



Alberta SOLAR ONE

ALBERTA UTILITIES COMMISSION

POWER PLANT AND INTERCONNECTION APPLICATION

(AUC RULE 007)

FOR THE PROPOSED

ALBERTA SOLAR ONE PROJECT

Submitted by:

Alberta Solar One, Inc.

100 Symes Road, Unit 100A

M6N 0A8

Toronto, Ontario

December 2018

Overview

Alberta Solar One project. is a proposed 9.5 MW_{AC} solar energy generation project. Alberta Solar One Inc. (the Proponent), a joint venture between Enbridge Inc. and Morgan Solar Inc., will develop and construct the Project, and Enbridge Inc. will operate the facility once constructed.

The Project is approximately four kilometres west of Burdett (Figure 1) and is located in the County of Forty Mile No. 8. The Project is sited on approximately 76 acres in the North East Quarter of Section 21, Township 10, Range 12, west of the fourth Meridian.

The Project is sited on privately owned agricultural lands that the Proponent has under option agreement.

The Project will connect to the distribution system. The Distribution Facility Owner for this region is Fortis Alberta.

Figure 1: Project Regional Map

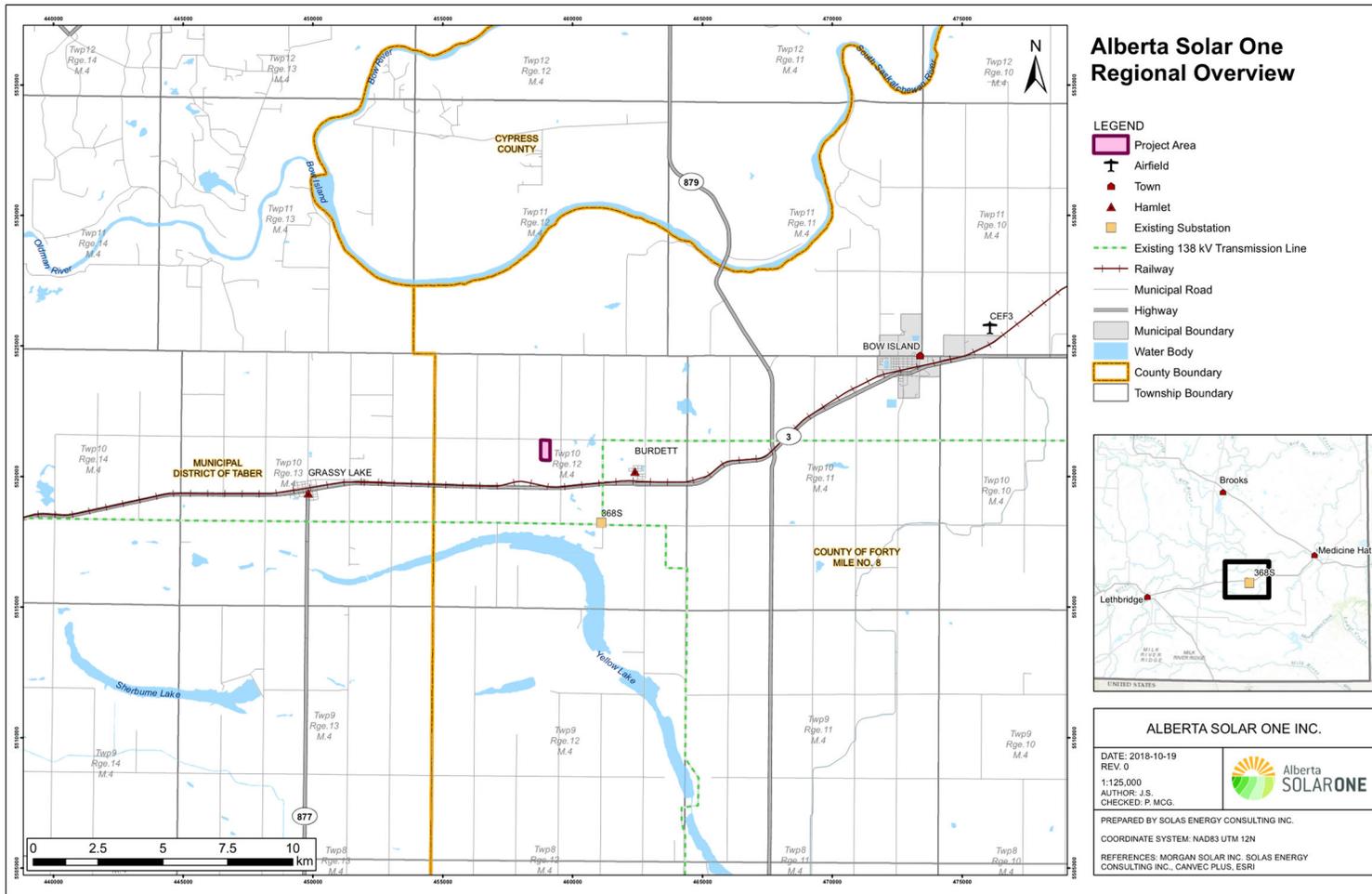


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List of Acronyms

ACT	Alberta Culture and Tourism
AEP	Alberta Environment and Parks
AESO	Alberta Electric System Operator
AUC	Alberta Utilities Commission
DFO	Distribution Facility Owner
EPEA	<i>Environmental Protection and Enhancement Act</i>
ERP	Emergency Response Plan
kVA	Kilovolt-ampere
HEEA	<i>Hydro and Electric Energy Act</i>
HRIA	Historical Resources Impact Assessment
ISO	Independent System Operator
LSD	Legal subdivision
MVA	Megavolt ampere
m	metre
MW	Megawatt
PIP	Participant Involvement Program
PSIP	Project Specific Information Package
Proponent	Alberta Solar One Inc.
PSIP	Project Specific Information Package
SCADA	Supervisory Control and Data Acquisition
SLD	Single Line Diagram
SSRP	South Saskatchewan Regional Plan
V	Volt

Power Plant Application Information

PP1)

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

Alberta Solar One, Inc. (the Proponent) hereby makes application under Section 11, and 18 of the *Hydro and Electric Energy Act*, c H-16, R.S.A. 2000 (the "HEEA"), as amended. This application has been prepared in accordance with AUC Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Development*.

The certificate of incorporation for the Proponent is provided in **Attachment 1 – Certificate of Incorporation**.

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;
- *Agricultural Pests Act*, R.S.A. 2000, c. A-8;
- *Alberta Land Stewardship Act*, S.A. 2009, cA-26-88;
- *Alberta Utilities Commission Act*, S.A. 2007, c.A-37.2;
- *Electrical Code Regulation*, Alta. Reg. 209/2006;
- *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;
- *Occupational Health and Safety Act*, R.S.A. 2000, c.0-2;
- *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;
- *Water Act*, R.S.A. 2000, c.W-3;
- *Weed Control Act*, S.A. 2008, c. W-501; and
- *Wildlife Act*, R.S.A. 2000, c. W-10

PP3)

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

The Proponent is applying for the following approvals:

- Pursuant to Section 11 of the *HEEA*, an order approving the construction and operation of the Project;
- Pursuant to Section 18 of the *HEEA*, a permit to interconnect to the Alberta Integrated Electric System.

A draft power plant approval is provided in **Attachment 2 – Draft AUC 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 Project.

PP5)

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

The Project is located within the County of Forty Mile No. 8. The Proponent has completed consultation with the county regarding the Project. The County of Forty Mile No. 8 prefers that the application for development permit occurs following submission of the AUC Rule 007 application.

On November 22, 2017 Alberta Solar One Inc. met with the County of Forty Mile No. 8 Council and the Development Officer Nathan Ogden to discuss the Project, answer any questions, and address concerns.

Areas of discussion included:

- Potential concerns;
- Clarification on municipal development permit requirements

The Proponent provided responses to the County's questions and the County seemed satisfied with these responses. Since this meeting, the Proponent has kept the Development Officer up to date and sent the Project Specific Information Package in 2018.

Emergency Response

On July 18, 2018, the Proponent consulted with the County of Forty Mile No.8 Fire Chief Dustin McGarry, the fire chief for the volunteer emergency response teams in the area.

Areas of discussion included:

- Potential hazards;
- Responses and responsibilities; and
- Begin formulating the Emergency Response Plan

On December 21, 2018, the Proponent sent a draft site-specific Emergency Response Plan (ERP) to Mr. McGarry to initiate the discussion on emergency response. The Proponent will continue to work with the County representatives to ensure the Project meets municipal development and building permit requirements.

Prior to the commencement of construction and operations, the local first responders will meet with the Proponent's on-site personnel for a site orientation, review of emergency procedures, and to confirm communication protocols. The plant manager will continue communications with local first responders over the life of the Project to ensure training and communication protocols are up to date.

The Proponent's local representative and first responder will control any plant shutdowns during regular business hours. The emergency response in the event of fire will be to call the local fire department or other local first responders to mobilize a team to the appropriate location.

During weekends and evening hours, the 24-7 remote operational centre will perform the same procedures that the day crew undertake during regular business hours and will call the designated representative to the site. The Plant Manager will interface with any emergency responder personnel.

The Project will have a supervisory control and data acquisition (SCADA) system. The system is operational on a 24 hours per day and 7 days a week basis. The controller sends automatic alarm/notification to various parties, including the 24-7 ROC, the Plant Manager, and lead technicians.

In the event of an emergency situation detected during operations, either the operational staff or the ROC staff will initiate the shutdown of the Project through the SCADA system. If a fire is observed, personnel will immediately call 911 to dispatch the local fire department under the protocols outlined in the ERP.

Decommissioning Plans

The expected life of the facility is approximately 25 years. Near the end of the Project's life, the Proponent will evaluate whether the Project should be decommissioned or repowered. Repowering is an alternative to decommissioning that enables continued solar power production from the same location beyond the initial design life of the facility. Repowering involves replacing project components and leveraging project infrastructure. Repowering is often an economically attractive alternative to decommissioning a solar power project with a proven solar resource. At the end of the facility life, if the Project is not retrofitted with newer components, the following infrastructure will be removed, and the site will be graded:

- Solar modules;
- Solar racking;
- Underground collector lines (if less than 1 metre below the surface);
- Access roads and gates (if requested by the landowner);
- Permanent environmental station; and
- Foundations and piling (leveled at 1 metre below the surface)

At the end of facility operations, decommissioning activities will be implemented. The decommissioning and restoration activities includes the removal of above-ground structures, removal of below ground structures to a depth of approximately one metre below surface, replacement of topsoil and subsoil, and re-vegetation and seeding.

Equipment parts and other materials removed during the decommissioning process will be recycled and/or disposed of as appropriate. Gravel, where used, will be removed from the site. Underground cables will be terminated and capped at connection points. As they are to be buried to a depth of at least one metre, limited adverse effects to land-use are anticipated. Landowners will be consulted post-decommissioning regarding any concerns that may arise.

The Proponent will comply with all provincial regulations at the time of decommissioning. Furthermore, the Proponent will work with the Project landowners to ensure that the land is restored to an equivalent land capacity.

Further details are available in **Attachment 3 – County Consultation** and **Attachment 4 – Participant Involvement Program**.

PP6)

Provide a list of parties/companies 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.

Responses in PP17, PP18, PP20, PP21, PP22, and PP23 cover the notification and consultation with landowners, residents, and occupants.

Please see **Attachment 4 - Participant Involvement Program** — Engagement Report for the list of parties that may be affected by the Project and agreements required.

Required agreements

Where required, proximity, crossing, and road use agreements will be put in place with individual companies/service providers and the County of Forty Mile No. 8 prior to commencing construction of the Project.

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.

Although PP7 is not required for solar projects, the Proponent has provided a solar glare analysis report to Transport Canada and NAV Canada on November 30, 2018. The solar glare analysis report is provided in **Attachment 12 – Solar Glare Analysis Report**. The solar glare analysis indicated that there is low risk of glare from the Project.

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.

Not required.

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.

Not required. The Alberta Solar One project is not located within 300 metres of a numbered highway.

PP10)

For all applications for thermal power plants greater than one megawatt, confirm that an *Environmental Protection and Enhancement Act* industrial approval application has been submitted to AEP and indicate the status of that approval. Additionally, list all other government departments and agencies from which an approval is required (e.g., AEP for a *Water Act* approval), and indicate the status of those approvals. A local AEP wildlife biologist should be consulted unless the project is located within an urban area with no nearby wildlife habitat.

For all solar and wind power plants, submit a signed renewable energy referral report from AEP Wildlife Management. Additionally, list all other government departments and agencies for which an approval is required (e.g., AEP for a *Water Act* approval), and indicate the status of those approvals.

Alternatively, if the applicant is unable to provide a renewable energy referral report for a solar or wind power project at time of application, the applicant must clearly identify the reason and provide details of its status to assist the Commission in deciding how to proceed with its consideration of the application.

EPEA

The Proponent has submitted an *Environmental Protection and Enhancement Act* industrial approval application. On August 30, 2016, the Proponent received a letter from AEP stating an environmental impact assessment report is not required. AEP consultation is provided in **Attachment 5 – Alberta Environment and Parks Consultation.**

AEP

The Proponent submitted an Environmental Evaluation (**Attachment 8 – Environmental Evaluation**) to Alberta Environment and Parks (AEP) on September 20, 2018. On November 28, 2018, AEP issued the renewable energy referral report for a solar project provided in **Attachment 5 – Alberta Environment and Parks Consultation.** The AEP stated “AEP-WM has ranked the Alberta Solar One Project proposed by Alberta Solar One Inc., a low risk based on Project siting, limited wildlife use in the area and commitments made by the Proponent to mitigate and monitor wildlife impacts.”

Conservation and Reclamation (C&R) Directive

The Proponent has met the initial Renewable Energy Operations (REO) C&R requirements under the C&R Directive by submitting the Environmental Evaluation to AEP and AUC.

Following AUC approval and prior to construction start in 2019, the required pre-disturbance site assessment will be completed using shallow soil assessments. These requirements will be completed by a qualified environmental professional. This data and information will be submitted along with the data and information from the interim monitoring site assessment (post-construction) with REO C&R plan. This approach is consistent with the C&R Directive.

At the end of operations, an additional interim monitoring site assessment will be completed and the REO C&R plan will be updated prior to decommissioning and reclamation. The reclamation certificate site assessment will be completed to support reclamation certification application and the reclamation inquiry by AEP, as per the requirements in the C&R Directive.

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.

The Proponent applied for *Historical Resource Act* Clearance on August 26, 2016. On September 21, 2016, Alberta Culture and Tourism approved Alberta Solar One under the Historical Resources Act. The application and approval are found in **Attachment 6 – Alberta Culture and Tourism Consultation**.

PP12)

Provide the ISO assigned asset identification code, if available.

The AESO has not yet assigned an asset identification code for the Project.

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.

The legal land description of the proposed power plant and connection point is NE 21-10-12 W4M.

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.

Not applicable

PP15)

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

The Project will consist of approximately 32,000 solar PV modules. The Project will have a total capacity of 9.5 MW_{AC} (9.6 MVA).

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 in the local study area.

The Project is located in the County of Forty Mile No. 8, four kilometres west of Burdett and covers half of a quarter section. The Project is located on cultivated land.

There are 11 residences within 2,000 metres of the Project boundary. **Attachment 7 – Maps and Figures** provides updated detailed maps of the environmental and land use conditions in the local study area.

The Project is located within the area identified in the South Saskatchewan Regional Plan (SSRP) (Government of Alberta, February 2017). This regional plan promotes the development of renewable energy within the region. Guidelines and conditions outlined in the SSRP apply to the Project, however the Project is not located in the conservation areas or provincial recreation areas identified in the SSRP.

Airstrips

There are no certified aerodromes within three kilometres of the Project area. The Project is subject to all federal and provincial laws including the *Aeronautics Act*. The nearest certified aerodrome is Bow Island Airport which is 16 kilometres east of the Project.

Land Conditions

The Project area is characterized by flat lands decending towards the South Saskatchewan River. The lands are irrigated and have few natural permanent wetlands or water bodies. The lands are within the St. Mary's Irrigation District. There is one small (approximately 0.1 hectares) Class II (temporary graminoid marsh) wetland within the Project boundary.

Attachment 8 – Environmental Evaluation includes maps that show important environmental features and environmentally sensitive areas on or near the Project. The Proponent completed a *Water Act* application in February 2018. The Proponent submitted a stormwater runoff plan to Alberta Environment and Parks (AEP) in November 2018. The Proponent is waiting on a response from AEP.

The siting issues that the Proponent took into consideration when designing the Project layout include:

- major transportation corridors;
- noise impact;
- landowner concerns and interest;
- environmental considerations;
- proximity to distribution lines;
- municipal land use bylaws;
- solar resource;
- historical resources; and
- technical siting considerations.

PP17)

For all types of power plants, at a level of detail commensurate with the size and type of potential effect(s) of the project, complete and submit an environmental evaluation of the project.

For all power plant applications that are not solar or wind power, provide a summary of feedback received to date from AEP addressing the environmental aspects of the project that AEP is satisfied with and any mitigation measures and monitoring activities recommended by AEP.

For all solar and wind power projects, submit a signed renewable energy referral report from AEP Wildlife Management as stated in PP10. Alternatively, if the applicant is unable to provide a renewable energy referral report at time of application, the applicant must clearly identify the reason and provide details of its status to assist to Commission in deciding how to proceed with its consideration of the application.

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 8 – Environmental Evaluation provides the following information:

- Environmental Evaluation;
- Technical Wildlife Report;
- Wetland Assessment and Impact Report;
- Construction and Operation Mitigation Plan; and
- Post-Construction Monitoring Plan

These attachments provide the information for the above-noted requirements in PP17.

No other government departments or agencies are required for approval, except those already listed in this application.

PP18)

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

- **Confirm that the proposed project is being developed in accordance with the applicable regional land use plan.**
- **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.**
- **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.**

This Project is within the area identified in the SSRP Government of Alberta, May 2018. Renewable energy is promoted through the Land Use Plan thus the Project is within the framework. The Proponent has reviewed the SSRP and determined that the guidelines and conditions below apply to the Project:

- The Proponent is developing the Project in accordance with the SSRP.
- This Project is not in the conservation areas or in any provincial recreation areas identified in the SSRP.
- The management frameworks in place under the SSRP are not applicable to this Project. Management frameworks under the SSRP include the following:
 - *South Saskatchewan Region Surface Water Quality Management Framework* – This framework does not apply to the Project, as the Proponent does not anticipate it will contribute to the emissions indicated in this framework.
 - *South Saskatchewan Region Air Quality Management Framework* – This framework does not apply, as there are no air emissions from the Project.

PP19)

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

Attachment 4 – Participant Involvement Program describes the participant involvement project (PIP) in detail since 2017, which the Proponent has carried out with AUC *Rule 007* Appendix A1 – Participant Involvement Program Guidelines. The Proponent prepared a PIP suited to the local community, in recognition that planting, and harvesting times are all busy times of year for the local community.

AUC *Rule 007* PIP recommends for a one to ten MW Project to “provide notification, to occupants, residents, and landowners within the first row of occupied properties surrounding the proposed development and consider including areas beyond the first row of occupied properties surrounding the proposed development, as the circumstances require.”

The Proponent held one Open House and sent two Project specific information packages (PSIP).

Project Specific Information Package – November 2017

The November 2017 PSIP included an invitation to the open house and the following information:

- the Proponent’s name and contact information;
- the Proponent’s background in renewable energy;
- the location of the proposed project, including site specific map;
- a description of proposed on-site equipment; and
- the proposed schedule.

This letter also included the most recent version of the AUC’s brochure: *Public involvement in a proposed utility development*.

Public Open House - November 2017

The November 2017 Open house included the following information:

- the Proponent’s name and contact information;
- the location of proposed Project, including a site-specific map;
- community benefits;
- information on the environmental studies and the permitting process;

- answers to frequently asked questions;
- visual representations from four locations near the Project;
- the nature of the potential impacts and need for proposed transmission facilities; and
- the proposed Project schedule.

This open house also included the most recent version of the AUC's brochure: *Public involvement in a proposed utility development*.

Project Specific Information Package - September 2018

The September 2018 PSIP included the following information:

- the Proponent's name and contact information;
- the location of proposed Project, including a site-specific map and visual simulations;
- the nature of the potential impacts and need for the proposed transmission facilities;
- description of the proposed on-site equipment;
- a Project map with the results of noise impact modelling;
- information on the Participant Involvement Program;
- visual representations of the Project from five locations;
- answers to frequently asked questions;
- the proposed project schedule; and
- community benefits.

This letter also included the most recent version of the AUC's brochure: *Public involvement in a proposed utility development*.

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.

A list of all occupants, residents and landowners on lands are found in **Attachment 4 – Participant Involvement Program**. This includes individuals and companies that are within 800 metres of the Project boundary, 2,000 m of the Project boundary, agencies and organizations included in consultations and individuals that identified themselves as interested parties.

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.

A list of mailing addresses with corresponding land locations and mailing labels of those parties mentioned in PP20 are found in **Attachment 4 – Participant Involvement Program**. Two sets of printed mailing labels will be provided to the AUC.

PP22)

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

Any persons who expressed concerns about the project and the specifics of their concerns are found in **Attachment 4 – Participant Involvement Program**.

PP23)

Summarize discussions held with potentially directly and adversely affected persons.

The discussions held with potentially directly and adversely affected persons are found in **Attachment 4 – Participant Involvement Program**.

PP24)

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

Please refer to **Attachment 4 – Participant Involvement Program** which sets out the Proponent’s responses to stakeholders’ concerns and the Proponent’s commitments to further address those concerns, where applicable.

PP25)

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

Please refer to **Attachment 4 – Participant Involvement Program** which sets out the Proponent’s responses to stakeholders’ concerns and the Proponent’s commitments to further address those concerns, 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*.

This is not applicable.

PP27)

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

The Proponent has provided **Attachment 9 – Noise Impact Assessment** in accordance with the current Rule 012: Noise Control, and demonstrates that noise from the Project will meet the permissible bounds of the permissible sound level established by Rule 012.

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

No changes to the major components of the power generating equipment are being contemplated after the filing of the application.

Solar PV Modules

The Project will consist of 32,000 solar PV modules. Each module has the following dimensions: 1970 x 1000 x 44.6mm. These modules use concentrating solar PV. Light is captured by the optics and concentrated three times onto a silicon PV cell.

The Project will incorporate 10,800 dual axis PV trackers. These trackers will use with three modules per armature. The solar trackers will rotate to face the sun.

Collector System

A 25 kV medium voltage collector system of exclusively underground cables will connect the trackers to the distribution system. The Proponent will install underground cables using open trenching, ploughing and underground directional drilling techniques as appropriate, depending on the site-specific conditions.

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.

This is not applicable.

PP30)

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

This is not applicable.

PP31)

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

This is not applicable.

PP32)

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

A legible site drawing showing all major equipment components is provided in **Attachment 7 – Maps and Figures**.

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.

A map showing the power plant site boundaries and land ownership, including any residences and dwellings within the appropriate notification radius, are found in **Attachment 7 – Maps and Figures**.

PP34)

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

A legible map of the project area suitable for use in a public notice is found **in Attachment 7 – Maps and Figures**.

PP35)

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

The following table represents the Project schedule.

Table 1: Project schedule

ACTIVITY	START DATE
First landowner and stakeholder notification	October 2017
Open House	November 2017
Personal Consultation with landowners within 800m	March 2018
Second landowner and stakeholder notification	September 2018
Power Plant Application submitted to AUC	Q4 2018
AUC decision anticipated	Q1 2019

ACTIVITY	START DATE
Development Permit Application submitted to the County	Q2 2019
Start construction	Q2 2019
Commercial operations	Q4 2019

If these dates cannot be met, ramifications may include deterioration of Project economics and scheduling. In the event the Project is delayed, the Proponent will provide an update of its construction schedule to stakeholders and monitor for new stakeholders in the Project area.

PP36)

Indicate the plant’s emission rates, in kilograms per megawatt-hour (kg/MWh) of nitrogen oxides (NOx), 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.

This is not applicable.

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.

This is not applicable.

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 provincial environmental assessment process begins when the Environmental Assessment Director is made aware of the new project. The Director determines if the project requires an Environmental Impact Assessment report to be prepared based on the *Environmental Assessment (Mandatory and Exempted Activities) Regulation*. The regulation lists specific activities that are either mandatory and will

require an Environmental Impact Assessment report, or are exempted and do not require such a report. Activities that are not on either list are considered discretionary and the Director decides whether further consideration under the environmental assessment process is required.

Under the Alberta *Environmental Protection and Enhancement Act* an environmental impact assessment is mandatory for thermal power plant facilities that use non-gaseous fuel and are greater than 100 megawatts in total capability

This is not applicable.

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.
- 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.

This is not applicable.

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.

A statement that Fortis Alberta has agreed to the interconnection is provided in **Attachment 10 – Interconnection Letter**.

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.

This is 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).

This is not applicable.

IC1)

Provide a statement that the local distribution company has agreed to interconnection, the LSD of the interconnection point, and an electric single-line diagram showing the interconnection point with the company. This agreement must reflect that the interest of current customers of the distribution company are served, that provision for future customer load has been made, and that both parties (generator and wire owner) are satisfied with the arrangement and its implications.

A statement that FortisAlberta has agreed to the interconnection is provided in **Attachment 10 – Interconnection Letter**.

The LSD of the interconnection point is 10-21-10-12-W4M.

An electric single-line diagram showing the interconnection point with the distribution company is provided in **Attachment 11 – Single-Line Diagram**.

IC2)

Provide local area load flow studies, including contingency analysis, with sufficient detail to demonstrate that the proposed interconnection would conform with current accepted planning criteria. Present the report of these studies with sufficient graphical outputs, which should be labelled and indexed to provide clarity as to what was studied.

This is not applicable

IC3)

For connection of power plants with total capability of 70 megawatts or larger, provide dynamic studies to determine the impact of the new generation on the transient and dynamic stability of the Alberta Interconnected Electric System. These dynamic studies should include system response to close-in and worst-case three-phase faults with and without the new plant addition to show the relative system performance. Study results should include macro-system quantities, such as machine angles, major bus voltages, major line active and reactive power flows, and system frequency. Present the report for the studies with sufficient graphical outputs labelled and indexed to provide clarity as to what was studied. For power plants with total capability over 10 megawatts but less than 70

megawatts, the Commission, in consultation with the ISO, will assess the need for dynamic studies.

This is not applicable.

IC4)

For connection of wind farms, provide details of how dynamic voltage control and “low voltage ride through” are able to conform with the current accepted standard at the point of interconnection. Details should include control block diagrams of the voltage control system and time domain responses to illustrate dynamics and stability of the voltage control system.

This is not applicable.

IC5)

Provide short-circuit levels at substations near the proposed connection.

This is not applicable.

IC6

Provide the most up-to-date functional specifications when the application is filed and the final functional specification before construction of the project begins.

Attachment 13 — AESO Functional Specification is provided.

IC7)

Include a cost estimate for the connection and required system upgrades.

This is not applicable.

IC8)

Explain the proponent’s contribution, if any, toward the capital cost of the interconnection.

This is not applicable.

ATTACHMENT 1
Certificate of Incorporation

ATTACHMENT 2
Draft AUC Approval

ATTACHMENT 3
County Consultation

ATTACHMENT 4
Participant Involvement Program

ATTACHMENT 5
Alberta Environment and Parks Consultation

ATTACHMENT 6

Alberta Culture and Tourism Consultation

ATTACHMENT 7
Maps and Figures

ATTACHMENT 8
Environmental Evaluation

ATTACHMENT 9
Noise Impact Assessment

ATTACHMENT 10
Interconnection Letter

ATTACHMENT 11
Single-Line Diagram

ATTACHMENT 12
Solar Glare Analysis Report

Attachment 13
AESO Functional Specification