

EXHIBIT DD

SPECIFIC STANDARDS

If the proposed facility is a facility for which the Council has adopted specific standards, information about the facility providing evidence to support findings by the Council as required by the following rules:

(A) For wind energy facilities, OAR 345-024-0010 and 0015.

(B) For surface facilities related to underground gas storage reservoirs, OAR 345-024-0030, including information required by OAR 345-021-0020.

(C) For any transmission line under Council jurisdiction, OAR 345-024-0090.

In its First Amended Project Order dated July 12, 2011, the Department requested that Exhibit DD include:

Paragraph (A) and (C) apply.

Wind energy facilities

Public Health and Safety Standards for Wind Energy Facilities

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

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

All facility components will be sited on private land, posted against trespass. To further limit proximity to turbine blades, Applicant proposes the following Condition:

The Certificate Holder shall construct all facility components in compliance with the following setback requirements:

- (a) All facility components must be at least 3,520 feet from the property line of properties zoned residential use or designated in the Gilliam County Comprehensive Plan as residential.
- (b) Where (a) does not apply, the Certificate Holder shall maintain a minimum distance of 110-percent of maximum blade tip height, measured from the centerline of the turbine tower to the nearest edge of any public road right-of-way. The Certificate Holder shall assume a minimum right-of-way width of 60 feet.

- (c) Where (a) does not apply, the Certificate Holder shall maintain a minimum distance of 1,320 feet, measured from the centerline of the turbine tower to the center of the nearest residence existing at the time of tower construction.
- (d) Where (a) does not apply, the Certificate Holder shall maintain a minimum distance of 110-percent of maximum blade tip height, measured from the centerline of the turbine tower to the nearest boundary of the certificate holder's lease area, unless the owner of the adjacent property has executed a waiver-of-set-back agreement.
- (e) The Certificate Holder shall construct turbine towers with no exterior ladders or access to the turbine blades and shall install locked tower access doors. The Certificate Holder shall keep tower access doors locked at all times except when authorized personnel are present.

Applicant has included waiver-of-setback language in the Condition proposed above to address situations where Applicant may excise a land area from its wind lease and thereby from its site boundary. Excisions may happen because subsequent surveys show that excision is a more rational alternative to dealing with the possibility of impacts on, for example, Cultural Resources.

The example of Shepherds Flat Central is instructive. The Certificate Holder (Applicant's sister-company) discovered that an area it intended to develop was occupied by the foundations of a long-removed airways beacon installation. SHPO determined that the airways installation was a significant Cultural Resource. Certificate Holder removed the installation area from its development footprint and lease, and subsequently discovered that this removal was warranted because none could determine whether or not the supply of fuel to light the airways beacons might have introduced an environmental hazard.

The Certificate Holder for Shepherds Flat Central, believing that the government's failure to remove its installations should not adversely affect the landowners right to otherwise develop its land, carved out an exception to the "lease area" setback.

Applicant wishes to carve out a "lease area" setback exception to address any similar injustices.

To further limit proximity to electrical equipment, Applicant proposes the following Condition:

To protect the public from electrical hazards, the certificate holder shall enclose the facility substations with appropriate fencing and locked gates.

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

Applicant's potential equipment suppliers (please see Exhibit B) have an excellent safety record. However, equipment failure has been known to occur. To protect the public, Applicant proposes the following Conditions:

The Certificate Holder shall install and maintain self-monitoring devices on each turbine, connected to a fault annunciation panel or supervisory control and data acquisition (SCADA) system to alert operators to potentially dangerous conditions. The Certificate Holder shall maintain automatic equipment protection features in each turbine that would shut down the turbine and reduce the chance of a mechanical problem causing a fire.

The Certificate Holder shall have an operational safety-monitoring program and shall inspect all turbine and turbine tower components on a regular basis. The Certificate Holder shall maintain or repair turbine and turbine tower components as necessary to protect public safety.

Cumulative Effects Standard for Wind Energy Facilities

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

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

Access to the facility site is provided by existing county roads, which are sufficient to handle the delivery of heavy equipment and long-loads (please see Exhibit U). However, most facility turbines will be located in wheat fields which are not now crossed by existing roads. Wheat fields generally offer limited habitat quality (please see Exhibit P), but Applicant has proposed the fewest practicable string roads (please see Exhibit C) of the narrowest practical width (please see Exhibit B) so as to limit impacts to agriculture.

- (2) Using underground transmission lines and combining transmission routes.

Applicant's preferred layout would place all proposed 34.5 kV transmission (the collector system) underground, with the option to include limited overhead collection lines in places where underground lines are not practical or to provide for the avoidance of features (geotechnical, cultural resources) which might be discovered later.

Applicant's 230 kV Transmission Option S (the preferred Option) will share the use of existing 230kV power poles for approximately 70% of its length, and (while requiring new power poles for the remainder) will parallel existing transmission corridors for all but 4.2 miles (please see Exhibits B and C).

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

Applicant's preferred interconnect location is the existing BPA Slatt Substation. BPA's Diamond Butte Substation, Applicant's alternate location, is being developed to serve more than one energy facility.

Applicant has proposed two facility substations, in order to serve two geographically separated areas of the Saddle Butte Wind Park.

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

Most facility turbines are sited on wheat fields, which (because they are tilled and or harvested annually) provide limited habitat for vulnerable wildlife. The site contains no bluff edges, and site boundary or topographical considerations preclude placement of turbines at the top of the steep slopes above Fourmile and Eightmile Canyons which might be used by soaring raptors. Applicant proposes the following Conditions to further protect injury to raptors:

The Certificate Holder shall design all aboveground transmission line support structures following the most current suggested practices for avian protection on power lines published by the Avian Power Line Interaction Committee.

The Certificate Holder shall reduce the risk of injuries to avian species by:

- (a) Installing turbine towers that are smooth steel structures that lack features that would allow avian perching.
- (b) Installing permanent meteorological towers that are non-guyed structures to eliminate the risk of avian collision with guy-wires.
- (c) Avoiding installation of aboveground transmission lines across narrow saddles, ravines and similar features and, where such crossings cannot be avoided, installing line-markers to make the lines more visible to avian species.

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

Applicant proposes the following Conditions to minimize adverse visual features:

To reduce the visual impact of the facility, the Certificate Holder shall:

- (a) Mount nacelles on smooth, steel structures, painted uniformly in a matte-finish, neutral white color.
- (b) Paint substation structures in a neutral color to blend with the surrounding landscape.
- (c) Not allow any advertising to be used on any part of the facility.

The Certificate holder shall design and construct the O&M buildings to be generally consistent with the character of similar buildings used by commercial farmers or ranchers in the area and shall paint the building in a neutral color to blend with the surrounding landscape.

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

Applicant proposes the following Condition to minimize lighting and glare:

The Certificate Holder shall not use exterior nighttime lighting except:

- (a) The minimum turbine tower lighting required or recommended by the Federal Aviation Administration.
- (b) Security lighting at the O&M buildings and substations, provided that such lighting is shielded or downward-directed to reduce glare.
- (c) Minimum lighting necessary for repairs or emergencies.
- (d) Minimum lighting necessary for nighttime construction. The Certificate Holder may use lighting only at work location and only 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.

Transmission lines

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

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

Predicted Electric and Magnetic Fields

Applicant's report showing 230 kV/ 35 kV electric and magnetic field calculations may be found in Attachment DD.

For underground 34.5 kV collector lines, no electric field will be measurable at one meter above ground surface. The insulation around the conductor cables, and the presence and configuration of the grounded concentric neutral ensures no current passes from the conductors to the ground or between adjacent conductors. Collector lines will be buried a minimum of three feet below the surface. The soil above buried lines provides shielding for electric fields, but does not eliminate magnetic fields. The cable insulation and concentric neutral provide some shielding of magnetic fields.

Applicant proposes the following Condition:

Certificate Holder shall design and maintaining all transmission lines so that alternating current electric fields do not exceed 9 kV per meter at one meter above the ground surface in areas accessible to the public.

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

Induced voltage and current effects caused by the field strengths calculated for the Saddle Butte Wind Park generally cause nuisance shocks rather than present a hazard. Effects would be highest for long objects that are parallel and close to the transmission line, such as fences, agricultural irrigation pipes, railroad tracks, fuel pipelines and other transmission lines.

Applicant proposes the following Condition:

The Certificate Holder shall ground appropriate sections of fencing that parallel transmission lines to reduce the risk of shock from induced voltage.

Note that irrigation pipes, above-ground fuel pipelines, and railroad tracks are not present within the site boundary.