by a licensed waste  
19 hauler or by using facility equipment and personnel to haul the waste.

20 (e) Segregating all hazardous wastes such as used oil, oily rags and oil-absorbent  
21 materials, mercury-containing lights and lead-acid and nickel-cadmium batteries for  
22 disposal by a licensed firm specializing in the proper recycling or disposal of hazardous  
23 wastes.

24 (f) Discharging all concrete truck rinse water into foundation holes and completing truck  
25 wash-down off-site.

26 102 The certificate holder shall implement a waste management plan during operation that  
27 includes but is not limited to the following measures:

28 (a) Training employees to minimize and recycle solid waste.

29 (b) Recycling paper products, metals, glass and plastics.

30 (c) Recycling used oil and hydraulic fluid.

31 (d) Collecting non-recyclable waste for transport to a local landfill by a licensed waste  
32 hauler or by using facility equipment and personnel to haul the waste.

33 (e) Segregating all hazardous, non-recyclable wastes such as used oil, oily rags and oil-  
34 absorbent materials, mercury-containing lights and lead-acid and nickel-cadmium batteries  
35 for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous  
36 wastes.

## VI. SUCCESSORS AND ASSIGNS

37 To transfer this site certificate or any portion thereof or to assign or dispose of it in any  
38 other manner, directly or indirectly, the certificate holder shall comply with OAR 345-027-0100.



**VII. SEVERABILITY AND CONSTRUCTION**

1 If any provision of this agreement and certificate is declared by a court to be illegal or in  
2 conflict with any law, the validity of the remaining terms and conditions shall not be affected,  
3 and the rights and obligations of the parties shall be construed and enforced as if the agreement  
4 and certificate did not contain the particular provision held to be invalid.

**VIII. GOVERNING LAW AND FORUM**

5 This site certificate shall be governed by the laws of the State of Oregon. Any litigation  
6 or arbitration arising out of this agreement shall be conducted in an appropriate forum in Oregon.

**IX. EXECUTION**

7 This site certificate may be executed in counterparts and will become effective upon  
8 signature by the Chair of the Energy Facility Siting Council and the authorized representative of  
9 the certificate holder.

10 **IN WITNESS WHEREOF**, this site certificate has been executed by the State of Oregon, acting  
11 by and through its Energy Facility Siting Council, and by Caithness Shepherds Flat, LLC.

ENERGY FACILITY SITING COUNCIL

CAITHNESS SHEPHERDS FLAT, LLC

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

By: [Signature]  
Print: DEESEE A GRANT, JR

Date: 7/25/08

Date: 07/25/08