

Garden Plain Wind Project

October 2017 Project Update

Project Update

As part of TransAlta's ongoing consultation and engagement plans, we are pleased to provide stakeholders with an update on the Garden Plain Wind Project. After more than a year of conducting pre-development activities, including: environmental and geotechnical studies, historical resource assessments, windfarm design, and incorporation of stakeholder feedback, TransAlta is in the late stages of finalizing the Garden Plain Wind Project design and preparing to submit an application to the Alberta Utilities Commission ("AUC") for approval to construct, own and operate this facility.

TransAlta plans to apply for an AUC facilities permit under its wholly owned subsidiaries: Garden Plain Wind Energy I Inc. and Garden Plain Wind Energy II Inc. in the coming weeks.

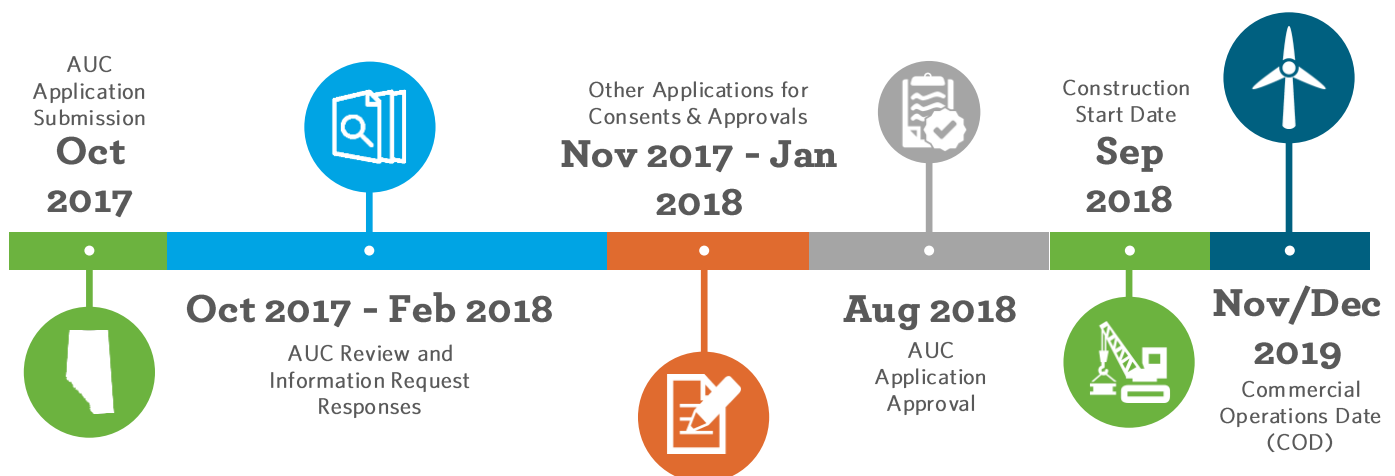
TransAlta will continue working with regulators, agencies and stakeholders to concurrently obtain all other approvals and consents necessary to prepare the project for development.

We thank you for your valuable input and involvement as we advance the project approvals.

In this Update You'll Find:

- Project Schedule
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Project Schedule



Project Layout Changes

Stakeholders were provided with an initial site layout map in our April and June project update as well as at our public Open House on June 26, 2017. Siting of wind turbines and other facilities related to the Project were determined based on a number of factors, including: regulatory setback stipulations, environmental setbacks and constraints, historical artifact discoveries, land quality and land type, aesthetics and visual impacts, sound impacts, engineering constraints, location of residences within the project area, and location of residences on adjacent lands to the Project.

Environmental studies and windfarm design have continued since our Open House and last project update in June. That work has contributed to some project updates, including modifications to the collector system within the project area and slight adjustments to the location of two turbines to avoid some wetland areas and native pasture.

The project layout included in this update reflects the minor changes based on that work:

- Relocation of Turbine T17 to avoid native pasture; and
- Relocation of Turbines T02, T15, T19, T31, T32, T34 to avoid wetlands

An updated project layout map has been included in this package which outlines the location of all facilities related to the Project.



Project Components

The Garden Plain Wind Project is located on approximately 14,000 acres of privately owned land straddling Paintearth County and Special Area No. 2 intersected north/south by provincial Highway 36. The Project will be identified in permitting applications as two phases that share some infrastructure including the substation, O&M building, and laydown & construction area. The Garden Plain I phase will comprise 50 MW on the west half of the project lands and Garden Plain II phase will comprise 80 MW on the east half of the project lands for a total project capacity of 130 MW. There is potential for both phases to be built concurrently or independently but both will be reviewed under a single AUC application. Below is information on the specific components of the Project.

Turbine Technology. The Garden Plain I phase consists of 14 GE wind turbines for a project capacity of 50 MW. The Garden Plain II phase consists of 22 GE wind turbines for a project capacity of 80 MW. Each turbine has a nameplate capacity of 3.63 MW. The turbines are located on towers 110 meters in height with a total rotor diameter of 137 meters.

Collector System, Substation and Interconnection. Turbines will be electrically connected through a buried underground 34.5kV system that will be approximately 47 km in total length.

A single substation will serve both phases of the Project and will be located on the SW 5-35-13 W4M as noted on the project layout map. The substation will meet all provincially regulated safety and protection protocols. Once the substation design is finalized it will be submitted for approval from the AUC under a separate application.

The project is expected to interconnect through the existing 9L59 (from Tinchebray 972S to Anderson 801S) via the 240kV line 200 meters away. Interconnection approvals for the project will be sought by the Transmission Facility Owner (TFO) ATCO under separate application and its own public consultation process.



Meteorological Tower. The project will utilize two permanent met towers as an independent source to collect wind speed and weather data used in wind farm operations. Three locations are under consideration and the selection of two final locations will be determined at a later date. Once final locations have been chosen, TransAlta will apply for the requisite permits to allow for the tower to be placed within the project area.

Environmental

Environmental studies have been ongoing at the Project site since 2015. These year-round studies have been conducted in accordance with provincial and federal wind guidelines and/or regulations. Recommendations provided to TransAlta by Alberta Environment and Parks personnel have been incorporated into our study design and Project siting.

Roads & Access Points.

Two new access points off Highway 36 are proposed and are presently under review by Alberta Transportation. Wherever possible we have endeavored to use existing access roads and access points. There will be approximately 20 km of access roads built within the project area.

Site Overview

	Garden Plain I	Garden Plain II	Total
Project Capacity	50 MW	80 MW	130 MW
Turbine Capacity	3.63 MW	3.63 MW	3.63 MW
Number of Turbines:	14	22	36
Tower Height	110 m (hub height)	110 m (hub height)	110 m (hub height)
Rotor Diameter	137 m	137 m	137 m
New Access Roads	8 km	12 km	20 km
Collector System	17 km	30 km	47 km
Permanent Met Towers	1	1	2
Laydown Areas	Laydown and construction areas are proposed at each turbine site and at the substation location.		
Temporary Concrete Batch Plant	If necessary, a temporary concrete batch plant may be required to serve construction of the Project. This would be undertaken by a contractor under separate permit and licensing.		
Substation	One substation will serve both Phases of the Project		
Electrical Collection System	Underground electrical lines will run from turbine to turbine to the substation. Projects will be electrically connected separately.		
Operations and Maintenance Building	One operations and maintenance building will serve both Phases of the Project. Tentatively planned for onsite location and will serve both phases of the project. There is potential to opt for an offsite O&M location.		
Transmission Line	Approximately 200 m of additional transmission line will be required to interconnect the project to existing transmission lines in the area. This would be designed and developed by ATCO Electric Ltd. under separate approval		



Radiocommunication and Radar Systems

Wind turbine generators, like other large structures, may have the potential to disrupt the transmission of electromagnetic signals and thereby interfere with radiocommunication systems.

As one of our predevelopment studies, TransAlta commissioned an inventory and preliminary impact assessment of radiocommunication and radar systems present in the vicinity of the Garden Plain Wind Project in accordance with guidelines developed for industry by the Radio Advisory Board of Canada, the Canadian Wind Energy Association and the Canadian Broadcasting Corporation.

There are a multitude of variables to consider when assessing systems and impacts including topography, turbine composition, turbine siting, source signal strength, equipment type and much more. Companies identified as having facilities within the range of our proposed operations have been consulted as part of this study. We do not expect any interference issues arising as a result of our wind farm operations.

Noise Impact Assessment

Wind energy projects must meet the AUC regulatory requirements ensuring that sound levels of 40 dBA (night time) are not exceeded at all residences within and adjacent to the wind farm. A Noise Impact Assessment (“NIA”) was completed to evaluate expected sound levels at all receptors as per AUC guidelines. The noise models considered sound expected to be generated from the wind farm as well as other noise sources in the area. The Project was designed to meet these standards and evaluation criteria and will comply with the AUC’s Rule 12: Noise Control.

Next Steps

TransAlta will be submitting an AUC application for the Garden Plain Wind Project within the coming weeks. Leading up to our application submission and during the AUCs review of our application, we will continue to respond to stakeholder comments or inquiries regarding the Project.

As part of our ongoing consultation and engagement plans, we will continue to update stakeholders of any major milestones or significant project updates through our regular project updates or on our website.

We welcome your involvement and thank you for participating in the development process for this project. We value your feedback and look forward to becoming part of your community.

To learn more about the project please visit our website or contact us directly.

For more information about TransAlta or the Garden Plain Wind Project, please visit:

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