

Rising Sun Solar Project

Alberta Utilities Commission Rule 007 Solar Power Plant & Substation Application





Report Prepared for:

Rising Sun Inc.

Author:

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Executive Summary

Rising Sun Inc. (RSI or the Proponent) is proposing to construct and operate a solar power plant, designated as the Rising Sun Solar Project, and the 1147S Rising Sun Substation (the Project). RSI has retained Green Cat Renewables Canada Corporation (GCR) to prepare the Project layout, technical studies, and support the regulatory application process.

The Project will consist of approximately 265,725 bi-facial solar photovoltaic (PV) modules, utilizing fixed tilt racking, with a total generation capacity of up to 125 megawatts (MW_{AC}). The Project will be located within the Municipal District of Provost No. 52, located approximately 2.5km northwest of the Hamlet of Cadogan, Alberta. The Project will be located on approximately 261.5 hectares (ha) of privately owned, cultivated land.

The Project will be connected to the Alberta Interconnected Electric System (AIES) via a 138kV transmission interconnection connecting to AltaLink Management Limited's (AltaLink) 715L transmission line. The exact routing and details of the transmission line are still to be determined, and will be included in a separate AUC application filed by AltaLink.

RSI is seeking approval from the Alberta Utilities Commission (AUC) to construct and operate the Project in accordance with Sections 11, 14 and 15 of the *Hydro and Electric Energy Act*. RSI has included all relevant information to meet the requirements of Section 4.4.2 and 7.2.1 of Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations, Hydro Developments and Gas Utility Pipelines* (April 2022), as well as the requirements established in the AUC interim requirements, including:

- A Noise Impact Assessment (NIA) confirming the Project will comply with AUC Rule 012: *Noise Control;*
- An assessment of the environmental impacts associated with the Project detailed in an Environmental Evaluation Report, an Environmental Protection Plan, and a Renewable Energy Referral Report from Alberta Environment and Protected Areas (AEPA) confirming the Project represents a low risk to wildlife and wildlife habitat;
- A Conservation and Reclamation Plan, detailing RSI's commitments for the end-of-life of the Project;
- A summary of the Participant Involvement Program (PIP) conducted for the Project in accordance with Appendix A1 of AUC Rule 007;
- Historical Resources Act approval from Alberta Culture and Status of Women (ACSW); and
- A Project-specific Emergency Response Plan, reviewed with the MD of Provost Director of Emergency Response.

The PIP identified 16 stakeholders within 800m of the Project boundary. Of these 16 stakeholders, 3 noted concerns that could not be resolved through consultation. The concerns were focused on Project location, water wells, property value impacts, glare hazards, visual impacts, and decommissioning, and are further described in the PIP Report provided in **Appendix 13**.

GCR prepared a Solar Glare Hazard Analysis Report, which concluded that the Project is not likely to have the potential to create hazardous glare conditions for the assessed receptors. The report concluded that glare mitigation is not expected to be required. Details of the Solar Glare Hazard Analysis are provided in **Appendix 6**.

RSI is confident that the information herein shows that the Project is in the public interest and requests the AUC approve the Project as proposed.



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Rising Sun

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Solar Power Plant Application

Information requirements pertaining to AUC Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations, Hydro Developments and Gas Utility Pipelines* (April 2022).

Project Description

SP1/TS1/TS7/TS12) State the approvals that are being applied for from the AUC and describe the power plant and collector system, including the number of solar photovoltaic panels and their make, model and the nominal capability of each solar photovoltaic panel in MW and the total capability of the power plant in MW, including battery storage, if applicable. If the vendors have not been selected or the equipment has not been finalized, provide:

- The total capability of the power plant in MW, including battery storage, if applicable.
- The anticipated type and number of solar modules, the physical dimensions of the solar array and the type of solar tracking system, if applicable.

RSI hereby applies to the AUC for the following:

- Approval to construct and operate the Solar Project pursuant to Section 11 of the *Hydro and Electric Act*.
- Permit to construct and Licence to operate the 1147S Rising Sun Substation, pursuant to Section 14 and 15 of the *Hydro and Electric Act.*

The Project equipment will consist of approximately 265,725 bi-facial solar PV modules and will utilize fixed tilt racking, with up to 28 inverters transformer stations, and the substation, all enclosed in perimeter fencing. The Project has a total area of approximately 261.5 hectares and will have a total capacity of up to 125 MW_{AC}.

The substation will be located in the northeast quarter of Section 11, Township 39, Range 04, west of the Fourth Meridian (LSD 16 -11-39-04-W4M) and is approximately 200m by 200m in size. The substation will include the following major equipment:

- One 138/34.5 kV 84/112/140 MVA transformer;
- One 138kV circuit breaker;
- Three 34.5kV circuit breakers;
- Enclosed within the chain-link perimeter fencing of the solar power plant

Details of the transmission line and interconnection will be provided by AltaLink Management Ltd. in a separate application.

SP2/TS4) 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 Projects.

SP3/TS3) Provide details of the project ownership structure, including the names of all companies having an ownership interest in the project and their ownership share, and if applicable, the name of the project operator. Confirm that the applicant is a qualified owner.

The Project will be 100% owned and operated by RSI. RSI is a wholly owned subsidiary of Atlantica Canada Inc. RSI is an Alberta registered corporation. See **Appendix 1** for RSI's Certificate of Incorporation.

SP4) For a municipality or a subsidiary of a municipality to hold an interest in a generating unit, provide documentation confirming compliance with Section 95 of the *Electric Utilities Act*.

Not applicable.

SP5/TS22) Describe the location of the project:

• 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 Project will be sited within portions of the following legal subdivisions:

Quarter	Section	Township	Range	Meridian
NE/NW	10	39	04	W4M
NE/NW	11	39	04	W4M

The Project substation will be located in the northeast quarter of Section 11, Township 39, Range 04, west of the Fourth Meridian.

• Provide a Keyhole Markup Language (.kml/.kmz) file that contains the geographic data of each of the major components, including substation locations and project boundary of the proposed power plant. This file should reflect the information shown on the drawings and maps submitted to address information requirement SP6.

A Keyhole Markup Language (.kml) file containing the information shown on the maps submitted to address SP6 is provided in **Appendix 2.**

SP6/TS21) Provide the following drawings and maps with units of measure/scale and the direction of north specified:

a. A legible plant site drawing showing the solar array, collector substations, collector lines and access roads and the power plant site boundary.



- b. Legible maps showing:
 - i. The power plant site boundary.
 - ii. Land ownership of surrounding lands, including any residences and dwellings within the notification radius described in Appendix A1 – Participant involvement program guidelines, Table A1-1: Electric facility application notification and consultation requirements.
 - iii. Neighbouring municipalities, First Nation reserves, Metis Settlements, including nearby roads, water bodies and other landmarks that may help identify the general location of the project area. This map may be at a larger scale than the detailed maps provided in response to other information requirements.
 - iv. All registered aerodromes and any known unregistered aerodromes within 4,000 metres of the edge of the proposed power plant site boundary.
 - v. Important environmental features and sensitive areas in the local study area.
 - vi. Any additional energy-related facilities within the project area.
 - vii. The proposed collector line route or routes, and major land use and resource features (e.g., vegetation, topography, existing land use, existing rights-of-way). This information should also be provided in air photo mosaics.

The following Project maps are provided in Appendix 3:

- Plant Site Map including major Project components;
- Overview Map including neighbouring municipalities, local landmarks, waterbodies, and environmentally significant areas;
- Energy Facilities Map; and
- Landcover Map including landcover types and topography.

The following Project maps are provided in the PIP report in **Appendix 13**:

• Landownership Map including landownership and residences within 800m of the Project boundary.

SP7/TS19) Provide the requested approval date from the Commission, the expected construction start date, the expected in-service date of the project and the requested construction completion date to be used in the project approval. Provide the rationale for these dates.

Per consultation with the AESO, RSI is targeting a March 2027 energization date for the Project. To ensure that timeline is met, RSI is planning to commence construction in Q4 2025. On this basis, RSI is requesting a construction completion date of Q3 2027.

RSI is aware that the AUC generally includes a condition of approval that the power plant operator must inform the AUC that the proposed facility has been constructed within 30 days of the completion of construction. RSI confirms that it will submit this letter of confirmation within the required timeline.

Project Connection

SP8) If a connection order is not concurrently being applied for, provide the expected date when the connection order application will be submitted.

The application for the connection order will be included with the associated AltaLink Facility Application, expected to be filed in Q4 2024.

SP9) Provide the asset identification code assigned by the independent system operator (ISO) and the ISO Project ID number related to your system access service request, if available.

The AESO has assigned an asset identification code of 2540 for the Project.

SP10/TS2) If the power plant is to be connected to the transmission system, provide 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.

If the power plant is to be connected to the distribution system, provide a statement from the distribution facility owner indicating that it is willing to connect the generating facilities.

This information will be detailed in the associated AltaLink Facility Application.

TS6) Provide the most up-to-date functional specification issued by the ISO.

The functional specification has not yet been finalized by the AESO; however, this will be included in the associated AltaLink Facility Application.

TS17) Provide an electric single-line diagram or switching map showing new facilities in place in the system. In the case of a substation, provide an electric single-line diagram and a substation layout diagram, including major items of equipment and the fenced boundary of the substation, with units of measure/scale.

The electric single line diagram (SLD) for the Project is provided in Appendix 4.

Emergency Response Plan

SP11) Confirm the applicant has or will have a corporate or site-specific emergency response plan for the construction and operation of the proposed power plant. If the applicant will have a corporate emergency response plan, please explain why it decided not to develop a site-specific emergency response plan.

RSI prepared a site-specific Emergency Response Plan (ERP) in consultation with the MD Emergency Management Director and has been distributed to emergency responders for review. The ERP is provided in **Appendix 5**.

SP12) Provide a summary of the following:

- a. The site-specific risks (construction phase and operations phase) that have been identified to date.
- b. The emergency mitigation measures that have been identified.
- c. The site monitoring and communication protocols that will be put into place.

The site-specific risks (construction phase and operations phase) identified to date include:

- Fire (either entering the site or starting on the site);
- Construction and Operational Risks (such as lifting, trips and falls, etc.);
- Electrical (such as electric shock and arc flash hazards);
- Severe weather (such as high winds, tornadoes, earthquakes, extreme cold weather and lightning);
- Wildlife encounters; and
- Solar glare.

The emergency mitigation measures include a Fire Prevention Plan, Vegetation Management Plan, Bear Management Plan and Spill Response Plan. In addition, safety and emergency response training will be conducted as part of the site induction before visiting or working in the field. Details of the emergency mitigation measures are outlined in **Appendix 5**.

The ERP includes contact information of the relevant emergency response agencies and key personnel specific to each project phase (permitting, construction, and operations). The ERP also outlines the roles and responsibilities of the key personnel. Communication protocols specific to each of the identified risks (listed above) as well as an emergency reporting and investigation template are included in **Appendix 5**.

SP13) Confirm that local responders and authorities have been contacted or notified regarding the project emergency response plan. Describe any requirements or feedback received and describe how the applicant intends to address the requirements and feedback received.

An ERP consistent with the requirements of the AUC's Rule 007 application process has been completed. The site-specific ERP was developed in consultation with the MD Emergency Management Director. The feedback received pertained to detailing further the specific fire hazards, emergency management responsibilities and communication protocol. The preliminary ERP was updated per the MD's feedback and issued to the MD for further review. It is understood that until a finalized ERP, ready for construction, ERP will fully is issued to the MD, the not meet their expectations. The Proponent is committed to ongoing engagement with the MD and has committed to providing a construction ready ERP 90 days prior to construction along with the Final Project Update to AUC once an EPC has been selected for the Project.

Solar Glare Assessment

- SP14) Submit a solar glare assessment report that predicts the solar glare at receptors within 800 metres from the boundary of the project and registered aerodromes and known unregistered aerodromes within 4,000 metres from the boundary of the project where the potential for glare is possible. The assessment report must:
 - a. Describe the time, location, duration and intensity of solar glare predicted to be caused by the project.
 - b. Describe the software or tools used in the assessment, the assumptions and the input parameters (equipment-specific and environmental) utilized.
 - c. Describe the qualification of the individual(s) performing the assessment.
 - d. Identify the potential solar glare at critical points along highways, major roadways and railways.
 - e. Identify the potential solar glare at any registered and known unregistered aerodromes within 4,000 metres from the boundary of the project, including the potential effect on runways, flightpaths and air traffic control towers.
 - f. Include a map (or maps) identifying the solar glare receptors, critical points along highways, major roadways and railways and aerodromes that were assessed.
 - g. Include a table that provides the expected intensity of the solar glare (e.g., green, yellow or red) and the expected duration of solar glare at each identified receptor, critical points along highways, major roadways and railways and any registered and known unregistered aerodromes.

The Solar Glare Hazard Analysis Report (SGHAR), inclusive of all the requirements outlined above, was completed for the Project and is provided in **Appendix 6**. The conclusion of the SGHAR found that the Project is not likely to create hazardous glare conditions and can operate without causing hazardous glare on evaluated receptors including dwellings and roads.

Three local roads and two dwellings were identified and assessed in the SGHAR. Minimal yellow and green glare may be observed along Township Road 392. Range Road 41 and Range Road 43 are expected to be free of glare of any level. One dwelling is predicted to observe green glare. The impact of the glare on affected receptors is expected to be reduced by sun-masking, existing visual screening, and cloud cover or other weather patterns.

The Project is not likely to create hazardous glare conditions for the roads or dwellings that were assessed, and mitigation is not considered to be required.

Environmental Information

SP15/TS24) If preparation of either a federal impact assessment or a provincial environmental impact assessment report was required, provide a copy as an appendix to the application and a separate environmental evaluation is not required. If a federal impact assessment or a provincial impact assessment report was not required, submit an environmental evaluation of the project. The environmental evaluation must:

- a. Describe the present (pre-project) environmental and land use conditions in the local study area.
- b. Identify and describe the project activities and infrastructure that may adversely affect the environment.
- c. Identify the 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 that may be adversely affected by the project.
- d. Describe any potential adverse effects of the project on the ecosystem components during the life of the project.
- e. 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.
- f. Describe the mitigation measures the applicant proposes to implement during the life of the project to reduce the potential adverse effects.
- g. Describe the predicted residual adverse effects of the project and their significance after implementation of the proposed mitigation.
- h. Describe any monitoring activities the applicant proposes to implement during the life of the project to verify the effectiveness of the proposed mitigation.
- i. List the qualifications of the individual or individuals who conducted or oversaw the environmental evaluation.

No federal impact assessment is required for the Project as the Project does not meet the definition of a designated project as described in the *Schedule of the Physical Activities Regulations*, *SOR*/2019-285 under the *Impact Assessment Act*.

No provincial environmental impact assessment is required as the Project is not a mandatory activity for the purposes of an environmental assessment as described in Schedule 1 of the *Environmental Assessment (Mandatory and Exempted Activities) Regulation, Alta Reg 111/1993* under the *Environmental Protection and Enhancement Act.*

The exemptions to the provision of federal and provincial environmental impact assessments for the Project were provided by the Impact Assessment Agency of Canada and the Alberta Environment and Protected Areas – Regulatory Assurance Division, provided in **Appendix 7** and **Appendix 8**, respectively.

A Project-specific Environmental Evaluation (EE) was conducted to assess potential effects to ecosystem components, including vegetation, soils, wetlands and waterbodies, hydrology, and wildlife and wildlife habitat. The EE is provided in **Appendix 9**.



SP16/TS25) For projects wholly or partially located on federal lands (First Nation reserves, national parks or military bases), provide a copy of the environmental impact analysis completed for the corresponding federal government department. Indicate whether the project has the potential to cause effects that may cross into another jurisdiction. Environmental effects that originate on federal lands, but cross into another jurisdiction, must be addressed as part of the environmental review process. Projects on federal lands may be subject to provincial laws, standards and permits. The applicant must address how it has considered AUC Rule 007, Rule 012 and Rule 033 and describe the steps taken, if any, to address specific requirements set out in these rules.

Not applicable as the Project is not sited on federal lands.

SP17/TS26) Submit a stand-alone, project-specific environmental protection plan (or environmental management plan) that itemizes and summarizes all of the mitigation measures and monitoring activities that the applicant is committed to implementing during construction and operation to minimize any adverse effects of the project on the environment.

The Project-specific Environmental Protection Plan (EPP) is provided in **Appendix 10**.

End-of-Life Management

SP18) Submit a copy of the initial renewable energy operations conservation and reclamation plan (REO C&R Plan) as set out in the Conservation and Reclamation Directive for Renewable Energy Operations.

The Project-specific Conservation and Reclamation Plan (C&R Plan) is provided in Appendix 11.

SP19) Provide an overview of how the operator will ensure sufficient funds are available at the project end of life to cover the cost of decommissioning and reclamation.

A detailed summary of how the Proponent will ensure sufficient funds will be available at the project end of life can be found in the 'Rule 007 Interim Information Requirements – Reclamation Security' Section.

Noise Impact Assessment

SP20/TS28) Provide a noise impact assessment in accordance with Rule 012.

A noise impact assessment (NIA), compliant with Rule 012, was completed for the Project and is provided in **Appendix 12.** The conclusion of NIA found that the cumulative sound levels at the seven assessed receptors were below the permissible sound level (PSL) at all receptors by a minimum margin of 2dB. The low frequency noise (LFN) assessment also determined that the Project is not expected to produce any significant LFN effects. The proposed Project was therefore assessed to meet the requirements of AUC Rule 012.



Approvals, Reports and Assessments from other Agencies

SP21/TS29) Identify any other acts (e.g., *Environmental Protection and Enhancement Act, Water Act, Public Lands Act and Wildlife Act*) that may apply to the project, identify approvals the project may require, and provide the status of each of these approvals.

Other Acts that may potentially affect the Project include:

- Alberta Land Stewardship Act, SA 2009, c A-26.8;
- Alberta Utilities Commission Act, SA 2007, c A-37.2;
- Electric Utilities Act, SA 2003 c E-5.1;
- Electrical Code Regulation, Alta. Reg. 209/2006;
- Environmental Protection and Enhancement Act, RSA 2000, c E-12;
- Historical Resources Act, RSA 2000, c H-9;
- Migratory Birds Convention Act, SC 1994, c 22;
- Municipal Government Act, RSA 2000, c M-26;
- Occupational Health and Safety Act, SA 2017, c O-2.1;
- Safety Codes Act, RSA 2000, c S-1;
- Soil Conservation Act, RSA 2000. c S-15;
- Species at Risk Act, SC 2002. c 29;
- Water Act, RSA 2000, c W-3;
- Weed Control Act, SA 2008, c W-5.1; and
- Wildlife Act, RSA 2000, c W-10.

The Project will require approval from NAV Canada and Transport Canada. The Proponent confirms that all applicable Act requirements will be obtained prior to construction.

A Land Use Submission package including Project map and Solar Glare Hazard Analysis Report was submitted to NAV Canada on July 25, 2024. Approval will be obtained prior to construction commencement.

An Aeronautical Assessment form including Project map and Solar Glare Hazard Analysis Report was submitted to Transport Canada on July 25, 2024. Approval was received on August 1, 2024 and a copy of the approval is provided in the Participant Involvement Program (PIP) located in **Appendix 13**.



SP22) Submit a signed renewable energy referral report from Alberta Environment and Protected Areas Fish and Wildlife Stewardship (EPA-FWS). 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. Owners of approved and constructed solar power plants are required to submit an annual post-construction monitoring survey report to AEP and the AUC pursuant to Rule 033: Post-approval Monitoring Requirements for Wind and Solar Power Plants.

The Renewable Energy Referral Report was issued by EPA-FWS on January 30, 2024 and is provided in **Appendix 14**. EPA-FWS has reviewed the proposed Project location, mitigation strategies, including associated infrastructure and construction plans, and post-construction monitoring and mitigation program. EPA-FWS determined the Project poses a low risk to wildlife and wildlife habitat, based on Project siting.

SP23/TS31) Confirm that a *Historical Resources Act* approval has been obtained or has been applied for. If a historic resource impact assessment is required, briefly describe any known historical or archaeological sites, palaeontological sites, or traditional use sites of a historic resource nature. If a *Historical Resources Act* approval has been obtained, provide a copy of it.

Historical Resources Act (HRA) from ACSW approval for the Project is provided in Appendix 15.

SP24) If the government of Alberta, through the Aboriginal Consultation Office (ACO) or otherwise, directed consultation with an Indigenous group for related approvals (i.e., *Public Lands Act, Water Act, Environmental Protection and Enhancement Act, Historical Resources Act, Government Organization Act, etc.*) the applicant must provide a copy of the pre-consultation assessment, the adequacy assessment and the specific issues and response table (if prepared). If the government of Alberta, through the ACO or otherwise, indicated that a pre-consultation assessment is not required, the applicant must provide a copy of that direction. If advice from the government of Alberta has not been obtained, the applicant must provide justification for its decision to not seek advice.

Details of this can be found in Appendix 13.

Participant Involvement Program

SP25/TS32) Summarize the participant involvement information, including a description of the activities undertaken and include any engagement materials provided. (See Appendix A1 – Participant involvement program guidelines and Appendix A1-B – Participant involvement program guidelines for Indigenous groups.)

SABR Energy Consulting (SABR) was retained by RSI to facilitate the PIP process. RSI and SABR worked in partnership throughout the entirety of the PIP process to provide detailed correspondence to all associated stakeholders within 800m of the Project boundary. The PIP was completed in compliance Appendix A1 of Rule 007. The aim of the PIP was to notify and consult with potentially affected stakeholders within the study area to provide information on the Project and address any questions or concerns raised about the Project.

The PIP Summary report is provided in Appendix 13.

SP26) Confirm that, if applicable, Alberta Transportation, the municipality in which the project is located, the applicable railway companies, and the owner of any registered and known unregistered aerodrome within 4,000 metres of the project boundary were consulted and provide a summary of any objections received, mitigations discussed, and any outstanding objections.

The PIP Summary report is provided in Appendix 13.

SP27/TS33) List all occupants, residents and landowners on lands within the appropriate notification radius as shown below and described in Appendix A1 – Participant involvement program guidelines, as well as Indigenous groups, owners of aerodromes or other interested persons that were consulted as part of the participant involvement program.

The PIP Summary report is provided in Appendix 13.

A mailing list is provided in **Appendix 18.**

SP28/TS34) Supply a list of contact information for all persons who had been contacted as part of the participant involvement program in a spreadsheet in accordance with the template included in Appendix A1 – Participant involvement program guidelines.

The PIP Summary report is provided in **Appendix 13.**

SP29/TS35) Summarize consultation with local jurisdictions (e.g., municipal districts, counties).

The PIP Summary report is provided in **Appendix 13.**

SP30/TS36) Identify all persons who expressed a concern(s) about the project. For each person, include the following information:

- a. The specifics of the concern(s).
- b. Steps taken to try and resolve the concern(s).
- c. Whether the concern(s) was resolved.

The PIP Summary report is provided in Appendix 13.



Rule 007 Interim Information Requirements

The following information is provided in addition to the above requirements to demonstrate how the Project meets the AUC Rule 007 interim information requirements.

Agricultural Land

1) Using the current version of the Agricultural Regions of Alberta Soil Inventory Database (AGRASID), please describe the agricultural capability of soils intersecting the project footprint as provided in the spring-seeded small grains ("SSSGRAIN") attribute of the Land Suitability Rating System ("LandSuitabilityRatings") table. SSSGRAIN provides the Land Suitability Rating System (LSRS) classification for spring-seeded small grains for the related AGRASID soil polygons. Provide a table showing the amount of area for each LSRS class impacted by the project in hectares (e.g. 2.01 hectares of Class 2A).

Details are outlined in the Project Specific Agrivoltaics report found in Appendix 16.

- 2) From the Agricultural Regions of Alberta Soil Inventory Database (AGRASID), please describe all soil series within the project area and report all potential material impacts to:
 - a. Soil quality (i.e. compaction, rutting, salinity, sodicity, fertility, contamination, clubroot).
 - b. Soil quantity (i.e. wind erosion, water erosion).
 - c. Hydrology (i.e. topography, soil drainage, depth to groundwater).

Describe how these material impacts to soil quality, quantity and hydrology will be adequately mitigated during construction, operation and reclamation.

Details are outlined in the Project Specific Agrivoltaics report found in Appendix 16.

- 3) Describe all earthworks (e.g., stripping and grading) planned for the project, including the following information:
 - a. Methodology to anchor structures (e.g. screw piles, concrete footings, etc.).
 - b. The extent of stripping and grading, with an estimate of the area of agricultural land impacted.
 - c. Description of how these activities have been reduced in both extent and intensity (as practical) to protect the quality, quantity and hydrology of impacted soils.
 - d. Description of how and where stripped soils will be stockpiled and what steps will be taken to preserve the quality and quantity of stockpiled soils prior to replacement on site.
 - e. Description of how soils will be replaced on site to preserve the quality, quantity and hydrology of the disturbed soils.

Details are outlined in the Project Specific Agrivoltaics report found in Appendix 16.

4) Describe the potential for co-locating agricultural activities (e.g. grazing, having, crops, apiculture) into the project design. If co-locating agricultural activities is not feasible, please explain why.

Details are outlined in the Project Specific Agrivoltaics report found in Appendix 16.

5) List the qualifications of the agrologist(s) who prepared or reviewed the responses regarding agricultural land.

Details are outlined in the Project Specific Agrivoltaics report found in Appendix 16.

Municipal Land Use

1) Confirm whether the proposed power plant complies with the applicable municipal planning documents including municipal development plans, area structure plans, land use by-laws and other municipal by-laws.

The applicable municipal planning documents are:

- Municipal District of Provost No. 52 Municipal Development Plan (MDP) Bylaw No. 2324
- Municipal District of Provost No. 52 Land Use Bylaw (LUB) No. 2323

The Project is not subject to any area structure plans or inter-municipal development plans. The current MDP and LUB were adopted on June 27, 2024. Under the previous Land Use Bylaw 2157, solar facilities were not defined as a permitted or discretionary use. The Project parcels are zoned Agricultural District.

Under the newly adopted LUB, Solar Energy Systems are defined and require reclassification to the Commercial Solar Energy 'CSE' Land Use District prior to submission of a development permit application. Setbacks for Solar Energy Systems are defined in section 41.14 as follows:

- Project setback from a dwelling shall be a minimum distance of 1.6 kilometres (1 mile) unless a lesser distance is agreed to by the owner of the affected dwelling.
- If a lesser distance is agreed to by the owner of the affected dwelling the minimum setback shall not be less than that determined in accordance with the modeled sound level not exceeding 40dBA measured at a distance of 15m from the nearest or most impacted dwelling, and no closer to a dwelling on an adjacent property than 200 metres. No variance or relaxation of this requirement is permitted.

While the Project was in compliance with setbacks required under the agricultural district under LUB 2157, the Project is not in compliance with the current LUB 2323. The Project is in compliance with road setbacks (40m from centre line) and external property lines (7.5m).

2) Identify any instances where the proposed power plant does not comply with applicable municipal planning documents and provide a justification for any non-compliance.

The power plant does not comply with the residence setbacks in LUB 2323 as the Project was designed prior to this bylaw being adopted and as currently designed, the Project complies with provincial regulations with respect to dwellings under AUC Rule 012.

Under LUB 2157, "Agricultural land rated as Canadian Land Inventory (CLI) classes 1 to 4 **shall be encouraged** to be preserved for agricultural operations". The Project is located on class 1-4 soils and therefore does not meet this preference of the MD, however this does not appear to be a firm requirement based on the language in the LUB.

Under the newly adopted LUB 2323, "subject to Clause A, use of irrigated land, native prairie grassland, and high-quality agricultural soils with an Agricultural Regions of Alberta Soil Inventory Database (AGRASID) soils classification of 1 through 3, shall be prohibited". As the Project area includes class 2 and 3 soils, the Project is not in compliance with LUB 2323. As indicated by the Government of Alberta's (GoA) February 27, 2024 letter regarding Policy Guidance to the AUC, "Alberta will no longer permit renewable generation developments on Class 1 or Class 2 lands, unless a Proponent can demonstrate the ability for both crops and/or livestock and renewable generation to co-exist". The Project has incorporated agriculture into the design, which meets the requirements outlined by the GoA.

3) Describe how the applicant engaged with potentially affected municipalities to modify the proposed power plant or to mitigate any of its potential adverse impacts to the municipality, prior to filing the application.

Please refer to the PIP report, Appendix 13, for details on engagement with the Municipality.

Viewscapes

1) List and describe valued viewscapes (including national parks, provincial parks, culturally significant areas, and areas used for recreation and tourism) on which the project will be imposed. Describe mitigation measures available to minimize impacts from the project on these viewscapes.

GCR was retained by the Proponent to identify valued viewscapes as defined by the Government of Alberta (GoA) and determine the potential need for a Visual Impact Assessment (VIA) for the Project.

The Government of Alberta (GoA) has provided direction to the AUC to create buffer zones around identified protected areas and other 'pristine viewscapes', within which wind developments may not be permitted or may require a VIA. The focus of the GoA direction considering the impact to viewscapes has focused on wind development, with no guidance or clear direction provided on other technologies, including solar power plants. The GoA has not provided direction on the requirements or methodology for a VIA, nor has it provided direction on what developments will trigger the need for a VIA.

GCR has reviewed the GoA drafted map that identifies these zones around protected areas and other 'pristine viewscapes'. The Project does not fall within the identified zones. Therefore, it is considered that a Visual Impact Assessment is not required for the Project. Furthermore, while not determinative, no stakeholder concerns relating to sensitive viewscapes or visual effects have been raised to the proponent for consideration.

Reclamation Security

Describe the reclamation security program for the proposed power plant, including details on:

1. The standard to which the project site will be reclaimed to upon decommissioning.

The standard to which the project site will be reclaimed after termination or expiry of the Lease Agreement requires RSI to remove all equipment and improvements from the land to a depth of 36 inches below ground level. In addition, the land must be restored to similar condition as in existence prior to the start of the Lease. All gravel roads must be removed, and any topsoil that was removed during construction must be replaced. All trenches and ruts must be backfilled and checked for settlement and re-filled after 12 months. Decommissioning and reclamation activities must be commenced within 12 months of lease expiry or termination.

2. How the amount of the reclamation security will be calculated.

A qualified, independent third-party specialist in decommissioning and recycling equipment from renewable energy projects (Sunset Renewable Asset Management) prepared a Decommissioning and Reclamation Estimate (the "Reclamation Evaluation"), found in **Appendix 17**, in July 2024 for the Rising Sun project (the Project). The Reclamation Evaluation provides the methodology and processes by which the Project will be decommissioned, and provides an estimate of decommissioning costs, salvage value, and net reclamation cost. The net reclamation cost will be used as the basis of the reclamation security amount.

3. The frequency with which the reclamation security amount will be updated or reassessed.

An updated Reclamation Evaluation will be prepared every 5 years to reassess the required amount of the reclamation security. Annually, a statement showing the current balance of the reclamation security and current Reclamation Evaluation will be sent to the security beneficiary.

4. When the reclamation security will be in place to be drawn upon, if needed.

RSI proposes to establish the reclamation security on the 15-year anniversary of the Commercial Operation Date (COD) of the Project.

5. What form the reclamation security will take (e.g., letter of credit, surety bond, other).

RSI proposes to use an irrevocable standby Letter of Credit from a chartered Canadian Bank for the reclamation security. A Surety Bond is also a viable option for providing reclamation security. Both options would be evaluated at the time of posting the reclamation security.

6. The security beneficiaries to whom the reclamation security will be committed.

The beneficiary of the Letter of Credit will be the Project Landowner (counterparty to the Lease Agreement). All of the Project lands are owned by a single landowner.

Notwithstanding, RSI understands that the Government of Alberta is expected to issue updated policy on reclamation, including identifying a procedure for a Government body to hold reclamation security funds throughout Project operations, and act as the beneficiary of these funds. RSI would suggest that the governing body tasked with environmental protection would be the preferred beneficiary of the reclamation security. Should this procedure be in place prior to implementation of the Project's reclamation security, RSI would identify this government body as the beneficiary of the reclamation security.

7. How the beneficiary can access the security and any constraints on such access.

Payment under the Letter of Credit will be made to the Landowner if there is an Event of Default under the Lease Agreement by the Project owner. Events of Default include items such as bankruptcy or

insolvency of the project owner, failure to pay lease payments, and failure to decommission the Project in accordance with the lease provisions at the expiry or termination of the Lease Agreement.

Should the beneficiary need to access the security due to an Event of Default, provision would be made to ensure that the security can only be used for the express purpose of decommissioning and remediating the site to the required standard.

8. A report prepared by a third party estimating the costs of reclaiming the proposed project. The report must include the estimated salvage value of project components.

A qualified, independent third-party specialist in decommissioning and recycling equipment from renewable energy projects (Sunset Renewable Asset Management) prepared a Decommissioning and Reclamation Estimate (the "Reclamation Evaluation") in July 2024 for the Rising Sun project (the Project). The Reclamation Estimate provides the methodology and processes by which the Project will be decommissioned.

The Reclamation Evaluation estimates the full cost of decommissioning and reclamation of the Rising Sun facility of \$15,023,740 CAD. Helping offsetting this cost is an estimated salvage value of \$11,319,139 for recycling and reuse of panel components, steel and electrical cables, producing a net cost of \$3,702,604 for decommissioning and reclamation.

The Reclamation Evaluation is provided in Appendix 17.

9. An explanation of why the chosen form of security was selected, having regard to its attributes and priority in bankruptcy, including how the secured party would be able to realize on the reclamation security should the project owner and operator be in default.

A Letter of Credit was selected as the chosen form of security due to its robustness, reliability and priority in bankruptcy. RSI feels that a Letter of Credit provides a straightforward and enforceable mechanism to ensure the Landowner can access sufficient funds to fully decommission and reclaim the site to its original condition in an event of default by the Project owner. A Surety Bond would also offer similar benefits.





Appendix 1- Qualified Owner Confirmation

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Appendix 2 - Geographical Keyhole Markup





Appendix 3- Project Maps



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Appendix 4 - Single Line Diagram



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Appendix 5- Emergency Response Plan





Appendix 6- Solar Glare Hazard Analysis Report





Appendix 7- Impact Assessment Agency of Canada Environmental Impact Confirmation





Appendix 8- Alberta Environment and Parks Environmental Impact Assessment Confirmation



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Appendix 9- Environmental Evaluation





Appendix 10- Environmental Protection Plan





Appendix 11- Conservation and Reclamation Plan



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Appendix 12- Noise Impact Assessment





Appendix 13- Participant Involvement Program





Appendix 14- Renewable Energy Referral Report





Appendix 15- Historical Resources Act Approval



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Appendix 16- Agrivoltaics Report



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Appendix 17- Reclamation Evaluation



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Appendix 18 - Project Mailing List

