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DEPARTMENT OF ENERGY

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

**Second Amended Site Certificate  
for the  
Biglow Canyon Wind Farm**

May 10, 2007

**The Oregon Energy Facility Siting Council**  
**SECOND AMENDED SITE CERTIFICATE**  
**FOR THE BIGLOW CANYON WIND FARM**

**I. INTRODUCTION**

1 This site certificate for the Biglow Canyon Wind Farm (“Biglow” or the “facility”) is  
2 issued and executed in the manner provided by ORS Chapter 469, by and between the State of  
3 Oregon (“State”), acting by and through its Energy Facility Siting Council (the “Council”), and  
4 Portland General Electric Company (“certificate holder”). This site certificate is a binding  
5 agreement between the State, acting by and through the Council, and the certificate holder.  
6 [Amendment #1]

7 The findings of fact, reasoning and conclusions of law underlying the terms and  
8 conditions of this site certificate are set forth in the following documents related to the facility,  
9 which are incorporated herein by this reference: (a) the Council’s Final Order in the Matter of the  
10 Application for a Site Certificate for the Biglow Canyon Wind Farm (the “Final Order on the  
11 Application”); (b) the Council’s Final Order on Amendment #1; and (c) the Council’s Final  
12 Order on Amendment #2. [Amendments #1 and #2]

13 In interpreting this site certificate, any ambiguity shall be clarified by reference to the  
14 following, in order of priority: (1) this Second Amended Site Certificate; (2) the Final Order on  
15 Amendment #2; (3) the Final Order on Amendment #1; (4) the Final Order on the Application;  
16 and (5) the record of the proceedings that led to the Final Orders on the Application, Amendment  
17 #1, and Amendment #2. [Amendments #1 and #2]

18 The terms used in this site certificate shall have the same meaning as set forth in ORS  
19 469.300 and OAR 345-001-0010, except where otherwise stated or where the context clearly  
20 indicates otherwise.

**II. SITE CERTIFICATION**

21 A. To the extent authorized by state law and subject to the conditions set forth herein, the State  
22 authorizes the certificate holder to construct, operate and retire a wind energy facility,  
23 together with certain related or supporting facilities, at the site in Sherman County, Oregon,  
24 as described in Section III of this site certificate. ORS 469.401(1)

25 B. This site certificate is effective until it is terminated under OAR 345-027-0110 or the rules in  
26 effect on the date that termination is sought or until the site certificate is revoked under ORS  
27 469.440 and OAR 345-029-0100 or the statutes and rules in effect on the date that revocation  
28 is ordered. ORS 469.401(1)

29 C. This site certificate does not address, and is not binding with respect to, matters that were not  
30 addressed in the Council’s Final Orders on the Application, Amendment #1 and Amendment  
31 #2. These matters include, but are not limited to: building code compliance, wage, hour and  
32 other labor regulations, local government fees and charges, and other design or operational  
33 issues that do not relate to siting the facility (ORS 469.401(4)) and permits issued under  
34 statutes and rules for which the decision on compliance has been delegated by the federal  
35 government to a state agency other than the Council. ORS 469.503(3). [Amendments #1 and #2]

- 1 D. Both the State and the certificate holder shall abide by local ordinances, state law, and the  
2 rules of the Council in effect on the date this site certificate is issued. In addition, upon a  
3 clear showing of a significant threat to public health, safety or the environment that requires  
4 application of later-adopted laws or rules, the Council may require compliance with such  
5 later-adopted laws or rules. ORS 469.401(2)
- 6 E. For a permit, license or other approval addressed in and governed by this site certificate, the  
7 certificate holder shall comply with applicable state and federal laws adopted in the future to  
8 the extent that such compliance is required under the respective state agency statutes and  
9 rules. ORS 469.401(2)
- 10 F. Subject to the conditions herein, this site certificate binds the State and all counties, cities and  
11 political subdivisions in Oregon as to the approval of the site and the construction, operation  
12 and retirement of the facility as to matters that are addressed in and governed by this site  
13 certificate. ORS 469.401(3)
- 14 G. Each affected state agency, county, city and political subdivision in Oregon with authority to  
15 issue a permit, license or other approval addressed in or governed by this site certificate shall,  
16 upon submission of the proper application and payment of the proper fees, but without  
17 hearings or other proceedings, issue such permit, license or other approval subject only to  
18 conditions set forth in this site certificate. ORS 469.401(3)
- 19 H. After issuance of this site certificate, each state agency or local government agency that  
20 issues a permit, license or other approval for the facility shall continue to exercise  
21 enforcement authority over such permit, license or other approval. ORS 469.401(3)
- 22 I. After issuance of this site certificate, the Council shall have continuing authority over the site  
23 and may inspect, or direct the Department to inspect, or request another state agency or local  
24 government to inspect, the site at any time in order to ensure that the facility is being  
25 operated consistently with the terms and conditions of this site certificate. ORS 469.430

### III. DESCRIPTIONS

#### A. THE FACILITY

26 In the site certificate application, the certificate holder defined the range of possible  
27 turbine vendors, sizes and numbers. Subject to specific conditions, this site certificate allows the  
28 certificate holder to construct wind turbines within defined 500-foot wide turbine corridors and  
29 to select turbine vendor, turbine size, number of turbines to be installed and precise turbine  
30 layout before beginning construction. This site certificate allows the certificate holder to  
31 construct other facility components (collector lines, access roads, meteorological towers) within  
32 micrositing areas. The facility is described further in the Final Order on Amendment #2.  
33 [Amendment #2]

- 34 1. Major Structures. The Biglow Canyon Wind Farm will consist of up to 225 wind turbines  
35 with an aggregate nominal nameplate generating capacity of up to 450 megawatts (MW)  
36 of electricity and an average electric generating capacity of up to 150 MW. Turbines will  
37 be mounted on tubular steel towers ranging in height from 265 to 280 feet at the hub with  
38 an overall height of from 400 to 445 feet including the turbine blades. The turbines will  
39 be erected within up to 30 corridors and spaced to optimize the facility's output. The

1 facility will be located on private farmland that the certificate holder has leased from the  
2 affected landowners. [Amendments #1 and #2]

3 2. Related or Supporting Facilities. The facility includes the following related or supporting  
4 facilities:

5 a. Power Collection System. Each wind turbine will generate power at about 600  
6 volts. The transformer sitting at the base of each wind turbine unit will increase  
7 the voltage to 34.5 kilovolts (kV). From the transformer, power will be  
8 transmitted to a central substation by means of electric cables. Most of the cables  
9 will be buried three feet or more below the surface in trenches about 3 feet wide.  
10 In areas where collector cables from several turbine strings follow the same  
11 alignment, e.g., on approach to the substation, multiple sets of cables may be  
12 installed within a single trench. If the facility is fully developed, there will be  
13 about 99 miles of 3-wire collector cables. Generally, these cables will be above,  
14 below or adjacent to the fiber optic cables comprising the supervisory control and  
15 data acquisition system. [Amendment #2]

16 In some locations, the collector cables may be constructed above ground on pole  
17 or tower structures. Aboveground structures would allow the collector cables to  
18 span terrain, such as canyons, native grasslands, wetlands, and intermittent  
19 streams, thereby reducing adverse environmental impacts, or to span cultivated  
20 areas, thereby reducing adverse impacts to farming operations. Poles or towers  
21 supporting aboveground segments of the power collection system will be about 23  
22 to 28 feet tall. Pending final site design, the certificate holder states that the length  
23 of the aboveground segments of the power collection system will be up to but not  
24 exceeding 15 miles.

25 b. Substations and Interconnection System. The substation site will be a graveled,  
26 fenced area of up to 6 acres with transformers, switching equipment and a parking  
27 area. Transformers will be non-polychlorinated biphenyl (PCB) oil-filled types.  
28 The facility will interconnect with a new Bonneville Power Administration (BPA)  
29 system transmission line adjacent to the facility substation. [Amendment #2].

30 c. Meteorological Towers. The certificate holder will place up to 10 meteorological  
31 towers throughout the facility site to collect wind resource data. The towers would  
32 be up to 279 feet tall.

33 d. Operations and Maintenance Building. The site of the operations and maintenance  
34 building will comprise about 5 acres adjacent to the substation on Herin Lane.  
35 The O&M building will occupy about 5,000 square feet and will include office  
36 and workshop areas, control room, kitchen, bathroom, shower, utility sink, and  
37 other typical facilities. Water for the bathroom, shower and kitchen will be  
38 obtained from an onsite well constructed by a licensed contractor in accordance  
39 with local and state requirements. Water use will not be expected to exceed 1,000  
40 gallons per day. Domestic wastewater generated at the O&M facility will drain  
41 into an onsite septic system. A graveled parking area for employees, visitors and  
42 equipment will be located adjacent to the O&M facility. [Amendment #2]

- 1 e. Control System. The certificate holder will install a supervisory control and data  
2 acquisition (SCADA) system to assist with the remote operation of the wind  
3 turbines, to collect data from each wind turbine, and to archive wind and  
4 performance data from various sources. The SCADA system will be linked by  
5 means of fiber optic cables or other means of communication to a central  
6 computer in the O&M facility.
- 7 f. Access Roads. The certificate holder will construct about 41.5 miles of new roads  
8 to provide access to the wind turbine strings, together with turnaround areas at the  
9 end of each wind turbine string. The roads will be about 16 feet wide (possibly up  
10 to 28 feet wide in some locations) and will be composed of crushed gravel with  
11 shoulders (without gravel) about 3 feet wide. In addition, the certificate holder  
12 will improve about 0.7 mile of existing roads by providing an all-weather surface  
13 and, in some cases, widening the roads to accommodate construction vehicles.  
14 [Amendment #2]
- 15 g. Temporary Laydown and Staging Areas. Depending on whether it proceeds with  
16 the 150-turbine or 225-turbine configuration, the certificate holder will use a total  
17 of 186 or 261 laydown and staging areas to stage construction and store supplies  
18 and equipment during construction of the facility. The certificate holder will  
19 develop one 18,500 square-foot laydown area at the site of each wind turbine, a  
20 one-acre laydown area for each wind turbine string, and six additional 5-acre  
21 laydown areas at various locations throughout the facility site. The laydown areas  
22 will have a crushed gravel surface and will be returned to their pre-construction  
23 condition following completion of construction of the facility.
- 24 h. Temporary Crane Paths. The certificate holder will develop seven temporary  
25 crane paths, totaling approximately 5.1 miles, in order to move construction  
26 cranes between turbine corridors. The temporary crane paths will be returned to  
27 their pre-construction condition following completion of construction of the  
28 facility. [Amendment #2]

## B. LOCATION OF THE FACILITY

29 The facility is located about 2.5 miles northeast of Wasco in Townships 1 and 2 North,  
30 Ranges 17 and 18 East, Willamette Meridian, Sherman County, Oregon.

## IV. SPECIFIC FACILITY CONDITIONS

31 The conditions listed in this section include conditions based on representations in the  
32 site certificate application and supporting record. The Council deems these representations to be  
33 binding commitments made by the applicant. These conditions are required under OAR 345-027-  
34 0020(10).

35 This section includes other specific facility conditions the Council finds necessary to  
36 ensure compliance with the siting standards of OAR Chapter 345, Divisions 22 and 24, and to  
37 protect the public health and safety.

**A. ORGANIZATIONAL EXPERTISE, OAR 345-022-0010**

- 1 (1) Before beginning construction of the facility, the certificate holder shall notify the  
2 Department of the identity and qualifications of the engineering, procurement and  
3 construction (EPC) contractor(s) for specific portions of the work. The certificate holder  
4 shall select EPC contractors that have substantial experience in the design and construction  
5 of similar facilities. The certificate holder shall report to the Department any change of  
6 major construction contractors.
- 7 (2) The certificate holder shall contractually require all construction contractors and  
8 subcontractors involved in the construction of the facility to comply with all applicable  
9 laws and regulations and with the terms and conditions of the site certificate. Such  
10 contractual provisions shall not operate to relieve the certificate holder of responsibility  
11 under the site certificate.
- 12 (3) During construction of the facility, the certificate holder shall have an on-site assistant  
13 construction manager who is qualified in environmental compliance to ensure compliance  
14 with all construction-related site certificate conditions. During operation, the certificate  
15 holder shall have a project manager who is qualified in environmental compliance to ensure  
16 compliance with all ongoing site certificate conditions. The certificate holder shall notify  
17 the Department of the name, telephone number, fax number and e-mail address of these  
18 managers and shall keep the Department informed of any change in this information.
- 19 (4) Within 72 hours after discovery of conditions or circumstances that may violate the terms  
20 or conditions of the site certificate, the certificate holder shall report the conditions or  
21 circumstances to the Department.

**B. RETIREMENT AND FINANCIAL ASSURANCE, OAR 345-022-0050**

- 22 (5) [Condition removed by Amendment #2]
- 23 (6) [Condition removed by Amendment #2]
- 24 (7) [Condition removed by Amendment #2]
- 25 (8) If the certificate holder elects to build the facility in more than one phase using any turbines  
26 other than the GE 1.5-MW turbines or GE 3.0-MW turbines, before beginning construction  
27 of any phase of the facility and after considering all micrositing factors, the certificate  
28 holder shall provide to the Department a detailed map of that phase of the facility showing  
29 the final locations where facility components are proposed to be built in relation to the  
30 features and micrositing corridors shown on Figure 1a as identified in the Final Order on  
31 Amendment #2, shall identify on this map the facilities that would constitute that phase of  
32 construction, and shall provide documentation defining the quantities of each of the  
33 following components that would constitute that phase of construction: turbines, pad  
34 transformers, meteorological towers, substation, O&M facility, miles of aboveground 34.5-  
35 kV collector system, miles of access road, acres of turnarounds and access road  
36 intersections, acres of temporary laydown area and miles of temporary crane paths. For  
37 each turbine, the certificate shall define the turbine manufacturer, turbine capacity, weight  
38 of steel, height of tower, sweep of blade, and size of concrete foundation. [Amendment #2]
- 39 (9) In February 2007, in accordance with the terms and conditions of the First Amended Site  
40 Certificate, the certificate holder submitted to the State of Oregon through the Council a

1 letter of credit in the amount of \$1.608 million before beginning construction of Phase 1 of  
2 the facility. The calculation of the amount of the letter of credit included a deduction from  
3 the estimated cost of site restoration for Phase 1 for the estimated value of scrap steel. In the  
4 Final Order on Amendment #2, the Council found that there should be no deduction of  
5 scrap or salvage value in calculating the amount of financial assurance required for site  
6 restoration.

7 Within 60 days following the effective date of the Second Amended Site Certificate, the  
8 certificate holder shall submit an amended or replacement letter of credit for Phase 1 in the  
9 amount of \$4.73 million (in 2005 dollars), adjusted to present value as of the date of  
10 issuance as described in (a).

11 Before beginning construction of any future phase of the facility, the certificate holder shall  
12 submit a bond or letter of credit for that phase in an amount approved by the Department  
13 and based on the costs shown in Table 3 of the Final Order on Amendment #2.

14 (a) The certificate holder shall adjust the amounts of all bonds or letters of credit  
15 submitted in compliance with this condition to present value as of the date of issuance,  
16 using the following calculation and subject to approval by the Department:

17 (i) Adjust the gross cost (in 2005 dollars) to present value, using the U.S. Gross  
18 Domestic Product Implicit Price Deflator, Chain-Weight, as published in the Oregon  
19 Department of Administrative Services' *Oregon Economic and Revenue Forecast* or by any  
20 successor agency (the "Index"). If at any time the Index is no longer published, the Council  
21 shall select a comparable calculation to adjust 2005 dollars to present value.

22 (ii) Add 1 percent of the adjusted gross cost for the adjusted performance bond  
23 amount, 10 percent of the adjusted gross cost for the adjusted administration and project  
24 management costs and 10 percent of the adjusted gross cost for the adjusted future  
25 developments contingency.

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

28 (b) The certificate holder shall annually adjust all bonds or letters of credit submitted in  
29 compliance with this condition to present value as of the date of issuance as described in  
30 (a).

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

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

35 (e) The certificate holder shall describe the status of all bonds or letters of credit for the  
36 facility in the annual report submitted to the Council under Condition (122).

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

3 [Amendment #2]

4 (10) If the certificate holder elects to use a bond to meet the requirements of Condition (9), the  
5 certificate holder shall ensure that the surety is obligated to comply with the requirements  
6 of applicable statutes, Council rules and this site certificate when the surety exercises any  
7 legal or contractual right it may have to assume construction, operation or retirement of the  
8 facility. The certificate holder shall also ensure that the surety is obligated to notify the  
9 Council that it is exercising such rights and to obtain any Council approvals required by  
10 applicable statutes, Council rules and this site certificate before the surety commences any  
11 activity to complete construction, operate or retire the facility.

12 (11) The certificate holder shall begin construction of the facility by June 30, 2009. Under OAR  
13 345-015-0085(9), a site certificate is effective upon execution by the Council Chair and the  
14 applicant. The Council may grant an extension of the deadline to begin construction in  
15 accordance with OAR 345-027-0030 or any successor rule in effect at the time the request  
16 for extension is submitted. [Amendment #2]

17 (12) The certificate holder shall complete construction of the facility by June 30, 2011.  
18 Construction is complete when: (1) the facility is substantially complete as defined by the  
19 certificate holder's construction contract documents; (2) acceptance testing has been  
20 satisfactorily completed; and (3) the energy facility is ready to begin continuous operation  
21 consistent with the site certificate. The certificate holder shall promptly notify the  
22 Department of the date of completion of construction. The Council may grant an extension  
23 of the deadline for completing construction in accordance with OAR 345-027-0030 or any  
24 successor rule in effect at the time the request for extension is submitted. [Amendment #2]

25 (13) The certificate holder shall construct a facility substantially as described in the site  
26 certificate.

27 (14) Notwithstanding OAR 345-027-0050(2), an amendment of the site certificate is required if  
28 the proposed change would increase the electrical generation capacity of the facility and  
29 would increase the number of wind turbines or the dimensions of existing wind turbines.

30 (15) The certificate holder shall obtain all necessary state and local permits or approvals  
31 required for construction, operation and retirement of the facility or ensure that its  
32 contractors obtain necessary state and local permits or approvals.

33 (16) Before beginning construction, the certificate holder shall notify the Department in advance  
34 of any work on the site that does not meet the definition of "construction" in OAR 345-001-  
35 0010 or ORS 469.300 and shall provide to the Department a description of the work and  
36 evidence that its value is less than \$250,000.

### C. LAND USE, OAR 345-022-0030

37 (17) The certificate holder shall construct the public road improvements described in the site  
38 certificate application to meet or exceed road standards for the road classifications in the  
39 County's Transportation System Plan and Zoning Ordinance because roads will require a  
40 more substantial section to bear the weight of the vehicles and turbine components than  
41 would usually be constructed by the County.

- 1 (18) The certificate holder shall ensure that no equipment or machinery is parked or stored on  
2 any county road except while in use.
- 3 (19) The site certificate holder shall design and construct private access roads to minimize the  
4 division of existing farm units.
- 5 (20) The certificate holder shall not locate any aboveground facility structure (including wind  
6 turbines, O&M building, substations, and meteorological towers, but not including  
7 aboveground transmission and collector lines and junction boxes) within 30 feet from any  
8 property line or within 50 feet from the right-of-way of any arterial or major collector road  
9 or street and shall not allow any architectural feature, as described in Sherman County  
10 Zoning Ordinance Section 4.2, to project into these required setbacks by more than 2 feet.
- 11 (21) The certificate holder shall locate access roads and temporary construction laydown and  
12 staging areas to minimize disturbance with farming practices and, wherever feasible, shall  
13 place turbines and transmission interconnection lines along the margins of cultivated areas  
14 to reduce the potential for conflict with farm operations. The certificate holder shall place  
15 aboveground collector lines and junction boxes along property lines and public road rights-  
16 of-way to the extent practicable. [Amendment #2]
- 17 (22) During operation of the facility, the certificate holder, in cooperation with landowners, shall  
18 avoid impact on cultivated land to the extent reasonably possible when performing facility  
19 repair and maintenance activities.
- 20 (23) Where necessary and feasible, the certificate holder shall provide access across construction  
21 trenches to fields within the facility site and otherwise provide adequate and timely access  
22 to properties during critical periods in the farming cycle, such as harvest.
- 23 (24) Before beginning construction of the facility, the certificate holder shall record a Farm  
24 Management Easement covering the properties on which the certificate holder locates wind  
25 power generation facilities. The certificate holder shall record the easements in the real  
26 property records of Sherman County and shall file a copy of the recorded easement with the  
27 Sherman County Planning Director.
- 28 (25) The certificate holder shall remove from Special Farm Assessment the portions of parcels  
29 on which facilities are located and shall pay all property taxes due and payable after the  
30 Special Farm Assessment is removed from such properties.

#### **D. SOIL PROTECTION, OAR 345-022-0022**

- 31 (26) The certificate holder shall conduct all construction work in compliance with an Erosion  
32 and Sediment Control Plan (ESCP) satisfactory to the Oregon Department of  
33 Environmental Quality and as required under the National Pollutant Discharge Elimination  
34 System (NPDES) Storm Water Discharge General Permit #1200-C. The certificate holder  
35 shall include in the ESCP any procedures necessary to meet local erosion and sediment  
36 control requirements and storm water management requirements.
- 37 (27) During construction of the facility, the certificate holder shall limit truck traffic to  
38 designated existing and improved road surfaces to avoid soil compaction, to the extent  
39 possible.

- 1 (28) The certificate holder shall cover turbine pad areas with gravel or other non-erosive  
2 material immediately following exposure during construction and shall maintain the pad  
3 area covering during operation of the facility.
- 4 (29) During construction of the facility, the certificate holder shall restore areas that are  
5 temporarily disturbed in accordance with the methods, monitoring procedures and success  
6 criteria described in the Revegetation Plan that is incorporated in this order as Attachment  
7 B and as that Revegetation Plan may be amended from time to time. During operation of  
8 the facility, the certificate holder shall restore areas that are temporarily disturbed during  
9 facility maintenance or repairs according to the same methods and monitoring procedures.
- 10 (30) During operation of the facility, the certificate holder shall routinely inspect and maintain  
11 all roads, pads and trenched areas and, as necessary, maintain or repair erosion control  
12 measures.
- 13 (31) During construction of the underground collector system, the certificate holder shall open  
14 the smallest necessary sections of trench during each day of construction and backfill the  
15 trenches as soon as is practical after power lines have been set in the trenches.
- 16 (32) During construction of the facility, the certificate holder shall strip and stockpile soil from  
17 laydown areas only during the time of year when rainfall is lowest, minimizing erosion  
18 from precipitation.
- 19 (33) During construction of the facility, the certificate holder shall use straw bales or similar  
20 containment features to protect soil stockpiles from erosion, as needed.
- 21 (34) During construction of the facility, the certificate holder shall keep wind-borne erosion to a  
22 minimum by using water trucks for dust suppression, as necessary.
- 23 (35) During construction of the facility, the certificate holder shall restore staging locations by  
24 bringing them back to their original contours, covering them with topsoil, and revegetating  
25 or preparing them for planting of wheat or barley or use as range land.

**E. PROTECTED AREAS, OAR 345-022-0040**

- 26 (36) Without Department approval, the certificate holder shall not move any turbines within its  
27 micrositing corridors such that a worst-case visual impact beyond that stated in the ASC  
28 and ASC Supplement would occur for the John Day Wildlife Refuge, the John Day Federal  
29 Wild and Scenic River, or the John Day State Scenic Waterway (Parrish Creek to  
30 Tumwater Falls).

**F. SCENIC AND AESTHETIC VALUES, OAR 345-022-0080**

31 [No conditions]

**G. RECREATION, OAR 345-022-0100**

32 [No conditions]

**H. PUBLIC HEALTH AND SAFETY STANDARDS FOR WIND ENERGY FACILITIES, OAR 345-024-0010**

- 1 (37) During construction, operation or retirement of the facility, the certificate holder shall  
2 notify the Department within 72 hours of any accidents that may result in public health and  
3 safety concerns, including mechanical failures on the site associated with construction or  
4 operation of the facility.
- 5 (38) Before beginning construction of any phase of the facility, the certificate holder shall  
6 submit a Notice of Proposed Construction or Alteration to the Federal Aviation  
7 Administration (FAA) identifying the proposed final locations of the turbines and related or  
8 supporting facilities for that phase of the facility. The certificate holder shall notify the  
9 Department of the FAA's response as soon as it has been received.
- 10 (39) The certificate holder shall enclose the facility substation with appropriate fencing and  
11 locked gates to protect the public from electrical hazards.
- 12 (40) The certificate holder shall not locate turbine towers within 450 feet of any residence. The  
13 certificate holder shall not locate turbine towers within 450 feet of any public road, unless  
14 the certificate holder demonstrates to the Department's satisfaction that a lesser setback is  
15 consistent with the protection of public health and safety.
- 16 (41) The certificate holder shall construct turbine towers that are smooth steel structures with no  
17 exterior ladders or access to the turbine blades and shall install locked access doors  
18 accessible only to authorized personnel.
- 19 (42) During construction of the facility, the certificate holder shall follow manufacturers'  
20 recommended handling instructions and procedures to prevent damage to towers or blades  
21 that could lead to failure.
- 22 (43) During operation of the facility, the certificate holder shall have an operational safety-  
23 monitoring program and shall inspect turbine blades on a regular basis for signs of wear.  
24 The certificate holder shall repair turbine blades as necessary to protect public safety.
- 25 (44) During operation of the facility, the certificate holder shall install and maintain self-  
26 monitoring devices on each turbine, connected to a fault annunciation panel or supervisory  
27 control and data acquisition (SCADA) system at the O&M facility, to alert operators to  
28 potential dangerous conditions, and the certificate holder shall remedy any dangerous  
29 conditions immediately.
- 30 (45) During construction of the facility, the certificate holder shall install generator step-up  
31 transformers at the base of each turbine tower in locked cabinets designed to protect the  
32 public from electrical hazards and to avoid creation of artificial habitat for raptor prey.
- 33 (46) During construction of the facility, the certificate holder shall require that all on-site  
34 construction contractors develop and implement a site health and safety plan that informs  
35 on-site workers and others what to do in case of an emergency and that includes the  
36 locations of fire extinguishers and nearby hospitals, important telephone numbers, and first  
37 aid techniques.
- 38 (47) During operation of the facility, the certificate holder shall develop and implement a site  
39 health and safety plan that informs on-site employees and others what to do in case of an

1 emergency and that includes the locations of fire extinguishers and nearby hospitals,  
2 important telephone numbers, and first aid techniques.

### **I. SITING STANDARDS FOR WIND ENERGY FACILITIES, OAR 345-024-0015**

3 (48) The certificate holder shall construct turbines on concrete foundations and shall cover the  
4 ground within a minimum 10-foot radius with non-flammable material. The certificate  
5 holder shall maintain the non-flammable pad area covering throughout operation of the  
6 facility.

7 (49) During construction and operation of the facility, the certificate holder shall implement a  
8 plan to control the introduction and spread of noxious weeds. The certificate holder shall  
9 develop the weed control plan in consultation with the Sherman County Weed Control  
10 District and the Department.

11 (50) During construction of the facility, to reduce the visual impact of the facility, the certificate  
12 holder shall:

13 (a) Paint turbine towers, nacelles, rotors, meteorological towers, and cabinets containing  
14 pad-mounted equipment with a low-reflectivity, neutral gray, white, off-white or earth tone  
15 finish to reduce contrast with the surrounding background.

16 (b) Apply a low-reflectivity finish to the exterior of the O&M building and substation  
17 equipment to control their visual integration into the surrounding background.

18 (c) With the exception of the turbine manufacturer's logo that may appear on turbine  
19 nacelles, not allow any advertising to be used on any part of the facility or on any signs  
20 posted at the facility. In addition, if the Council amends OAR 345-024-0015 by eliminating  
21 the restriction in Section (1)(a) of that rule and not otherwise prohibiting the use of a logo,  
22 the certificate holder may place its logo on the nacelles of not more than 20 percent of the  
23 wind turbines.

24 (d) Use only those signs required by law or for facility safety or security, except that the  
25 certificate holder may erect a sign near the O&M facility or substation to identify the wind  
26 energy facility.

27 [Amendment #2]

28 (51) The certificate holder shall design and construct the O&M building to be generally  
29 consistent with the character of similar buildings used by commercial farmers or ranchers in  
30 the area and shall paint the building in a neutral color to blend with the surrounding  
31 background.

32 (52) The certificate holder shall not use exterior nighttime lighting except:

33 (a) The minimum turbine tower lighting required by the Federal Aviation Administration.

34 (b) Security lighting at the O&M building and substation, provided that such lighting is  
35 shielded or directed downward to reduce glare.

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

### **J. SITING STANDARDS FOR TRANSMISSION LINES, OAR 345-024-0090**

37 (53) The certificate holder shall design the transmission lines so that alternating current electric  
38 fields shall not exceed 9 kV per meter at one meter above the ground surface in areas  
39 accessible to the public.

1 (54) The certificate holder shall design the transmission lines so that induced voltages resulting  
2 from the transmission lines are as low as reasonably achievable.

**K. THREATENED AND ENDANGERED SPECIES, OAR 345-022-0070**

3 (55) Before beginning construction of the facility, the certificate holder shall deliver to the  
4 Department surveys for threatened and endangered plant and wildlife species in newly  
5 affected areas as identified in the ASC Supplement.

6 (56) If construction of the facility begins after 2006, the certificate holder shall review the  
7 ONHIC and USFWS databases and consult with an expert designated by ODFW on an  
8 annual basis before beginning construction to determine whether nesting bald eagles or  
9 peregrine falcons have been documented to occur within two miles of the facility. The  
10 certificate holder shall report the results of the database review and consultation to the  
11 Department and to ODFW and, if there have been new documentations of nesting bald  
12 eagles or peregrine falcons within two miles of the facility, the certificate holder shall  
13 implement appropriate measures to protect the species from adverse impact, as approved by  
14 the Department and ODFW.

15 (57) The certificate holder shall implement measures to mitigate impacts to sensitive wildlife  
16 habitat during construction including, but not limited to, the following:  
17 (a) Preparing maps to show sensitive areas, such as nesting or denning areas for sensitive  
18 wildlife species, that are off limits to construction personnel.  
19 (b) Ensuring that a qualified person instructs construction personnel to be aware of  
20 wildlife in the area and to take precautions to avoid injuring or destroying wildlife or  
21 significant wildlife habitat.  
22 (c) Avoiding unnecessary road construction, temporary disturbance and vehicle use.

**L. FISH AND WILDLIFE HABITAT, OAR 345-022-0060**

23 (58) The certificate holder shall design and construct all aboveground transmission line support  
24 structures following the practices suggested by the Avian Powerline Interaction Committee  
25 (APLIC 1996, referenced in the site certificate application, p. P-33) and shall install anti-  
26 perching devices on transmission pole tops and cross arms where the poles are located  
27 within one-half mile of any wind turbine.

28 (59) The certificate holder may construct turbines and other facility components within the 500-  
29 foot corridors shown on Figures P-1 through P-10 of the site certificate application and  
30 March 2006 supplement, subject to the following requirements addressing potential habitat  
31 impact:

32 (a) The certificate holder shall not construct any facility components within areas of  
33 Category 1 or Category 2 habitat and shall avoid temporary disturbance of Category 1 or  
34 Category 2 habitat.

35 (b) The certificate holder shall design and construct facility components that are the  
36 minimum size needed for safe operation of the energy facility.

37 (c) To the extent possible, the certificate holder shall construct facility components in the  
38 locations shown on Figure C-2 of the March 2006 site certificate application supplement.

1 (60) During construction, the certificate holder shall protect the area within a 1300-foot buffer  
2 around any active nests of the following species during the sensitive period, as provided in  
3 this condition:

Species	Sensitive Period	Early Release Date
Swainson's hawk	April 1 to August 15	May 31
Golden eagle	February 1 to August 31	May 31
Ferruginous hawk	March 15 to August 15	May 31
Burrowing owl	April 1 to August 15	July 15

4 The 1300-foot buffer may be reduced, with Department approval, if there is an adequate  
5 physical barrier between the nest site and the construction impacts such that a 1300-foot  
6 buffer proves to be excessive.

7 During the year in which construction of any phase occurs, the certificate holder shall use a  
8 protocol approved by the Oregon Department of Fish and Wildlife (ODFW) to determine  
9 whether there are any active nests of these species within a half-mile of any areas that  
10 would be disturbed during construction. If a nest is occupied by any of these species after  
11 the beginning of the sensitive period, the certificate holder shall not engage in high-impact  
12 construction activities (activities that involve blasting, grading or other major ground  
13 disturbance) or allow high levels of construction traffic within 1300 feet of the nest site, or  
14 such lesser distance as may be approved by the Department in the event there is an adequate  
15 physical barrier between the nest site and the construction impacts.

16 In addition, the certificate holder shall flag the boundaries of the 1300-foot buffer area, or  
17 such lesser distance as may be approved by the Department in the event there is an adequate  
18 physical barrier between the nest site and the construction impacts, and shall instruct  
19 construction personnel to avoid any unnecessary activity within the buffer area. The  
20 certificate holder shall direct a qualified biologist, approved by the Department, to observe  
21 the active nest sites during the sensitive period for signs of disturbance and to notify the  
22 Department of any non-compliance with this condition. The Department has approved the  
23 qualifications of the four biologists identified in the Final Order on Amendment #2. The  
24 certificate holder may select other qualified biologists to observe the nest sites, subject to  
25 Department approval. If the biologist observes nest site abandonment or other adverse  
26 impact to nesting activity, the certificate holder shall implement appropriate mitigation, in  
27 consultation with ODFW and subject to the approval of the Department, unless the adverse  
28 impact is clearly shown to have a cause other than construction activity. The certificate  
29 holder may begin or resume high impact construction activities before the ending day of the  
30 sensitive period if any known nest site is not occupied by the early release date. If a nest  
31 site is occupied, then the certificate holder may begin or resume high-impact construction  
32 before the ending day of the sensitive period with the approval of ODFW, after the young  
33 are fledged. The certificate holder shall use a protocol approved by ODFW to determine  
34 when the young are fledged (the young are independent of the core nest site). [Amendment #2]

35 (61) The certificate holder shall conduct wildlife monitoring and mitigation in accordance with  
36 the Wildlife Monitoring and Mitigation Plan that is incorporated in the Final Order on  
37 Amendment #2 as Attachment A and as may be amended from time to time. [Amendment #2]

38 (62) The certificate holder shall restore areas that are temporarily disturbed during construction  
39 in accordance with the methods, monitoring procedures and success criteria set forth in the

1 Revegetation Plan that is incorporated in the Final Order on Amendment #2 as Attachment  
2 B and as may be amended from time to time. [Amendment #2]

3 (63) Before beginning construction of the facility, the certificate holder shall acquire the legal  
4 right to create, maintain and protect a habitat mitigation area for the life of the facility by  
5 means of an outright purchase, conservation easement or similar conveyance and shall  
6 provide a copy of the documentation to the Department. Within the habitat mitigation area,  
7 the certificate holder shall improve the habitat quality in accordance with the Habitat  
8 Mitigation Plan that is incorporated in the Final Order on Amendment #2 as Attachment C  
9 and as may be amended from time to time. [Amendment #2]

10 (64) For the life of the project, the certificate holder shall provide to the appropriate staff of the  
11 Confederated Tribes of the Warm Springs Reservation of Oregon the same annual  
12 mitigation and monitoring reports it submits to the Department.

13 (65) For the life of the project, the certificate holder shall consult annually with the appropriate  
14 staff of the Confederated Tribes of the Warm Springs Reservation of Oregon to discuss  
15 noxious weed or other issues that may arise from the close proximity of the facility site and  
16 tribal lands. The certificate holder shall provide a summary of that consultation in the  
17 annual report it provides to the Department.

#### **M. STRUCTURAL STANDARD, OAR 345-022-0020**

18 (66) Before beginning construction of the facility, the certificate holder shall conduct a site-  
19 specific geotechnical investigation and shall report its findings to the Oregon Department of  
20 Geology & Mineral Industries (DOGAMI). The certificate holder shall conduct the  
21 geotechnical investigation after consultation with DOGAMI and in accordance with the  
22 Oregon Board of Geologists Examiners guidelines entitled: Guidelines for Engineering  
23 Geology Reports and Site-Specific Seismic Hazard Report.

24 (67) The certificate holder shall design and construct the facility in accordance with  
25 requirements set forth by the State of Oregon's Building Code Division and any other  
26 applicable codes and design procedures.

27 (68) The certificate holder shall design, engineer and construct the facility to avoid dangers to  
28 human safety presented by non-seismic hazards. As used in this condition, "non-seismic  
29 hazards" include settlement, landslides, flooding and erosion.

#### **N. HISTORIC, CULTURAL AND ARCHAEOLOGICAL RESOURCES, OAR 345-022-0090**

30 (69) Before beginning construction of any phase of the facility, the certificate holder shall  
31 provide to the Department a map showing the final design locations of all components of  
32 that phase of the facility and areas that would be temporarily disturbed during construction  
33 and also showing the areas surveyed by CH2M Hill and Archaeological Investigations  
34 Northwest, Inc. (AINW) in preparing the Cultural Resources Surveys for Biglow Canyon  
35 Wind Farm included in the site certificate application as Attachment S-1 and in Request for  
36 Amendment #2 as Attachment 15. The certificate holder shall hire qualified personnel to  
37 conduct field investigation of all areas of permanent or temporary disturbance that CH2M  
38 Hill and AINW did not previously survey and shall provide to the Department a written  
39 report of the field investigation. If any significant historic, cultural or archaeological  
40 resources are found during the field investigation, the certificate holder shall ensure that

1 construction and operation of the facility will have no impact on the resources. The  
2 certificate holder shall instruct all construction personnel to avoid areas where the resources  
3 were found and shall implement other appropriate measures to protect the resources.  
4 [Amendment #2]

- 5 (70) The certificate holder shall ensure that a qualified person instructs construction personnel in  
6 the identification of cultural resources.
- 7 (71) The certificate holder shall ensure that a qualified archaeologist is present on site during  
8 any ground-disturbing activities, including grading and graveling; or, the certificate holder  
9 shall implement an alternate monitoring procedure, including a testing strategy, as agreed to  
10 in consultation with the Department, SHPO, and the tribes.
- 11 (72) The certificate holder shall ensure that construction personnel cease all ground-disturbing  
12 activities in the immediate area if any archaeological or cultural resources are found during  
13 construction of the facility until a qualified archaeologist can evaluate the significance of  
14 the find. The certificate holder shall notify the Department and the State Historic  
15 Preservation Office (SHPO) of the find. If the archaeologist determines that the resource is  
16 significant, the certificate holder shall make recommendations to the Council for mitigation,  
17 including avoidance or data recovery, in consultation with the Department, SHPO, and  
18 other appropriate parties. The certificate holder shall not restart work in the affected area  
19 until the certificate holder has demonstrated to the Department that it has complied with the  
20 archaeological permit requirements administered by SHPO.
- 21 (73) The certificate holder shall ensure that construction personnel proceed carefully in the  
22 vicinity of the mapped alignment of the Oregon Trail. If any intact physical evidence of the  
23 trail is discovered, the certificate holder shall avoid any disturbance to the intact segments,  
24 by redesign, re-engineering or restricting the area of construction activity. The certificate  
25 holder shall promptly notify the Department and SHPO of the discovery. The certificate  
26 holder shall consult with the Department and with SHPO to determine appropriate  
27 mitigation measures.

#### **O. PUBLIC SERVICES, OAR 345-022-0110**

- 28 (74) During construction of the facility, the certificate holder and its contractors shall obtain all  
29 water required for construction activities from off-site sources previously permitted for  
30 such uses.
- 31 (75) Before beginning operation of the facility, the certificate holder shall have in operation a  
32 well suitable for delivering water, not exceeding 5,000 gallons per day, for domestic use at  
33 the facility's O&M building and, provided the rate of extraction would not exceed 5,000  
34 gallons per day, blade-washing activities. The certificate holder shall not change the source  
35 of water for the facility's domestic use without prior Council approval.
- 36 (76) During operation of the facility, the certificate holder and its contractors shall obtain all  
37 water required for blade-washing activities from off-site sources previously permitted for  
38 such uses or from the on-site well, provided such use of well water would not cause the rate  
39 of extraction to exceed 5,000 gallons in any one-day period.
- 40 (77) Before beginning construction of the facility, the certificate holder shall develop a system  
41 for monitoring state highways and local roads that would serve as transporter routes for

1 delivering equipment to the facility site for degradation, *e.g.*, major potholes, so that safe  
2 travel paths may be maintained. The monitoring system shall include site inspection and  
3 photographic cataloguing of existing road conditions so that pre-construction conditions can  
4 be compared with conditions after construction has been completed. The certificate holder  
5 shall coordinate monitoring methods and preferred mitigation efforts with Sherman County  
6 Public Works and the Oregon Department of Transportation. [Amendment #1]

7 (78) After completing construction of the facility, the certificate holder shall restore state  
8 highways and county roads affected by facility construction activities to at least their pre-  
9 construction conditions, to the satisfaction of Sherman County Public Works and the  
10 Oregon Department of Transportation.

11 (79) During construction of the facility, the certificate holder shall implement the following  
12 measures to reduce traffic delays on county roads serving as transporter routes for delivery  
13 of equipment to the facility site:

14 (a) Provide notice to adjacent landowners when construction takes place to help minimize  
15 access disruptions;

16 (b) Provide proper road signage and warnings of "Equipment on Road," "Truck Access,"  
17 or "Road Crossings;"

18 (c) Implement traffic diversion equipment, such as advance signage and pilot cars,  
19 whenever possible when slow or oversized loads are being hauled;

20 (d) Encourage carpooling for the construction workforce to reduce traffic volume;

21 (e) Employ flaggers, as necessary, to direct traffic when large equipment is entering or  
22 exiting public roads to minimize risk of accidents; and

23 (f) Maintain at least one travel lane at all times so that roadways will not be closed to  
24 traffic as a result of construction vehicles entering or exiting public roads.

#### **P. WASTE MINIMIZATION, OAR 345-022-0120**

25 (80) The certificate holder shall use hazardous materials in a manner that protects public health,  
26 safety and the environment and shall comply with applicable local, state and federal  
27 environmental laws and regulations.

28 (81) If a spill or release of hazardous materials occurs during construction or operation of the  
29 facility, the certificate holder shall notify the Department within 72 hours and shall clean up  
30 the spill or release and dispose of any contaminated soil or other materials according to  
31 applicable regulations. The certificate holder shall ensure that spill kits containing items  
32 such as absorbent pads are located on equipment and storage facilities to respond to  
33 accidental spills and shall instruct employees handling hazardous materials in the proper  
34 handling, storage and cleanup of these materials.

35 (82) During construction of the facility, the certificate holder shall provide portable toilets for  
36 on-site sewage handling and shall ensure that the portable toilets are pumped and cleaned  
37 regularly by a licensed contractor that is qualified to pump and clean portable toilet  
38 facilities.

39 (83) During operation of the facility, the certificate holder shall discharge sanitary wastewater  
40 generated at the O&M building to a licensed on-site septic system in compliance with  
41 county permit requirements. The certificate holder shall design the septic system with a  
42 capacity that is less than 2,500 gallons per day.

- 1 (84) During construction of the facility, the certificate holder shall implement a waste  
2 management plan that includes but is not limited to the following measures:  
3 (a) Training employees to minimize and recycle solid waste;  
4 (b) Minimizing the generation of wastes from construction through detailed estimating of  
5 materials needs and through efficient construction practices;  
6 (c) Recycling steel and other metal scrap;  
7 (d) Recycling wood waste;  
8 (e) Recycling packaging wastes, such as paper and cardboard;  
9 (f) Collecting non-recyclable waste for transport to a landfill by a licensed waste hauler;  
10 and  
11 (g) Segregating all hazardous wastes, such as used oil, oily rags and oil-absorbent  
12 materials, mercury-containing lights and lead-acid and nickel-cadmium batteries for  
13 disposal by a licensed firm specializing in the proper recycling or disposal of hazardous  
14 wastes.
- 15 (85) The certificate holder may dispose of waste concrete on site with the permission of the  
16 landowner and in accordance with OAR 340-093-0080 and other applicable regulations.  
17 The certificate holder shall dispose of waste concrete on site by placing the material in an  
18 excavated hole, covering the concrete with at least 3 feet of topsoil, and grading the area to  
19 match existing contours. If the waste concrete is not disposed of on site, the certificate  
20 holder shall arrange for proper disposal in a licensed landfill.
- 21 (86) During construction of the facility, the certificate holder shall ensure that the wash down of  
22 concrete trucks occurs only at a contractor-owned batch plant or at tower foundation  
23 locations. If such wash down occurs at tower foundation locations, then the certificate  
24 holder shall ensure that wash down wastewater does not run off the construction site into  
25 otherwise undisturbed areas and that the wastewater is disposed of on backfill piles and  
26 buried underground with the backfill over the tower foundation.
- 27 (87) During operation of the facility, the certificate holder shall implement a waste management  
28 plan that includes but is not limited to the following measures:  
29 (a) Training employees to minimize and recycle solid waste;  
30 (b) Recycling paper products, metals, glass and plastics;  
31 (c) Collecting non-recyclable waste for transport to a landfill by a licensed waste hauler;  
32 and  
33 (d) Segregating all hazardous wastes, such as used oil, oily rags and oil-absorbent  
34 materials, mercury-containing lights and lead-acid and nickel-cadmium batteries for  
35 disposal by a licensed firm specializing in the proper recycling or disposal of hazardous  
36 wastes.
- 37 (88) During operation of the facility, the certificate holder may engage in blade-washing  
38 activities but shall ensure that these activities do not cause runoff of washwater from the  
39 site or discharges to surface waters, storm sewers or dry wells. The certificate holder shall  
40 not use acids, bases or metal brighteners with the wash water. The certificate may use  
41 biodegradable, phosphate-free cleaners sparingly. [Amendment #2]

#### 42 Q. NOISE CONTROL REGULATIONS, OAR 340-035-0035

- (89) To reduce noise impacts at nearby residential areas, the certificate holder shall:

- 1 (a) Confine the noisiest operation of heavy construction equipment to the daylight hours;  
2 (b) Require contractors to install and maintain exhaust mufflers on all combustion  
3 engine-powered equipment; and  
4 (c) Establish a complaint response system at the construction manager's office to address  
5 noise complaints.

6 (90) If the GE 1.5-MW turbines (for which the certificate holder states the maximum sound  
7 power level warranted by the manufacturer is 104 dBA) or the GE 3.0-MW turbines  
8 (provided the certificate holder is able to demonstrate, by means of the manufacturer's  
9 warranty or other means acceptable to the Department, that the maximum sound power  
10 level of the GE 3.0-MW turbine is 106 dBA) will be used at the facility, before beginning  
11 construction, the certificate holder shall present information demonstrating to the  
12 satisfaction of the Department that the following requirements have been met at the 24  
13 identified noise sensitive properties. The identified noise sensitive properties are the  
14 properties listed in Table 12 of the Final Order on the Application and further identified in  
15 the Final Order on Amendment #2, except for property R14:

16 (a) For any identified noise sensitive property where the previously-predicted maximum  
17 hourly  $L_{50}$  noise level caused by the facility would equal or exceed 50 dBA, the certificate  
18 holder shall identify the final design locations of all turbines to be built and perform a noise  
19 analysis demonstrating, in accordance with OAR 340-035-0035(1)(b)(B)(iii)(IV), that the  
20 total hourly  $L_{50}$  noise level generated by the facility would not exceed 50 dBA at the  
21 appropriate measurement point. The certificate holder shall perform the noise analysis using  
22 the noise model, CADNA/A by DataKustik GmbH of Munich, Germany, and shall assume  
23 the following input parameters:

- 24 • The maximum sound power level of turbines and substation transformers based on  
25 the manufacturers' warranty or confirmed by other means acceptable to the  
26 Department
- 27 • The exact locations of the proposed turbines
- 28 • The environmental factors included in the original noise analysis, *i.e.*, the  
29 temperature, relative humidity, barrier effects and ground effects used in the original  
30 analysis. If the certificate holder has cause to believe the environmental factors  
31 included in the original noise analysis are no longer valid for a particular receiver, the  
32 certificate holder shall perform the noise analysis for that receiver using both the  
33 environmental factors included in the original noise analysis and the environmental  
34 factors the certificate holder now believes to be applicable to that receiver.

35 (b) Where the previously-predicted hourly  $L_{50}$  noise levels caused by the facility would  
36 exceed 36 dBA but not exceed 50 dBA at any identified noise sensitive property, the  
37 certificate holder has obtained a legally effective easement or real covenant pursuant to  
38 which the owner of the property authorizes the certificate holder's operation of the facility  
39 to increase ambient statistical noise levels  $L_{10}$  and  $L_{50}$  by more than 10 dBA at the  
40 appropriate measurement point. A legally effective easement or real covenant shall: (i)  
41 include a legal description of the burdened property (the noise sensitive property); (ii) be  
42 recorded in the real property records of the county; (iii) expressly benefit the certificate  
43 holder; (iv) expressly run with the land and bind all future owners, lessees or holders of any  
44 interest in the burdened property; and (v) not be subject to revocation without the certificate  
45 holder's written approval.

1 (c) If, for any identified noise sensitive property where the previously-predicted hourly  
2 L<sub>50</sub> noise levels caused by the facility would exceed 36 dBA but not exceed 50 dBA, the  
3 certificate holder has not obtained a legally effective easement or real covenant as described  
4 in (b) above, the certificate holder shall identify the final design locations of all turbines to  
5 be built and perform a noise analysis demonstrating, in accordance with OAR 340-035-  
6 0035(1)(b)(B)(iii)(IV), that the total noise generated by the facility (including the noise  
7 from turbines and substation transformers) would meet the ambient noise degradation test at  
8 the appropriate measurement point on those noise sensitive properties. The certificate  
9 holder shall perform the noise analysis using the noise model, CADNA/A by DataKustik  
10 GmbH of Munich, Germany, and shall assume the following input parameters:

- 11 • The maximum sound power level of turbines and substation transformers based on  
12 the manufacturers' warranty or confirmed by other means acceptable to the  
13 Department
- 14 • The exact locations of the proposed turbines
- 15 • The environmental factors included in the original noise analysis, *i.e.*, the  
16 temperature, relative humidity, barrier effects and ground effects used in the original  
17 analysis. If the certificate holder has cause to believe the environmental factors  
18 included in the original noise analysis are no longer valid for a particular receiver, the  
19 certificate holder shall perform the noise analysis for that receiver using both the  
20 environmental factors included in the original noise analysis and the environmental  
21 factors the certificate holder now believes to be applicable to that receiver.

22 [Amendment #2]

23 (91) Before beginning construction using turbines other than GE 1.5-MW or GE 3.0-MW  
24 turbines, the certificate holder shall:

25 (a) Identify the final design locations of all turbines to be built, perform a noise analysis  
26 for all turbines and substation transformers, and generate a new table listing each noise  
27 sensitive property, as defined in OAR 340-035-0015(38), and the predicted maximum  
28 hourly L<sub>50</sub> noise level at each noise sensitive property. The certificate holder shall perform  
29 the noise analysis using the noise model, CADNA/A by DataKustik GmbH of Munich,  
30 Germany, and shall assume the following input parameters:

- 31 • The maximum sound power level of turbines and substation transformers based on  
32 the manufacturers' warranty or confirmed by other means acceptable to the  
33 Department
- 34 • The exact locations of the proposed turbines
- 35 • The environmental factors included in the original noise analysis, *i.e.*, the  
36 temperature, relative humidity, barrier effects and ground effects used in the original  
37 analysis. If the certificate holder has cause to believe the environmental factors  
38 included in the original noise analysis are no longer valid for a particular receiver, the  
39 certificate holder shall perform the noise analysis for that receiver using both the  
40 environmental factors included in the original noise analysis and the environmental  
41 factors the certificate holder now believes to be applicable to that receiver.

42 (b) Demonstrate to the satisfaction of the Department that the requirements of paragraphs  
43 (a), (b) and (c) of Conditions (90) have been met for each noise sensitive property listed on  
44 the new table generated under paragraph (a) of this condition, except for any new  
45 development of noise sensitive property that occurs after the effective date of the Second  
46 Amended Site Certificate.

1 [Amendment #2]

**R. REMOVAL-FILL LAW**

2 [No conditions]

**S. GROUND WATER ACT**

3 [No conditions]

**T. PUBLIC HEALTH AND SAFETY**

4 (92) During operation of the facility, the certificate holder shall maintain built-in fire prevention  
5 measures in each turbine that would shut down the turbine automatically before mechanical  
6 problems create excess heat or sparks.

7 (93) During construction and operation of the facility, the certificate holder shall develop and  
8 implement fire management plans in consultation with local fire control authorities to  
9 minimize the risk of fire and to respond appropriately to any fires that occur on the facility  
10 site. In developing the fire management plans, the certificate holder should take into  
11 account the dry nature of the region and should address risks on a seasonal basis.

12 (94) During construction and operation of the facility, the certificate holder shall ensure that  
13 each on-site company vehicle contains a fire extinguisher, water spray can, shovel,  
14 emergency response procedures book, and two-way radio for immediate communication  
15 with the O&M facility.

16 (95) During construction of the facility, the certificate holder shall clear vegetation from a  
17 laydown area adjacent to each wind turbine where welding, cutting, grinding, or other  
18 flame- or spark-producing operations are likely to occur.

19 (96) Upon beginning operation of the facility, the certificate holder shall provide to all local fire  
20 departments maps of the facility site. During operation of the facility, the certificate holder  
21 shall provide to all local fire departments the names and telephone numbers of facility  
22 personnel available to respond on a 24-hour basis in case of an emergency on the facility  
23 site.

24 (97) During operation of the facility, the certificate holder shall ensure that all on-site employees  
25 receive annual fire prevention and response training by qualified instructors or members of  
26 the local fire department and that all employees are instructed to keep vehicles on roads and  
27 off dry grassland, except when off-road operation is required for emergency purposes.

28 (98) During operation of the facility, the certificate holder shall ensure that water-carrying  
29 trailers ("water buffaloes") are maintained at strategic locations around the facility site and  
30 that a water buffalo is always present at a job site where there is substantial risk of fire.  
31 Each water buffalo shall be equipped with one-inch hoses, have a capacity of 500 gallons of  
32 water, and be equipped with a 5-horsepower pump with a pumping rate of 60 gallons per  
33 minute. Each water buffalo shall be capable of being towed by on-site service vehicles or  
34 pickup trucks.

35 (99) The certificate holder shall take reasonable steps to reduce or manage exposure to  
36 electromagnetic fields (EMF), consistent with Council findings presented in the "Report of  
37 EMF Committee to the Energy Facility Siting Council," March 30, 1993, and subsequent

1 findings. Effective on the date of this site certificate, the certificate holder shall provide  
2 information to the public, upon request, about EMF levels associated with the energy  
3 facility and related transmission lines.

- 4 (100) At least 30 days before beginning preparation of detailed design and specifications for the  
5 electrical transmission lines, the certificate holder shall consult with the Oregon Public  
6 Utility Commission staff to ensure that its designs and specifications are consistent with  
7 applicable codes and standards.

## V. CONDITIONS REQUIRED BY COUNCIL RULES

8 This section lists conditions specifically required by OAR 345-027-0020 (Mandatory  
9 Conditions in Site Certificates), OAR 345-027-0028 (Monitoring Conditions), and OAR Chapter  
10 345, Division 26 (Construction and Operation Rules for Facilities). All references to the Office  
11 of Energy or Office shall be construed to refer to the Department of Energy. These conditions  
12 should be read together with the specific facility conditions included in Section IV to ensure  
13 compliance with the siting standards of OAR Chapter 345, Divisions 22 and 24, and to protect  
14 the public health and safety. The certificate holder shall comply with all site certificate  
15 conditions.

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 (101) 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 (102) OAR 345-027-0020(2): Except as provided in OAR 345-027-0023(6), before beginning  
23 construction, the certificate holder shall submit to the Office of Energy a legal description  
24 of the site.

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

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

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

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

- 32 (104) OAR 345-027-0020(4): The certificate holder shall begin and complete construction of  
33 the facility by the dates specified in the site certificate.

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

1 (a) The certificate holder has construction rights on that part of the site; and

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

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

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

17 (108) OAR 345-027-0020(8): Before beginning construction of the facility, the certificate  
18 holder shall submit to the State of Oregon, through the Council, a bond or letter of credit,  
19 satisfactory to the Council, in an amount specified in the site certificate to restore the site to  
20 a useful, non-hazardous condition. The certificate holder shall maintain a bond or letter of  
21 credit in effect at all times until the facility has been retired. The Council may specify  
22 different amounts for the bond or letter of credit during construction and during operation  
23 of the facility.

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

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

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

39 (112) OAR 345-027-0020(12): The certificate holder shall design, engineer and construct the  
40 facility to avoid dangers to human safety presented by seismic hazards affecting the site that  
41 are expected to result from all maximum probable seismic events. As used in this rule  
42 "seismic hazard" includes ground shaking, landslide, liquefaction, lateral spreading,  
43 tsunami inundation, fault displacement and subsidence.

1 (113) OAR 345-027-0020(13): The certificate holder shall notify the Office, the State Building  
2 Codes Division and the Department of Geology and Mineral Industries promptly if site  
3 investigations or trenching reveal that conditions in the foundation rocks differ significantly  
4 from those described in the application for a site certificate. After the Office receives the  
5 notice, the Council may require the certificate holder to consult with the Department of  
6 Geology and Mineral Industries and the Building Codes Division and to propose mitigation  
7 actions.

8 (114) OAR 345-027-0020(14): The certificate holder shall notify the Office, the State Building  
9 Codes Division and the Department of Geology and Mineral Industries promptly if shear  
10 zones, artesian aquifers, deformations or clastic dikes are found at or in the vicinity of the  
11 site.

12 (115) OAR 345-027-0020(15): Before any transfer of ownership of the facility or ownership of  
13 the site certificate holder, the certificate holder shall inform the Office of the proposed new  
14 owners. The requirements of OAR 345-027-0100 apply to any transfer of ownership that  
15 requires a transfer of the site certificate.

16 (116) OAR 345-027-0020(16): If the Council finds that the certificate holder has permanently  
17 ceased construction or operation of the facility without retiring the facility according to a  
18 final retirement plan approved by the Council, as described in OAR 345-027-0110, the  
19 Council shall notify the certificate holder and request that the certificate holder submit a  
20 proposed final retirement plan to the Office within a reasonable time not to exceed 90 days.  
21 If the certificate holder does not submit a proposed final retirement plan by the specified  
22 date, the Council may direct the Office to prepare a proposed a final retirement plan for the  
23 Council's approval. Upon the Council's approval of the final retirement plan, the Council  
24 may draw on the bond or letter of credit described in section (8) to restore the site to a  
25 useful, non-hazardous condition according to the final retirement plan, in addition to any  
26 penalties the Council may impose under OAR Chapter 345, Division 29. If the amount of  
27 the bond or letter of credit is insufficient to pay the actual cost of retirement, the certificate  
28 holder shall pay any additional cost necessary to restore the site to a useful, non-hazardous  
29 condition. After completion of site restoration, the Council shall issue an order to terminate  
30 the site certificate if the Council finds that the facility has been retired according to the  
31 approved final retirement plan.

32 (117) OAR 345-027-0023(4): If the energy facility or related or supporting facility is a  
33 transmission line, the certificate holder shall restore the reception of radio and television at  
34 residences and commercial establishments in the primary reception area to the level present  
35 prior to operations of the transmission line, at no cost to residents experiencing interference  
36 resulting from the transmission line.

37 (118) OAR 345-027-0023(5): If the facility includes any high voltage transmission line under  
38 Council 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 (119) OAR 345-027-0023(6): If the proposed energy facility is a pipeline or a transmission line  
4 or 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. Before beginning operation of the facility, the certificate  
10 holder shall submit to the Office a legal description of the permanent right-of-way where  
11 the applicant has built the pipeline or transmission line within an approved corridor. The  
12 site of the pipeline or transmission line subject to the site certificate is the area within the  
13 permanent right-of-way.

14 (120) OAR 345-027-0028: The following general monitoring conditions apply:

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

21 (b) The certificate holder shall implement the approved monitoring programs described in  
22 section (a) and monitoring programs required by permitting agencies and local  
23 governments.

24 (c) For each monitoring program described in sections (a) and (b), the certificate holder  
25 shall have quality assurance measures approved by the Office before beginning  
26 construction or, as appropriate, before beginning commercial operation.

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

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

43 (122) OAR 345-026-0080: The certificate holder shall report according to the following  
44 requirements:

1 (a) General reporting obligation for non-nuclear facilities under construction or  
2 operating:

3 (i) Within six months after beginning construction, and every six months thereafter  
4 during construction of the energy facility and related or supporting facilities, the certificate  
5 holder shall submit a semiannual construction progress report to the Council. In each  
6 construction progress report, the certificate holder shall describe any significant changes to  
7 major milestones for construction. The certificate holder shall include such information  
8 related to construction as specified in the site certificate. When the reporting date coincides,  
9 the certificate holder may include the construction progress report within the annual report  
10 described in this rule;

11 (ii) The certificate holder shall, within 120 days after the end of each calendar year  
12 after beginning construction, submit an annual report to the Council addressing the subjects  
13 listed in this rule. The Council secretary and the certificate holder may, by mutual  
14 agreement, change the reporting date.

15 (iii) To the extent that information required by this rule is contained in reports the  
16 certificate holder submits to other state, federal or local agencies, the certificate holder may  
17 submit excerpts from such other reports to satisfy this rule. The Council reserves the right  
18 to request full copies of such excerpted reports.

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

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

26 (ii) Reliability and Efficiency of Power Production: For electric power plants,

27 (A) The plant availability and capacity factors for the reporting year. If equipment  
28 failures or plant breakdowns had a significant impact on those factors, the certificate holder  
29 shall describe them and its plans to minimize or eliminate their recurrence;

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

34 (C) The facility's annual hours of operation by fuel type and, every five years  
35 after beginning operation, a summary of the annual hours of operation by fuel type as  
36 described in OAR 345-024-0590(5);

37 (iii) Status of Surety Information: Documentation demonstrating that bonds or letters  
38 of credit as described in the site certificate are in full force and effect and will remain in full  
39 force and effect for the term of the next reporting period;

40 (iv) Industry Trends: A discussion of any significant industry trends that may affect  
41 the operations of the facility;

42 (v) Monitoring Report: A list and description of all significant monitoring and  
43 mitigation activities performed during the previous year in accordance with site certificate  
44 terms and conditions, a summary of the results of those activities, and a discussion of any  
45 significant changes to any monitoring or mitigation program, including the reason for any  
46 such changes;

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

5 (vii) Facility Modification Report: A summary of changes to the facility that the  
6 certificate holder has determined do not require a site certificate amendment in accordance  
7 with OAR 345-027-0050; and

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

11 (123) OAR 345-026-0100: The certificate holder shall promptly notify the Office of Energy of  
12 any changes in major milestones for construction, decommissioning, operation or  
13 retirement schedules. Major milestones are those identified by the certificate holder in its  
14 construction, retirement or decommissioning plan.

15 (124) OAR 345-026-0105: The certificate holder and the Office of Energy shall exchange  
16 copies of all correspondence or summaries of correspondence related to compliance with  
17 statutes, rules and local ordinances on which the Council determined compliance, except for  
18 material withheld from public disclosure under state or federal law or under Council rules.  
19 The certificate holder may submit abstracts of reports in place of full reports; however, the  
20 certificate holder shall provide full copies of abstracted reports and any summarized  
21 correspondence at the request of the Office of Energy.

22 (125) OAR 345-026-0170: The certificate holder shall notify the Office of Energy within 72  
23 hours of any occurrence involving the facility if:

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

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

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

## VI. CONDITIONS RELATING TO AMENDMENT #2

29 (126) Prior to any disturbance in the areas of the site added in the Final Order for Amendment  
30 #2, the certificate holder shall deliver to the Department the results of a spring survey of  
31 Crossing G, conducted during the appropriate bloom time for Northern wormwood and  
32 Henderson's ricegrass. If Northern wormwood or any other protected rare plant species are  
33 observed during the spring survey, the certificate holder shall ensure that construction and  
34 operation of the facility will have no impact on the rare plant habitat. [Amendment #2]

35 (127) The certificate holder shall avoid any disturbance, including the placement of poles for  
36 the collector line, within 25 feet of the stream channel in the area identified as Crossing G  
37 in the Request for Amendment #2 and within a wetland area identified as "POWHX" on  
38 Figure J-1 of the site certificate application. [Amendment #2]

## VII. SUCCESSORS AND ASSIGNS

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

**VIII. 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. In the event of a  
5 conflict between the conditions contained in this site certificate and the Council's final order, the  
6 conditions contained in this site certificate shall control.

**IX. GOVERNING LAW AND FORUM**

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

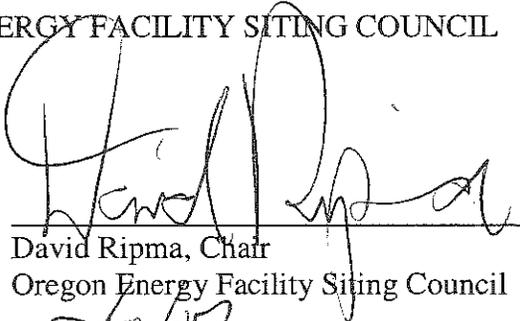
**X. EXECUTION**

9 This site certificate may be executed in counterparts and will become effective upon  
10 signature by the Chair of the Energy Facility Siting Council and the authorized representative of  
11 the certificate holder. [Amendment #1]

12 **IN WITNESS WHEREOF**, this site certificate has been executed by the State of Oregon, acting  
13 by and through its Energy Facility Siting Council, and by Portland General Electric Company.  
14 [Amendment #1]

ENERGY FACILITY SITING COUNCIL

PORTLAND GENERAL ELECTRIC  
COMPANY

By:   
David Ripma, Chair  
Oregon Energy Facility Siting Council

By:  (LN)  
Print: JAMES F. LOBDEW  
VICE PRESIDENT

Date: 5/10/07

Date: 5/25/07