SunAlta Power

SunAlta Solar Inc.
15 Elk Valley Place
Bragg Creek, AB T0L 0K0

Application to the Alberta Utilities Commission
SunAlta Solar PV1 Project

October 27, 2020

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List of Acronyms

AC	Alternating Current
ACT	Alberta Culture and Tourism
AEP	Alberta Environment and Parks
AIES	Alberta Interconnected Electric System
AUC	Alberta Utilities Commission
BIA	Biophysical Impact Assessment
CEAA	Canadian Environmental Assessment Act
DC	Direct Current
EEA	Environmental Effects Assessment
EPEA	Environmental Protection and Enhancement Act
EPP	Environmental Protection Plan
EUA	Electric Utilities Act
HEEA	Hydro and Electric Energy Act
HRA	Historical Resources Act
HRIA	Historical Resources Impact Assessment
SAP	SunAlta Power Inc.
SAS	SunAlta Solar Inc.
SASPV1	SunAlta Solar PV1 Project
ISO	Independent Systems Operator
km	Kilometre
kV	Kilovolt
LSD	Legal Subdivision
m	Metres
MGA	Municipal Government Act
MVA	Megavolt-ampere
MW	Megawatt
NIA	Noise Impact Assessment
O&M	Operations and Maintenance
PIP	Participant Involvement Program
PSIP	Project Specific Information Package
PV	Photovoltaic
SSRP	South Saskatchewan Regional Plan
VEC	Valued Ecosystem Components

Application

SunAlta Solar Inc. (SAS Inc.) hereby makes an application to the Commission, pursuant to Section 11 and 18 of the *Hydro and Electric Energy Act* for the construction, operation and connection of a 9.25 MW solar Photovoltaic facility, known as the SunAlta Solar PV1 Project (the Project).

All communication regarding this application should be directed to:

Tony Smith
SunAlta Solar Inc.
Ph: (403) 615-7494 | E: ahs.tonysmith@shaw.ca

Dated at the City of Calgary, in the Province of Alberta, this 27 day of October, 2020.

Signed by:

_____

Tony Smith
Authorized Representative
SunAlta Solar Inc.

Executive Summary

Project Overview

SAS Inc. is proposing to construct and operate a solar power plant eponymous SunAlta Solar PV1 (SASPV1) Project. The Project consists of solar arrays that will generate approximately 9.25 MW of power delivered to the local FortisAlberta distribution grid (alternating current). SAS Inc. will connect the SASPV1 project to the local FortisAlberta distribution system on the north boundary of the Project. The interconnection of the Project is the responsibility of FortisAlberta.

The Environmental Assessment for this project is favorable and the public consultation has been completed will all outstanding questions and concerns addressed.

Project Location

SASPV1 is located approximately 14km SE of the Town of Bassano. The proposed Project is located on the eastern 120 acres of NE-17-20-17W4. A preliminary plot plan showing the layout of racking, fencing, inverter Quonset, data and radio e-house, O&M building, and roads is included in Attachment 7.

Project Schedule

Table 1 below provides a preliminary schedule for the Project. Approval of the Power Plant application is required by February 2021 in order to maintain the proposed schedule.

Table 1- Project Schedule

Project Activity	Date
Public Meetings	November 2019
AEP Submission	February 2020
Newell County DP application	Started September 2019
AEP Approval Received	September 2020
AUC Approval	February 2021
Development Permit Application complete	February 2021
Development Permit Approval	February/March 2021
Equipment Procurement	March 2021 – May 2021
Piles and Roads	July 2021
Racking , Civil	August 2021 - September 2021
Distribution Connection	October 2021
Panel installation	October 2021
Construction Complete	January 15 2021
Commissioning	January/February 2022
In-service Date (Change from Sept 1, 2021 to be requested)	March 1 2022

Corporate Information

SAS Inc. was founded in 2020 as a joint venture between SunAlta Power Inc. (SAP) and Irricana Power Generation (IPG) to develop utility-scale solar projects in Southern Alberta.

SAP was established in 2018, by Aenergy Capital (AEC) and BTM Energy Partners (BTM) in response to an emerging need in the Alberta renewable energy market to create a platform that integrated the commercial and technical expertise required to successfully identify, develop and implement commercial/community opportunities for small-to-medium sized decentralized solar PV projects, either as behind-the-meter microgeneration-connected or distribution-connected projects.

IPG was founded in 2016 to develop utility-scale solar projects in Southern Alberta. IPG's principal is an Alberta-based electrical engineer. IPG, registered legally as 1867559 Alberta Ltd, is the landowner of the project area. This is IPG's second Rule 007 application, the other being Proceeding 25170, which received AUC approval on May 21, 2020.

SunAlta Solar Inc. Power Plant Application

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

SAS Inc. hereby applies to the Alberta Utilities Commission (AUC) to construct and operate a power plant pursuant to Section 11 of the Hydro and Electric Energy Act, c H-16, R.S.A. 2000 (the HEEA), as amended. SAS Inc. also applies to the AUC for connection of the power plant to an electric distribution system pursuant to Section 18 of the HEEA.

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

Other Acts that may potentially affect the Project include:

- *Alberta Utilities Commission Act*, S.A. 2007, c.A-37.2;
- *Electric 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;
- *Safety Codes Act,* R.S.A. 2000, c.S-1;
- *Soils Conservation Act,* R.S.A. 2000, c. S-15;
- *Species at Risk Act,* S.C. 2002. c.29;
- *Wildlife Act,* R.S.A. 2000, c. W-10;
- *Water Act,* R.S.A. 2000, c.W-3; and
- *Weed Control Act,* S.A. 2008, c. W-5.1.

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

SAS Inc. is applying for approval to construct and operate a 9.25 MW solar power plant, pursuant to Section 11 of the HEEA.

In addition, SAS Inc. is applying for approval under Section 18 of the HEEA to connect the power plant to the Fortis Alberta distribution system.

The draft power plant approval and connection order are enclosed as Attachment 1 and 2 respectively.

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).

County consultation started with a pre-development meeting on February 21 with the Manager of Planning and Development to understand the process. A development permit application was opened on Sept 8 2019, and a number of missing items were identified which have since been delivered. In total, the list includes:

1. PIP report (May 2020)
2. Technical Data Report
3. Project Description
4. Traffic Accommodation Plan
5. Glare Hazard Report
6. Stormwater Management Plan
7. Photos of adjacent lands
8. Emergency Response Plan
9. Conservation and Reclamation concordance table
10. Dust abatement application
11. Setbacks confirmed

At this time Newell County has asked SAS Inc. to wait for AUC approval before taking the matter to the planning committee.

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.

A list of parties that may be affected by the project as well as a summary of questions and concerns raised throughout the PIP are included as Attachment 3, PIP Report.

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.

Not applicable. NAV CANADA was contacted because in 2018 they expressed an interest in all solar projects. There is no objection to this project.

See Attachment 14, NAV Canada Letter.

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 applicable.

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 applicable.

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.

On February 27, 2020, Stantec Consulting Ltd. (Stantec) submitted the SASPV1 Technical Data Report (included with Attachment 4) to Alberta Environment and Parks – Wildlife Management (AEP-WM) for their review of the Project to obtain a Renewable Energy Referral Report for the Project. AEP-WM provided Initial Review Questions on June 03, 2020, which Stantec responded to on July 16, 2020. AEP-WM issued a Renewable Energy Referral Report on September 08, 2020 (Attachment 5).

See Attachment 18, the Conservation and Reclamation Plan.

Other agencies include:

- Alberta Culture and Tourism, see PP11
- AESO: Project P2194 SASR submitted December 2018, currently in Stage 3.
- Newell County: Started September 2018, currently waiting for AUC approval. See Attachments 15.1 and 15.2.

PP11) With respect to new facilities or alterations that may have historical, archaeological or paleontological impacts, confirm that a Historical Resources Act approval 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.

Historical Resources Act Approval number 4941-19-0009-001 was received May 14 2019 from Alberta Culture and Tourism under the Heritage Resources Act. This is included as Attachment 6.

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

No ISO asset identification code is available at this time. The identification code will be applied for in due course.

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 location of the proposed power plant is NE-17-20-17W4, 202082 RR174 Newell County. The interconnection will be in LSD 15. The three phase power lines to be upgraded by Fortis run down RR174 and along the north boundary of the property.

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 of 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 capability (kilovolt-ampere [kVA], or megavolt-ampere [MVA]) for the project.

The generator will consist of 74 inverters rated at 125 kW each, for a total of 9.25 MW at operating power factor of -0.94 for a generation of 8.695 MW Maximum Allowable Real Power. Each inverter supports the ability to connect 187.5kW on the DC side. The inverters planned are the Canadian Solar 125KTL-GE-E operating at 125 VAC.

The PV array will be approximately Canadian Solar, CS3W BiHiku, 400W solar panels at a 30-degree tilt. The Glare Hazard Report (Attachment 16) reflects this tilt. The ground cover ratio is 0.42 and the DC overbuild is 1.33.

Details for the currently proposed solar panels are included in PP29.

If the exact type of solar panels and inverter technology changes, through additional engineering and procurement processes, the Commission will be notified of these changes. Any changes which result in a new glare or noise analysis will be communicated to residents within 1,500 m of the Project in an update letter to stakeholders.

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 within Newell County, approximately 14 km southeast of the Town of Bassano, Alberta and 43 km northwest of the City of Brooks. The Project will be located on approximately 46.4 ha of privately-owned agricultural land in NE-17-20-17-W4M. The landcover in the Project Area (Plot Plan) consists entirely of tame pasture. The Project is bounded by Range Road 174 to the east, an irrigation canal to the west, and a fence to the south.

The Project is located within the Dry Mixedgrass Natural Subregion of the Grassland Natural Region of Alberta (Natural Regions Committee 2006). This subregion occupies the southeastern

corner of Alberta and consists of level to undulating till or lacustrine plains, with some hummocky uplands and sand dunes. The climate during the summer is warm, and this subregion receives the lowest amount of precipitation of all the subregions in Alberta. Winters are cold and dry.

Agriculture is the primary landuse in the dry mixedgrass natural subregion; approximately 55% of the area is used for grazing with an additional 35% used for dry-land farming and 10% used for irrigated crops. The native land cover is dominated by drought-resistant grasses and shrubs. The most common grass species include blue grama (Bouteloua gracilis), needle and thread (Hesperostipa comata), June grass (Koeleria macrantha) and western wheat grass (Pascopyrum smithii). Shrub communities commonly include buckbrush (Symphoricarpos occidentalis), silver sagebrush (Artemisia cana), silverberry (Elaeagnus commutata) and prickly rose (Rosa acicularis). Communities composed of willow (Salix spp.), buffaloberry (Shepherdia argentea) and plains cottonwood (Populus deltoides) develop in valleys. Wetlands represent about 3% of area in this subregion; marshes and shallow open water are the dominant wetland classes. Wetlands in this region are a key habitat for nesting waterfowl. Soil in this subregion is mainly Orthic Brown Chernozem with some Solonetzic soils present where saline and sodic conditions prevail (Natural Regions Committee 2006).

The Project has been sited to avoid all wetlands and waterbodies, as well as environmentally sensitive wildlife habitat (including critical habitat for species at risk) and features. Refer to Attachment 4 (Environmental Evaluation) for a description of the existing environmental conditions in the Project Area. Alberta Environment and Parks – Fish and Wildlife Stewardship (AEP-FWS) has ranked the Project as a low risk to wildlife and wildlife habitat based on the Project siting and commitments made to mitigate and monitor wildlife impacts (Attachment 5). There are no other siting concerns identified for the Project.

The Project falls within the South Saskatchewan Region, one of seven land-use regions defined under Alberta's Land-Use Framework and reinforced under section 13 of the Alberta Land Stewardship Act (GOA 2009). One of the strategies of the SSRP ensures policies are in place to promote and remove barriers to new investments in renewable energy and supports Alberta's commitment to green energy production. Development of the Project is therefore aligned with the objectives and strategies outlined in the SSRP.

GOA. 2009. Alberta Land Stewardship Act. Chapter A-26.9. Alberta Queen's Printer. Edmonton, AB. Natural Regions Committee. 2006.

Natural Regions and Subregions of Alberta. Compiled by D.J. Downing and W.W. Pettapiece. Government of Alberta. Pub. No. T/852.

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 the 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 that 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 off 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.

On February 27, 2020, Stantec Consulting Ltd. (Stantec) submitted the SASPV1 Technical Data Report (included with Attachment 4) to Alberta Environment and Parks – Wildlife Management (AEP-WM) for their review of the Project to obtain a Renewable Energy Referral Report for the Project. The Project has been sited to avoid all wetlands and waterbodies, as well as environmentally sensitive wildlife habitat (including critical habitat for species at risk) and features. Alberta Environment and Parks – Fish and Wildlife Stewardship (AEP-FWS) has ranked the Project as a low risk to wildlife and wildlife habitat and issued a Renewable Energy Referral Report on September 08, 2020 (Attachment 5).

An Environmental Evaluation (Attachment 4) was prepared for the Project that describes the present environmental conditions, identifies project activities and infrastructure, discusses specific ecosystem components, describes potential adverse effects of the project, proposes mitigation measures, identifies predicted residual effects of the Project and their significance, and describes proposed monitoring programs.

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.

The Project falls within the South Saskatchewan Region, one of seven land-use regions defined under Alberta's Land-Use Framework and reinforced under section 13 of the Alberta Land Stewardship Act (GOA 2009). The South Saskatchewan Regional Plan (SSRP) identifies strategic directions for the region and establishes a long-term vision, strategic direction, and an implementation plan to achieve defined objectives for the economy, air,

biodiversity and ecosystems, water, land-use, recreation and historic resources, aboriginal peoples, and community development to ensure that land-use decisions achieve a common vision for the region.

The region has a natural advantage for the development of renewable energy sources. One of the strategies of the SSRP ensures policies are in place to promote and remove barriers to new investments in renewable energy and supports Alberta's commitment to green energy production. Development of the Project is therefore aligned with the objectives and strategies outlined in the SSRP.

The SSRP delegates responsibility for land-use planning and development to the municipal government. The Project is located entirely on private lands in Newell County. The County is responsible for land-use planning within their jurisdiction.

Under the SSRP, conservation areas will be managed to minimize or prevent new land disturbance. The Project is not located within any of the conservation areas or provincial recreation areas established in the SSRP and is therefore aligned with the SSRP's conservation objectives.

GOA. 2009. Alberta Land Stewardship Act. Chapter A-26.9. Alberta Queen's Printer. Edmonton, AB.

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.

The Project is located on private land and is not located within or adjacent to a conservation area or provincial recreation area.

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.

The SSRP has two management frameworks in place; the South Saskatchewan Region Air Quality Management Framework and the South Saskatchewan Region Surface Water Quality Management Framework. The development of a third management framework for biodiversity was identified in the SSRP, but this management framework has not yet been implemented.

One of the main objectives of the South Saskatchewan Region Air Quality Management Framework is to manage releases from point and non-point sources to prevent unacceptable air quality. The Project will not have associated air emissions, and emissions from non-point sources during construction (e.g., construction equipment, vehicles) are expected to be negligible. Accordingly, the South Saskatchewan Region Air Quality Management Framework is not applicable to the Project.

The Surface Water Quality Management Framework is aimed at protecting current and future water use based on management of surface water quality in the Bow, Oldman, South Saskatchewan and Milk Rivers. This framework is not applicable to the Project as there are no watercourses within the Project Area. Best management practices will be employed during construction to minimize any potential surface water effects. The operation of the Project is not expected to affect surface water quality.

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

Attachment 3 describes the PIP Report undertaken by the proponent for this proposed Project.

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 within 2,000m is included in Attachment 3.

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 is included in Attachment 3. Two sets of hard copy mailing labels will be delivered to the AUC upon submission of this application.

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

All questions or concerns related to the Project have been addressed and are discussed in Attachment 3.

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

Consultations held with potentially directly and adversely affected stakeholders are discussed in Attachment 3.

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

All questions or concerns related to the Project have been addressed and are discussed in Attachment 3. To our knowledge, no concerns remain outstanding with regards to the Project.

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

All questions or concerns related to the Project have been addressed and are discussed in Attachment 3. There are no concerns that remain outstanding with regards to the Project.

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.

Not applicable.

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

The Noise Impact Assessment (NIA) has been completed by Stantec and is provided in Attachment 9.

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

Please refer to PP29.

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 capability of the applied-for power plant and the design and maximum operating parameters, and characteristics specified for the power generating equipment and associated facilities.

Table 2: Power Generating Equipment Operating Parameters

Inverter MPP Input Voltage Range	860 V to 1300 V
Inverter Nominal Voltage Input	920 V
Inverter Nominal AC Power Output	125 kW
Inverter Max AC Output Current	120 A

Inverter Rated Power Factor	0.8 leading to 0.8 lagging adjustable
Inverter AC Voltage Range	480-660 V AC
Inverter AC Power Frequency	60 Hz
Inverter Extended Operating Temp Range	-25°C to 60°C
Module Type	Poly-crystalline, split cell
Panel Peak Power Pmax	400 W
Panel Operating Voltage Vmp	38.7 V
Panel Operating Temperature Range	-40° C to + 85° C

Additional Equipment Required for the Project Includes:

- Collector System: DC combiner and re-combiner boxes and cabling, 24.94 kV padmount transformers, and underground electrical collection cables that connect the inverters to the Point of Interconnection (POI)
- Distribution System Point of Interconnection: The Project will be interconnected to the local Fortis distribution system at 24.94 kV. The voltage of the Project collector system will be designed to match the voltage of the Fortis distribution system such that a Project substation is not required. The Fortis connection will include a Project pole mounted disconnect switch operable by SAS Inc., surge arresters and metering equipment. This equipment will be contained within the Project site
- E-House Building: An on-site building will house electrical controls, protection, and monitoring systems. In addition, a remote computer-based system will be used to control and monitor the generating equipment including such parameters as active and reactive power output, terminal voltage, ramp rates and also operational and safety alarms and shutdowns. The facility will also contain a battery backup system. The building will house operational data communication equipment used to monitor and operate the facility remotely. If a communication tower is required it will be mounted on or located in close proximity to the e-house building
- Operations and Maintenance Building: to house spare parts, vehicles and maintenance equipment as well as provide office and welfare facilities for site staff.
- Canteen trailer.
- Perimeter chain link fencing and security cameras: A chain link fence will surround the perimeter of the facility. The facility entrance will be gated and locked. Security cameras will be installed for remote site monitoring
- Parking area for site operators: A gravel parking area will be located at the Project site
- Project Roads: Gravel roads will be installed through the site to allow access to the generating equipment for site maintenance and operations.

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.

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

Not applicable.

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

A legible plant site drawing showing all major equipment components is included as Attachment 7.

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 residences/dwellings within 1,500m is included in Appendix C of Attachment 3. A separate map showing all energy-related facilities within 1,500m of the Project area is included in Appendix I of Attachment 3. A pipeline runs through the area, however outside of the fenced project area. All setbacks will be adhered to for the pipeline, and if crossing and proximity agreements are required, they will be obtained prior to construction. No soil disturbance is planned within 30m of a regulated pipeline.

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 enclosed as Attachment 11.

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

The expected in-service date (ISD) is currently September 1, 2021. However, due to COVID-19 related delays in obtaining the renewable energy referral report from Alberta Environment & Parks, SAS Inc. has consulted with FortisAlberta, AltaLink, and AESO to request an extension to the current in-service-date. These consultations have resulted in an understanding that SAS Inc. should be able to reasonably request and obtain an extension of the in-service date to sometime in Q2 2022 without significant impact to the project and the AIES. However, this would be conditional on obtaining AUC approval by Q2 2021. If approval by this date cannot be met, it will result in challenges with respect to project

planning and procurement schedules, requiring a further delay of the in-service date for which AESO has indicated could become problematic. Current consultation with FortisAlberta, AltaLink, and AESO indicates that further delay in the ISD beyond Q2 2022, is likely to require that the Engineering Study Report (ESR) be revised to reflect this even later ISD. Should this occur, FortisAlberta may also elect to revise their corresponding interconnection study depending on connection activity on their system.

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 Air Emission Standards for Electricity Generation and any other emission standards or guidelines that are applicable to the proposed project.

Not applicable. The Project has no air emission sources.

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. The Project has no air emission sources.

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 a 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.

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

Not applicable as this project is not connected to the transmission system.

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 letter from FortisAlberta to the AUC in this regard is provided in Attachment 12.

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 plant 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).

Not applicable.

SunAlta Solar Inc. Interconnection Application Information

SAS Inc. hereby makes application to the Commission, pursuant to Section 18 of the HEEA to

connect the power plant to the Fortis Alberta distribution system.

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 letter from FortisAlberta to the AUC in this regard is provided in Attachment 12. The location of the interconnection is in LSD 15 of Section 17-20-17 W4M. A single-line diagram is provided for the interconnection in Attachment 13. The interconnection will be handled by FortisAlberta.