# Redline of Amended Site Certificate

# **The Oregon Energy Facility Siting Council**

# **SECOND THIRD AMENDED SITE CERTIFICATE**

#### FOR THE BIGLOW CANYON WIND FARM

#### I. INTRODUCTION

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

The findings of fact, reasoning and conclusions of law underlying the terms and conditions of this site certificate are set forth in the following documents related to the facility, which are incorporated herein by this reference: (a) the Council's Final Order in the Matter of the Application for a Site Certificate for the Biglow Canyon Wind Farm (the "Final Order on the Application"); (b) the Council's Final Order on Amendment #1; and (c) the Council's Final Order on Amendment #2.2; and (d) the Council's Final Order on Amendment #3. [Amendments #1 and 1, #2 and #3]

In interpreting this site certificate, any ambiguity shall be clarified by reference to the following, in order of priority: (1) this Second Amended Site Certificate; (2) the Final Order on Amendment #3; (3) the Final Order on Amendment #2; (34) the Final Order on Amendment #1; (45) the Final Order on the Application; and (56) the record of the proceedings that led to the Final Orders on the Application, Amendment #1, and Amendment #2, 2 and Amendment #3. [Amendments #1 and 1, #2 and #3]

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

#### II. SITE CERTIFICATION

- A. To the extent authorized by state law and subject to the conditions set forth herein, the State authorizes the certificate holder to construct, operate and retire a wind energy facility, together with certain related or supporting facilities, at the site in Sherman County, Oregon, as described in Section III of this site certificate. ORS 469.401(1)
- B. This site certificate is effective until it is terminated under OAR 345-027-0110 or the rules in effect on the date that termination is sought or until the site certificate is revoked under ORS 469.440 and OAR 345-029-0100 or the statutes and rules in effect on the date that revocation is ordered. ORS 469.401(1)
- C. This site certificate does not address, and is not binding with respect to, matters that were not addressed in the Council's Final Orders on the Application, Amendment #1 and 1.

  Amendment #2.2 and Amendment #3. These matters include, but are not limited to: building code compliance, wage, hour and other labor regulations, local government fees and charges, and other design or operational issues that do not relate to siting the facility (ORS 469.401(4)) and permits issued under statutes and rules for which the decision on compliance

- has been delegated by the federal government to a state agency other than the Council. ORS 469.503(3). [Amendments #1 and 1, #2 and #3]
- D. Both the State and the certificate holder shall abide by local ordinances, state law, and the rules of the Council in effect on the date this site certificate is issued. In addition, upon a clear showing of a significant threat to public health, safety or the environment that requires application of later-adopted laws or rules, the Council may require compliance with such later-adopted laws or rules. ORS 469.401(2)
- E. For a permit, license or other approval addressed in and governed by this site certificate, the certificate holder shall comply with applicable state and federal laws adopted in the future to the extent that such compliance is required under the respective state agency statutes and rules. ORS 469.401(2)
- F. Subject to the conditions herein, this site certificate binds the State and all counties, cities and political subdivisions in Oregon as to the approval of the site and the construction, operation and retirement of the facility as to matters that are addressed in and governed by this site certificate. ORS 469.401(3)
- G. Each affected state agency, county, city and political subdivision in Oregon with authority to issue a permit, license or other approval addressed in or governed by this site certificate shall, upon submission of the proper application and payment of the proper fees, but without hearings or other proceedings, issue such permit, license or other approval subject only to conditions set forth in this site certificate. ORS 469.401(3)
- H. After issuance of this site certificate, each state agency or local government agency that issues a permit, license or other approval for the facility shall continue to exercise enforcement authority over such permit, license or other approval. ORS 469.401(3)
- I. After issuance of this site certificate, the Council shall have continuing authority over the site and may inspect, or direct the Department to inspect, or request another state agency or local government to inspect, the site at any time in order to ensure that the facility is being operated consistently with the terms and conditions of this site certificate. ORS 469.430

#### III. DESCRIPTIONS

#### A. THE FACILITY

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

1. <u>Major Structures</u>. The Biglow Canyon Wind Farm will consist of up to 225 wind turbines with an aggregate nominal nameplate generating capacity of up to 450 megawatts (MW) of electricity and an average electric generating capacity of up to 150 MW. Turbines will be mounted on tubular steel towers ranging in height from 265 to 280 feet at the hub with an overall height of from 400 to 445 feet including the turbine blades. The turbines will

- be erected within up to 30 corridors and spaced to optimize the facility's output. The facility will be located on private farmland that the certificate holder has leased from the affected landowners. [Amendments #1 and #2]
- 4 2. <u>Related or Supporting Facilities</u>. The facility includes the following related or supporting facilities:

 a. Power Collection System. Each wind turbine will generate power at about 600 volts. The transformer sitting at the base of each wind turbine unit will increase the voltage to 34.5 kilovolts (kV). From the transformer, power will be transmitted to a central substation by means of electric cables. Most of the cables will be buried three feet or more below the surface in trenches about 3 feet wide. In areas where collector cables from several turbine strings follow the same alignment, e.g., on approach to the substation, multiple sets of cables may be installed within a single trench. If the facility is fully developed, there will be about 99106 miles of 3-wire collector cables. Generally, these cables will be above, below or adjacent to the fiber optic cables comprising the supervisory control and data acquisition system. [Amendment Amendments #2 and #3]

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

- b. <u>Substations and Interconnection System</u>. The substation site will be a graveled, fenced area of up to 6 acres with transformers, switching equipment and a parking area. Transformers will be non-polychlorinated biphenyl (PCB) oil-filled types. The facility will interconnect with a new Bonneville Power Administration (BPA) system transmission line adjacent to the facility substation. [Amendment #2].
- c. <u>Meteorological Towers</u>. The certificate holder will place up to 10 meteorological towers throughout the facility site to collect wind resource data. The towers would be up to 279 feet tall.
- d. Operations and Maintenance BuildingBuildings. The site of the operations and maintenance buildingbuildings will comprise about 5 acres adjacent to the substation on Herin Lane. The O&M buildingbuildings will occupy about 5,00017,500 square feet and will include office and workshop areas, control room, kitchen, bathroom, shower, utility sink, and other typical facilities. Water for the bathroom, shower and kitchen will be obtained from an onsite well constructed by a licensed contractor in accordance with local and state requirements. Water use will not be expected to exceed 1,000 gallons per day. Domestic wastewater generated at the O&M facility will drain into an onsite septic system. A graveled parking area for employees, visitors and equipment will be located adjacent to the O&M facility. [Amendment Amendments #2 and #3]

- e. <u>Control System</u>. The certificate holder will install a supervisory control and data acquisition (SCADA) system to assist with the remote operation of the wind turbines, to collect data from each wind turbine, and to archive wind and performance data from various sources. The SCADA system will be linked by means of fiber optic cables or other means of communication to a central computer in the O&M facility.
  - f. Access Roads. The certificate holder will construct about 41.544 miles of new roads to provide access to the wind turbine strings, together with turnaround areas at the end of each wind turbine string. The roads will be about 16 feet wide (possibly up to 28 feet wide in some locations) and will be composed of crushed gravel with shoulders (without gravel) about 3 feet wide. In addition, the certificate holder will improve about 0.7 mile of existing roads by providing an all-weather surface and, in some cases, widening the roads to accommodate construction vehicles. [AmendmentAmendments #2 and #3]
  - g. Temporary Laydown and Staging Areas. Depending on whether it proceeds with the 150-turbine or 225-turbine configuration, the certificate holder will use a total of 186 or 261 laydown and staging areas to stage construction and store supplies and equipment during construction of the facility. The certificate holder will develop one 18,500 square-foot laydown area at the site of each wind turbine, a one-acre laydown area for each wind turbine string, and six additional 5-acre laydown areas at various locations throughout the facility site. The laydown areas will have a crushed gravel surface and will be returned to their pre-construction condition following completion of construction of the facility.
  - h. <u>Temporary Crane Paths</u>. The certificate holder will develop seven-temporary crane paths, totaling approximately 5.116 miles, in order to move construction cranes between turbine corridors. The temporary crane paths will be returned to their pre-construction condition following completion of construction of the facility. [Amendment Amendments #2 and #3]

#### B. LOCATION OF THE FACILITY

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

#### IV. SPECIFIC FACILITY CONDITIONS

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

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

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

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

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

- 22 (5) [Condition removed by Amendment #2]
- 23 (6) [Condition removed by Amendment #2]
- 24 (7) [Condition removed by Amendment #2]

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

1	letter of credit in the amount of \$1.608 million before beginning construction of Phase 1 of
2	the facility. The calculation of the amount of the letter of credit included a deduction from
3	the estimated cost of site restoration for Phase 1 for the estimated value of scrap steel. In the
4	Final Order on Amendment #2, the Council found that there should be no deduction of
5	scrap or salvage value in calculating the amount of financial assurance required for site
6	restoration.
7	Within 60 days following the effective date of the Second Amended Site Certificate, the

- Within 60 days following the effective date of the Second Amended Site Certificate, the certificate holder shall submit an amended or replacement letter of credit for Phase 1 in the amount of \$4.73 million (in 2005 dollars), adjusted to present value as of the date of issuance as described in (a).
- Before beginning construction of any future phase of the facility, the certificate holder shall submit a bond or letter of credit for that phase in an amount approved by the Department and based on the costs shown in Table 3 of the Final Order on Amendment #2.
- (a) The certificate holder shall adjust the amounts of all bonds or letters of credit submitted in compliance with this condition to present value as of the date of issuance, using the following calculation and subject to approval by the Department:
- (i) Adjust the gross cost (in 2005 dollars) to present value, using the U.S. Gross Domestic Product Implicit Price Deflator, Chain-Weight, as published in the Oregon Department of Administrative Services' *Oregon Economic and Revenue Forecast* or by any successor agency (the "Index"). If at any time the Index is no longer published, the Council shall select a comparable calculation to adjust 2005 dollars to present value.
- (ii) Add 1 percent of the adjusted gross cost for the adjusted performance bond amount, 10 percent of the adjusted gross cost for the adjusted administration and project management costs and 10 percent of the adjusted gross cost for the adjusted future developments contingency.
- (<u>iii</u>) Add the adjusted gross cost (i) to the sum of the percentages (ii) and round the resulting total to the nearest \$1,000 to determine the adjusted financial assurance amount.
- (b) The certificate holder shall annually adjust all bonds or letters of credit submitted in compliance with this condition to present value as of the date of issuance as described in (a).
- (c) The certificate holder shall use a form of bond or letter of credit approved by the Council.
- (d) The certificate holder shall use an issuer of the bond or letter of credit approved by the Council.
- (e) The certificate holder shall describe the status of all bonds or letters of credit for the facility in the annual report submitted to the Council under Condition (122).

- 1 (f) The bond or letter of credit shall not be subject to revocation or reduction before retirement of the facility.
- 3 [Amendment #2]
- (10) If the certificate holder elects to use a bond to meet the requirements of Condition (9), the 4 certificate holder shall ensure that the surety is obligated to comply with the requirements 5 of applicable statutes, Council rules and this site certificate when the surety exercises any 6 legal or contractual right it may have to assume construction, operation or retirement of the 7 facility. The certificate holder shall also ensure that the surety is obligated to notify the 8 Council that it is exercising such rights and to obtain any Council approvals required by 9 applicable statutes, Council rules and this site certificate before the surety commences any 10 activity to complete construction, operate or retire the facility. 11
- 12 (11) The certificate holder shall begin construction of the facility by June 30, 2009. Under OAR 345-015-0085(9), a site certificate is effective upon execution by the Council Chair and the applicant. The Council may grant an extension of the deadline to begin construction in accordance with OAR 345-027-0030 or any successor rule in effect at the time the request for extension is submitted. [Amendment #2]
- (12) The certificate holder shall complete construction of the facility by June 30, 2011. 17 Construction is complete when: (1) the facility is substantially complete as defined by the 18 certificate holder's construction contract documents; (2) acceptance testing has been 19 satisfactorily completed; and (3) the energy facility is ready to begin continuous operation 20 consistent with the site certificate. The certificate holder shall promptly notify the 21 Department of the date of completion of construction. The Council may grant an extension 22 of the deadline for completing construction in accordance with OAR 345-027-0030 or any 23 successor rule in effect at the time the request for extension is submitted. [Amendment #2] 24
- 25 (13) The certificate holder shall construct a facility substantially as described in the site certificate.
- 27 (14) Notwithstanding OAR 345-027-0050(2), an amendment of the site certificate is required if 28 the proposed change would increase the electrical generation capacity of the facility and 29 would increase the number of wind turbines or the dimensions of existing wind turbines.
- 130 (15) The certificate holder shall obtain all necessary state and local permits or approvals required for construction, operation and retirement of the facility or ensure that its contractors obtain necessary state and local permits or approvals.
- 33 (16) Before beginning construction, the certificate holder shall notify the Department in advance 34 of any work on the site that does not meet the definition of "construction" in OAR 345-001-35 0010 or ORS 469.300 and shall provide to the Department a description of the work and 36 evidence that its value is less than \$250,000.

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

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

- 1 (18) The certificate holder shall ensure that no equipment or machinery is parked or stored on any county road except while in use.
- 3 (19) The site certificate holder shall design and construct private access roads to minimize the division of existing farm units.
- 5 (20) The certificate holder shall not locate any aboveground facility structure (including wind turbines, O&M <u>buildingbuildings</u>, substations, and meteorological towers, but not including aboveground transmission and collector lines and junction boxes) within 30 feet from any property line or within 50 feet from the right-of-way of any arterial or major collector road or street and shall not allow any architectural feature, as described in Sherman County Zoning Ordinance Section 4.2, to project into these required setbacks by more than 2 feet. [Amendment #3]
- 12 (21) The certificate holder shall locate access roads and temporary construction laydown and
  13 staging areas to minimize disturbance with farming practices and, wherever feasible, shall
  14 place turbines and transmission interconnection lines along the margins of cultivated areas
  15 to reduce the potential for conflict with farm operations. The certificate holder shall place
  16 aboveground collector lines and junction boxes along property lines and public road rights17 of-way to the extent practicable. [Amendment #2]
- 18 (22) During operation of the facility, the certificate holder, in cooperation with landowners, shall avoid impact on cultivated land to the extent reasonably possible when performing facility repair and maintenance activities.
- 21 (23) Where necessary and feasible, the certificate holder shall provide access across construction 22 trenches to fields within the facility site and otherwise provide adequate and timely access 23 to properties during critical periods in the farming cycle, such as harvest.
- 24 (24) Before beginning construction of the facility, the certificate holder shall record a Farm
  25 Management Easement covering the properties on which the certificate holder locates wind
  26 power generation facilities. The certificate holder shall record the easements in the real
  27 property records of Sherman County and shall file a copy of the recorded easement with the
  28 Sherman County Planning Director.
- 29 (25) The certificate holder shall remove from Special Farm Assessment the portions of parcels 30 on which facilities are located and shall pay all property taxes due and payable after the 31 Special Farm Assessment is removed from such properties.

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

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

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

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

- 26 (36) Without Department approval, the certificate holder shall not move any turbines within its
  27 micrositing corridors such that a worst-case visual impact beyond that stated in the ASC
  28 and ASC Supplement would occur for the John Day Wildlife Refuge, the John Day Federal
  29 Wild and Scenic River, or the John Day State Scenic Waterway (Parrish Creek to
  30 Tumwater Falls).
  - F. SCENIC AND AESTHETIC VALUES, OAR 345-022-0080
- 31 [No conditions]
  - G. RECREATION, OAR 345-022-0100
- 32 [No conditions]

# H. Public Health and Safety Standards for Wind Energy Facilities, OAR 345-024-0010

- During construction, operation or retirement of the facility, the certificate holder shall notify the Department within 72 hours of any accidents that may result in public health and safety concerns, including mechanical failures on the site associated with construction or 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 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 exterior ladders or access to the turbine blades and shall install locked access doors 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.
- During operation of the facility, the certificate holder shall have an operational safetymonitoring program and shall inspect turbine blades on a regular basis for signs of wear. The certificate holder shall repair turbine blades as necessary to protect public safety.
- During operation of the facility, the certificate holder shall install and maintain selfmonitoring devices on each turbine, connected to a fault annunciation panel or supervisory control and data acquisition (SCADA) system at the O&M facility, to alert operators to potential dangerous conditions, and the certificate holder shall remedy any dangerous conditions immediately.
- During construction of the facility, the certificate holder shall install generator step-up transformers at the base of each turbine tower in locked cabinets designed to protect the 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.
- During operation of the facility, the certificate holder shall develop and implement a site health and safety plan that informs on-site employees and others what to do in case of an

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

#### 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 ground within a minimum 10-foot radius with non-flammable material. The certificate 4 holder shall maintain the non-flammable pad area covering throughout operation of the 5 facility. 6
- (49) During construction and operation of the facility, the certificate holder shall implement a 7 8 plan to control the introduction and spread of noxious weeds. The certificate holder shall develop the weed control plan in consultation with the Sherman County Weed Control 9 District and the Department. 10
- (50) During construction of the facility, to reduce the visual impact of the facility, the certificate holder shall: 12
  - (a) Paint turbine towers, nacelles, rotors, meteorological towers, and cabinets containing pad-mounted equipment with a low-reflectivity, neutral gray, white, off-white or earth tone finish to reduce contrast with the surrounding background.
  - (b) Apply a low-reflectivity finish to the exterior of the O&M building buildings and substation equipment to control their visual integration into the surrounding background.
  - (c) With the exception of the turbine manufacturer's logo that may appear on turbine nacelles, not allow any advertising to be used on any part of the facility or on any signs posted at the facility. In addition, if the Council amends OAR 345-024-0015 by eliminating the restriction in Section (1)(a) of that rule and not otherwise prohibiting the use of a logo, the certificate holder may place its logo on the nacelles of not more than 20 percent of the wind turbines.
  - (d) Use only those signs required by law or for facility safety or security, except that the certificate holder may erect a sign near the O&M facility or substation to identify the wind energy facility.

[Amendment #2] [Amendments #2 and #3]

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- (51) The certificate holder shall design and construct the O&M building buildings to be generally consistent with the character of similar buildings used by commercial farmers or ranchers in the area and shall paint the **buildingbuildings** in a neutral color to blend with the surrounding background. [Amendment #3]
- (52) The certificate holder shall not use exterior nighttime lighting except:
  - (a) The minimum turbine tower lighting required by the Federal Aviation Administration.
  - (b) Security lighting at the O&M buildingbuildings and substation, provided that such lighting is shielded or directed downward to reduce glare.
    - (c) Minimum lighting necessary for repairs or emergencies.
  - (d) Minimum lighting necessary for nighttime construction. The certificate holder may only use local lighting directed downward to illuminate the work area at the turbine base or upward from the base to illuminate the turbine tower; construction lighting shall not be directed outward. The certificate holder shall use nighttime lighting only with the approval of the owner of the property on which the work is

- 1 conducted and shall provide notice of nighttime construction to occupants of all
- 2 residences within one-half mile of the construction site.
- 3 [Amendment #3]

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

- 4 (53) The certificate holder shall design the transmission lines so that alternating current electric fields shall not exceed 9 kV per meter at one meter above the ground surface in areas accessible to the public.
- 7 (54) The certificate holder shall design the transmission lines so that induced voltages resulting from the transmission lines are as low as reasonably achievable.

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

- 9 (55) Before beginning construction of the facility, the certificate holder shall deliver to the
  10 Department surveys for threatened and endangered plant and wildlife species in newly
  11 affected areas as identified in the ASC Supplement.
- (56) If construction of the facility begins after 2006, the certificate holder shall review the 12 ONHIC and USFWS databases and consult with an expert designated by ODFW on an 13 annual basis before beginning construction to determine whether nesting bald eagles or 14 peregrine falcons have been documented to occur within two miles of the facility. The 15 certificate holder shall report the results of the database review and consultation to the 16 Department and to ODFW and, if there have been new documentations of nesting bald 17 eagles or peregrine falcons within two miles of the facility, the certificate holder shall 18 implement appropriate measures to protect the species from adverse impact, as approved by 19 the Department and ODFW. 20
- 21 (57) The certificate holder shall implement measures to mitigate impacts to sensitive wildlife 22 habitat during construction including, but not limited to, the following:
  - (a) Preparing maps to show sensitive areas, such as nesting or denning areas for sensitive wildlife species, that are off limits to construction personnel.
  - (b) Ensuring that a qualified person instructs construction personnel to be aware of wildlife in the area and to take precautions to avoid injuring or destroying wildlife or significant wildlife habitat.
    - (c) Avoiding unnecessary road construction, temporary disturbance and vehicle use.

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

- 29 (58) The certificate holder shall design and construct all aboveground transmission line support 30 structures following the practices suggested by the Avian Powerline Interaction Committee 31 (APLIC 1996, referenced in the site certificate application, p. P-33) and shall install anti-32 perching devices on transmission pole tops and cross arms where the poles are located 33 within one-half mile of any wind turbine.
- (59) The certificate holder may construct turbines and other facility components within the 500-foot corridors shown on Figures P-1 through P-10 of the site certificate application and March 2006 supplement, and Figure 7-1 to Attachment 5 of the Request for Amendment #3, subject to the following requirements addressing potential habitat impact:

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

- (b) The certificate holder shall design and construct facility components that are the minimum size needed for safe operation of the energy facility.
- (c) To the extent possible, the certificate holder shall construct facility components in the locations shown on Figure C-2 of the March 2006 site certificate application supplement. and Figure 7-1 to Attachment 5 of the Request for Amendment #3.
- (d) Prior to constructing any turbines or permanent related or supporting facilities within the northward extension of Corridor 3 shown on Figure 2a of Request for Amendment #3, the certificate holder shall provide the Department with maps and calculations documenting the additional permanent impacts, if any, to Category 3 and Category 4 habitat predicted to result from the construction. The certificate holder's obligations under the Habitat Mitigation Plan that is incorporated in the Final Order on Amendment #2 as Attachment C shall include mitigation for any such additional impacts to Category 3 and Category 4 habitat.

  [Amendment #3]
- (60) During construction, the certificate holder shall protect the area within a 1300-foot buffer around any active nests of the following species during the sensitive period, as provided in 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

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

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

In addition, the certificate holder shall flag the boundaries of the 1300-foot buffer area, or such lesser distance as may be approved by the Department in the event there is an adequate physical barrier between the nest site and the construction impacts, and shall instruct construction personnel to avoid any unnecessary activity within the buffer area. The certificate holder shall direct a qualified biologist, approved by the Department, to observe the active nest sites during the sensitive period for signs of disturbance and to notify the Department of any non-compliance with this condition. The Department has approved the qualifications of the four biologists identified in the Final Order on Amendment #2. The

- certificate holder may select other qualified biologists to observe the nest sites, subject to 1 Department approval. If the biologist observes nest site abandonment or other adverse 2 impact to nesting activity, the certificate holder shall implement appropriate mitigation, in 3 consultation with ODFW and subject to the approval of the Department, unless the adverse 4 impact is clearly shown to have a cause other than construction activity. The certificate 5 holder may begin or resume high impact construction activities before the ending day of the 6 sensitive period if any known nest site is not occupied by the early release date. If a nest 7 site is occupied, then the certificate holder may begin or resume high-impact construction 8 before the ending day of the sensitive period with the approval of ODFW, after the young 9 are fledged. The certificate holder shall use a protocol approved by ODFW to determine 10 when the young are fledged (the young are independent of the core nest site). [Amendment #2] 11
- 12 (61) The certificate holder shall conduct wildlife monitoring and mitigation in accordance with 13 the Wildlife Monitoring and Mitigation Plan that is incorporated in the Final Order on 14 Amendment #2 as Attachment A and as may be amended from time to time. [Amendment #2]
- 15 (62) The certificate holder shall restore areas that are temporarily disturbed during construction 16 in accordance with the methods, monitoring procedures and success criteria set forth in the 17 Revegetation Plan that is incorporated in the Final Order on Amendment #2 as Attachment 18 B and as may be amended from time to time. [Amendment #2]
- 19 (63) Before beginning construction of the facility, the certificate holder shall acquire the legal
  20 right to create, maintain and protect a habitat mitigation area for the life of the facility by
  21 means of an outright purchase, conservation easement or similar conveyance and shall
  22 provide a copy of the documentation to the Department. Within the habitat mitigation area,
  23 the certificate holder shall improve the habitat quality in accordance with the Habitat
  24 Mitigation Plan that is incorporated in the Final Order on Amendment #2 as Attachment C
  25 and as may be amended from time to time. [Amendment #2]
- (64) For the life of the project, the certificate holder shall provide to the appropriate staff of the
   Confederated Tribes of the Warm Springs Reservation of Oregon the same annual
   mitigation and monitoring reports it submits to the Department.
- 29 (65) For the life of the project, the certificate holder shall consult annually with the appropriate 30 staff of the Confederated Tribes of the Warm Springs Reservation of Oregon to discuss 31 noxious weed or other issues that may arise from the close proximity of the facility site and 32 tribal lands. The certificate holder shall provide a summary of that consultation in the 33 annual report it provides to the Department.

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

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- 34 (66) Before beginning construction of the facility, the certificate holder shall conduct a site-35 specific geotechnical investigation and shall report its findings to the Oregon Department of 36 Geology & Mineral Industries (DOGAMI). The certificate holder shall conduct the 37 geotechnical investigation after consultation with DOGAMI and in accordance with the 38 Oregon Board of Geologists Examiners guidelines entitled: Guidelines for Engineering 39 Geology Reports and Site-Specific Seismic Hazard Report.
  - (67) The certificate holder shall design and construct the facility in accordance with requirements set forth by the State of Oregon's Building Code Division and any other applicable codes and design procedures.

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

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

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- (69) Before beginning construction of any phase of the facility, the certificate holder shall 4 provide to the Department a map showing the final design locations of all components of 5 that phase of the facility and areas that would be temporarily disturbed during construction 6 and also showing the areas surveyed by CH2M Hill and Archaeological Investigations 7 Northwest, Inc. (AINW) in preparing the Cultural Resources Surveys for Biglow Canyon 8 Wind Farm included in the site certificate application as Attachment S-1 and in Request for 9 Amendment #2 as Attachment 15. The certificate holder shall hire qualified personnel to 10 conduct field investigation of all areas of permanent or temporary disturbance that CH2M 11 Hill and AINW did not previously survey and shall provide to the Department a written 12 report of the field investigation. If any significant historic, cultural or archaeological 13 resources are found during the field investigation, the certificate holder shall ensure that 14 construction and operation of the facility will have no impact on the resources. The 15 certificate holder shall instruct all construction personnel to avoid areas where the resources 16 were found and shall implement other appropriate measures to protect the resources. 17 [Amendment #2] 18
  - (70) The certificate holder shall ensure that a qualified person instructs construction personnel in the identification of cultural resources.
- 21 (71) The certificate holder shall ensure that a qualified archaeologist is present on site during 22 any ground-disturbing activities, including grading and graveling; or, the certificate holder 23 shall implement an alternate monitoring procedure, including a testing strategy, as agreed to 24 in consultation with the Department, SHPO, and the tribes.
  - (72) The certificate holder shall ensure that construction personnel cease all ground-disturbing activities in the immediate area if any archaeological or cultural resources are found during construction of the facility until a qualified archaeologist can evaluate the significance of the find. The certificate holder shall notify the Department and the State Historic Preservation Office (SHPO) of the find. If the archaeologist determines that the resource is significant, the certificate holder shall make recommendations to the Council for mitigation, including avoidance or data recovery, in consultation with the Department, SHPO, and other appropriate parties. The certificate holder shall not restart work in the affected area until the certificate holder has demonstrated to the Department that it has complied with the archaeological permit requirements administered by SHPO.
    - (73) The certificate holder shall ensure that construction personnel proceed carefully in the vicinity of the mapped alignment of the Oregon Trail. If any intact physical evidence of the trail is discovered, the certificate holder shall avoid any disturbance to the intact segments, by redesign, re-engineering or restricting the area of construction activity. The certificate holder shall promptly notify the Department and SHPO of the discovery. The certificate holder shall consult with the Department and with SHPO to determine appropriate mitigation measures.

#### O. Public Services, OAR 345-022-0110

- (74) During construction of the facility, the certificate holder and its contractors shall obtain all water required for construction activities from off-site sources previously permitted for such uses.
- 4 (75) Before beginning operation of the facility, the certificate holder shall have in operation a
  well suitable for delivering water, not exceeding 5,000 gallons per day, for domestic use at
  the facility's O&M buildingbuildings and, provided the rate of extraction would not exceed
  5,000 gallons per day, blade-washing activities. The certificate holder shall not change the
  source of water for the facility's domestic use without prior Council approval. [Amendment
  #3]
  - (76) During operation of the facility, the certificate holder and its contractors shall obtain all water required for blade-washing activities from off-site sources previously permitted for such uses or from the on-site well, provided such use of well water would not cause the rate of extraction to exceed 5,000 gallons in any one-day period.
  - (77) Before beginning construction of the facility, the certificate holder shall develop a system for monitoring state highways and local roads that would serve as transporter routes for delivering equipment to the facility site for degradation, *e.g.*, major potholes, so that safe travel paths may be maintained. The monitoring system shall include site inspection and photographic cataloguing of existing road conditions so that pre-construction conditions can be compared with conditions after construction has been completed. The certificate holder shall coordinate monitoring methods and preferred mitigation efforts with Sherman County Public Works and the Oregon Department of Transportation. [Amendment #1]
  - (78) After completing construction of the facility, the certificate holder shall restore state highways and county roads affected by facility construction activities to at least their preconstruction conditions, to the satisfaction of Sherman County Public Works and the Oregon Department of Transportation.
    - (79) During construction of the facility, the certificate holder shall implement the following measures to reduce traffic delays on county roads serving as transporter routes for delivery of equipment to the facility site:
      - (a) Provide notice to adjacent landowners when construction takes place to help minimize access disruptions;
      - (b) Provide proper road signage and warnings of "Equipment on Road," "Truck Access," or "Road Crossings;"
      - (c) Implement traffic diversion equipment, such as advance signage and pilot cars, whenever possible when slow or oversized loads are being hauled;
        - (d) Encourage carpooling for the construction workforce to reduce traffic volume;
      - (e) Employ flaggers, as necessary, to direct traffic when large equipment is entering or exiting public roads to minimize risk of accidents; and
      - (f) Maintain at least one travel lane at all times so that roadways will not be closed to traffic as a result of construction vehicles entering or exiting public roads.

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

- 1 (80) The certificate holder shall use hazardous materials in a manner that protects public health, 2 safety and the environment and shall comply with applicable local, state and federal 3 environmental laws and regulations.
- 4 (81) If a spill or release of hazardous materials occurs during construction or operation of the facility, the certificate holder shall notify the Department within 72 hours and shall clean up the spill or release and dispose of any contaminated soil or other materials according to applicable regulations. The certificate holder shall ensure that spill kits containing items such as absorbent pads are located on equipment and storage facilities to respond to accidental spills and shall instruct employees handling hazardous materials in the proper handling, storage and cleanup of these materials.
- 11 (82) During construction of the facility, the certificate holder shall provide portable toilets for 12 on-site sewage handling and shall ensure that the portable toilets are pumped and cleaned 13 regularly by a licensed contractor that is qualified to pump and clean portable toilet 14 facilities.
  - (83) During operation of the facility, the certificate holder shall discharge sanitary wastewater generated at the O&M **buildingbuildings** to a licensed on-site septic system in compliance with county permit requirements. The certificate holder shall design the septic system with a capacity that is less than 2,500 gallons per day.

#### [Amendment #3]

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- (84) During construction of the facility, the certificate holder shall implement a waste management plan that includes but is not limited to the following measures:
  - (a) Training employees to minimize and recycle solid waste;
  - (b) Minimizing the generation of wastes from construction through detailed estimating of materials needs and through efficient construction practices;
    - (c) Recycling steel and other metal scrap;
  - (d) Recycling wood waste;
    - (e) Recycling packaging wastes, such as paper and cardboard;
  - (f) Collecting non-recyclable waste for transport to a landfill by a licensed waste hauler; and
  - (g) Segregating all hazardous wastes, such as used oil, oily rags and oil-absorbent materials, mercury-containing lights and lead-acid and nickel-cadmium batteries for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous wastes.
- (85) The certificate holder may dispose of waste concrete on site with the permission of the landowner and in accordance with OAR 340-093-0080 and other applicable regulations. The certificate holder shall dispose of waste concrete on site by placing the material in an excavated hole, covering the concrete with at least 3 feet of topsoil, and grading the area to match existing contours. If the waste concrete is not disposed of on site, the certificate holder shall arrange for proper disposal in a licensed landfill.
- 40 (86) During construction of the facility, the certificate holder shall ensure that the wash down of 41 concrete trucks occurs only at a contractor-owned batch plant or at tower foundation 42 locations. If such wash down occurs at tower foundation locations, then the certificate

- holder shall ensure that wash down wastewater does not run off the construction site into otherwise undisturbed areas and that the wastewater is disposed of on backfill piles and buried underground with the backfill over the tower foundation.
- 4 (87) During operation of the facility, the certificate holder shall implement a waste management plan that includes but is not limited to the following measures:
  - (a) Training employees to minimize and recycle solid waste;
  - (b) Recycling paper products, metals, glass and plastics;

- (c) Collecting non-recyclable waste for transport to a landfill by a licensed waste hauler; and
- (d) Segregating all hazardous wastes, such as used oil, oily rags and oil-absorbent materials, mercury-containing lights and lead-acid and nickel-cadmium batteries for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous wastes.
- (88) During operation of the facility, the certificate holder may engage in blade-washing activities but shall ensure that these activities do not cause runoff of washwater from the site or discharges to surface waters, storm sewers or dry wells. The certificate holder shall not use acids, bases or metal brighteners with the wash water. The certificate may use biodegradable, phosphate-free cleaners sparingly. [Amendment #2]

#### Q. Noise Control Regulations, OAR 340-035-0035

- (89) To reduce noise impacts at nearby residential areas, the certificate holder shall:
  - (a) Confine the noisiest operation of heavy construction equipment to the daylight hours;
  - (b) Require contractors to install and maintain exhaust mufflers on all combustion engine-powered equipment; and
  - (c) Establish a complaint response system at the construction manager's office to address noise complaints.
  - (90) If the GE 1.5-MW turbines (for which the certificate holder states the maximum sound power level warranted by the manufacturer is 104 dBA) or the GE 3.0-MW turbines (provided the certificate holder is able to demonstrate, by means of the manufacturer's warranty or other means acceptable to the Department, that the maximum sound power level of the GE 3.0-MW turbine is 106 dBA) will be used at the facility, before beginning construction, the certificate holder shall present information demonstrating to the satisfaction of the Department that the following requirements have been met at the 24 identified noise sensitive properties. The identified noise sensitive properties are the properties listed in Table 12 of the Final Order on the Application and further identified in the Final Order on Amendment #2, except for property R14:
    - (a) For any identified noise sensitive property where the previously-predicted maximum hourly  $L_{50}$  noise level caused by the facility would equal or exceed 50 dBA, the certificate holder shall identify the final design locations of all turbines to be built and perform a noise analysis demonstrating, in accordance with OAR 340-035-0035(1)(b)(B)(iii)(IV), that the total hourly  $L_{50}$  noise level generated by the facility would not exceed 50 dBA at the appropriate measurement point. The certificate holder shall perform the noise analysis using the noise model, CADNA/A by DataKustik GmbH of Munich, Germany, and shall assume the following input parameters:

• The exact locations of the proposed turbines

- The environmental factors included in the original noise analysis, *i.e.*, the temperature, relative humidity, barrier effects and ground effects used in the original analysis. If the certificate holder has cause to believe the environmental factors included in the original noise analysis are no longer valid for a particular receiver, the certificate holder shall perform the noise analysis for that receiver using both the environmental factors included in the original noise analysis and the environmental factors the certificate holder now believes to be applicable to that receiver.
- (b) Where the previously-predicted hourly  $L_{50}$  noise levels caused by the facility would exceed 36 dBA but not exceed 50 dBA at any identified noise sensitive property, the certificate holder has obtained a legally effective easement or real covenant pursuant to which the owner of the property authorizes the certificate holder's operation of the facility to increase ambient statistical noise levels  $L_{10}$  and  $L_{50}$  by more than 10 dBA at the appropriate measurement point. A legally effective easement or real covenant shall: (i) include a legal description of the burdened property (the noise sensitive property); (ii) be recorded in the real property records of the county; (iii) expressly benefit the certificate holder; (iv) expressly run with the land and bind all future owners, lessees or holders of any interest in the burdened property; and (v) not be subject to revocation without the certificate holder's written approval.
- (c) If, for any identified noise sensitive property where the previously-predicted hourly  $L_{50}$  noise levels caused by the facility would exceed 36 dBA but not exceed 50 dBA, the certificate holder has not obtained a legally effective easement or real covenant as described in (b) above, the certificate holder shall identify the final design locations of all turbines to be built and perform a noise analysis demonstrating, in accordance with OAR 340-035-0035(1)(b)(B)(iii)(IV), that the total noise generated by the facility (including the noise from turbines and substation transformers) would meet the ambient noise degradation test at the appropriate measurement point on those noise sensitive properties. The certificate holder shall perform the noise analysis using the noise model, CADNA/A by DataKustik GmbH of Munich, Germany, and shall assume the following input parameters:
  - The maximum sound power level of turbines and substation transformers based on the manufacturers' warranty or confirmed by other means acceptable to the Department
  - The exact locations of the proposed turbines
  - The environmental factors included in the original noise analysis, *i.e.*, the temperature, relative humidity, barrier effects and ground effects used in the original analysis. If the certificate holder has cause to believe the environmental factors included in the original noise analysis are no longer valid for a particular receiver, the certificate holder shall perform the noise analysis for that receiver using both the environmental factors included in the original noise analysis and the environmental factors the certificate holder now believes to be applicable to that receiver.

[Amendment #2]

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

- (a) Identify the final design locations of all turbines to be built, perform a noise analysis for all turbines and substation transformers, and generate a new table listing each noise sensitive property, as defined in OAR 340-035-0015(38), and the predicted maximum hourly  $L_{50}$  noise level at each noise sensitive property. The certificate holder shall perform the noise analysis using the noise model, CADNA/A by DataKustik GmbH of Munich, Germany, and shall assume the following input parameters:
  - The maximum sound power level of turbines and substation transformers based on the manufacturers' warranty or confirmed by other means acceptable to the Department
  - The exact locations of the proposed turbines
  - The environmental factors included in the original noise analysis, i.e., the temperature, relative humidity, barrier effects and ground effects used in the original analysis. If the certificate holder has cause to believe the environmental factors included in the original noise analysis are no longer valid for a particular receiver, the certificate holder shall perform the noise analysis for that receiver using both the environmental factors included in the original noise analysis and the environmental factors the certificate holder now believes to be applicable to that receiver.
- (b) Demonstrate to the satisfaction of the Department that the requirements of paragraphs (a), (b) and (c) of Conditions (90) have been met for each noise sensitive property listed on the new table generated under paragraph (a) of this condition, except for any new development of noise sensitive property that occurs after the effective date of the Second Amended Site Certificate.
- 23 [Amendment #2]

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#### R. REMOVAL-FILL LAW

[No conditions]

#### S. GROUND WATER ACT

25 [No conditions]

#### T. PUBLIC HEALTH AND SAFETY

- 26 (92) During operation of the facility, the certificate holder shall maintain built-in fire prevention 27 measures in each turbine that would shut down the turbine automatically before mechanical 28 problems create excess heat or sparks.
- During construction and operation of the facility, the certificate holder shall develop and implement fire management plans in consultation with local fire control authorities to minimize the risk of fire and to respond appropriately to any fires that occur on the facility site. In developing the fire management plans, the certificate holder should take into account the dry nature of the region and should address risks on a seasonal basis.
  - (94) During construction and operation of the facility, the certificate holder shall ensure that each on-site company vehicle contains a fire extinguisher, water spray can, shovel, emergency response procedures book, and two-way radio for immediate communication with the O&M facility.

- 1 (95) During construction of the facility, the certificate holder shall clear vegetation from a 2 laydown area adjacent to each wind turbine where welding, cutting, grinding, or other 3 flame- or spark-producing operations are likely to occur.
- Upon beginning operation of the facility, the certificate holder shall provide to all local fire departments maps of the facility site. During operation of the facility, the certificate holder shall provide to all local fire departments the names and telephone numbers of facility personnel available to respond on a 24-hour basis in case of an emergency on the facility site.
- 9 (97) During operation of the facility, the certificate holder shall ensure that all on-site employees 10 receive annual fire prevention and response training by qualified instructors or members of 11 the local fire department and that all employees are instructed to keep vehicles on roads and 12 off dry grassland, except when off-road operation is required for emergency purposes.
- (98) During operation of the facility, the certificate holder shall ensure that water-carrying 13 trailers ("water buffaloes") are maintained at strategic locations around the facility 14 site and that a water buffalo is always present at a job site where there is substantial 15 risk of fire. Each water buffalo shall be equipped with one-inch hoses, have a capacity 16 of 500 gallons of water, and be equipped with a 5-horsepower pump with a pumping 17 rate of 60 gallons per minute. Each water buffalo shall be capable of being towed by 18 on-site service vehicles or pickup trucks.comply with all other written fire protection 19 recommendations of the Fire Chief of the applicable Rural Fire Protection District 20 and shall promptly provide the Department any correspondence from the Fire Chief 21 altering those recommendations. [Amendment #3] 22
  - (99) The certificate holder shall take reasonable steps to reduce or manage exposure to electromagnetic fields (EMF), consistent with Council findings presented in the "Report of EMF Committee to the Energy Facility Siting Council," March 30, 1993, and subsequent findings. Effective on the date of this site certificate, the certificate holder shall provide information to the public, upon request, about EMF levels associated with the energy facility and related transmission lines.
  - (100) At least 30 days before beginning preparation of detailed design and specifications for the electrical transmission lines, the certificate holder shall consult with the Oregon Public Utility Commission staff to ensure that its designs and specifications are consistent with applicable codes and standards.

# V. CONDITIONS REQUIRED BY COUNCIL RULES

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

The Council recognizes that many specific tasks related to the design, construction, operation and retirement of the facility will be undertaken by the certificate holder's agents or

- contractors. Nevertheless, the certificate holder is responsible for ensuring compliance with all provisions of the site certificate.
  - (101) OAR 345-027-0020(1): The Council shall not change the conditions of the site certificate except as provided for in OAR Chapter 345, Division 27.
- 5 (102) OAR 345-027-0020(2): Except as provided in OAR 345-027-0023(6), before
  6 beginning construction, the The certificate holder shall submit a legal description of the
  7 site to the OfficeDepartment of Energy a legal description of the site within 90 days
  8 after beginning operation of the facility. The legal description required by this rule
  9 means a description of metes and bounds or a description of the site by reference to a
  10 map and geographic data that clearly and specifically identifies the outer boundaries
  11 that contain all parts of the facility. [Amendment #3]
  - (103) OAR 345-027-0020(3): The certificate holder shall design, construct, operate and retire the facility:
    - (a) Substantially as described in the site certificate;

- (b) In compliance with the requirements of ORS Chapter 469, applicable Council rules, and applicable state and local laws, rules and ordinances in effect at the time the site certificate is issued; and
  - (c) In compliance with all applicable permit requirements of other state agencies.
- (104) OAR 345-027-0020(4): The certificate holder shall begin and complete construction of the facility by the dates specified in the site certificate.
- (105) OAR 345-027-0020(5): Except as necessary for the initial survey or as otherwise allowed for wind energy facilities, transmission lines or pipelines under this section, the certificate holder shall not begin construction, as defined in OAR 345-001-0010, or create a clearing on any part of the site until the certificate holder has construction rights on all parts of the site. For the purpose of this rule, "construction rights" means the legal right to engage in construction activities. For wind energy facilities, transmission lines or pipelines, if the certificate holder does not have construction rights on all parts of the site, the certificate holder may nevertheless begin construction, as defined in OAR 345-001-0010, or create a clearing on a part of the site if the certificate holder has construction rights on that part of the site and:
  - (a) The certificate holder has construction rights on that part of the site; and
  - (b) (a) The certificate holder would construct and operate part of the facility on that part of the site even if a change in the planned route of the transmission line or pipeline occurs during the certificate holder's negotiations to acquire construction rights on another part of the site; or
  - (a) The certificate holder would construct and operate part of a wind energy facility on that part of the site even if other parts of the facility were modified by amendment of the site certificate or were not built.

    [Amendment #3]
- (106) OAR 345-027-0020(6): If the Council requires mitigation based on an affirmative finding under any standards of Division 22 or Division 24 of this chapter, the certificate holder shall consult with affected state agencies and local governments designated by the Council and shall develop specific mitigation plans consistent with Council findings under the relevant standards. The certificate holder must submit the mitigation plans to the Office and

- receive Office approval before beginning construction or, as appropriate, operation of the facility.
- 3 (107) OAR 345-027-0020(7): The certificate holder shall prevent the development of any conditions on the site that would preclude restoration of the site to a useful, non-hazardous condition to the extent that prevention of such site conditions is within the control of the certificate holder.

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- (108) OAR 345-027-0020(8): Before beginning construction of the facility, the certificate holder shall submit to the State of Oregon, through the Council, a bond or letter of credit, in a form and amount satisfactory to the Council, in an amount specified in the site certificate to restore the site to a useful, non-hazardous condition. The certificate holder shall maintain a bond or letter of credit in effect at all times until the facility has been retired. The Council may specify different amounts for the bond or letter of credit during construction and during operation of the facility. [Amendment #3]
- (109) OAR 345-027-0020(9): The certificate holder shall retire the facility if the certificate holder permanently ceases construction or operation of the facility. The certificate holder shall retire the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110. The certificate holder shall pay the actual cost to restore the site to a useful, non-hazardous condition at the time of retirement, notwithstanding the Council's approval in the site certificate of an estimated amount required to restore the site.
- 20 (110) OAR 345-027-0020(10): The Council shall include as conditions in the site certificate all representations in the site certificate application and supporting record the Council deems to be binding commitments made by the applicant.
- combustible material resulting from clearing of land and construction of the facility.
- 29 (112) OAR 345-027-0020(12): The certificate holder shall design, engineer and construct the facility to avoid dangers to human safety presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events. As used in this rule "seismic hazard" includes ground shaking, landslide, liquefaction, lateral spreading, tsunami inundation, fault displacement and subsidence.
- OAR 345-027-0020(13): The certificate holder shall notify the Office, the State Building
  Codes Division and the Department of Geology and Mineral Industries promptly if site
  investigations or trenching reveal that conditions in the foundation rocks differ significantly
  from those described in the application for a site certificate. After the Office receives the
  notice, the Council may require the certificate holder to consult with the Department of
  Geology and Mineral Industries and the Building Codes Division and to propose mitigation
  actions.
- 41 (114) OAR 345-027-0020(14): The certificate holder shall notify the Office, the State Building
  42 Codes Division and the Department of Geology and Mineral Industries promptly if shear

zones, artesian aquifers, deformations or clastic dikes are found at or in the vicinity of the site.

- (115) OAR 345-027-0020(15): Before any transfer of ownership of the facility or ownership of the site certificate holder, the certificate holder shall inform the Office of the proposed new owners. The requirements of OAR 345-027-0100 apply to any transfer of ownership that requires a transfer of the site certificate.
- (116) OAR 345-027-0020(16): If the Council finds that the certificate holder has permanently ceased construction or operation of the facility without retiring the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, the Council shall notify the certificate holder and request that the certificate holder submit a proposed final retirement plan to the Office within a reasonable time not to exceed 90 days. If the certificate holder does not submit a proposed final retirement plan by the specified date, the Council may direct the Office to prepare a proposed a final retirement plan for the Council's approval. Upon the Council's approval of the final retirement plan, the Council may draw on the bond or letter of credit described in section OAR 345-027-0020(8) to restore the site to a useful, non-hazardous condition according to the final retirement plan, in addition to any penalties the Council may impose under OAR Chapter 345, Division 29. If the amount of the bond or letter of credit is insufficient to pay the actual cost of retirement, the certificate holder shall pay any additional cost necessary to restore the site to a useful, non-hazardous condition. After completion of site restoration, the Council shall issue an order to terminate the site certificate if the Council finds that the facility has been retired according to the approved final retirement plan. [Amendment #3]
  - (117) OAR 345-027-0023(4): If the energy facility or related or supporting facility is a transmission line, the certificate holder shall restore the reception of radio and television at residences and commercial establishments in the primary reception area to the level present prior to operations of the transmission line, at no cost to residents experiencing interference resulting from the transmission line. [Condition removed by Amendment #3]
  - (118) OAR 345-027-0023(54): If the facility includes any high voltage transmission line under Council jurisdiction:
    - (a) The certificate holder shall design, construct and operate the transmission line in accordance with the requirements of the National Electrical Safety Code (American National Standards Institute, Section C2, 1997 Edition); and
    - (b) The certificate holder shall develop and implement a program that provides reasonable assurance that all fences, gates, cattle guards, trailers, or other objects or structures of a permanent nature that could become inadvertently charged with electricity are grounded or bonded throughout the life of the line.

      [Amendment #3]
  - (119) OAR 345-027-0023(65): If the proposed energy facility is a pipeline or a transmission line or has, as a related or supporting facility, a pipeline or transmission line, the Council shall specify an approved corridor in the site certificate and shall allow the certificate holder to construct the pipeline or transmission line anywhere within the corridor, subject to the conditions of the site certificate. If the applicant has analyzed more than one corridor in its application for a site certificate, the Council may, subject to the Council's standards, approve more than one corridor. Before beginning operation of the facility, the

- (120) OAR 345-027-0028: The following general monitoring conditions apply:
  - (a) The certificate holder shall consult with affected state agencies, local governments and tribes and shall develop specific monitoring programs for impacts to resources protected by the standards of divisions 22 and 24 of this chapter OAR Chapter 345 and resources addressed by applicable statutes, administrative rules and local ordinances. The certificate holder must submit the monitoring programs to the Office of Energy and receive Office approval before beginning construction or, as appropriate, operation of the facility.
  - (b) The certificate holder shall implement the approved monitoring programs described in section (a OAR 345-027-0028(1)) and monitoring programs required by permitting agencies and local governments.
  - (c) For each monitoring program described in sections (a OAR 345-027-0028(1)) and (b2), the certificate holder shall have quality assurance measures approved by the Office before beginning construction or, as appropriate, before beginning commercial operation.
  - (d) If the certificate holder becomes aware of a significant environmental change or impact attributable to the facility, the certificate holder shall, as soon as possible, submit a written report to the Office describing the impact on the facility and any affected site certificate conditions.

[Amendment #3]

- (121) OAR 345-026-0048: Following receipt of the site certificate or an amended site certificate, the certificate holder shall implement a plan that verifies compliance with all site certificate terms and conditions and applicable statutes and rules. As a part of the compliance plan, to verify compliance with the requirement to begin construction by the date specified in the site certificate, the certificate holder shall report promptly to the Office of Energy when construction begins. Construction is defined in OAR 345-001-0010. In reporting the beginning of construction, the certificate holder shall describe all work on the site performed before beginning construction, including work performed before the Council issued the site certificate, and shall state the cost of that work. For the purpose of this exhibit, "work on the site" means any work within a site or corridor, other than surveying, exploration or other activities to define or characterize the site or corridor. The certificate holder shall document the compliance plan and maintain it for inspection by the Department or the Council. [Amendment #3]
- (122) OAR 345-026-0080: The certificate holder shall report according to the following requirements:
  - (a) General reporting obligation for non-nuclearenergy facilities under construction or operating:
  - (i) Within six months after beginning construction, and every six months thereafter during construction of the energy facility and related or supporting facilities, the certificate holder shall submit a semiannual construction progress report to the Council Department of Energy. In each construction progress report, the certificate holder shall describe any significant changes to major milestones for construction. The certificate holder shall include such information related to construction as specified in the site

- (ii) The certificate holder shall, within 120 days after the end By April 30 of each calendar-year after beginning construction, the certificate holder shall submit an annual report to the Council Department addressing the subjects listed in this rule. OAR 345-026-0080. The Council secretary Secretary and the certificate holder may, by mutual agreement, change the reporting date.
- (iii) To the extent that information required by this rule OAR 345-026-0080 is contained in reports the certificate holder submits to other state, federal or local agencies, the certificate holder may submit excerpts from such other reports to satisfy this rule. The Council reserves the right to request full copies of such excerpted reports.
- (b) In the annual report, the certificate holder shall include the following information for the calendar year preceding the date of the report:
- (i) Facility Status: An overview of site conditions, the status of facilities under construction, and a summary of the operating experience of facilities that are in operation. In this section of the annual report, the certificate holder shall describe any unusual events, such as earthquakes, extraordinary windstorms, major accidents or the like that occurred during the year and that had a significant adverse impact on the facility.
  - (ii) Reliability and Efficiency of Power Production: For electric power plants,
- (A) The Reliability and Efficiency of Power Production: For electric power plants, the plant availability and capacity factors for the reporting year. If The certificate holder shall describe any equipment failures or plant breakdowns that had a significant impact on those factors, the certificate holder and shall describe them and its plans to minimize or eliminate their any actions taken to prevent the recurrence; of such problems.
  - Fuel Use: For thermal power plants:

- (B) The efficiency with which the power plant converts fuel into electric energy. If the fuel chargeable to power heat rate was evaluated when the facility was sited, the certificate holder shall calculate efficiency using the same formula and assumptions, but using actual data; and
- (C) The facility's annual hours of operation by fuel type and, every five years after beginning operation, a summary of the annual hours of operation by fuel type as described in OAR 345-024-0590(5).
- (iii) Status of Surety Information: Documentation demonstrating that bonds or letters of credit as described in the site certificate are in full force and effect and will remain in full force and effect for the term of the next reporting period.
- (iv) Industry Trends: A discussion of any significant industry trends that may affect the operations of the facility;
- Monitoring Report: A list and description of all significant monitoring and mitigation activities performed during the previous year in accordance with site certificate terms and conditions, a summary of the results of those activities, and a discussion of any significant changes to any monitoring or mitigation program, including the reason for any such changes.
- (vi) Compliance Report: A description of all instances of noncompliance with a site certificate condition. For ease of review, the certificate holder shall, in this section of

- the report, use numbered subparagraphs corresponding to the applicable sections of the site certificate.
  - (vii) Facility Modification Report: A summary of changes to the facility that the certificate holder has determined do not require a site certificate amendment in accordance with OAR 345-027-0050; and 0050.
  - (viii) Nongenerating Facility Carbon Dioxide Emissions: For nongenerating facilities that emit carbon dioxide, a report of the annual fuel use by fuel type and annual hours of operation of the carbon dioxide emitting equipment as described in OAR 345-024-0630(4).

[Amendment #3]

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- (123) OAR 345-026-0100: The certificate holder shall promptly notify the Office of Energy of any changes in major milestones for construction, decommissioning, operation or retirement schedules. Major milestones are those identified by the certificate holder in its construction, retirement or decommissioning plan. [Condition removed by Amendment #3]
- (124) OAR 345-026-0105: The certificate holder and the Office of Energy shall exchange copies of all correspondence or summaries of correspondence related to compliance with statutes, rules and local ordinances on which the Council determined compliance, except for material withheld from public disclosure under state or federal law or under Council rules. The certificate holder may submit abstracts of reports in place of full reports; however, the certificate holder shall provide full copies of abstracted reports and any summarized correspondence at the request of the Office of Energy.
- (125) OAR 345-026-0170: The certificate holder shall notify the Office of Energy within 72 hours of any occurrence involving the facility if:
  - (a) There is an attempt by anyone to interfere with its safe operation;
  - (b) A natural event such as an earthquake, flood, tsunami or tornado, or a human-caused event such as a fire or explosion affects or threatens to affect the public health and safety or the environment; or
    - (c) There is any fatal injury at the facility.

#### VI. CONDITIONS RELATING TO AMENDMENT #2

- 30 (126) Prior to any disturbance in the areas of the site added in the Final Order for Amendment 31 #2, the certificate holder shall deliver to the Department the results of a spring survey of 32 Crossing G, conducted during the appropriate bloom time for Northern wormwood and 33 Henderson's ricegrass. If Northern wormwood or any other protected rare plant species are 34 observed during the spring survey, the certificate holder shall ensure that construction and 35 operation of the facility will have no impact on the rare plant habitat. [Amendment #2]
- 127) The certificate holder shall avoid any disturbance, including the placement of poles for the collector line, within 25 feet of the stream channel in the area identified as Crossing G in the Request for Amendment #2 and within a wetland area identified as "POWHX" on Figure J-1 of the site certificate application. [Amendment #2]

# VII. CONDITIONS RELATING TO AMENDMENT #3

- 1 (128) With respect to any turbine located within a corridor approved by the Council after
  2 November 21, 2007, the certificate shall not locate such turbine within the setback
  3 prescribed by Section 4 of the Sherman County Wind Power Set Back Ordinance
  4 (Ordinance No. 39-2007) unless the Council has approved a variance to such setback
  5 for the turbine or the certificate holder has negotiated a setback agreement with the
  6 affected adjacent property owner or wind project developer. [Amendment #3]
  - (129) The certificate holder shall avoid any disturbance within 25 feet of the stream channel in the area identified as Crossing H in the Request for Amendment #3 and shall install any collector line through the area by tunneling or drilling beneath the stream channel. [Amendment #3]

# VIII. VII. SUCCESSORS AND ASSIGNS

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

# IX. VIII. SEVERABILITY AND CONSTRUCTION

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

# X. IX. GOVERNING LAW AND FORUM

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

#### XI. X.-EXECUTION

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

- 1 IN WITNESS WHEREOF, this site certificate has been executed by the State of Oregon, acting
- 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:	By: Print:
Date:	Date: