

Power Renewable Energy Corporation

Power Plant Application for the Jenner Wind Power Project

Submission to Alberta Utilities Commission

March 2016

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Application

Power Renewable Energy Corporation (PRE) hereby makes application to the Alberta Utilities Commission, pursuant to Sections 11 of the *Hydro and Electric Energy Act* for the construction and operation of a new wind power project in the Jenner, Alberta area.

Signed by:



Jeff Jenner

Chief Executive Officer

Power Renewable Energy Corporation

Overview

Power Renewable Energy Corporation (PRE) proposes to construct a 120 megawatt (MW) wind power project, named the Jenner Wind Power Project (JWPP). The JWPP boundary is approximately three and a half (3.5) kilometres (km) east of Jenner, Alberta (Figure 1).

The land optioned for the JWPP is primarily cultivated farmland and grazing lands. There is oil and gas activity on the lands. The JWPP is located approximately in Townships 21 and 22, Range 8 and 9 west of the fourth meridian. The southern edge of the JWPP is five km from the border of Canadian Forces Base Suffield. The western border of the JWPP is 15 km east of Dinosaur Provincial Park. The Red Deer River is north of the JWPP lands, and there is an abandoned railway line that transects the site. The JWPP is in the Alberta Electric System Operator planning area 48.

PRE proposes to develop the JWPP using the Alberta Utilities Commission (AUC) buildable area phased process. The Phase 1 (Buildable Area) application contained herein details the approximate 6,400 hectares of lands within the JWPP project boundary, and the 1,400 hectares of Buildable Area unconstrained lands in which the future Phase 2 JWPP Buildable Area application will site turbines.

PRE developed this buildable area application process through the AUC's consultation with the wind industry in 2012. Since this consultation, the AUC modified AUC Rule 007 to incorporate the buildable area approach. The buildable area application allows for the flexibility to change turbine type, within a specific physical area. PRE will use the buildable area approach to confirm that the Phase 1 application conforms to the AUC's requirements and ensure it chooses the relevant turbine for the Project in the Phase 2 application.

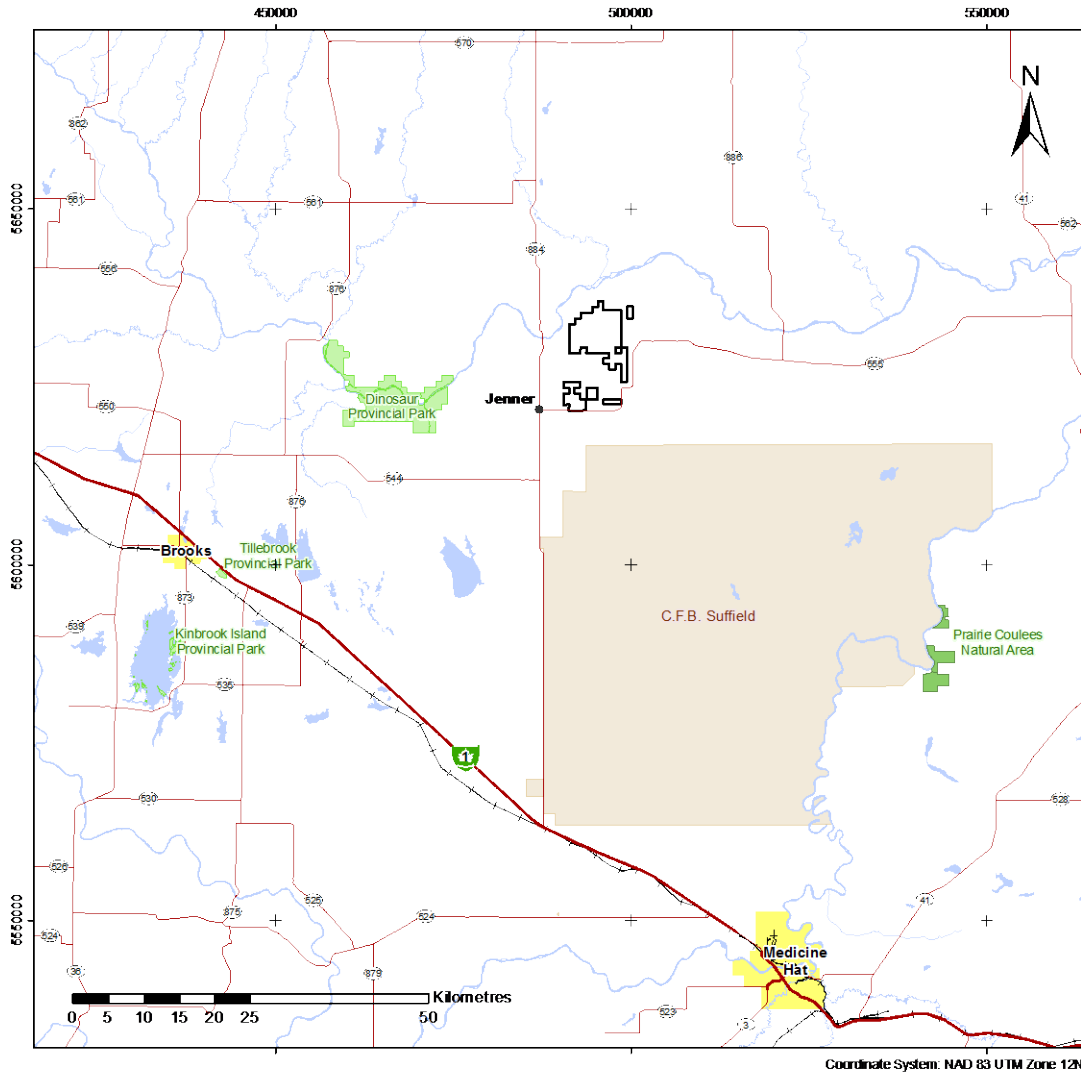
Joss Wind Power Inc. (Joss Wind) has been the prospector and developer of the JWPP since 2010. On November 30, 2015, Joss Wind sold the JWPP to PRE, and all required assignments of the interconnection rights were completed on February 2, 2016. PRE and Joss Wind will continue to develop the JWPP through the permitting phase.

PRE is proposing the JWPP as a 120 MW development. PRE will cover any potential expansions under a separate AUC application at some future time. Should expansion be pursued, PRE anticipates that the JWPP could accommodate up to an additional 180 MW, potentially making the JWPP a 300 MW facility.

Figure 1 Jenner Wind Power Project — Regional Overview Map

Jenner Wind Power Project Regional Overview

Figure 1



- Legend**
- Project Boundary
 - DND Military Base
 - Natural Area
 - Provincial Park

Power Renewable Energy Corp.
 Date: 26 Feb 2016
 Map By: Joss Wind Power Inc.
 Revision: 3.0
 Version: FINAL



Data Sources: Base data (water features, roads, railway and city boundaries) and Department of National Defence Military Base boundary obtained from Aerial IS © Government of Alberta. Protected Area data obtained from Alberta Conservation Information Management System 2015 © Alberta Environment and Sustainable Resource Development.

Corporate Information

PRE is an independent power producer focused on developing, managing, and operating wind energy systems. The management team of PRE have developed and constructed numerous wind farms across Canada. PRE is a wholly owned subsidiary of Power Energy Corporation (PE). PE invests in companies operating in the renewable energy sector and holds ownership positions in two companies operating in this sector: Potentia Solar Inc., a solar power producer, and Eagle Creek Renewable Energy LLC, a U.S.-based owner and operator of hydropower facilities. PE is a wholly owned subsidiary of Power Corporation of Canada, a diversified international management and holding company.

PRE's head office mailing address is:

Power Renewable Energy Corporation
161 Bay Street Suite 5000
Toronto, Ontario M5J 2S1

Please send inquiries, questions, and correspondence relating to this application to the contact information provided in the filing.

Schedule

Table 1 below provides a preliminary project schedule for the JWPP. Approval of the Facilities Application (Phase 2) is required by first quarter 2017.

Table 1 — Project Schedule

Activity	Start Date
Stakeholder consultation	Ongoing
File Phase 1 Buildable Area applications with AUC	First quarter of 2016
File Phase 2 Buildable Area applications with AUC	Second half of 2016
Phase 2 Buildable Area approval	First quarter 2017
Start construction ¹	First half of 2017
Construction completed	November 2017
In-service Date	December 2017

¹Pending AUC approval

List of Acronyms

ACT	Alberta Culture and Tourism
AEP	Alberta Environment and Parks
AESO	Alberta Electric System Operator
AIES	Alberta Integrated Electric System
AUC	Alberta Utilities Commission
DTS	Demand Transmission Service
EPEA	Environmental Protection and Enhancement Act
ESRD	Environment and Sustainable Resource Development (predecessor of AEP)
EUA	Electric Utilities Act
HEEA	Hydro and Electric Energy Act
HRIA	Historical Resources Impact Assessment
ISO	Independent Systems Operator
JWPP	Jenner Wind Power Project
kg	Kilogram
MARP	Maximum Authorized Real Power
LSD	Legal Subdivision
MC	Maximum Capability
MW	Megawatt
MWh	Megawatt-hour
NID	Need Identification Document
NO_x	Nitrogen Oxides
PE	Power Energy Corporation
PIP	Participant Involvement Program
PSIP	Project Specific Information Package
PRE	Power Renewable Energy Corporation
SLD	Single Line Diagram
SO₂	Sulphur Dioxide
STS	Supply Transmission Service
VEC	Valued Ecosystem Component

Power Plant Application Information

PP1) Identify the sections of the *Hydro and Electric Energy Act* under which the application is made.

Power Renewable Energy Corporation (PRE) hereby applies under Section 11 (Approval of Power Plant) of the *Hydro and Electric Energy Act*, c H-16, R.S.A. 2000 (the “*HEEA*”), as amended.

PP2) Identify any other acts (e.g., *Environmental Protection and Enhancement Act*, *Water Act*, and *Wildlife Act*) that may affect the project.

The following provincial and federal statutes may affect the Project:

- *Aeronautics Act*, R.S.C. 1985, c.A-2;
- *Alberta Utilities Commission Act*, S.A. 2007, c.A-37.2;
- *Utilities Act*, S.A. 2003 c E-5.1;
- *Environmental Protection and Enhancement Act*, R.S.A. 2000, c.E-12;
- *Historical Resources Act*, R.S.A. 2000, c.H-9;
- *Migratory Birds Convention Act*, S.C. 1994, c.22;
- *Municipal Government Act*, R.S.A. 2000, c.M-26;
- *Public Highways Development Act*, R.S.A. 2000, c.P-38;
- *Public Lands Act*, R.S.A. 2000, c.P-40;
- *Radiocommunications Act*, R.S.C. 1985, c.R-2;
- *Safety Codes Act*, R.S.A. 2000, c.S-1;
- *Special Areas Act*, R.S.A. 2000, c.S-16
- *Species at Risk Act*, S.C. 2002. c.29;
- *Wildlife Act*, R.S.A. 2000, c. W-10; and
- *Water Act*, R.S.A. 2000, c.W-3.

PP3) State the approvals that are being applied for from the Commission, and provide a draft of the approval being requested.

PRE applies for approval pursuant to Section 11 of the *HEEA*, an order approving the Buildable Area for eventual construction and operation of the JWPP. Attachment 1 provides a draft power plant approval.

PP4) Provide a list of existing approvals for facilities directly affected by this project, if any.

There are no known existing approvals for facilities directly affected by the JWPP.

PP5) Provide details and outcome of consultation with local jurisdictions (e.g., municipal districts, counties).

The JWPP is on privately owned agricultural land within Special Areas No. 2, and all turbines will be sited on deeded land. Segments of the collector system will also cross grazing leases within Special Areas No. 2. Developers of the JWPP have been in contact with Special Areas over a period of several years on a number of issues relating to wind power development. Issues that have been discussed with Special Areas include but are not limited to the following:

- Development and implementation of Special Areas Land Use Order M.O. # L:192/13 dated November 26, 2013 as it pertains to Wind Energy Conversion Systems. Discussions on this topic between Bryan Clake, Dave Schroeder, and Justin Thompson from Joss Wind, and Trent Caskey, Jordon Christianson, and others from Special Areas cover the period from 2013 to the present (Attachment 2).
- Occasional updates on the project status and industry developments, as further outlined below
- Special Areas requirements for public involvement and consultation, and for the development of public acceptance and support
- Special Areas requirements for a development permit, and the potential timing of a JWPP application to Special Areas following the final selection of the JWPP turbine locations
- The buildable area approach for the JWPP compared with the traditional AUC application approach
- Setback requirements for adjacent disposition holders at the JWPP Buildable Area boundary
- Potential for a combination of overhead and buried collector lines with appropriate landowner consents
- Potential for the relaxation of internal quarter-section line setbacks in certain conditions with landowner consents
- Setbacks for the Halsbury wind substation
- Potential use of an abandoned rail bed for siting of a collector line

These discussions have occurred via face-to-face meetings on June 3, 2014, September 9, 2014 and on November 25, 2015, and via various phone calls and emails. Particulars of the most recent formal consultations is outlined below.

On November 25, 2015, the following members of Special Areas met with representatives of PRE, Joss Wind, and Scott Land:

- Jordon Christianson — Chair
- Trent Caskey — Administrator

PRE provided Special Areas representatives with copies of the Open House boards (Attachment 3). The meeting included discussion around feedback received from landowners and grazing lease holders, which generally was positive to date.

Connection of the JWPP was discussed and possible transmission line routing was reviewed. Special Areas representatives confirmed their preference for connection would be to stay within existing rights-of-way, where possible. They indicated that occupant consents for grazing lease holders would be required for any dispositions acquired on Special Areas land. Should overhead collector lines be required, they would be on single poles and the landowner's consent would be required.

Furthermore, community involvement and support was also discussed, including the use of the local school as the open house venue.

Lastly, Special Areas representatives indicated they would like to see PRE work with oil and gas companies and Fortis during the planning phase of the JWPP. PRE confirmed ongoing discussions will occur with both.

PP6) Provide a list of parties that may be affected by the project, confirm that these parties have no concerns regarding the application, and indicate which other agreements are necessary to carry out the project.

The Participant Involvement Program (PIP), detailed in Attachment 3, includes a list of all parties that may be affected by the JWPP and provides details of the consultation completed with these parties.

PP7) For wind power plants, provide a copy of approval from Transport Canada for any structures 20 metres or taller and an evaluation from NAV Canada.

PRE provided a Project Specific Information Package (PSIP) to Transport Canada, along with a request to comment on the Buildable Area, with the understanding that once PRE selects turbine locations, it will submit applications as necessary. Transport Canada responded (Attachment 4), indicating it cannot complete an assessment until PRE completes a full application. The application requires information specific to turbine locations, including coordinates and height. Transport Canada plans to withhold comment until PRE selects a final layout and submits a full application for review. Attachment 4 includes a copy of the email communications with Transport Canada.

PRE also sent a PSIP to NAV Canada, along with coordinates for the JWPP Buildable Area boundary and maximum possible turbine height. Based on the preliminary study area, potential turbines in the southwest corner of the JWPP Buildable Area may impact the Medicine Hat Secondary Surveillance Radar Site, if within 15 kilometres of the radar site. Attachment 4 includes a copy of the NAV Canada letter outlining the conflict. PRE will work with NAV Canada to mitigate these impacts where feasible and/or adjust the JWPP design to accommodate. PRE will provide details to the AUC as they become available.

- PP8) For wind power plants, provide a copy of an assessment from Environment Canada regarding the potential for interference with weather radars. For assessments in which Environment Canada has identified the potential for significant interference with a weather radar, also provide a copy of a mitigation agreement to be concluded with Environment Canada prior to operation of the wind power plant. No wind power plant will be permitted within a five-kilometre radius, or as otherwise agreed to by Environment Canada, of a federal weather radar station due to the significant interference to Environment Canada's ability to accurately forecast the weather.**

Following the AUC's February 1, 2016 update to Rule 007, PRE sent a PSIP to Environment Canada with a request for evaluation of the JWPP Buildable Area. Results of the Environment Canada assessment, received February 26, 2016, indicating project acceptance, are provided in Attachment 4.

- PP9) Provide a copy of the approval from Alberta Transportation if a wind power plant that is within 300 metres of a numbered highway is being applied for.**

PRE sent a PSIP to the Hanna office of Alberta Transportation, requesting initial comment on the Buildable Area. On February 10, 2016, Alberta Transportation responded, indicating it has no overall issues with the JWPP, providing PRE adheres to setbacks and completes applications where necessary (Attachment 5). Alberta Transportation requires a minimum setback of 115 metres from the centerline of highways. Once PRE chooses a turbine layout, if turbines are proposed within 300 metres of the centerline of Highway 555 or within 800 m of the centre point of an intersection of the provincial highway with another public road, PRE will submit a Roadside Development Permit Application to Alberta Transportation for approval in the Phase 2 Buildable Area application, as applicable.

- PP10) Confirm that an application to AEP has been made, if applicable, and list all other government departments and agencies from which approval is required.**

For all power plant applications, a local AEP wildlife biologist must be consulted unless the project is located within an urban area with no nearby wildlife habitat. The Commission requires a sign-off from AEP prior to processing any new wind power applications.

On September 30, 2013, a site visit of the JWPP lands was completed with Scott Stevens of Alberta Environment and Parks (AEP). Attachment 6 has a summary of that site visit.

On November 5, 2014, PRE submitted a document summarizing the JWPP development activities and flora and fauna assessments for the JWPP to Scott Stevens, Wildlife Biologist, Red Deer, at AEP (formerly Alberta Environment and Sustainable Resource Development [ESRD]) for "AEP Sign-Off" for the AUC Phase I Buildable Area application.

On March 12, 2015, Mr. Stevens issued the "Wind Energy Referral Report — Environment and Sustainable Resource Development" for the Project (Attachment 6).

Mr. Stevens continues to be the regional wildlife biologist for the JWPP at the time of this application.

PP11) With respect to new facilities or alterations that may have historical, archaeological or paleontological impacts, confirm that a *Historical Resources Act* clearance has been obtained or is being applied for. If a historical impact assessment is required, briefly describe any historical, archaeological or paleontological sites close to the power plant site. Please ensure that any summary provided protects the confidential location of any historical, archaeological or paleontological resources.

PRE has applied for *Historic Resource Act* clearance via a January 4, 2016 submission of a Statement of Justification. Alberta Culture and Tourism (ACT) is reviewing the application (Attachment 7). ACT does not provide any more detail than this once a project is in its system and before it issues the letter of clearance and/or additional requirement.

The JWPP is in the second stage of ACT's three-stage review process. This is the most substantive phase and involves the provincial experts assessing recommendations. The final stage is the head of ACT department responsible reviewing staff recommendations and issuing either clearance or a directive for fieldwork.

If PRE receives a decision following the submission of the Buildable Area application, PRE will upload the decision to the AUC separately.

The following is a summary of findings that were submitted:

Archaeological Resources:

PRE examined site data from the Borden Blocks in which the JWPP Buildable Area is situated. The JWPP Buildable Area is essentially within Borden Blocks EfOs and EeOs. A very small area of the JWPP Buildable Area extends into EfOr; however, there are no sites in EfOr near the JWPP Buildable Area.

There are 75 recorded sites in EfOs block. All but five of these sites are classed as stone features, primarily stone circles and/or cairns. Other sites are classed as lithic scatters or isolated finds. Most, if not all, of the sites in this Borden Block are surface finds. Site inventory data for EfOs include some features that are classified as alignments, and one site that has stone circles, cairns and an alignment, and a possible medicine wheel (EfOs-36). The majority of sites in this Block are north of the Red Deer River.

There are no recorded EfOs Block sites within the project area and there are only four recorded sites that are close to the JWPP Buildable Area.

EeOs covers approximately the southern half of the JWPP Buildable Area, and there are 62 recorded sites in this Borden Block. Like EfOs, most of the sites in this block are stone surface features, such as tipi ring and cairns. The Block has 40 such sites: 10 lithic scatters (that is, small groups of stone tool-making debris), seven Euro-Canadian homesteads, and the remainder are finds of single artifacts (these latter sites effectively no longer exist).

The majority of sites in this Borden Block are south of the JWPP Buildable Area. In fact, only one EeOs site is within the JWPP Buildable Area and three others close to the boundary or potentially in the JWPP Buildable Area, including one site that no longer exists

Evaluation:

The distribution of recorded sites in the general region is correlated with native grasslands, as well as the oil and gas development area, where, of course, most of the previous Historical Resources Impact Assessment (HRIA) work in the area has been carried out. Recorded sites are clustered in the area of the densest concentration of oil and gas sector activity, essentially in the northwest portion of the development area.

Based on the recorded sites, site location patterns in this area and the general terrain there is moderate to high potential for the presence of unrecorded sites anywhere in that portion of the JWPP Buildable Area in areas of native grassland.

Palaeontological Sensitivity:

Sections of land in the northwest area of the JWPP Buildable Area carry Historical Resource Values of 3P and 5P, indicating that they have potential to contain palaeontological resources; however, for the most part, fossiliferous bedrock exposures and shallowly buried bedrock are limited to river and coulee valley slopes, the river valley, and some areas where ground moraine deposits are particularly thin near the break of slopes. These areas will not be impacted by the JWPP.

PP12) Provide the ISO assigned asset identification code, if available.

The Independent Systems Operator (ISO) assigned asset identification code is currently JNR1.

PP13) Provide the legal description of the proposed power plant site (legal subdivision [LSD], Section, Township, Range, Meridian and/or Plan, Block, Lot, municipal address for urban parcels) and connection point, if applicable.

PRE will provide this information with the Phase 2 submission of this Buildable Area application.

PP14) For wind power plant applications, provide the longitude and latitude coordinates for the centre of each structure supporting a wind-powered generator. If, after approval is granted, the location of any supporting structure has to be relocated more than 50 metres from the coordinates stated in the application, the power plant proponent must reapply to the Commission for approval to relocate the structure prior to construction. For movement less than 50 metres, the applicant is not required to reapply unless there is an adverse impact on the permissible sound level or wildlife setback distances.

PRE will provide this information with the Phase 2 submission of this Buildable Area application.

PP15) Describe the number of generating units and the total capacity (kilovolt-ampere [kVA], or megavolt-ampere [MVA]) for the project.

PRE has not made a final decision for the turbine model it will use for the JWPP. Turbines suitable for a utility-scale wind project range from 1.5 MW to 4.2MW, with tower heights ranging from 78 metres to 135 metres and rotor diameters between 110 metres and 141 metres.

For the initial project size of 120 MW, the total number of turbines required ranges from 30 to 80, depending on the turbine size. The trend in the wind industry is towards using

larger turbine nameplate capacity.

PRE will provide information on the number of generating units and turbine model specifications with the Phase 2 submission of this Buildable Area application, along with the final total capacity of the JWPP reflecting the final turbine number multiplied by the capacity per turbine.

PP16) Describe the existing environmental and land use conditions in the local study area, and discuss potential siting and land use issues. Also, describe the regional setting of the development including regional land use plans in force (e.g., the Lower Athabasca Regional Plan). If applicable, include maps showing important environmental features and sensitive areas on or near the project site.

Maps detailing the JWPP Buildable Area are provided in Attachment 8, while an Environmental Evaluation document is provided in Attachment 9. The Environmental Evaluation document summarizes the JWPP development activities and the results of multiple years of wildlife monitoring surveys and habitat evaluations. It includes surveys and evaluations that have been conducted within and surrounding the proposed JWPP area between 2012 and 2015.

The development of the JWPP, and the methodologies used for environmental assessment, were, and continue to be, based on AEP's requirements and standards and acceptable practices for environmental assessments.

The Environmental Evaluation document provides relevant information on environmental features, land use, and regional settings. The document also provides maps.

PP17) At a level of detail commensurate with the size and type of potential impact(s) of the project, complete and submit an environmental evaluation of the project and provide a sign-off from AEP addressing the environmental aspects of the project that AEP is satisfied with.

An environmental evaluation describes and predicts a project's effects on the environment before the project is actually carried out, and the measures to avoid or mitigate the project's predicted adverse environmental effects and any monitoring proposed to evaluate the efficacy of those measures. The purpose of an environmental evaluation is to ensure enough information is provided by the applicant to inform the public and government agencies about the applicant's understanding of the consequences of its project, and to help the AUC determine if the project is in the public interest. The environmental evaluation should be conducted or overseen by an individual or individuals who possess appropriate environmental experience related to the type and scale of development. An environmental evaluation should:

- **describe the present (pre-project) environmental conditions in the local study area**
- **identify and describe the project activities and infrastructure that may adversely affect the environment**

- **identify what specific ecosystem components (i.e., terrain and soils, surface water bodies and hydrology, groundwater, wetlands, vegetation species and communities, wildlife species and habitat, aquatic species and habitat, air quality and environmentally sensitive areas) within the local study area may be adversely affected by the project**
- **describe the potential adverse effects of the project on the ecosystem components during the life of the project**
- **describe the mitigation measures the applicant proposes to implement during the life of the project to reduce these potential adverse effects**
- **describe the predicted residual adverse effects of the project and their significance after implementation of the proposed mitigation**
- **describe any monitoring activities the applicant proposes to implement during the life of the project to verify the effectiveness of the proposed mitigation**
- **describe the methodology used to identify, evaluate and rate the adverse environmental effects and determine their significance, along with an explanation of the scientific rationale for choosing this methodology**

If the power plant project requires preparation of a federal environmental assessment report or a provincial environmental impact assessment report, then that report should be submitted as an appendix to the application as required by PP38, and a separate environmental evaluation report satisfying the requirements of PP17 need not be prepared for the project. In such cases, the federal environmental assessment or the provincial environmental impact assessment report is sufficient to also satisfy the environmental requirements outlined in PP17.

Attachment 9 provides an Environmental Evaluation document. That document summarizes the JWPP development activities and the results of multiple years of wildlife monitoring surveys and habitat evaluations. It includes surveys and evaluations conducted within and surrounding the proposed JWPP area between 2012 and 2015.

The specific objective of these environmental assessments was to identify potentially affected Valued Ecosystem Components (VECs); determine what effects the JWPP may have on each VEC; and develop mitigation techniques that will eliminate, reduce, or control any adverse environmental effects. PRE continues to monitor VECs at the JWPP.

PP18) If the project site occurs within the plan boundaries of a regional land use plan in force:

- i. Confirm that the proposed project is being developed in accordance with the applicable regional land use plan.**
- ii. Confirm if the proposed project is in a conservation area or provincial recreation area established in the applicable regional land use plan. Provide submissions describing how the activity may be considered incidental to a previously approved activity.**
- iii. Indicate what, if any, management frameworks in place under the applicable regional land use plan are applicable to the project, the reason why any management frameworks are not applicable to the project and summarize discussions held with AEP and any other government department required to be consulted under the management frameworks regarding the project and its impacts in terms of the management frameworks. Include details on any actions or mitigation measures recommended as a result of the discussions and describe how these actions or mitigation measures will be incorporated into the project.**

As of February 16, 2016, the Alberta Environment and Parks, Land-use Framework, Regional Plans website (<https://landuse.alberta.ca/REGIONALPLANS/Pages/default.aspx>) indicated that the Red Deer Regional Land Use Plan has not started the Land Use planning process.

PP19) Describe the participant involvement information. (See Appendix A1 — Participant involvement program guidelines).

Attachment 3 describes the PIP, which was carried out in accordance with AUC 007 Appendix A1 — Participant involvement program guidelines.

PP20) List all occupants, residents and landowners on lands within the appropriate notification radius as determined using Appendix A1 — Participant involvement program guidelines, as well as other interested persons that were consulted as part of the participant involvement program. If there are populated areas just outside the minimum notification distance, applicants should consider including those areas in the participant involvement program.

The PIP, detailed in Attachment 3, includes a list of all occupants, residents, and landowners on lands within two kilometres of the JWPP Buildable Area boundary. Attachment 3 also includes details on other individuals, agencies, and local industry who may be affected and/or interested in the JWPP.

PP21) Supply a list of mailing addresses, with corresponding land locations and two sets of printed mailing labels of those parties mentioned in PP20, above.

The PIP, detailed in Attachment 3, includes a list of mailing addresses with corresponding land locations for landowners, occupants, and residents mentioned in PP20, as well as two sets of mailing labels. The mailing list also includes all industry and agency contacts included in the PIP.

PP22) Identify any persons who expressed concerns about the project and the specifics of their concerns.

The PIP, detailed in Attachment 3, includes a list of questions and concerns stakeholders raised during the PIP.

PP23) Summarize discussions held with potentially directly and adversely affected persons.

The PIP, detailed in Attachment 3, includes a list of questions and concerns stakeholders raised during the PIP, and PRE's response to those questions and concerns.

PP24) If potentially directly and adversely affected persons raised any concerns, describe how these concerns were dealt with or are being dealt with.

The PIP, detailed in Attachment 3, includes responses to stakeholders concerns and next steps, where applicable.

PP25) For those potentially directly and adversely affected persons identified above, include a confirmation of resolution of the concerns, if applicable.

The PIP, detailed in Attachment 3, includes responses to stakeholders concerns and confirmation of resolution, or next steps, where applicable.

PP26) If the power plant is to be located within an oil and gas facility, confirm the power plant will comply with the standards outlined in Section 8.090 of the *Oil and Gas Conservation Rules*.

The JWPP is not located within an oil and gas facility.

PP27) Provide a noise impact assessment, in accordance with the current Rule 012.

PRE will provide this information with the Phase 2 submission of this Buildable Area application.

PP28) For an application where no changes to the major components of the power generating equipment are contemplated after filing of the application, provide details of the power generating equipment and associated facilities, such as make, model and nominal capacity.

PRE will provide this information with the Phase 2 submission of this Buildable Area application.

PP29) For an application where vendors which are to supply the major components of the power generating equipment have not been selected, provide the nominal capacity of the applied-for power plant and the design and maximum operating parameters, and characteristics specified for the power generating equipment and associated facilities.

PRE will provide this information with the Phase 2 submission of this Buildable Area application.

PP30) Present the estimated power plant heat rates, efficiency of the power plant and details of the cooling system for the power plant.

Not applicable to wind power facilities.

PP31) State the fuel requirements of the power plant, including type, source, method of handling, transportation, processing, storage and environmental effects.

Not applicable to wind power facilities.

PP32) Provide a legible plant site drawing showing all major equipment components.

PRE will provide this information with the Phase 2 submission of this Buildable Area application.

PP33) Provide a legible map showing the power plant site boundaries and land ownership, including any residences and dwellings within the appropriate notification radius as determined using Appendix A1 — Participant involvement program guidelines, as well as any additional energy-related facilities within the project area.

Attachment 8 provides land ownership maps that detail the JWPP Buildable Area boundary, residences, and the AUC-mandated notification radius.

PP34) Provide a legible map of the project area suitable for use in a public notice.

Attachment 8 provides a map of the JWPP Buildable Area, suitable for use in a public notice.

PP35) Supply the expected in-service dates, and describe ramifications if the approval date cannot be met.

PRE proposes to start construction in the first half of 2017, with an expected in-service date of December 2017. In order to meet the Project in-service date, PRE requires approval of the AUC Buildable Area Phase 1 and Phase 2 applications on or before the first quarter 2017. Project delay would condense the schedule and construction would need to be completed in sub-optimal months. Delays would financially impact PRE and delay green energy production.

PP36) Indicate the plant's emission rates, in kilograms per megawatt-hour (kg/MWh) of nitrogen oxides (NO_x), sulphur dioxide (SO₂), and primary particulate matter, and state whether the emissions will comply with the current *Alberta Source Emission Standards for Electricity Generation* and any other emission rate standards or guidelines that are applicable to the proposed project.

Not applicable to wind power applications.

PP37) State whether the proposed plant will comply with the Alberta Ambient Air Quality Objectives and Guidelines and any other standards or guidelines that are applicable to the proposed project for ground-level concentrations of pollutants.

Not applicable to wind power applications.

PP38) Provide the federal environmental assessment or provincial environmental impact assessment as an appendix to the application, if one was required by a federal or provincial authority.

The applicant must obtain approval from AEP for thermal power plant facilities greater than one megawatt in total capacity at one site. An environmental impact assessment is mandatory for thermal power plant facilities that use non-gaseous fuel and are greater than 100 megawatts in total capacity; an environmental impact assessment may be required for other power plant facilities regardless of total capacity. When an environmental impact assessment is not mandatory, AEP will determine if it is necessary, based on the specific nature of the project. The applicant should consult with the Commission and AEP in the initial stages of preparing its application to determine the level of detail required.

There are no approval, registration, or notification requirements for wind power projects under the *Canadian Environmental Assessment Act – 2012*.

There are no approval, registration, or notification requirements for wind power projects under the *Environmental Protection and Enhancement Act, Environmental Assessment (Mandatory and Exempted Activities) Regulation, Alberta Regulation 111/1993, With amendments up to and including Alberta Regulation 62/2008*.

If the project involves any work within a waterbody, or involves de-watering of groundwater from excavations, there may be requirements under the *Water Act*. At this time, the *Water Act* is not triggered.

PP39) If the power plant is to be connected to the transmission system of the Alberta Interconnected Electric System, irrespective of voltage level, provide the following information:

- **An electrical single-line diagram obtained from the ISO or sanctioned by the ISO showing the transmission development plan for the interconnection.**

Attachment 10 provides an electrical single-line diagram(SLD). This SLD will be filed with the AESO engineering study report, which will be included in the NID.

- **A map with one or more conceptual layouts showing possible routes and general land locations for facilities that would be used to interconnect the power plant to the Alberta Interconnected Electric System.**

Attachment 8 (Maps and Figures) provides conceptual layout and routes for interconnection of the Project, subject to separate application.

PP40) If the power plant is to be connected at distribution voltage level to the Alberta Interconnected Electric System (generally less than 69 kV), the applicant must provide a statement from the distribution facility owner indicating that it is willing to connect the generating facilities.

Not applicable.

PP41) For a municipality or a subsidiary of a municipality to hold an interest in a generating unit, documentation confirming compliance with Section 95 of the *Electric Utilities Act* is required.

Not applicable.

PP42) For a wind power application, provide legible maps and/or air photo mosaics upon which the proposed collector power line route or routes have been imposed and showing the residences, landowner names, and major land use and resource features (e.g., vegetation, topography, soil type, existing land use, existing rights-of-way, and superficial and mineable resources).

PRE will provide detailed collector power line routes once it identifies final turbine locations. The number of turbines (ranging from 30 to 80 locations, as addressed in PP15) required to reach 120 MW will highly influence the collector line routing.

However, page 13 of the open house poster boards (Attachment 3) outlines preliminary and indicative collector lines. Attachment 8 includes maps showing a potential collector configuration on top of the requested resource features.

Buildable Area Phase 1 Application — Additional Requirements

BA1) Explain whether the proposed buildable area meets the requirements of other government departments, municipal governments and agencies in relation to wind power plants, including applicable setback distances and the status of any approvals or comments received from other government departments, municipal governments and agencies or persons who may be directly and adversely affected by the proposed application.

The proposed Buildable Area meets the initial requirements of other government departments, municipal governments, and agencies in relation to wind power plants, including applicable setback distances. However, an important qualifier is that additional setbacks or exclusions zones may be required once PRE selects a final turbine model and identifies final turbine locations. Although extensive work and consultation has gone into defining the Buildable Area, there are a number of areas where changes could be required in the second phase of the Buildable Area application:

- Special Areas requires consents from adjacent landowners in certain circumstances. If PRE does not obtain some consent agreements, certain quarter sections along the project boundary could be subject to an increased setback for turbines of 550 metres from the project boundary.
- Special Areas also requires an application for a development permit, but PRE cannot submit this until it finalizes turbine locations.
- Transport Canada indicated that it will withhold comment until final turbine locations are available.
- NAVCan has requested a 15-kilometre radius exclusion zone from the Medicine Hat Secondary Surveillance Radar Site. This could potentially impact eight quarter sections in the southwest corner of the JWPP. PRE commissioned studies to look at opportunities to mitigate potential impacts on the Radar Site, which are underway.
- Once PRE selects final turbine locations, it will conduct additional field studies to evaluate and classify setbacks from waterbodies and wetlands. Following discussion with AEP, PRE anticipates that setbacks could vary, with potential increases or decreases possible on a case-by-case basis.
- PRE could vary other setbacks, including from oil and gas facilities, if necessary based on future discussions with industry and changes in the status of wells, pipelines, or facilities.

BA2) Illustrate the unconstrained buildable areas on maps of the project area as conceptually illustrated below.

Attachment 8 provides the Buildable Area map, based on the most recent analysis of constraints. A table detailing the constraints considered in the development of the Buildable Area is also provided in Attachment 8.

BA3) List the potential size and height range of the type of turbines anticipated to be installed.

PRE has not made a final decision for the turbine model it will use for the JWPP. Turbines suitable for a utility-scale wind project range from 1.5 MW to 4.2MW, with tower heights ranging from 78 metres to 135 metres, and rotor diameters between 110 metres and 141 metres.

For the initial project size of 120 MW, the total number of turbines required ranges from 30 to 80, depending on the turbine size. The trend in the wind industry is towards using larger turbine nameplate capacity.

PRE will provide information on the number of generating units and turbine model specifications with the Phase 2 submission of this Buildable Area application, along with the final total capacity of the JWPP reflecting the final turbine number multiplied by the capacity per turbine.

BA4) An applicant must include in its public consultation program the potential size and height range of the type of turbines anticipated to be installed, in conjunction with the approximate tower locations within the buildable area space. As part of its consultation program, an applicant must identify potentially directly and adversely affected persons, and maintain a record of discussions with them regarding any concerns respecting the buildable area.

As part of the public consultation program, PRE indicated the potential size and height range of the type of turbines anticipated to be installed, as well as an indicative layout, showing preliminary and approximate turbines locations within the Buildable Area. These are indicated in the newsletter (Attachment 3) and the open house poster boards (Attachment 3). A record of discussions, questions and concerns from potentially directly and adversely affected persons can be found in Attachment 3.

ATTACHMENT 1
Draft AUC Approval

ATTACHMENT 2
Special Areas Consultation

ATTACHMENT 3
Participant Involvement Program

ATTACHMENT 4
Transport Canada, NAV Canada and Environment
Canada Consultation

ATTACHMENT 5
Alberta Transportation Consultation

ATTACHMENT 6
Alberta Environment and Parks Consultation

ATTACHMENT 7
Alberta Culture and Tourism Consultation

ATTACHMENT 8
Maps and Figures

ATTACHMENT 9
Environmental Evaluation

ATTACHMENT 10
Single-Line Diagrams