

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

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

November 3, 2006

The Oregon Energy Facility Siting Council

FIRST 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”) and (b) the Council’s Final Order on Amendment #1. [Amendment #1]

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

16 The terms used in this site certificate shall have the same meaning as set forth in ORS
17 469.300 and OAR 345-001-0010, except where otherwise stated or where the context clearly
18 indicates otherwise.

II. SITE CERTIFICATION

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

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

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

34 D. Both the State and the certificate holder shall abide by local ordinances, state law, and the
35 rules of the Council in effect on the date this site certificate is issued. In addition, upon a
36 clear showing of a significant threat to public health, safety or the environment that requires

1 application of later-adopted laws or rules, the Council may require compliance with such
2 later-adopted laws or rules. ORS 469.401(2)

3 E. For a permit, license or other approval addressed in and governed by this site certificate, the
4 certificate holder shall comply with applicable state and federal laws adopted in the future to
5 the extent that such compliance is required under the respective state agency statutes and
6 rules. ORS 469.401(2)

7 F. Subject to the conditions herein, this site certificate binds the State and all counties, cities and
8 political subdivisions in Oregon as to the approval of the site and the construction, operation
9 and retirement of the facility as to matters that are addressed in and governed by this site
10 certificate. ORS 469.401(3)

11 G. Each affected state agency, county, city and political subdivision in Oregon with authority to
12 issue a permit, license or other approval addressed in or governed by this site certificate shall,
13 upon submission of the proper application and payment of the proper fees, but without
14 hearings or other proceedings, issue such permit, license or other approval subject only to
15 conditions set forth in this site certificate. ORS 469.401(3)

16 H. After issuance of this site certificate, each state agency or local government agency that
17 issues a permit, license or other approval for the facility shall continue to exercise
18 enforcement authority over such permit, license or other approval. ORS 469.401(3)

19 I. After issuance of this site certificate, the Council shall have continuing authority over the site
20 and may inspect, or direct the Department to inspect, or request another state agency or local
21 government to inspect, the site at any time in order to ensure that the facility is being
22 operated consistently with the terms and conditions of this site certificate. ORS 469.430

III. DESCRIPTIONS

A. THE FACILITY

23 In the site certificate application, the certificate holder requested the flexibility, within
24 defined 500-foot-wide turbine corridors, to defer the final selection of turbine vendor, turbine
25 size, number of turbines to be installed, and precise turbine layout until after the issuance of a
26 site certificate and prior to commencement of construction. In the site certificate application, the
27 certificate holder defined the range of possible turbine vendors, sizes and numbers. In the site
28 certificate application, the certificate holder also defined two alternative transmission line
29 options, two alternative substation locations, and three alternative O&M facility locations.
30 Subject to specific conditions, this site certificate grants that flexibility.

31
32 1. Major Structures. The Biglow Canyon Wind Farm will consist of up to 225 wind turbines
33 with an aggregate nominal nameplate generating capacity of 337.5 megawatts (MW) of
34 electricity or 150 wind turbines with an aggregate nominal nameplate generating capacity
35 of 450 MW. The average electric generating capacity will be about 112.5 to 150 MW.
36 Turbines will be mounted on tubular steel towers ranging in height from 265 to 280 feet
37 at the hub with an overall height of from 400 to 445 feet including the turbine blades. The
38 turbines will be erected within up to 30 corridors and spaced to optimize the facility's
39 output. The facility will be located on private farmland that the certificate holder has
40 leased from the affected landowners. [Amendment #1]
41

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

3 a. Power Collection System. Each wind turbine will generate power at about 600
4 volts. The transformer sitting at the base of each wind turbine unit will increase
5 the voltage to 34.5 kilovolts (kV). From the transformer, power will be
6 transmitted to a central substation by means of electric cables. Most of the cables
7 will be buried three feet or more below the surface in trenches about 3 feet wide.
8 In areas where collector cables from several turbine strings follow the same
9 alignment, *e.g.*, on approach to the substation, multiple sets of cables may be
10 installed within a single trench. If the facility is fully developed, there will be
11 about 468,000 feet (88.6 miles) of 3-wire collector cables. Generally, these cables
12 will be above, below or adjacent to the fiber optic cables comprising the
13 supervisory control and data acquisition system.

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

23 b. Substations and Interconnection System. Under one of its transmission
24 alternatives, the certificate holder would construct a new substation in the
25 southern section of the facility site. The substation site would be a graveled,
26 fenced area of up to 6 acres with transformers, switching equipment and a parking
27 area. Transformers would be non-polychlorinated biphenyl (PCB) oil-filled types.
28 The transmission line would be about 3 miles long and would interconnect with
29 the Bonneville Power Administration (BPA) system at the existing Klondike
30 Schoolhouse Substation.

31 Under its second transmission alternative, the certificate holder would construct a
32 new substation near the center of the facility site. The substation site would be a
33 graveled, fenced area of up to 6 acres with transformers, switching equipment and
34 a parking area. Transformers would be non-PCB oil-filled types. The transmission
35 line would be about 7 miles long and would interconnect with an electric
36 transformer or switching facility to be installed at BPA's John Day Substation or
37 Switchyard for delivery of electricity to BPA's high-voltage transmission system.

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

41 d. Operations and Maintenance Building. The site of the operations and maintenance
42 building will comprise about 5 acres. The O&M building will occupy about 5,000
43 square feet and will include office and workshop areas, control room, kitchen,
44 bathroom, shower, utility sink, and other typical facilities. Water for the

1 bathroom, shower and kitchen will be obtained from an onsite well constructed by
2 a licensed contractor in accordance with local and state requirements. Water use
3 will not be expected to exceed 1,000 gallons per day. Domestic wastewater
4 generated at the O&M facility will drain into an onsite septic system. A graveled
5 parking area for employees, visitors and equipment will be located adjacent to the
6 O&M facility.

7 The certificate holder proposed three alternative locations for the O&M facility:
8 (1) adjacent to the substation to be located in the southern section of the facility
9 site in the event Biglow is interconnected to the BPA transmission system by
10 means of the Klondike Schoolhouse Substation; (2) adjacent to the substation to
11 be located near the center of the facility site in the event Biglow is interconnected
12 to the BPA transmission system by means of the John Day Substation; or (3) at
13 the site of an existing house located at 97327 Emigrant Lane, Wasco, Oregon.

14 e. Control System. The certificate holder will install a supervisory control and data
15 acquisition (SCADA) system to assist with the remote operation of the wind
16 turbines, to collect data from each wind turbine, and to archive wind and
17 performance data from various sources. The SCADA system will be linked by
18 means of fiber optic cables or other means of communication to a central
19 computer in the O&M facility.

20 f. Access Roads. The certificate holder will construct about 40.5 miles of new roads
21 to provide access to the wind turbine strings, together with turnaround areas at the
22 end of each wind turbine string. The roads will be about 28 feet wide and will be
23 composed of crushed gravel. In addition, the certificate holder will improve about
24 0.7 mile of existing roads by providing an all-weather surface and, in some cases,
25 widening the roads to accommodate construction vehicles.

26 g. Temporary Laydown and Staging Areas. Depending on whether it proceeds with
27 the 150-turbine or 225-turbine configuration, the certificate holder will use a total
28 of 186 or 261 laydown and staging areas to stage construction and store supplies
29 and equipment during construction of the facility. The certificate holder will
30 develop one 18,500 square-foot laydown area at the site of each wind turbine, a
31 one-acre laydown area for each wind turbine string, and six additional 5-acre
32 laydown areas at various locations throughout the facility site. The laydown areas
33 will have a crushed gravel surface and will be returned to their pre-construction
34 condition following completion of construction of the facility.

B. LOCATION OF THE FACILITY

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

IV. SPECIFIC FACILITY CONDITIONS

37 The conditions listed in this section include conditions based on representations in the
38 site certificate application and supporting record. The Council deems these representations to be
39 binding commitments made by the applicant. These conditions are required under OAR 345-027-
40 0020(10).

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

A. ORGANIZATIONAL EXPERTISE, OAR 345-022-0010

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

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

- 25 (5) If the certificate holder elects to build the facility in a single phase using only GE 1.5-MW
26 turbines, GE 3.0-MW turbines or a combination of these two GE turbines, before beginning
27 construction of the facility and after considering all micrositing factors, the certificate
28 holder shall provide to the Department a detailed map of the proposed facility showing the
29 final locations where facility components are proposed to be built within the 500-foot-wide
30 corridors shown on Revised Figures C-2 and C-2A of the ASC Supplement.
- 31 (6) If the certificate holder proposes to build the facility in more than one phase using only GE
32 1.5-MW turbines, GE 3.0-MW turbines or a combination of these two GE turbines, before
33 beginning construction of any phase of the facility and after considering all micrositing
34 factors, the certificate holder shall provide to the Department a detailed map of that phase
35 of the facility showing the final locations where facility components are proposed to be
36 built within the 500-foot-wide corridors shown on Revised Figures C-2 and C-2A of the
37 ASC Supplement, shall identify on this map the facilities that would constitute that phase of
38 construction, and shall provide documentation defining the quantities of each of the
39 following components that would constitute that phase of construction: GE 1.5-MW
40 turbines, GE 3.0-MW turbines, pad transformers, meteorological towers, substation, O&M

1 facility, miles of 230-kV or 500-kV transmission line, miles of aboveground 34.5-kV
2 collector system, miles of access road, acres of turnarounds and access road intersections,
3 and acres of temporary laydown area.

4 (7) If the certificate holder elects to build the facility in a single phase using any turbines other
5 than the GE 1.5-MW turbines or GE 3.0-MW turbines, before beginning construction of the
6 facility and after considering all micrositing factors, the certificate holder shall provide to
7 the Department a detailed map of the proposed facility showing the final locations where
8 facility components are proposed to be built within the 500-foot-wide corridors shown on
9 Revised Figures C-2 and C-2A of the ASC Supplement. The certificate holder shall include
10 with this map documentation defining quantities of each of the following components that
11 would constitute the complete facility: turbines, pad transformers, meteorological towers,
12 substation, O&M facility, miles of 230-kV or 500-kV transmission line, miles of
13 aboveground 34.5-kV collector system, miles of access road, acres of turnarounds and
14 access road intersections, and acres of temporary laydown area. For each turbine, the
15 certificate shall define the turbine manufacturer, turbine capacity, weight of steel, height of
16 tower, sweep of blade, and size of concrete foundation.

17 (8) If the certificate holder elects to build the facility in more than one phase using any turbines
18 other than the GE 1.5-MW turbines or GE 3.0-MW turbines, before beginning construction
19 of any phase of the facility and after considering all micrositing factors, the certificate
20 holder shall provide to the Department a detailed map of that phase of the facility showing
21 the final locations where facility components are proposed to be built within the 500-foot-
22 wide corridors shown on Revised Figures C-2 and C-2A of the ASC Supplement, shall
23 identify on this map the facilities that would constitute that phase of construction, and shall
24 provide documentation defining the quantities of each of the following components that
25 would constitute that phase of construction: turbines, pad transformers, meteorological
26 towers, substation, O&M facility, miles of 230-kV or 500-kV transmission line, miles of
27 aboveground 34.5-kV collector system, miles of access road, acres of turnarounds and
28 access road intersections, and acres of temporary laydown area. For each turbine, the
29 certificate shall define the turbine manufacturer, turbine capacity, weight of steel, height of
30 tower, sweep of blade, and size of concrete foundation.

31 (9) If the certificate holder elects to build the facility in a single phase using only GE 1.5-MW
32 turbines, GE 3.0-MW turbines or a combination of these two GE turbines, before beginning
33 construction of the facility the certificate holder shall submit to the State of Oregon through
34 the Council a bond or letter of credit in the amount of \$6.208 million (in 2005 dollars)
35 naming the State of Oregon, acting by and through the Council as beneficiary or payee. If
36 the certificate holder elects to build the facility in a single phase using any turbines other
37 than the GE 1.5-MW or GE 3.0-MW turbines or if the certificate holder elects to build the
38 facility in more than one phase using any combination of turbines, before beginning
39 construction of any phase of the facility, the certificate holder shall submit to the State of
40 Oregon through the Council a bond or letter of credit naming the State of Oregon, acting by
41 and through the Council, as beneficiary or payee in the amount (in 2005 dollars) determined
42 by the Department as the gross cost of demolition and site restoration minus the carbon
43 steel scrap value plus the one-percent performance bond amount, ten-percent administration
44 and project management costs and twenty-percent future developments contingency
45 applicable to the proposed phase of construction, together with any previous phases of

1 construction. If the certificate holder elects to build the facility in more than one phase
2 using only GE 1.5-MW turbines, GE 3.0-MW turbines or a combination of the two GE
3 turbines, the Department will establish the amount of the bond or letter of credit by
4 applying the unit costs described in Table 5 of the Council's final order on the site
5 certificate application (incorporated herein by this reference) to the number of units
6 identified by the certificate holder and verified by the Department as applicable to the
7 proposed phase and any previous phases of construction and adding to that subtotal the one-
8 percent performance bond amount, ten-percent administration and project management
9 costs and twenty-percent future developments contingency. If the certificate holder elects to
10 build the facility using any turbines other than the GE 1.5-MW turbines or GE 3.0-MW
11 turbines, for each phase of construction the Department will establish the amount of the
12 bond or letter of credit by using its Facility Retirement Cost Estimating Guide to estimate
13 the gross cost of demolition and site restoration minus the carbon steel scrap value plus the
14 one-percent performance bond amount, ten-percent administration and project management
15 costs and twenty-percent future developments contingency.

16 (a) The certificate holder shall adjust the amount of the bond or letter of credit annually,
17 using the following calculation:

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

23 (ii) Adjust the estimated carbon steel scrap value by an index factor derived from the
24 Producer Price Index values, not seasonally adjusted, reported by the U.S. Department of
25 Labor, Bureau of Labor Statistics, "Commodities: Metals and Metal Products: Carbon Steel
26 Scrap" (Series ID: WPU101211). Using the average monthly index value for the 12 months
27 ending with December of the year preceding the year in which the adjustment is made as
28 the numerator and the average monthly index value for the 12 months ending with
29 December 2005 (277.2) as the denominator, multiply the estimated scrap value of \$149 per
30 net ton (in 2005 dollars) by the resulting factor. If at any time the Producer Price Index
31 Values are no longer published, the Council shall select a comparable calculation to adjust
32 the estimated scrap value.

33 (iii) Multiply the adjusted carbon steel scrap value (ii) per net ton by the number of
34 tons of carbon steel scrap applicable to the phase or phases of construction to which the
35 letter of credit applies and subtract the resulting value from the adjusted gross cost (i).

36 (iv) Add 1 percent of the subtotal (iii) for the adjusted performance bond amount, 10
37 percent of the subtotal (iii) for the adjusted administration and project management costs,
38 and 20 percent of the subtotal (iii) for the adjusted future developments contingency.

39 (v) Add the subtotal (iii) to the sum of the percentages (iv) and round the resulting
40 total to the nearest \$1,000 to determine the adjusted financial assurance amount for the
41 reporting year.

42 (b) The certificate holder shall use a form of bond or letter of credit approved by the
43 Council.

44 (c) The certificate holder shall use an issuer of the bond or letter of credit approved by the
45 Council.

1 (d) The certificate holder shall describe the status of the bond or letter of credit in the
2 annual report submitted to the Council under Condition (122).

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

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

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

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

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

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

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

35 (16) Before beginning construction, the certificate holder shall notify the Department in advance
36 of any work on the site that does not meet the definition of "construction" in OAR 345-001-
37 0010 or ORS 469.300 and shall provide to the Department a description of the work and
38 evidence that its value is less than \$250,000.

C. LAND USE, OAR 345-022-0030

39 (17) The certificate holder shall construct the public road improvements described in the site
40 certificate application to meet or exceed road standards for the road classifications in the
41 County's Transportation System Plan and Zoning Ordinance because roads will require a

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

D. SOIL PROTECTION, OAR 345-022-0022

- 33 (26) The certificate holder shall conduct all construction work in compliance with an Erosion
34 and Sediment Control Plan (ESCP) satisfactory to the Oregon Department of
35 Environmental Quality and as required under the National Pollutant Discharge Elimination
36 System (NPDES) Storm Water Discharge General Permit #1200-C. The certificate holder
37 shall include in the ESCP any procedures necessary to meet local erosion and sediment
38 control requirements and storm water management requirements.

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

E. PROTECTED AREAS, OAR 345-022-0040

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

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

34 [No conditions]

G. RECREATION, OAR 345-022-0100

35 [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.

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

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

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

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

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

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

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

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

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

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

- 1 (55) Before beginning construction of the facility, the certificate holder shall deliver to the
2 Department surveys for threatened and endangered plant and wildlife species in newly
3 affected areas as identified in the ASC Supplement.
- 4 (56) If construction of the facility begins after 2006, the certificate holder shall review the
5 ONHIC and USFWS databases and consult with an expert designated by ODFW on an
6 annual basis before beginning construction to determine whether nesting bald eagles or
7 peregrine falcons have been documented to occur within two miles of the facility. The
8 certificate holder shall report the results of the database review and consultation to the
9 Department and to ODFW and, if there have been new documentations of nesting bald
10 eagles or peregrine falcons within two miles of the facility, the certificate holder shall
11 implement appropriate measures to protect the species from adverse impact, as approved by
12 the Department and ODFW.
- 13 (57) The certificate holder shall implement measures to mitigate impacts to sensitive wildlife
14 habitat during construction including, but not limited to, the following:
15 (a) Preparing maps to show sensitive areas, such as nesting or denning areas for sensitive
16 wildlife species, that are off limits to construction personnel.
17 (b) Ensuring that a qualified person instructs construction personnel to be aware of
18 wildlife in the area and to take precautions to avoid injuring or destroying wildlife or
19 significant wildlife habitat.
20 (c) Avoiding unnecessary road construction, temporary disturbance and vehicle use.

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

- 21 (58) The certificate holder shall design and construct all aboveground transmission line support
22 structures following the practices suggested by the Avian Powerline Interaction Committee
23 (APLIC 1996, referenced in the site certificate application, p. P-33) and shall install anti-
24 perching devices on transmission pole tops and cross arms where the poles are located
25 within one-half mile of any wind turbine.
- 26 (59) The certificate holder may construct turbines and other facility components within the 500-
27 foot corridors shown on Figures P-1 through P-10 of the site certificate application and
28 March 2006 supplement, subject to the following requirements addressing potential habitat
29 impact:
30 (a) The certificate holder shall not construct any facility components within areas of
31 Category 1 or Category 2 habitat and shall avoid temporary disturbance of Category 1 or
32 Category 2 habitat.
33 (b) The certificate holder shall design and construct facility components that are the
34 minimum size needed for safe operation of the energy facility.
35 (c) To the extent possible, the certificate holder shall construct facility components in the
36 locations shown on Figure C-2 of the March 2006 site certificate application supplement.
- 37 (60) During construction, the certificate holder shall protect the area within a 1300-foot buffer
38 around any active nests of the following species during the sensitive period, as provided in
39 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

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

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

13 In addition, the certificate holder shall flag the boundaries of the 1300-foot buffer area, 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, and shall instruct
16 construction personnel to avoid any unnecessary activity within the buffer area. The
17 certificate holder shall direct a qualified independent third-party biological monitor, as
18 approved by the Department, to observe the active nest sites during the sensitive period for
19 signs of disturbance and to notify the Department of any non-compliance with this
20 condition. If the monitor observes nest site abandonment or other adverse impact to nesting
21 activity, the certificate holder shall implement appropriate mitigation, in consultation with
22 ODFW and subject to the approval of the Department, unless the adverse impact is clearly
23 shown to have a cause other than construction activity. The certificate holder may begin or
24 resume high impact construction activities before the ending day of the sensitive period if
25 any known nest site is not occupied by the early release date. If a nest site is occupied, then
26 the certificate holder may begin or resume high-impact construction before the ending day
27 of the sensitive period with the approval of ODFW, after the young are fledged. The
28 certificate holder shall use a protocol approved by ODFW to determine when the young are
29 fledged (the young are independent of the core nest site).

30 (61) The certificate holder shall conduct wildlife monitoring and mitigation in accordance with
31 the Wildlife Monitoring and Mitigation Plan that is incorporated in the order as Attachment
32 A and as may be amended from time to time.

33 (62) The certificate holder shall restore areas that are temporarily disturbed during construction
34 in accordance with the methods, monitoring procedures and success criteria set forth in the
35 Revegetation Plan that is incorporated in the order as Attachment B and as may be amended
36 from time to time.

37 (63) Before beginning construction of the facility, the certificate holder shall acquire the legal
38 right to create, maintain and protect a habitat mitigation area for the life of the facility by
39 means of an outright purchase, conservation easement or similar conveyance and shall
40 provide a copy of the documentation to the Department. Within the habitat mitigation area,
41 the certificate holder shall improve the habitat quality in accordance with the Habitat

1 Mitigation Plan that is incorporated in the order as Attachment C and as may be amended
2 from time to time.

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

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

M. STRUCTURAL STANDARD, OAR 345-022-0020

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

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

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

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

23 (69) Before beginning construction of any phase of the facility, the certificate holder shall
24 provide to the Department a map showing the final design locations of all components of
25 that phase of the facility and areas that would be temporarily disturbed during construction
26 and also showing the areas surveyed by CH2M Hill in preparing the Cultural Resources
27 Survey for Biglow Canyon Wind Farm included in the site certificate application as
28 Attachment S-1. The certificate holder shall hire qualified personnel to conduct field
29 investigation of all areas of permanent or temporary disturbance that CH2M Hill did not
30 previously survey and shall provide to the Department a written report of the field
31 investigation. If any significant historic, cultural or archaeological resources are found
32 during the field investigation, the certificate holder shall ensure that construction and
33 operation of the facility will have no impact on the resources. The certificate holder shall
34 instruct all construction personnel to avoid areas where the resources were found and shall
35 implement other appropriate measures to protect the resources.

36 (70) The certificate holder shall ensure that a qualified person instructs construction personnel in
37 the identification of cultural resources.

38 (71) The certificate holder shall ensure that a qualified archaeologist is present on site during
39 any ground-disturbing activities, including grading and graveling; or, the certificate holder

1 shall implement an alternate monitoring procedure, including a testing strategy, as agreed to
2 in consultation with the Department, SHPO, and the tribes.

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

13 (73) The certificate holder shall ensure that construction personnel proceed carefully in the
14 vicinity of the mapped alignment of the Oregon Trail. If any intact physical evidence of the
15 trail is discovered, the certificate holder shall avoid any disturbance to the intact segments,
16 by redesign, re-engineering or restricting the area of construction activity. The certificate
17 holder shall promptly notify the Department and SHPO of the discovery. The certificate
18 holder shall consult with the Department and with SHPO to determine appropriate
19 mitigation measures.

O. PUBLIC SERVICES, OAR 345-022-0110

20 (74) During construction of the facility, the certificate holder and its contractors shall obtain all
21 water required for construction activities from off-site sources previously permitted for
22 such uses.

23 (75) Before beginning operation of the facility, the certificate holder shall have in operation a
24 well suitable for delivering water, not exceeding 5,000 gallons per day, for domestic use at
25 the facility's O&M building and, provided the rate of extraction would not exceed 5,000
26 gallons per day, blade-washing activities. The certificate holder shall not change the source
27 of water for the facility's domestic use without prior Council approval.

28 (76) During operation of the facility, the certificate holder and its contractors shall obtain all
29 water required for blade-washing activities from off-site sources previously permitted for
30 such uses or from the on-site well, provided such use of well water would not cause the rate
31 of extraction to exceed 5,000 gallons in any one-day period.

32 (77) Before beginning construction of the facility, the certificate holder shall develop a system
33 for monitoring state highways and local roads that would serve as transporter routes for
34 delivering equipment to the facility site for degradation, *e.g.*, major potholes, so that safe
35 travel paths may be maintained. The monitoring system shall include site inspection and
36 photographic cataloguing of existing road conditions so that pre-construction conditions can
37 be compared with conditions after construction has been completed. The certificate holder
38 shall coordinate monitoring methods and preferred mitigation efforts with Sherman County
39 Public Works and the Oregon Department of Transportation. [Amendment #1]

40 (78) After completing construction of the facility, the certificate holder shall restore state
41 highways and county roads affected by facility construction activities to at least their pre-

1 construction conditions, to the satisfaction of Sherman County Public Works and the
2 Oregon Department of Transportation.

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

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

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

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

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

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

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

P. WASTE MINIMIZATION, OAR 345-022-0120

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

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

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

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

35 (84) During construction of the facility, the certificate holder shall implement a waste
36 management plan that includes but is not limited to the following measures:

37 (a) Training employees to minimize and recycle solid waste;

38 (b) Minimizing the generation of wastes from construction through detailed estimating of
39 materials needs and through efficient construction practices;

40 (c) Recycling steel and other metal scrap;

41 (d) Recycling wood waste;

42 (e) Recycling packaging wastes, such as paper and cardboard;

1 (f) Collecting non-recyclable waste for transport to a landfill by a licensed waste hauler;
2 and

3 (g) Segregating all hazardous wastes, such as used oil, oily rags and oil-absorbent
4 materials, mercury-containing lights and lead-acid and nickel-cadmium batteries for
5 disposal by a licensed firm specializing in the proper recycling or disposal of hazardous
6 wastes.

7 (85) The certificate holder may dispose of waste concrete on site with the permission of the
8 landowner and in accordance with OAR 340-093-0080 and other applicable regulations.
9 The certificate holder shall dispose of waste concrete on site by placing the material in an
10 excavated hole, covering the concrete with at least 3 feet of topsoil, and grading the area to
11 match existing contours. If the waste concrete is not disposed of on site, the certificate
12 holder shall arrange for proper disposal in a licensed landfill.

13 (86) During construction of the facility, the certificate holder shall ensure that the wash down of
14 concrete trucks occurs only at a contractor-owned batch plant or at tower foundation
15 locations. If such wash down occurs at tower foundation locations, then the certificate
16 holder shall ensure that wash down wastewater does not run off the construction site into
17 otherwise undisturbed areas and that the wastewater is disposed of on backfill piles and
18 buried underground with the backfill over the tower foundation.

19 (87) During operation of the facility, the certificate holder shall implement a waste management
20 plan that includes but is not limited to the following measures:

21 (a) Training employees to minimize and recycle solid waste;

22 (b) Recycling paper products, metals, glass and plastics;

23 (c) Collecting non-recyclable waste for transport to a landfill by a licensed waste hauler;
24 and

25 (d) Segregating all hazardous wastes, such as used oil, oily rags and oil-absorbent
26 materials, mercury-containing lights and lead-acid and nickel-cadmium batteries for
27 disposal by a licensed firm specializing in the proper recycling or disposal of hazardous
28 wastes.

29 (88) During operation of the facility, the certificate holder shall engage in blade-washing
30 activities only in accordance with the appropriate Wastewater General Permit #1700 issued
31 by the Oregon Department of Environmental Quality and all applicable regulations.

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

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

33 (a) Confine the noisiest operation of heavy construction equipment to the daylight hours;

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

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

38 (90) If the GE 1.5-MW turbines (for which the certificate holder states the maximum sound
39 power level warranted by the manufacturer is 104 dBA) or the GE 3.0-MW turbines
40 (provided the certificate holder is able to demonstrate, by means of the manufacturer's
41 warranty or other means acceptable to the Department, that the maximum sound power
42 level of the GE 3.0-MW turbine is 106 dBA) will be used at the facility, before beginning

1 construction, the certificate holder shall present information demonstrating to the
2 satisfaction of the Department that each of the following requirements have been met at all
3 25 properties identified as noise sensitive properties in the site certificate application:

4 (a) For any noise sensitive property listed in Table 12 where the predicted maximum
5 hourly L_{50} noise level caused by the facility would equal or exceed 50 dBA, the certificate
6 holder shall identify the final design locations of all turbines to be built and perform a noise
7 analysis demonstrating, in accordance with OAR 340-035-0035(1)(b)(B)(iii)(IV), that the
8 total hourly L_{50} noise level generated by the facility would not exceed 50 dBA at the
9 appropriate measurement point. The certificate holder shall perform the noise analysis using
10 the CADNA/A by DataKustik GmbH of Munich, Germany, and shall assume the following
11 input parameters:

- 12 • The maximum sound power level warranted by the manufacturer or confirmed by
13 other means acceptable to the 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 (b) Where the hourly L_{50} noise levels caused by the facility would exceed 36 dBA but not
23 exceed 50 dBA at any noise sensitive property listed in Table 12, the certificate holder has
24 obtained a legally effective easement or real covenant pursuant to which the owner of the
25 property authorizes the certificate holder's operation of the facility to increase ambient
26 statistical noise levels L_{10} and L_{50} by more than 10 dBA at the appropriate measurement
27 point. A legally effective easement or real covenant shall: (i) include a legal description of
28 the burdened property (the noise sensitive property); (ii) be recorded in the real property
29 records of the county; (iii) expressly benefit the certificate holder; (iv) expressly run with
30 the land and bind all future owners, lessees or holders of any interest in the burdened
31 property; and (v) not be subject to revocation without the certificate holder's written
32 approval.

33 (c) If, for any noise sensitive property listed in Table 12 where the hourly L_{50} noise levels
34 caused by the facility would exceed 36 dBA but not exceed 50 dBA, the certificate holder
35 has not obtained a legally effective easement or real covenant as described in (b) above, the
36 certificate holder shall identify the final design locations of all turbines to be built and
37 perform a noise analysis demonstrating, in accordance with OAR 340-035-
38 0035(1)(b)(B)(iii)(IV), that the total noise generated by the facility would meet the ambient
39 noise degradation test at the appropriate measurement point on those noise sensitive
40 properties. The certificate holder shall perform the noise analysis using the CADNA/A by
41 DataKustik GmbH of Munich, Germany, and shall assume the following input parameters:

- 42 • The maximum sound power level warranted by the manufacturer or confirmed by
43 other means acceptable to the Department
- 44 • The exact locations of the proposed turbines
- 45 • The environmental factors included in the original noise analysis, *i.e.*, the
46 temperature, relative humidity, barrier effects and ground effects used in the original

1 analysis. If the certificate holder has cause to believe the environmental factors
2 included in the original noise analysis are no longer valid for a particular receiver, the
3 certificate holder shall perform the noise analysis for that receiver using both the
4 environmental factors included in the original noise analysis and the environmental
5 factors the certificate holder now believes to be applicable to that receiver.

6 (91) If turbines other than the GE 1.5-MW turbines (for which the certificate holder states the
7 maximum sound power level warranted by the manufacturer is 104 dBA) or the GE 3.0-
8 MW turbines (for which the certificate holder has assumed a maximum sound power level
9 of 106 dBA) will be used at the facility, before beginning construction of the facility the
10 certificate holder shall identify the final design locations of all turbines to be built, perform
11 a complete new noise analysis for all turbines, and generate a new table listing each noise
12 sensitive property, as defined in OAR 340-035-0015(3), and the predicted maximum hourly
13 L₅₀ noise level at each noise sensitive property. The certificate holder shall perform the
14 noise analysis using the CADNA/A by DataKustik GmbH of Munich, Germany, and shall
15 assume the following input parameters:

- 16 • The maximum sound power level warranted by the manufacturer or confirmed by other
17 means acceptable to the Department
- 18 • The exact locations of the proposed turbines
- 19 • The environmental factors included in the original noise analysis, *i.e.*, the temperature,
20 relative humidity, barrier effects and ground effects used in the original analysis. If the
21 certificate holder has cause to believe the environmental factors included in the original
22 noise analysis are no longer valid for a particular receiver, the certificate holder shall
23 perform the noise analysis for that receiver using both the environmental factors
24 included in the original noise analysis and the environmental factors the certificate
25 holder now believes to be applicable to that receiver.

26 After generating the new table identifying noise sensitive properties and the predicted
27 maximum hourly L₅₀ noise level at each noise sensitive property, the certificate holder shall
28 meet Conditions (90)(a), (90)(b) and (90)(c) with respect to the noise sensitive properties
29 identified in that table.

30 R. REMOVAL-FILL LAW

[No conditions]

31 S. GROUND WATER ACT

[No conditions]

T. PUBLIC HEALTH AND SAFETY

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

35 (93) During construction and operation of the facility, the certificate holder shall develop and
36 implement fire management plans in consultation with local fire control authorities to
37 minimize the risk of fire and to respond appropriately to any fires that occur on the facility

1 site. In developing the fire management plans, the certificate holder should take into
2 account the dry nature of the region and should address risks on a seasonal basis.

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

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

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

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

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

26 (99) The certificate holder shall take reasonable steps to reduce or manage exposure to
27 electromagnetic fields (EMF), consistent with Council findings presented in the "Report of
28 EMF Committee to the Energy Facility Siting Council," March 30, 1993, and subsequent
29 findings. Effective on the date of this site certificate, the certificate holder shall provide
30 information to the public, upon request, about EMF levels associated with the energy
31 facility and related transmission lines.

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

V. CONDITIONS REQUIRED BY COUNCIL RULES

36 This section lists conditions specifically required by OAR 345-027-0020 (Mandatory
37 Conditions in Site Certificates), OAR 345-027-0028 (Monitoring Conditions), and OAR Chapter
38 345, Division 26 (Construction and Operation Rules for Facilities). All references to the Office
39 of Energy or Office shall be construed to refer to the Department of Energy. These conditions
40 should be read together with the specific facility conditions included in Section IV to ensure
41 compliance with the siting standards of OAR Chapter 345, Divisions 22 and 24, and to protect

1 the public health and safety. The certificate holder shall comply with all site certificate
2 conditions.

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

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

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

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

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

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

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

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

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

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

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

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

41 (107) OAR 345-027-0020(7): The certificate holder shall prevent the development of any
42 conditions on the site that would preclude restoration of the site to a useful, non-hazardous

1 condition to the extent that prevention of such site conditions is within the control of the
2 certificate holder.

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

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

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

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

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

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

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

41 (115) OAR 345-027-0020(15): Before any transfer of ownership of the facility or ownership of
42 the site certificate holder, the certificate holder shall inform the Office of the proposed new

1 owners. The requirements of OAR 345-027-0100 apply to any transfer of ownership that
2 requires a transfer of the site certificate.

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

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

24 (118) OAR 345-027-0023(5): If the facility includes any high voltage transmission line under
25 Council jurisdiction:

26 (a) The certificate holder shall design, construct and operate the transmission line in
27 accordance with the requirements of the National Electrical Safety Code (American
28 National Standards Institute, Section C2, 1997 Edition); and

29 (b) The certificate holder shall develop and implement a program that provides
30 reasonable assurance that all fences, gates, cattle guards, trailers, or other objects or
31 structures of a permanent nature that could become inadvertently charged with electricity
32 are grounded or bonded throughout the life of the line.

33 (119) OAR 345-027-0023(6): If the proposed energy facility is a pipeline or a transmission line
34 or has, as a related or supporting facility, a pipeline or transmission line, the Council shall
35 specify an approved corridor in the site certificate and shall allow the certificate holder to
36 construct the pipeline or transmission line anywhere within the corridor, subject to the
37 conditions of the site certificate. If the applicant has analyzed more than one corridor in its
38 application for a site certificate, the Council may, subject to the Council's standards,
39 approve more than one corridor. Before beginning operation of the facility, the certificate
40 holder shall submit to the Office a legal description of the permanent right-of-way where
41 the applicant has built the pipeline or transmission line within an approved corridor. The
42 site of the pipeline or transmission line subject to the site certificate is the area within the
43 permanent right-of-way.

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

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

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

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

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

18 (121) OAR 345-026-0048: Following receipt of the site certificate, the certificate holder shall
19 implement a plan that verifies compliance with all site certificate terms and conditions and
20 applicable statutes and rules. As a part of the compliance plan, to verify compliance with
21 the requirement to begin construction by the date specified in the site certificate, the
22 certificate holder shall report promptly to the Office of Energy when construction begins.
23 Construction is defined in OAR 345-001-0010. In reporting the beginning of construction,
24 the certificate holder shall describe all work on the site performed before beginning
25 construction, including work performed before the Council issued the site certificate, and
26 shall state the cost of that work. For the purpose of this exhibit, "work on the site" means
27 any work within a site or corridor, other than surveying, exploration or other activities to
28 define or characterize the site or corridor. The certificate holder shall document the
29 compliance plan and maintain it for inspection by the Department or the Council.

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

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

34 (i) Within six months after beginning construction, and every six months thereafter
35 during construction of the energy facility and related or supporting facilities, the certificate
36 holder shall submit a semiannual construction progress report to the Council. In each
37 construction progress report, the certificate holder shall describe any significant changes to
38 major milestones for construction. The certificate holder shall include such information
39 related to construction as specified in the site certificate. When the reporting date coincides,
40 the certificate holder may include the construction progress report within the annual report
41 described in this rule;

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

VI. SUCCESSORS AND ASSIGNS

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

VII. SEVERABILITY AND CONSTRUCTION

17 If any provision of this agreement and certificate is declared by a court to be illegal or in
18 conflict with any law, the validity of the remaining terms and conditions shall not be affected,
19 and the rights and obligations of the parties shall be construed and enforced as if the agreement
20 and certificate did not contain the particular provision held to be invalid. In the event of a
21 conflict between the conditions contained in this site certificate and the Council's final order, the
22 conditions contained in this site certificate shall control.

VIII. GOVERNING LAW AND FORUM

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

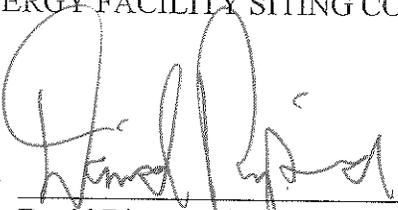
IX. EXECUTION

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

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

ENERGY FACILITY SITING COUNCIL

PORTLAND GENERAL ELECTRIC
COMPANY

By: 

David Ripma, Chair
Oregon Energy Facility Siting Council

Date: 11/3/06

By:  (LN)

Print: James F. Lobdell
VP Power Operations &
Resource Planning

Date: 11/06/06