
Notice of Intent for a Site Certificate for the Baseline Wind Energy Facility

Gilliam County, Oregon

Prepared for



June 2010

Prepared by



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Acronyms and Abbreviations

AC/DC	alternating current/direct current
aMW	average megawatts
ASC	Application for Site Certificate
BLM	Bureau of Land Management
BMP	best management practice
BPA	Bonneville Power Administration
CFR	Code of Federal Regulations
CWA	Clean Water Act
DEQ	Department of Environmental Quality
EFSC	Energy Facility Siting Council
EFU	Exclusive Farm Use
FAA	Federal Aviation Administration
ft	feet
gpd	gallons per day
I-84	Interstate 84
kV	kilovolt
LLC	limited liability company
m	meter
met	meteorological
mgd	million gallons per day
MW	megawatt
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWC	Northwest Wildlife Consultants, Inc.
NWI	National Wetlands Inventory
O&M	Operations and Maintenance
OAR	Oregon Administrative Rule
ODE	Oregon Department of Energy
ODFW	Oregon Department of Fish and Wildlife
ORE	Oregon Highway
ORBIC	Oregon Biodiversity Information Center
ORS	Oregon Revised Statute
OWRD	Oregon Water Resources Department

PCB	polychlorinated biphenyls
rpm	revolutions per minute
SCADA	Supervisory Control and Data Acquisition
SHPO	State Historic Preservation Officer
sq ft	square feet
U.S.	United States
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
V	volt

EXHIBIT A

Applicant Information

OAR 345-020-0011(1)(a)

(a) **Exhibit A.** Information about the applicant and participating persons, including:

(A) *The name and address of the applicant, including all co-owners of the proposed facility, the name, mailing address and telephone number of the contact person for the NOI, and if there is a contact person other than the applicant, the name, title, mailing address and telephone number of that person;*

RESPONSE

Applicant name and mailing address:

Baseline Wind, LLC
An affiliate of First Wind Holdings, LLC
179 Lincoln Street, Suite 500
Boston, MA 02111

Contact persons, mailing address, and telephone number:

Ben Fairbanks, Development Director
First Wind Energy, LLC
1001 SW 5th Avenue, Suite 1100
Portland, OR 97204
(503) 535-0611

Irina Makarow, Northwest Environmental Permitting Manager
First Wind Energy, LLC
1001 SW 5th Avenue, Suite 1100
Portland, OR 97204
(503) 535-0611

Contact persons other than the Applicant:

Corrinne Atkinson
HDR Engineering, Inc.
1001 SW 5th Avenue, Suite 1800
Portland, OR 97204
(503) 423-3785

Timothy McMahan
Stoel Rives, LLP
900 SW Fifth Avenue, Suite 2600
Portland, OR 97204
(503) 294-9517

Evelyn Lim
Senior Vice President and Deputy General Counsel
First Wind Energy, LLC
179 Lincoln Street, Suite 500
Boston, MA 02111
(617) 960-9650

- (B) *The contact name, address and telephone number of all participating persons, other than individuals, including but not limited to any parent corporation of the applicant, persons upon whom the applicant will rely for third-party permits or approvals related to the facility, and persons upon whom the applicant will rely in meeting any facility standard adopted by the Council.*

RESPONSE

Parent company:

First Wind Holdings, LLC
179 Lincoln Street, Suite 500
Boston, MA 02111

Contact persons, mailing address, and telephone number:

Ben Fairbanks, Development Director
First Wind Energy, LLC
1001 SW 5th Avenue, Suite 1100
Portland, OR 97204
(503) 535-0611

- (C) *If the applicant is a corporation, it shall give:*
- (i) *The full name, official designation, mailing address and telephone number of the officer responsible for submitting the NOI;*
 - (ii) *The date and place of its incorporation;*
 - (iii) *A copy of its articles of incorporation and its authorization for submitting the NOI; and*
 - (iv) *In the case of a corporation not incorporated in Oregon, the name and address of the resident attorney-in-fact in this state and proof of registration to do business in Oregon.*

RESPONSE

The Applicant is a Delaware limited liability company (LLC) and not a corporation. The requested information under Section (C) is as follows:

- (i) The officer responsible for submitting the NOI is as follows:

Evelyn Lim
 Senior Vice President and Deputy General Counsel
 First Wind Energy, LLC
 179 Lincoln Street, Suite 500
 Boston, MA 02111
 (617) 960-9650

- (ii) Baseline Wind, LLC was organized and acknowledged by the Oregon Secretary of State on April 30, 2010 in Salem, Oregon as a foreign LLC. A Certificate of Formation was filed on June 19, 2008, for Harvest Wind Energy, LLC with the Delaware Secretary of State. A Certificate of Amendment was filed on May 6, 2010 with the Delaware Secretary of State recognizing the name change from Harvest Wind Energy, LLC to Baseline Wind, LLC.
 - (iii) Authority to Transact for the Applicant is provided in Attachment A-1. The Certificate of Formation for the Applicant is provided in Attachment A-2.
 - (iv) Not applicable. Baseline Wind, LLC is a limited liability company authorized to do business in the State of Oregon.
- (D) *If the applicant is a wholly owned subsidiary of a company, corporation or other business entity, in addition to the information required by paragraph (C), it shall give the full name and business address of each of the applicant's full or partial owners;*

RESPONSE

Baseline Wind, LLC is owned by First Wind Oregon Holdings, LLC, a wholly owned subsidiary of First Wind Holdings, LLC, the parent of the First Wind group of companies. The name and business address of First Wind Holdings, LLC is as follows:

First Wind Holdings, LLC
 179 Lincoln Street, Suite 500
 Boston, MA 02111

- (E) *If the person submitting the NOI is an association of citizens, a joint venture or a partnership, it shall give:*
- (i) *The full name, official designation, mailing address and telephone number of the person responsible for submitting the NOI;*
 - (ii) *The name, business address and telephone number of each person participating in the association, joint venture or partnership and the percentage interest held by each;*
 - (iii) *Proof of registration to do business in Oregon;*
 - (iv) *A copy of its articles of association, joint venture agreement or partnership agreement and a list of its members and their cities of residence; and*
 - (v) *If there are no articles of association, joint venture agreement or partnership agreement, the applicant shall state that fact over the signature of each member;*

RESPONSE

The Applicant is not an association of citizens, joint venture, or partnership.

- (F) *If the applicant is a public or governmental entity, it shall give:*
- (i) *The full name, official designation, mailing address and telephone number of the person responsible for submitting the NOI; and*
 - (ii) *Written authorization from the entity's governing body to submit an NOI;*

RESPONSE

The Applicant is not a public or governmental entity.

- (G) *If the applicant is an individual, the individual shall give his or her mailing address and telephone number;*

RESPONSE

The Applicant is not an individual.

EXHIBIT B

Facility Description

OAR 345-020-0011(1)(b)

(b) **Exhibit B.** Information about the proposed facility, including:

(A) A description of the proposed energy facility, including as applicable:

(i) The nominal electric generating capacity and the average electrical generating capacity, as defined in ORS 469.300.

RESPONSE

The Applicant proposes to construct the Baseline Wind Energy Facility (Facility) with a nominal generating capacity of up to 500 megawatts (MW) in Gilliam County, Oregon. The average generating capacity of the Facility would be up to approximately 167 average MW (aMW) of energy.

Facility construction is expected to begin in late 2011 or early 2012 after issuance of the Site Certificate. The beginning of commercial operation is expected at the end of 2012.

(ii) Major components, structures and systems, including a description of the size, type and configuration of equipment used to generate electricity and useful thermal energy.

RESPONSE

The proposed Facility will be located in Gilliam County in north-central Oregon, approximately 7 miles south of Arlington, Oregon. Electrical power from the proposed Facility will interconnect to the proposed Diamond Butte Substation and existing Bonneville Power Administration's (BPA) Ash-Marion 500 kilovolt (kV) transmission line.

The major Facility components used to generate electricity are wind turbine generators. Wind turbines consist of 3 primary components: a tubular steel tower, rotor blades, and a nacelle. These components are assembled on a turbine foundation. The basic components of the wind turbine generators are described in the following sections. The wind turbines would be grouped in linear strings. Figure G-2 illustrates the approximate location of Facility components.

In the Application for Site Certificate (ASC) the Applicant will request the flexibility to select a turbine vendor, turbine size, and resulting turbine number and layout after issuance of the Site Certificate. The ASC will propose "micrositing corridors" for project elements to enable comprehensive regulatory review while allowing flexibility in the final layout. The ASC will analyze impacts for turbines that represent the expected range of technologies from which a final model will be chosen. For each resource subject to a Council standard, the ASC will present the "worst case scenario" describing the potential impacts of the turbines under consideration. Thus, the ASC will ensure that the Facility will meet all Council standards regardless of the turbine type chosen from the turbine models analyzed.

Turbine Towers

The towers supporting the wind turbines will be tapered monopoles. The towers are assembled at each turbine pad from 3 or 4 prefabricated sections (base, middle or lower-middle and top-middle, and top). At this time, the Applicant anticipates that the wind turbine towers will range from approximately 262 feet (ft) (80 meters (m)) to 328ft (100 m) high at hub height and the total height from tower base to blade tip will range from approximately 389 ft (119 m) to 492 ft (150 m), depending on the vendor. Attachment B, Figure B-1, illustrates typical wind turbine and tower components. Typical tower heights in response to OAR 345-020-0011(1)(b) (C) are shown in Table B-1. The facility dimensions and ranges used to show compliance with Council standards will be determined prior to filing the ASC.

Access to each tower will be provided through a locked entry door and an internally-mounted ladder and safety platforms leading up to the nacelle housing. Electricity generated in the wind turbine generator is transmitted to the base of the tower through electrical cables. A controller cabinet is located inside the base of the tower. The turbine towers will be mounted on concrete foundations described in more detail below.

Turbine Foundations

The wind turbine towers will be mounted on reinforced concrete foundations, which will be located on an approximately 40-foot-diameter graveled pad. The actual foundation design for each turbine/tower assembly will be determined based on site-specific geotechnical information and structural loading requirements for the turbine model selected for the Facility. Typically, turbine tower foundations are of the pier or spread-foot type. Attachment B, Figure B-2, illustrates typical foundation types. The foundation is typically buried with approximate soil cover of 3 ft below grade, and will range in size from approximately 48 ft (15 m) to 80 ft (24 m) in diameter.

During construction, additional temporary laydown areas may be located beside the turbine foundation to facilitate turbine and tower installation.

Rotor Blades

Wind turbine generators are powered by the movement of 3 fiberglass epoxy or polyester resin blades connected to a central rotor hub. Wind creates lift on the blades, causing the rotor hub to spin. This rotation is transferred to a gearbox where the speed of rotation is increased to the speed required for the attached electric generator that is housed in the nacelle. The rotor blades typically turn at 20 revolutions per minute (rpm) or less. The diameter of the circle covered by the rotors would range from approximately 253 ft (77 m) to 328 ft (100 m). Individual rotor blades, hubs, and nacelles are delivered to the Facility and are assembled as they are mounted on the turbine towers. Typical rotor dimensions in response to OAR 345-020-0011(1)(b) (C) are shown in Table B-1.

Nacelle

The nacelle houses equipment such as the gearbox, electrical generators, and various pieces of control equipment and supports the turbine blades and hub. Together, the blades, hub, and nacelle weigh approximately 90 to 95 tons. A yaw system is mounted between the nacelle and the top of the tower on which the nacelle resides. The yaw system is composed of a bearing surface for directional rotation of the turbine, and a drive system consisting of a drive motor(s) to keep the turbine pointed into the wind to maximize energy capture. A wind vane and anemometer are mounted at the rear of the nacelle to signal the controller with wind speed and direction information.

Safety and emergency systems are incorporated into the design of the wind turbines to ensure safe and reliable operation, including: multiple braking systems; automatic shut-down systems; automatic, manual, and remote turbine controls; tower-access safety systems; and lightning protection. Some turbines will include aviation warning lights as required by the Federal Aviation Administration (FAA). The number of turbines with lights and the lighting pattern of the turbines will be determined in consultation with the FAA once the final turbine model and layout are determined.

- (iii) *Methods for waste management and waste disposal, including, to the extent known, the amount of wastewater the applicant anticipates, the applicant's plans for disposal of wastewater and storm water, and the location of disposal;*

RESPONSE

During construction, solid waste disposal for the Facility will be provided by private contract with a local commercial hauler or haulers. Solid wastes will be collected and disposed of at approved locations such as permitted landfills. Temporary sanitary facilities will be installed for use by construction workers, with sanitary wastes being removed and disposed of by approved haulers.

Operation of the electrical generating and transmission components of the Facility will not produce wastewater. Sanitary waste will be produced at the Operations and Maintenance (O&M) building described below. Sanitary waste will be disposed of in an approved septic system constructed at the O&M building. During construction solid waste will be collected, managed, and disposed of at approved landfills or waste transfer locations.

Storm water runoff is expected to infiltrate the ground surface. The Facility will be constructed with site-specific storm water management systems, consistent during construction with a National Pollutant Discharge Elimination System (NPDES) 1200-C Construction Storm Water Permit issued by the Oregon Department of Environmental Quality (DEQ).

Further details of storm water drainage, water, solid waste management, and sewage treatment during both construction and operations are discussed in Exhibit K.

- (iv) *For thermal power plants:*
- I. *A discussion of the source, quantity and availability of all fuels proposed to be used in the facility to generate electricity or useful thermal energy.*
 - II. *Methods for disposal of waste heat.*

RESPONSE

The Facility is not a thermal power plant. Electricity will be produced from wind energy. The Facility will not produce waste heat.

- (v) *For transmission lines, approximate transmission line voltage, load carrying capacity and type of current.*

RESPONSE

The Facility is not a transmission line as defined under ORS 469.300.11(a)(C). The Facility will include an "associated transmission line" which is described below in Response OAR 345-020-0011(1)(b)(B).

- (vi) *For pipelines, approximate operating pressure and delivery capacity in thousand cubic feet per day.*

RESPONSE

The Facility is not a pipeline as defined under ORS 469.300.11.

- (vii) *For surface facilities related to underground gas storage, estimated daily injection and withdrawal rates, horsepower compression required to operate at design injection or withdrawal rates, operating pressure range and fuel type of compressors.*

RESPONSE

The Facility is not a surface facility related to underground gas storage as defined under ORS 469.300.11.

- (viii) *For facilities to store liquefied natural gas, the approximate volume, maximum pressure, liquefaction and gasification capacity in thousand cubic feet per hour.*

RESPONSE

The Facility is not a facility to store liquefied natural gas as defined under ORS 469.300.11.

- (B) *A description of major components, structures and systems of each related or supporting facility.*

RESPONSE

Related or ancillary facilities consist of the electrical collection system; up to 4 collector substations, a supervisory, control, and data acquisition (SCADA) system, a 230-kV aboveground generator line, meteorological towers, O&M building, access roads, and additional construction areas.

Electrical Collection System

A transformer at each wind turbine tower will increase electrical power generated by the turbine at 575 to 690 volts (V) to 34.5 kV for delivery to the Facility substations. The steel box housing the transformer circuitry will be either located inside the turbine or mounted on a fiberglass or concrete pad or vault located at the base of each turbine tower. If the transformer is pad-mounted it will be located in a transformer box approximately 7 ft by 8 ft, with the concrete pad or foundation approximately 6 to 10 inches thick. The transformers will be connected to the underground electrical collection system that terminates at one of the Facility's substations.

Underground electrical collector lines will be installed between turbines to collect power generated by the individual wind turbine generators. The electrical collection system will consist primarily of medium-voltage, high-density, insulated underground cables connecting multiple turbines to a substation. Between the turbine arrays, the collector lines will generally follow established roads to one of the collector substations.

For the most part, this system will be buried underground; sections can be located aboveground to span canyons or waterbodies to reduce environmental impacts resulting from trenching, or where subsurface conditions do not allow burial. Trenches for each underground collector line will be approximately 3 ft

deep and 3 ft wide. In some areas where the conductors from multiple strings converge to a single substation, several trenches may be placed side-by-side. Collector cables that are strung aboveground will be hung on overhead pole structures approximately 105 to 115 ft tall.

At this stage of the siting process, the Applicant cannot determine whether aboveground collector cables will be required. That decision will be made once the final Facility layout is established and site-specific geotechnical borings have been completed.

Electrical Collector Substations

As described above, the electrical collection system will link each turbine in its respective string, and ultimately multiple turbine strings of up to 4 collector substations. The approximate location of substations is shown on Figure G-2. The substations will step up the voltage of the power being delivered at 34.5 kV by the electrical collection system to 230 kV for delivery through the 230-kV generator line to the proposed BPA Diamond Butte substation. The approximate location of the proposed BPA substation is also shown on Figure G-2.

The substations will each occupy an approximately 15-acre graveled area. Transformers will be non-polychlorinated biphenyl (non-PCB), oil-filled types. Additional substation equipment will include circuit breakers, power transformer(s), bus and insulators, disconnect switches, relays, battery and charger, surge arrestors, alternating and direct current (AC/DC) supplies, control house, metering equipment, SCADA provision, grounding, and associated control wiring. Other proposed substation equipment includes backup power supply equipment. The substation areas will be surrounded by an 8-foot-high chain-link fence topped with barbed wire.

230-kV Associated Transmission Lines

A new overhead 230-kV associated transmission line (generator line) will connect the Facility to BPA's Diamond Butte Substation along the Ash-Marion 500 kV line. Approximately 12 miles of generator line will be constructed for interconnection of the Facility with the proposed Diamond Butte substation. The generator line structures will be wood or steel towers. Tower heights may vary from 80 to 135 ft above the ground surface, depending on terrain and type of structure. A preliminary generator line alignment is shown in Figure G-2.

Interconnect Substation

The proposed 230-kV generator line will terminate on private land at the proposed BPA Diamond Butte substation. The interconnect substation equipment may include circuit breakers, bus and insulators, disconnect switches, relaying, battery and charger, surge arrestors, AC/DC supplies, control house, metering equipment, SCADA provision, grounding, and associated control wiring. The transmission facilities will conform to all applicable Oregon, IPCO, and BPA regulations and electrical codes, as required.

SCADA System and Fiber Optic Communications

A SCADA system will be installed at the Facility to collect operating and performance data from each wind turbine and the Facility as a whole, and to provide remote operation of the wind turbines from the O&M building.

The wind turbines will be linked to a central computer in the O&M building by a fiber optic network. The fiber optic cables used for SCADA communication will be placed in the same trenches used for the electrical collection system. As noted above, in some areas the electrical collector system may need to be located above ground – in such cases the fiber optic cables will also be strung overhead on the same structures. An underground fiber optic cable will connect the O&M building to a substation and, from there, the cable will be mounted near the top of the generator line tower structures to connect the substation to the interconnection point with the proposed Diamond Butte Substation.

Meteorological Towers

Up to 10 freestanding permanent meteorological (met) towers will be erected within the Project Boundary to monitor and document wind conditions during Facility operations. Four permanent met towers are currently in place, and up to 6 more may be added depending on final turbine design and turbine manufacturer requirements. All permanent met towers and their associated access roads will be located within the Project Boundary. Met towers will be approximately the same height as the hub of the wind turbine selected, i.e., about 328 ft (100 m).

O&M Building

The O&M building will include: a one- or two-story building with offices, spare parts storage, restrooms, a vehicle maintenance area, and a shop area; outdoor parking and a turnaround area for large vehicles; outdoor lighting; and full perimeter fencing with gated access. Limited maintenance or repair of turbine components will also be provided for in conjunction with parts and equipment storage. Ambient conditions within the O&M building will be maintained to meet equipment operating requirements and support the presence of maintenance personnel.

The permanent footprint of the O&M building (including parking area) will be approximately 10 acres, and the building will be 30,000 square feet (sq ft) or less in area. It will be approximately 45 ft (14 m) in height. The building will be painted to blend with the surrounding landscape, and the undeveloped area around the building will be landscaped with native grasses and shrubs. The O&M building area will be secured with fencing. Building security lighting will be directed downward to avoid nighttime glare.

The location of the O&M building has not yet been selected; three possible locations are therefore shown on Figure G-2. The Applicant will identify the preferred location for the O&M building in the ASC.

Utilities

Utilities will primarily be associated with operation of the O&M building and the substations. They will include water, septic services, and utility electrical power.

Water will be supplied to the O&M building using an exempt groundwater well located within or near the building. Water from this well will be used for sanitary, kitchen, and some industrial purposes. Water use at the O&M building is estimated at 5,000 gallons per day (gpd) or less. Wastewater from the O&M building will be discharged to and treated in a septic system constructed and operated to state requirements. Power to operate the substations and O&M building will be obtained from the local electrical utility provider. Small generators may also be considered for emergency power supply to these facilities.

Access Roads

A network of roads will be established for access to operate and maintain the wind turbines. These roads will provide long-term access during construction and operation of the Facility and will consist of existing public roads to access the Facility, existing private roads that may or may not require improvements, and new private permanent roads. Temporary access roads will also be developed to access the Facility during construction and will be decommissioned and reseeded at the conclusion of construction. Private access roads, whether newly constructed or improved existing roads, will have a compacted base of native soil, and will be graveled to a depth of 4 to 6 inches. These access roads will generally have a permanent travel width of 20 ft and a road base or gravel surface. The temporary road width during construction will range from 40 to 60 ft. After construction, road shoulders on either side will be reseeded but retained for future use as needed and construction plans will be adapted to conditions at the Facility. The ASC will present an estimated number of miles for each of the types of roads described above.

Additional Laydown and Storage Areas

The Facility will include laydown areas to be used to stage construction and store equipment and supplies. Several laydown areas varying in size from 2 to 10 acres will be established. Following construction the majority of these areas will be decommissioned and reseeded. The O&M building footprint will also be used for laydown and secure storage during Facility construction.

Aggregate and concrete will be obtained from existing quarries and batch plants in the vicinity of the Facility; however, if needed, a permitted concrete batch plant could also be used at the Facility, staged at one of the Facility's additional laydown areas.

(C) *The approximate dimensions of major facility structures and visible features.*

RESPONSE

The approximate dimensions of the turbines, power collection system, substations, and O&M building are described in Table B-1. Because the turbine vendor and turbine size have not yet been selected for the Facility, Table B-1 shows typical structure dimensions. As discussed above, the ASC will identify minimum and maximum turbine component dimensions to evaluate worst case impacts to environmental resources. The ASC will also identify the dimensions of all other major Facility structures.

Table B-1: Typical Wind Facility Dimensions

Structure	Typical Dimensions
Turbine hub height	262 ft (80 m) - 328 ft (100 m)
Turbine rotor-swept area	253 ft (77 m) - 328 ft (100 m)
Turbine total height	389 ft (119 m) - 492 ft (150 m)
Turbine foundation (diameter)	48 ft (15 m) -80 ft (24 m)
Turbine gravel pad (radius)	40 ft (12 m)
Generator line structures (height)	105 ft (32 m) - 115 ft (35 m)
Collector and Interconnect Substations (height)	70 ft (21 m) - 80 ft (24 m)
Meteorological towers (height)	262 ft (80 m) - 328 ft (100 m)
O&M building (height)	45 ft (14 m)

Notes: All values are approximate.

ft = feet; m = meters

EXHIBIT C

Facility Location

OAR 345-020-0011(1)(c)

(c) ***Exhibit C.** A description of the location of the proposed energy facility site and the proposed site of each related or supporting facility and all areas that might be temporarily disturbed during construction of the facility, including the approximate land area of each.*

RESPONSE

Figure G-1 in Attachment G shows the Baseline Wind Energy Facility Project Boundary, which at its northernmost point is approximately 7 miles south of the town of Arlington in Gilliam County, Oregon. The Project Boundary encompasses all or portions of the following townships, ranges, and sections:

- Township 1N, Range 20E, Sections: 1, 2, 3, 4
- Township 1N, Range 21E, Sections: 4, 5, 6, 7, 8, 9, 13, 14, 15, 17, 18, 19, 20, 22, 23, 24, 25, 27, 28, 29, 30, 33, 34, 35, 36
- Township 1N, Range 22E, Sections: 6, 7, 18, 19, 29, 30
- Township 1S, Range 21E, Sections: 1, 2, 3, 11, 12, 13
- Township 1S, Range 22E, Sections: 3, 4, 5, 7, 8, 9, 10, 15, 16, 17, 18, 19, 20, 21, 22, 26, 27, 28, 29, 33, 34, 35
- Township 2S, Range 22E, Sections: 1, 2, 3, 4, 10, 11, 12, 14, 15
- Township 2N, Range 20E, Sections: 34, 35, 36
- Township 2N, Range 21E, Sections: 31, 32

The Project Boundary encompasses approximately 32,000 acres. Project and Facility components will be located on private land. The Applicant has negotiated, or is in the final stages of negotiating, long-term wind energy leases or easements with the landowners. Easements will also be negotiated with adjacent landowners and nearby wind energy developers for location of generator lines, roads, and collector line access.

In the ASC, the Applicant will identify micrositing corridors (as defined in OAR 345-001-0010(31)) in which turbines and supporting facilities will be located during final engineering design. This approach will provide the Applicant with sufficient flexibility to locate Facility components once the selection of turbine vendors and sizes is finalized. It will also allow the Applicant to maximize the wind resource while avoiding or minimizing impacts to protected plants, animals, and other sensitive resources. The micrositing corridor for the associated generator line also provides the Applicant flexibility for final easement agreements with landowners during final engineering design.

The micrositing corridors will be studied in accordance with Council requirements and applicable regulatory standards. The micrositing corridors will be assessed within the context of the study of the entire Analysis Area to be defined in the Project Order. To demonstrate that the Baseline Wind Energy

Facility Project will meet Council standards no matter what turbine manufacturer the Applicant ultimately selects, studies and analyses provided in the ASC will be based on the “worst case” scenario applicable to each environmental resource considered. The “worst case” scenario will be based on the turbine size and layout with the greatest potential impacts to each resource.

Preliminary proposed locations of supporting facilities are shown on Figure G-2. The location of the O&M Facility has not yet been selected; three possible locations are therefore shown on Figure G-2; the Applicant will identify the preferred location for the O&M Facility in the ASC.

EXHIBIT D

Alternative Locations

OAR 345-020-0011(1)(d)

- (d) ***Exhibit D.** If the proposed energy facility is a pipeline or a transmission line or has, as a related or supporting facility, a transmission line or pipeline that, by itself, is an energy facility under the definition in ORS 469.300, identification of at least two proposed corridors, as defined in OAR 345-001-0010, or identification of a single proposed corridor with an explanation of why alternate corridors are unlikely to better meet the applicant's needs and satisfy the Council's standards. The applicant shall include an explanation of the basis for selecting the proposed corridor(s) and, for each proposed corridor, the information described in subsections (e), (g), (i), (j), (k), (n) and (p) that is available from existing maps, aerial photographs, and a search of readily available literature.*

RESPONSE

The proposed Facility is not a pipeline or a transmission line as defined in ORS 469.300, and does not include a pipeline or transmission line that in themselves would be considered an energy facility under ORS 469.300(11).

EXHIBIT E

Permits Needed for Construction and Operation

OAR 345-020-0011(1)(e)

(e) **Exhibit E.** *Identification of all federal, state and local government permits needed before construction and operation the proposed facility, legal citation of the statute, rule or ordinance governing each permit, and the name, address and telephone number of the agency or office responsible for each permit.*

RESPONSE

The following lists the permits that are typically required for construction and operation of a wind energy generation facility. On-going project design, analyses and field-studies will confirm the need for some of the permits listed below based on the presence of, and anticipated impacts to, protected resources.

Federal Approvals/Permits

- Permit:** **Record of Decision/National Environmental Policy Act Compliance** *(for BPA's decision to interconnect the Facility to BPA's transmission network)*
- Agency:** Bonneville Power Administration
Transmission Services
5411 NE Highway 99
P.O. Box 491 – T/Ditt2
Vancouver, WA 98666-0491
503-230-3000
- Authority:** National Environmental Policy Act (NEPA), Section 102 (42 United States Code (USC) § 4332); 40 CFR § 1500 – 1508
- Permit:** **Notice of Proposed Construction or Alteration (Form 7460.1 and 7460.2)** *(for potential obstruction evaluation/airport airspace analysis)*
- Agency:** Federal Aviation Administration
Earl Newalu, Air Traffic Wind Turbine Specialist
(404) 305-7082
Southwest Regional Office
Obstruction Evaluation Service, AJR-322
2601 Meacham Boulevard
Fort Worth, TX 76193
(817) 838-1996
- Authority:** Federal Aviation Act of 1958 (49 USC § 44718); 14 CFR § 77

Permit: **Clean Water Act, Section 404** *(for potential impacts to waters of the United States, including wetlands)*

Agency: U.S. Army Corps of Engineers
Portland District
Mike Turaski, Section Chief
333 SW First Avenue
P.O. Box 2946
Portland, OR 97208
503-808-4381

Authority: Clean Water Act, Section 4040 (33 USC §1344); 33 CFR §§ 320, 323, 325-28, and 330

Permit: **Endangered Species Act** *(for potential impacts to federally-listed species; Section 7 consultation and incidental take permit)*

Agency: U.S. Fish and Wildlife Service
Pacific Region Bend Field Office
Nancy Gilbert, Field Supervisor
20310 Empire Avenue, Suite A-100
Bend, OR 97701
(541) 383-7146

Authority: 16 USC 1536, 1539; 50 CFR 13 and 402

Permit: **Migratory Bird Treaty Act** *(for potential impacts to migratory bird species; consultation)*

Agency: U.S. Fish and Wildlife Service
Pacific Region Bend Field Office
Nancy Gilbert, Field Supervisor
20310 Empire Avenue, Suite A-100
Bend, OR 97701
(541) 383-7146

Permit: **Section 106** *(for consultation with federal agency and Native American Tribes pursuant to Section 106 of the National Historic Preservation Act)*

Agency: Oregon Parks and Recreation Department: Heritage Programs
State Historic Preservation Office
725 Summer Street NE, Suite C
Salem, OR 97301
(503) 986-0671

Authority: 16 USC 470

State Permits

- Permit:** **Energy Facility Site Certificate** *(for authorization to build and operate an energy facility)*
- Agency: Oregon Department of Energy
Energy Facility Siting Council
Tom Stoops
625 Marion St. NE
Salem, OR 97301
(503) 378-4040
- Authority: ORS 469.300 *et seq.*; OAR Chapter 345, Divisions 1, 21-24
- Permit:** **Removal/Fill** *(for potential impacts to remove or fill material in waters of the state)*
- Agency: Oregon Department of State Lands
Eastern Region
Sarah Kelly
1645 NE Forbes Rd., Suite 112
Bend, OR 97701
(541) 388-6060
- Authority: ORS 196; OAR Chapter 141, Division 85
- Permit:** **Onsite Sewage Disposal Construction-Installation** *(for septic system approval)*
- Agency: Oregon Department of Environmental Quality
Water Quality Onsite Program
Eastern Region
Bob Marshall
700 SE Emigrant, #330
Pendleton, OR 97801
(541) 278-4600
- Authority: ORS 454 and 468B; OAR Chapter 340, Divisions 71 and 73
- Permit:** **NPDES Storm Water Discharge 1200-C** *(for construction storm water)*
- Agency: Oregon Department of Environmental Quality
Eastern Region
700 SE Emigrant, #330
Pendleton, OR 97801
(541) 276-4063
- Authority: Clean Water Act, Section 402 (33 USC § 1342); 40 CFR § 122; ORS 468 and 468B; OAR Chapter 340, Division 14, 41, 45, 52, and 55

Permit: **401 Water Quality Certification** *(for potential discharge to waters of the state)*
Agency: Oregon Department of Environmental Quality
Water Quality Division
811 SW 6th Avenue
Portland, OR 97204
(503) 229-5279
Authority: Clean Water Act, Section 401 (33 USC § 1341); ORS 468 and 468B; OAR Chapter 340, Division 48

Permit: **Water Use Authorization** *(for a new well or wells issued under a limited use license)*
Agency: Oregon Water Resources Department
North Central Region
Michael Ladd, Region Manager
116 SE Dorion Ave
Pendleton, OR 97801
(541) 278-5456
Authority: ORS 537 and 540; OAR 690 Divisions 310, 340, 410, and 502.

Permit: **Over-Dimension Variance** *(for oversized load movement)*
Agency: Oregon Department of Transportation
Motor Carriers Transportation Division
550 Capitol Street NE
Salem, OR 97301
(503) 378-5849
Authority: ORS 818.030; OAR Chapter 734, Division 82

Permit: **State Highway Approach** *(for access to/from a state highway)*
Agency: Oregon Department of Transportation
Region 4, District 09
3313 Bret Clodfelter Way
The Dalles, OR 97058
(541) 296-2215
Authority: OAR Chapter 734, Division 51

Permit: **Archaeological** *(for potential impacts to archeological and historic resources)*
Agency: Oregon Parks and Recreation Department: Heritage Programs
State Historic Preservation Office
725 Summer Street NE, Suite C
Salem, OR 97301
(503) 986-0671
Authority: ORS 97, 197, 358, and 390; OAR Chapter 736, Division 51

Permit: **Air Contaminant Discharge Permit** (*for potential impacts from concrete processing*)
Agency: Oregon Department of Environmental Quality
Business Office
811 SW 6th Avenue
Portland, OR 97204
(503) 229-5696
Authority: ORS 468 & 468A; OAR Chapter 340, Division 216

Local Permits

Permit: **Conditional Use** (*for a commercial utility facility and ancillary uses*)
Agency: Gilliam County Planning Department
Susie Anderson
221 Oregon Street
PO Box 427
Condon, OR 97823
(541) 384-2381
Authority: Gilliam County Zoning and Land Development Ordinance Article 4 – Use Zones,
Article 7 – Conditional Uses, and Article 11 – Administrative Provisions

Permit: **Zoning** (*facility development approval*)
Agency: Gilliam County Planning Department
Susie Anderson
221 Oregon Street
PO Box 427
Condon, OR 97823
(541) 384-2381
Authority: Gilliam County Zoning and Land Development Ordinance Article 11 – Administrative
Provisions

Permit: **Structural, Mechanical, Electrical** (*construction permits*)
Agency: Mid-Columbia Council of Governments
Mid-Columbia Building Code Services
312 Court St, Suite 415
The Dalles, OR 97058
(541) 298-4461
Authority: Oregon Building Codes

EXHIBIT F

Property Ownership

OAR 345-020-0011(1)(f)

- (f) **Exhibit F.** *A list of the names and mailing addresses of all owners of record, as shown on the most recent property tax assessment roll, of property located within or adjacent to the site boundary as defined in OAR 345-001-0010. In addition to incorporating the list in the NOI, the applicant shall submit the list to the Department of Energy in electronic format acceptable to the Department for the production of mailing labels. Property adjacent to the site boundary means property that is:*
- (A) *Within 100 feet of the site boundary where the site, corridor or micrositing corridor is within an urban growth boundary;*
 - (B) *Within 250 feet of the site boundary where the site, corridor or micrositing corridor is outside an urban growth boundary and not within a farm or forest zone; and*
 - (C) *Within 500 feet of the site boundary where the site, corridor or micrositing corridor is within a farm or forest zone;*

RESPONSE

Lists of the names and mailing addresses of all Gilliam County owners of record of property located within 500 ft of the Project Boundary are provided in Attachment F, Table F-1.

EXHIBIT G

Facility Maps

OAR 345-020-0011(1)(g)

- (g) **Exhibit G.** *A map or maps showing:*
- (A) *The proposed locations of the energy facility site, all related or supporting facility sites and all areas that might be temporarily disturbed during construction of the facility in relation to major roads, water bodies, cities and towns, important landmarks and topographic features;*
 - (B) *The proposed locations of the corridors the applicant has identified under subsection (d) in relation to major roads, water bodies, cities and towns, important landmarks and topographic features;*
 - (C) *The study area(s) for the proposed facility as defined in OAR 345-001-0010;*
 - (D) *The topography of the study area(s) including streams, rivers, lakes, major roads and contour lines;*
 - (E) *All protected areas in the study area as defined in OAR 345-001-0010 for impacts to protected areas; and*
 - (F) *The location of any potential waters of the state or waters of the United States that are on or adjacent to the site.*

RESPONSE

The following 5 maps are included in Attachment G and spatially represent the required information:

- (A) Figure G-1: Vicinity Map shows the proposed locations of the project.
- (B) Figure G-2: Facility Layout shows proposed location of the associated generator line and related and/or supporting facilities. The location of the O&M Facility has not yet been selected; three possible locations are therefore shown on Figure G-2; the Applicant will identify the preferred location for the O&M Facility in the ASC.
- (C) Figure G-3: Study Area Boundaries shows the Project Boundary and study areas as defined in OAR 345-001-0010 including land use and fish and wildlife habitat (0.5 mile), threatened and endangered species areas (5 miles), recreational resources (5 miles), scenic resources and public services (10 miles) and protected areas (20 miles).
- (D) Topography is shown on G-5: National Wetlands Inventory
- (E) Figure G-4: Protected Areas shows protected areas in the 20 mile Study Area as defined by OAR 345-022-0040.
- (F) Figure G-5: National Wetlands Inventory (NWI) shows topography and the location of waters of the state of waters of the United States that are on or adjacent to the Facility.

EXHIBIT H

Non-generating Energy Facility

OAR 345-020-0011(1)(h)

- (h) ***Exhibit H.** If the proposed facility is a non-generating energy facility for which the applicant must demonstrate need under OAR 345-023-0005, identification of the rule in Division 23 of this chapter under which the applicant intends to demonstrate need and a summary statement of the need and justification for the proposed facility.*

RESPONSE

The proposed Facility is an electrical generating facility. The Applicant is not required to demonstrate need under OAR 345-023-0005.

EXHIBIT I

Land Use

OAR 345-020-0011(1)(i)

- (i) ***Exhibit I.*** A statement indicating whether the applicant intends to satisfy the Council's land use standard, OAR 345-022-0030, by obtaining local land use approval under ORS 469.504(1)(a) or by seeking a Council determination under ORS 469.504(1)(b).

RESPONSE

The Applicant intends to satisfy the Council's land use standard by seeking a Council determination of compliance with Gilliam County land use standards under ORS 469.504(1)(b).

EXHIBIT J

Environmental Impacts

OAR 345-020-0011(1)(j)

- (j) ***Exhibit J.** Identification of significant potential environmental impacts of construction and operation of the proposed facility on the Study Areas, including those impacts affecting air quality, surface and ground water quality and availability, wildlife and wildlife habitat, threatened and endangered plant and animal species, historic, cultural and archaeological resources, scenic and aesthetic areas, recreation, and land use.*

RESPONSE

This exhibit identifies potential environmental impacts of construction and operation of the Facility. Responses are organized into the following sections:

- Air Quality
- Surface and Groundwater Quality and Availability (includes Wetlands and Waters of the United States)
- Wildlife and Wildlife Habitat (Study Area, as defined in OAR 345-001-0010(57)(c), is 0.5 mile)
- Threatened and Endangered Plant and Animal Species (Study Area, as defined in OAR 345-001-0010(57)(a), is 5 miles)
- Historic, Cultural, and Archaeological Resources (Study Area is within the Project Boundary)
- Scenic and Aesthetic Areas (Study Area, as defined in OAR 345-001-0010(57)(b), is 10 miles)
- Recreation (Study Area, as defined in OAR 345-001-0010(57)(d) is 5 miles)
- Land Use (Study Area, as defined in OAR 345-001-0010(57)(c), is 0.5 mile)]

Air Quality

During construction, the Facility is expected to generate temporary pollutant and dust emissions. Temporary and localized increases in pollutant concentrations will consist of tailpipe emissions from construction equipment exhaust and operation of on-site generators.

Construction activities are also a source of fugitive dust emissions. Fugitive dust emissions are typically associated with land clearing, excavating, and construction activities. Dust emissions also occur when vehicles travel on paved and unpaved surfaces and haul trucks lose material. Dust control measures will be discussed in more detail in the ASC. Operation of rock crushers and concrete batch plants may also be a source of dust emissions.

Emissions during operation of the Facility will result from vehicle use associated with maintenance, repair, and inspection. Operation of the wind turbines themselves will not emit pollutants or create dust emissions.

Surface and Groundwater Quality and Availability

The Project Boundary is located in the John Day drainage basin, as defined by the Oregon Water Resources Department. A small portion of the project is located within the Umatilla drainage basin. Surface and groundwater availability in these basins is addressed in Exhibits K and L and will be discussed in more detail in the ASC.

Surface and Groundwater Quality

Construction of the Facility will not result in discharge of pollutants to surface or groundwater. The Applicant will apply for an NPDES 1200-C Construction Storm Water Permit, issued by the Oregon DEQ. Coverage under an NPDES 1200-C permit requires the development and implementation of an Erosion and Sediment Control Plan, storm water best management practices (BMPs), and inspection of controls implemented during construction.

Domestic wastewater from the O&M building will be discharged to an on-site septic system. The septic system will have a drain field and will be operated in accordance with state and local permitting requirements.

Surface and Groundwater Availability

Water for road construction and dust suppression will be obtained from either the City of Arlington, a new well under a limited use license, or existing water rights in the leased area. It is estimated that approximately 50 million gallons of water will be required for construction. The Applicant will confirm the estimated amount of water and provide additional detail on water use in the ASC.

During Facility operation, the Applicant will rely on exempt wells, allowed under ORS 537.545, to provide water to the O&M building. Operations will use less than 5,000 gpd.

Wetlands and Waters of the State/United States

Preliminary review of NWI wetland locations suggests that wetlands in the Project Boundary are largely associated with rivers and streams. NWI locations are shown in Attachment G, Figure G-5. A wetland delineation and assessment of Waters of the State and United States (U.S.) will be conducted to identify potential impacts from construction and operation of the Facility on jurisdictional wetlands and waters. The delineation and assessment will be performed to meet the Oregon Removal/Fill Law and the Clean Water Act (CWA), Section 404.

The ASC will contain a detailed discussion of the potential impacts to wetlands or Waters of the State and U.S. and will identify necessary permits.

Wildlife and Wildlife Habitat

The Study Area for impacts to fish and wildlife habitat as defined by OAR 345-001-0010 includes all areas in the Project Boundary and areas within 0.5 miles from the boundary. Attachment G, Figure G-3 maps the Study Area for wildlife and wildlife habitat, which extends 0.5 miles from the Project Boundary.

Habitat types within the Project Boundary include active crop-producing lands (dry land wheat, other), Conservation Reserve Program or other planted grassland, annual grasslands/disturbed areas, shrub-steppe, and native perennial grassland, among other habitat types. Perennial aboveground streams are not present; major drainages are intermittent with limited riparian habitat. Of the lands within the approximately 32,000 acres within the Project Boundary, approximately 65 percent contain actively cultivated crops or are developed areas. Land use, including agricultural areas, are visible on the aerial photo in Attachment G, Figure G-5.

On behalf of the Applicant, Northwest Wildlife Consultants, Inc. (NWC) initiated a biological survey in 2009 within the Project Boundary. Wildlife and habitat surveys will be used to identify potential impacts to habitat and wildlife that may result from the construction and operation of the Facility. The ASC will include a more detailed discussion on existing conditions and potential impacts to wildlife and habitat based on results from the following surveys:

- Wildlife habitat mapping and quality rating (Categories 1–6): scheduled for completion by late August 2010.
- Avian use surveys: begun in November 2009, a full year of surveys will have been completed in October 2010.
- Raptor nest survey: within a 2 mile radius of the preliminary proposed turbine locations completed in spring 2010.
- Special status vertebrate wildlife species surveys: including surveys for Washington ground squirrels completed March through mid-June 2010.
- Rare plant surveys: completed in spring 2010.

Data collected during these surveys may identify or confirm the presence of wildlife and plant species and will be used by the Applicant to modify design features and/or develop mitigation measures to reduce impacts to wildlife and wildlife habitat. Preliminary site reconnaissance indicates that there are no new unique habitat types present within the Project Boundary.

Sensitive, Threatened, and Endangered Plant and Animal Species

The Study Area for sensitive, threatened, and endangered plant and animal species extends 5 miles from the Project Boundary and is shown in Attachment G, Figure G-3. It is located primarily in Gilliam County but also includes portions of Morrow and Sherman Counties. U.S. Fish and Wildlife Service (USFWS) maintains lists for wildlife and plants that are federally listed, proposed, candidate species, or species of concern that may occur in these counties. The lists are provided in Attachments J-1, J-2, and J-3.

NWC requested data from the Oregon Biodiversity Information Center (ORBIC). Attachment J-4 provides the response letter for this request; however, ORBIC notes that this information is confidential and the data cannot be distributed. The data will be provided to Oregon Department of Fish and Wildlife (ODFW) and Oregon Department of Energy (ODOE) upon request.

The Applicant is participating in a Ferruginous hawk (*Buteo regalis*) study entitled, “*Movement and Behavior Patterns of Ferruginous Hawks in Association with Wind Turbines.*” The multiyear study’s objective is to determine how Ferruginous hawks use the areas collocated with active wind projects in the Columbia Plateau (Schultz 2009). Ferruginous hawks are an Oregon state-listed sensitive-critical species (ODFW 2008) and USFWS lists them as a species of concern (USFWS 2010b).

Results

A total of 20 records were reported by ORBIC within 5 miles of the Project Boundary: 5 records of vascular plant or lichen species, 6 mammal records, 6 fish records, 1 mollusk, 1 amphibian, and 1 bird record, including species listed below:

- Sessile mousetail (*Myosurus sessilis*), State Candidate; 2 records
- Laurence’s milk-vetch (*Astragalus collinus var. laurentii*); 1 record
- Woven-spore lichen (*Texasporium sancti-jacobi*), federal species of concern; 2 records
- Washington ground squirrel (*Urocitellus washingtoni* formerly *Spermophilus washingtoni*), State Endangered; 6 records
- Steelhead (*Oncorhynchus mykiss*, population 28), State Sensitive-Critical; 5 records
- Chinook salmon (*Oncorhynchus tshawtscha*, population 19), State Sensitive-Vulnerable; 1 record
- Ferruginous hawk (*Buteo regalis*), State Sensitive-Critical; 1 record of nesting approximately 5 miles from the Project Boundary
- Western toad (*Anaxyrus boreas*), State Sensitive-Vulnerable; 1 record
- Shortface lanx (giant Columbia River limpet); no State status, but tracked by ORBIC; 1 record

In addition, other records at distances greater than 5 miles from the current Project Boundary were reviewed to aid in compiling lists of species with potential for occurrence in the general area.

The USFWS Gilliam County, Morrow County, and Sherman County species lists (Attachment J) were reviewed for plant and vertebrate wildlife species with potential for occurrence and were used to develop target lists for NWC surveys. Species that have no potential for occurrence within the Project Boundary (due to lack of habitat) are not included in the target list for NWC surveys (e.g., mountain quail and greater sage grouse).

A total of 20 species are listed by USFWS for Gilliam County as either threatened, candidate species, or species of concern; 19 species are listed by USFWS for Morrow County as candidate species or species of concern; 18 species are listed by USFWS for Sherman County as candidate species or species of concern.

Status definitions, critical habitat designation, and federal status are provided in Attachment J-1, J-2, and J-3. The Applicant will provide an analysis of potential impacts to these species in the ASC.

Historic, Cultural, and Archaeological Resources

Cultural resources in the Project Boundary will be identified by reviewing records on file with the Oregon State Historic Preservation Office (SHPO) and conducting field surveys of specific Facility areas. Investigations will focus on areas where construction will occur and Facility components will be located, including proposed wind turbines, collector lines, access roads, the O&M building, and collector substations. Areas surveyed will include flexibility for movement of Facility components during final engineering design. The resulting inventory of cultural resources will be evaluated with reference to the applicable significance criteria of the National Register of Historic Places (NRHP). The results of the analysis and a discussion of potential impacts and mitigation measures will be included in the ASC.

Study methods to identify potential impacts to historic, cultural, and archaeological resources will follow applicable regulations of NEPA and Section 106 of the National Historic Preservation Act (NHPA). Field survey methods and documentation of cultural resources will follow SHPO standards and guidelines.

The Applicant contacted the State Commission of Indian Services to identify each appropriate tribe to consult with regarding potential impacts to tribal cultural resources. Correspondence with the State Commission of Indian Services is provided in Attachment J-4. Details of consultation with the tribes will be included in the ASC.

Scenic and Aesthetic Areas

The Study Areas for ASC Exhibit L, Protected Areas, and ASC Exhibit R, Scenic Resources, will identify scenic and aesthetic areas within the Project Boundary, as well as areas within 20 miles of Protected Areas and within 10 miles of Scenic Resources. Preliminary assessment indicates that protected and significant scenic and aesthetic areas within this Study Area include, but may not be limited to, the National Wild and Scenic John Day River/John Day State Scenic Waterway, John Day Wildlife Refuge, Horn Butte Area of Critical Environmental Concern, multiple tracts of Bureau of Land Management (BLM)-administered land, the Oregon National Historic Trail, Fourmile Canyon and John Day Crossing interpretive sites, and Umatilla National Wildlife Refuge. These areas are shown in Attachment G, Figure G-4.

The Applicant will conduct a visual analysis to identify significant impacts occurring to these resources. The ASC will document this analysis and, if applicable, propose mitigation measures to potential impacts.

Recreation

The Study Area for recreational resources includes the area within the Project Boundary and extends 5 miles outside that boundary. Recreational activities in this area include but are not limited to hiking, birding, camping, hunting, fishing, boating, bicycling, and nature photography. Water-based recreational

activities occur along the major waterways of the region. The applicant will identify and assess impacts to recreational opportunities in the ASC. Recreational areas are shown in Attachment G, Figure G-4.

Land Use

The Study Area for land use includes the area within the Project Boundary, and extends 0.5 miles outside that boundary as shown in Attachment G, Figure G-3. Land within the boundary is zoned Exclusive Farm Use (EFU). This land is privately owned and is used primarily for agricultural purposes (wheat production) and cattle grazing. The closest community is Arlington, Oregon, located approximately 7 miles north of the proposed Facility.

The Facility will comply with EFU zone criteria in the Gilliam County Zoning Ordinance. Some conversion of agricultural lands will occur and impacts of this conversion will be addressed in the ASC.

References

CH2M HILL

- 2009 Technical Memorandum. Permitting and Environmental Issues Evaluation for the Harvest Wind Power Project. August 31, 2009.

Fujii, Bill

- 2010 Personal Communication with Bill Fujii, Oregon Water Resources Department. April 21, 2010.

Oregon Department of Environmental Quality (DEQ)

- 2009 2008 Oregon Air Quality Data Summaries. June 2009.
<http://www.deq.state.or.us/aq/forms/2008AQreport.pdf>

Oregon Department of Fish and Wildlife (ODFW)

- 2008 Oregon Department of Fish and Wildlife Sensitive Species: Frequently Asked Questions and Sensitive Species List. Available online at
http://www.dfw.state.or.us/wildlife/diversity/species/docs/SSL_by_taxon.pdf

Oregon Natural Heritage Information Center (ORNHC)

- 2010 Oregon State University. Search Oregon Basin Distribution. Accessed April 23, 2010. Available online at: http://oregonstate.edu/ornhc/plants/searchspecies_basin.html

Rogers, Ann

- 2007 Cultural Resource Survey for the Rock Creek Diversion. Natural Resource Conservation Service, Pendleton, Oregon.

Schultz, Travis

- 2009 Movement and Behavior Patterns of Ferruginous Hawks in Association with Wind Turbines. Oregon Department of Fish and Wildlife.

Thomas, Suzanne Crowley

- 1983a Cultural Resource Survey Report. C.R. Report #83-05-5. U.S. Bureau of Land Management, Prineville District.

1983b Cultural Resource Survey Report. C.R. Report #84-05-8. U.S. Bureau of Land Management, Prineville District.

U.S. Fish and Wildlife Service (USFWS)

2010a National Wetlands Inventory (NWI). Accessed May 4, 2010. Available online at:
<http://www.fws.gov/wetlands/Data/Mapper.html>

2010b Federally listed, proposed, candidate species, and species of concern under the jurisdiction of the fish and wildlife service which may occur within Gilliam County, Oregon. Last updated May 1, 2010. Available online at:
<http://www.fws.gov/oregonfwo/Species/Lists/Documents/County/GILLIAM%20COUNTY.pdf>

2010c Federally listed, proposed, candidate species, and species of concern under the jurisdiction of the fish and wildlife service which may occur within Morrow County, Oregon. Last updated May 1, 2010. Available online at:
<http://www.fws.gov/oregonfwo/Species/Lists/Documents/County/MORROW%20COUNTY.pdf>

2010d Federally listed, proposed, candidate species, and species of concern under the jurisdiction of the fish and wildlife service which may occur within Sherman County, Oregon. Last updated May 1, 2010. Available online at:
<http://www.fws.gov/oregonfwo/Species/Lists/Documents/County/SHERMAN%20COUNTY.pdf>

EXHIBIT K

Community Service Impacts

OAR 345-020-0011(1)(k)

(k) **Exhibit K.** *Information about significant potential adverse impacts of construction and operation of the proposed project on the ability of communities in the study area to provide the services listed in OAR 345-022-0110.*

RESPONSE

This exhibit provides summary information about potential significant adverse impacts to community services as a result of construction and operation of the Facility. The Study Area as defined by OAR 345-001-0010 for public services includes all areas in the Project Boundary and areas within 10 miles of the boundary. Community services assessed include sewers and sewage treatment, water, storm water drainage, solid waste management, housing, traffic safety, police and fire protection, health care, and schools. The Study Area for these services is shown in Attachment G, Figure G-3. Further analysis of potential impacts to each of these services resulting from construction and operation of the Facility will be included in the ASC.

Sewers and Sewage Treatment

Most of the communities in or near the Study Area provide sewer systems and treatment facilities. Rural residences in the area typically dispose of sewage by onsite private septic systems.

During construction, sanitary waste will be collected in portable toilets, and will be hauled offsite for disposal by licensed commercial contractors. During operations, sanitary waste and domestic wastewater produced at the O&M building will be disposed of in an approved septic system constructed at the O&M building. Operation of the electrical generating and transmission components of the Facility will not produce wastewater.

Impacts to community sewer systems are not anticipated because communities in the area will not provide sewer systems or treatment to the Facility during construction or operation.

Water

Most of the communities in or near the Study Area are served by public water systems. Private wells typically provide water for residences and other uses that are not served by public water systems.

During the construction phase, approximately 4.8 million gallons of water will be needed for wind turbine foundation construction. An additional estimated 50 million gallons will be needed for road construction and dust suppression. Water for road construction and dust suppression will be obtained from either the City of Arlington, a new well under a limited use license, or existing water rights in the leased area. The Applicant will confirm the quantity of water required for the construction phase and the specific source(s) of water to be utilized in the ASC.

During Facility operation, the Applicant will rely on exempt wells allowed under ORS 537.545 to provide water to the O&M building. This facility will use less than 5,000 gpd, and such consumption of will not require the Applicant to obtain a new water right.

Because water will only be obtained from permitted sources, public water systems will not be adversely affected by construction or operation of the Facility.

Storm Water Drainage

Storm water drainage facilities are provided by the larger communities in or near the Study Area. Minimal storm water drainage facilities, such as roadside ditches, are provided in rural areas. None of the communities in the area provide specific storm water drainage that will serve the Facility, with the exception of the minimal storm water drainage facilities associated with Gilliam County public roads.

Storm water runoff is expected to infiltrate the ground surface. The Facility will be constructed and operated with site-specific storm water management systems. The ASC will include an application for a construction NPDES 1200-C Construction Storm water Permit, issued by the Oregon DEQ.

Solid Waste Management

Incorporated communities in or near the Study Area provide solid waste management services. The Arlington Landfill, owned by Waste Management Services of Oregon, Inc., is the public landfill nearest the Facility.

Solid waste disposal during construction and operation of the Facility will be provided by a local commercial hauler under contract to the Applicant. Solid wastes generated by the Facility will be disposed of at approved locations.

Housing

Construction

The Applicant estimates that an average of 250 people will be employed onsite during construction. Most construction workers will be employees of construction and equipment manufacturing companies under contract to the Applicant.

While local hiring will depend on the availability of appropriately skilled workers, the Applicant will make an effort to hire construction companies and workers from communities within 30 to 40 miles of the Project Boundary (i.e., communities in Gilliam, Morrow, Wasco, Sherman, Wheeler, Umatilla, Klickitat, and Benton counties) for construction activities such as road and turbine pad construction. Positions requiring specialized workers (e.g., electrical substation and transmission construction, turbine assembly, and turbine testing) may need to be filled by people not living in the area, which would result in a minor increase in the need for temporary housing.

Housing to accommodate outside workers will be fulfilled through available housing. Temporary housing options include campgrounds and other areas where workers can park trailers or other mobile housing, motels and hotels, and apartments or other short-term rental homes. These types of housing will be available in larger communities within a commutable distance such as The Dalles, Hermiston, and Umatilla, Oregon and Goldendale, Washington. Housing availability in counties within 40 miles of the Project Boundary is expected to be approximately 10,488 units (U.S. Census Bureau, 2000). While more recent data is unavailable, housing is still likely available in these counties. Although not all of these housing facilities would be available at any given time, adequate supplies are expected to be available in relation to the number of temporary construction workers. Potential impacts on housing could result if there were an inadequate supply of housing to meet the demand from the new residents associated with Facility construction.

Operations

The Applicant estimates that 12 to 15 personnel will be employed during operation of the Facility. Most of the O&M building staff will likely be hired locally, with the exception of positions that require previous wind generation facility experience (e.g., supervisors). Periodically, specialized outside contractors may also be required (e.g., for repair of nacelles or meteorological services). The assumption is that operations will begin in late 2012 and continue for the anticipated Facility lifetime of 30 years. Permanent housing for approximately 4 new households will be required starting in late 2012. Based on the availability of housing in the area, significant adverse impacts are not anticipated.

Traffic Safety

The primary transporter route to the Facility will likely begin from either eastbound or westbound Interstate 84 (I-84) and continue south on Oregon Highway (ORE) 19 from Arlington, Oregon, or south on ORE 74 through Cecil. It is assumed that these routes will support the majority of construction-related vehicle traffic, including workforce traffic and equipment and material deliveries. Oversize vehicles will transport turbine components for assembly at the Facility. Heavy-duty trucks will carry gravel and other materials required to improve or construct new turbine access roads from existing roadways. Light-duty trucks will deliver water to the Facility for dust control during road construction, electrical equipment, and other construction materials.

Operational trips will include employees commuting to work in personal vehicles, specialized personnel traveling in light-duty trucks for inspections of the turbine strings and transmission lines, and periodic delivery trucks. Operation of the Facility is not anticipated to result in traffic impacts.

Police and Fire Protection

Most of the incorporated cities in or near the Study Area provide local police service. As necessary, the Applicant will request police service assistance from the Gilliam County Sheriff's Office in Condon, Oregon. Backup law enforcement service is available from the Oregon State Police Eastern Region, with offices in Arlington, Condon, Pendleton, and Milton-Freewater. The relatively small number of new

temporary and permanent residents is not anticipated to place significant demands on police services in the area.

North Gilliam County Rural Fire Protection District, which is located within the Study Area, will provide fire protection to the Facility. The Applicant will notify the Fire Protection District of construction plans and phasing, identify the location of and access to Facility structures, and provide assistance in the case of fire in or around the Facility. The Facility will be equipped with fire protection equipment in accordance with the Oregon Fire Code. The relatively small number of new temporary and permanent residents is not anticipated to place significant demands on the fire protection services in the Study Area.

Health Care

There are no hospitals located within the Study Area. The hospitals nearest to the Facility are the Mid-Columbia Medical Center located in The Dalles, Klickitat Valley Hospital and Providence Hood River Memorial Hospital, both located in Goldendale, the Pioneer Memorial Hospital in Heppner, and the Good Shepherd Hospital located in Hermiston. Ambulance service in the Study Area is provided by private service groups that contract with Gilliam County. Providers offer basic, intermediate, and advanced life support emergency medical care and transportation.

Impacts on local health care services will be minimized by careful management of Facility health and safety risks. The small number of new temporary and permanent residents is not expected to place significant demands on health care services in the area.

Schools

The Arlington Grade School and High School, operated by the Arlington School District 003, are located within the Study Area. In Oregon, 4 schools within 2 school districts are located near the Study Area. Condon Elementary School and Condon High School are within the Condon School District 25J. Lone Elementary School and Lone High School are located within the Lone School District 2. In Washington, Roosevelt Elementary School, operated by the Roosevelt School District, is located near the Study Area.

Because construction of the Facility will be short-term, no new students are anticipated in association with Facility construction.

Minimal school enrollment is expected from the small increase in local population resulting from new Facility operations employees. Actual impacts on schools will depend on the housing choices of new residents with children, which is unknown. Given the small number of new school-aged children expected, the dispersed area in which new residents are likely to settle, and the number of schools available, it is unlikely that any one school will receive more new students than it can accommodate. As a result, no significant adverse impacts on school services are anticipated as a result of Facility operation.

References

Gilliam County Emergency Management Department

2010 Personal communication with Christina Fitzsimmons, Gilliam County Emergency Management Department. April 29, 2010.

Gilliam County Planning Department

2010 Personal communication with Susie Anderson, Gilliam County Planning Department. April 29, 2010.

Oregon Department of Environmental Quality (DEQ)

2010 Personal communication with Angela Thompson, DEQ Pendleton Office. April 27, 2010.

U.S. Census Bureau

2000 Census 2000 Summary File 1. Available online at:
http://factfinder.census.gov/servlet/ACSSAFFacts?_submenuId=factsheet_0&_sse=on.

EXHIBIT L

Water Sources and Use

OAR 345-020-0011(1)(l)

- (l) **Exhibit L.** *Information about anticipated water use during construction and operation of the proposed facility, including:*
- (A) *A description of each source of water and the applicant's estimate of the amount of water the facility will need from each source;*

RESPONSE

Construction

During the construction phase, approximately 4.8 million gallons of water will be needed for wind turbine foundation construction and will be obtained from the contractor supplying the concrete from an off-site location. An additional estimated 50 million gallons will be needed for road construction and dust suppression. Water for road construction and dust suppression will be obtained from either the City of Arlington, a new well under a limited use license, or existing water rights in the leased area. The Applicant will confirm the quantity of water required for the construction phase and the specific source(s) of water to be identified in the ASC.

Operations

During Facility operation, the Applicant will rely on exempt wells, allowed under ORS 537.545, to provide water to the O&M building and will use less than 5,000 gpd. Consumption of less than 5,000 gpd will not require the Applicant to obtain a new water right.

- (B) *If a new water right is required, the approximate location of the points of diversion and the estimated quantity of water to be taken at each point;*

RESPONSE

No new water rights are anticipated to be required for this Facility.

- (C) *For operation, the source of cooling water and the estimated consumptive use of cooling water, based on annual average conditions.*

RESPONSE

Not applicable. No cooling water is required.

EXHIBIT M

Carbon Dioxide Emissions

OAR 345-020-0011(1)(m)

- (m) ***Exhibit M.** If the proposed facility would emit carbon dioxide, an estimate of the gross rate of carbon dioxide emissions, a table listing all the factors that form the basis for calculating the estimate, and a statement of the means by which the applicant intends to comply with the applicable carbon dioxide emissions standard under OAR 345-024-560, 345-024-600 or 345-024-630.*

RESPONSE

The proposed Facility will not emit carbon dioxide.

EXHIBIT N

Evaluation of Statutes, Rules, and Ordinances

OAR 345-020-0011(1)(n)

(n) ***Exhibit N. Identification, by legal citation, of all state statutes and administrative rules and local government ordinances containing standards or criteria that the proposed facility must meet for the Council to issue a site certificate, other than statutes, rules and ordinances identified in Exhibit E, and identification of the agencies administering those statutes, administrative rules and ordinances. The applicant shall analyze and describe any problems the applicant foresees in satisfying the requirements of any such statute, rule or ordinance.***

RESPONSE

Identified below are state statutes and administrative rules as well as local government ordinances containing standards or criteria that the proposed Facility must meet for the Council to issue a Site Certificate, other than the statutes, rules and ordinances identified in Exhibit E. The Applicant does not foresee problems in meeting the requirements of the following statutes, rules, or ordinances.

State ESA Plants *(for potential impacts to state-listed species)*

Agency: Oregon Department of Agriculture
Plant Division
Native Plant Conservation Program
635 Capitol St., NE
Salem, OR 97301
(503) 986-4550

Authority: ORS 564; OAR Chapter 603, Division 73

Noise Control Regulations *(for noise control standard and regulation compliance)*

Agency: Oregon Department of Environmental Quality
811 SW Sixth Avenue
Portland, OR 97204
(503) 229-5696

Authority: ORS 467; OAR Chapter 340, Division 35

Solid Waste Management *(for solid waste management compliance)*

Agency: Oregon Department of Environmental Quality
Solid Waste Program
811 SW Sixth Avenue
Portland, OR 97204
(503) 229-5696

Authority: ORS 459; OAR Chapter 340, Division 93

Hazardous Substance Remedial Action Rules *(for hazardous waste management compliance)*

Agency: Oregon Department of Environmental Quality
Hazardous Waste Program
811 SW Sixth Avenue
Portland, OR 97204
(503) 229-5696

Authority: ORS 453, 459, 465, and 466; OAR Chapter 340, Division 100

State ESA Fish and Wildlife *(for potential impacts to state-listed fish and wildlife species and habitat)*

Agency: Oregon Department of Fish and Wildlife
Wildlife Division
3406 Cherry Avenue NE
Salem, OR 97303
(503) 947-6000

Authority: ORS 496 and 506; OAR Chapter 635, Divisions 100 and 415

Oregon Community Right-to-Know and Protection Act *(for hazardous substance information and notification)*

Agency: Oregon Office of State Fire Marshal
Community Right to Know
4760 Portland Road NE
Salem, OR 97305
(503) 378-3473

Authority: ORS 453; OAR Chapter 837, Divisions 85 and 90

Oregon Statewide Planning Goals *(for Oregon Statewide Planning Goal 3 Exception)*

Agency: Oregon Department of Land Conservation and Development
635 Capitol St. NE, Suite 150
Salem, OR 97301
(503) 373-0050

Authority: ORS 215; OAR Chapter 660, Divisions 4 and 15

EXHIBIT O

Schedule for Application for Site Certificate

OAR 345-020-0011(1)(o)

(o) ***Exhibit O.** A schedule stating when the applicant expects to submit an application for a site certificate.*

RESPONSE

Table O-1 provides a schedule of key Energy Facility Siting Council (EFSC) milestones, including the expected submittal date for the ASC.

Table O-1: Key Energy Facility Siting Council Milestones for the Baseline Wind Facility

Milestone	Target Completion Date
Applicant NOI	June 25, 2010
ODOE reviews NOI, conducts public information meeting/hearing, facilitates comment period, and issues Project Order	June 25, 2010 – August 25, 2010
Applicant files ASC	November 2010

EXHIBIT P

Evidence of Consultation with State Commission on Indian Services

OAR 345-020-0011(1)(p)

(p) ***Exhibit P.** Evidence of consultation with the State Commission on Indian Services to identify each appropriate tribe to consult with regarding the proposed facility's possible effects on Indian historic and cultural resources.*

RESPONSE

Attachment P includes correspondence with the Oregon Commission on Indian Services. Umatilla and Warm Springs are the appropriate tribes to contact regarding possible effects of the Facility on Indian historic and cultural resources.

Distribution

OAR 345-020-0040

Distribution of a Notice of Intent

- (1) *As soon as is practical after the submission of the notice of intent (NOI), the applicant shall distribute, by hand delivery or mailing, copies of the NOI to the reviewing agencies as defined in OAR 345-001-0010.*
- (2) *The applicant shall attach the memorandum from the Department described in OAR 345-015-0120 to the copies of the NOI distributed according to section (1).*
- (3) *The applicant shall provide additional copies of the NOI to the Department upon request and copies or access to copies to any person requesting copies.*

RESPONSE

The Applicant will distribute the NOI and memorandum from the Department according to the requirements of OAR 345-001-0010 and any additional instructions provided by ODOE staff.