Sweetgrass Solar with Storage Project

Alberta Utilities Commission
Rule 007 Solar Power Plant, BESS & Substation Application

Client: Neoen Renewables Canada Inc.
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Executive Summary

Neoen Renewables Canada Inc. (Neoen or the Proponent) is proposing to construct and operate the Sweetgrass Solar with Storage Project (the Project). The Project includes a solar power plant (Solar Power Plant) and battery energy storage system (BESS) and a collector substation designated as the Sweetgrass 1160S Substation (Project Substation). Neoen has retained Green Cat Renewables Canada Corporation (GCR) to prepare the Project layout, technical studies for the Project, emergency response plan, and support the application process.

The Project will consist of approximately 841,425 solar photovoltaic (PV) modules, utilizing single axis tracker racking, with a total generation capacity of up to 396 megawatts (MW_{AC}) and a grid capacity limit of 315 MW_{AC}. The BESS has a capacity of 150 MW and a storage capacity of 300 megawatt hours (MWh). The Project will be located in the Municipal District of Willow Creek No. 26 (the MD), approximately 4.5 kilometres (km) east of the Hamlet of Granum, Alberta. The Project has a fenced area of approximately 662 hectares (ha) (1,635 acres) and will be located on privately owned, cultivated land.

The Project will be connected to the Alberta Interconnected Electric System (AIES) through AltaLink's 240kV transmission line 1038L, between SC1 266S and Windy Flats 138S, located approximately 14 km west from the Project area. This connection will be made via a newly proposed market participant choice (MPC) Willow Creek 1132S 240kV switching substation and an approximately 14 km long transmission line from the Project Substation to the aforementioned switching substation. The MPC transmission line application will be submitted to the Alberta Utilities Commission (AUC or Commission) for review under a separate application.

Neoen is seeking approval from the AUC to construct and operate the Project in accordance with Sections 11, 13.01, 14, and 15 of the *Hydro and Electric Energy Act*. As part of its application, Neoen has submitted all relevant information to meet the requirements of Sections 4.4.2,7.2.1, and 10.3 of Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations, Hydro Developments and Gas Utility Pipelines* (March 2024).

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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* (March 2024).

Project Description

SP1) 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. If the vendors have not been selected or the equipment has not been finalized, provide:

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

Neoen hereby applies to the AUC for the following:

- Approval to construct and operate the Solar Power Plant and BESS pursuant to Sections 11 and 13.01 of the *Hydro and Electric Energy Act*.
- Permit to construct and licence to operate the Project Substation pursuant to Sections 14 and 15 of the *Hydro and Electric Energy Act*.

The Solar Power Plant will consist of approximately 841,425 solar PV modules (590W) and will utilize single axis tracker racking, with up to 90 inverters all enclosed in perimeter fencing that will be at least 1.8 metres (m) in height. The Project has a total fenced area of approximately 662 ha and will have a total generation capacity of up to 396 megawatts (MW_{AC}) with a grid capacity limit of 315 MW_{AC}. The electricity exported from the Project to the AIES will not exceed this 315 MW_{AC} limit. The BESS will have a total capability of 150 MW and a storage capacity of 300 MWh.

The indicative design supplied for the purposes of this application is based on the use of a Astroenergy 590-Watt solar panel and Tesla Megapack 2 XL BESS.

The Solar Power Plant and BESS will include the following major equipment:

- Ten (10) 34.5 kV breakers with associated disconnect switches (Solar Power Plant and BESS); and
- Five (5) 34.5 kV breakers with associated disconnect switches (Transformer, Reactive Power Compensation, and Bus Tie).

SP2) Provide a list of existing approvals for facilities directly affected by this project, if any.

There are no existing approvals for facilities that are expected to be directly affected by the Project.

SP3) 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 owned and operated by Neoen Renewables Canada Inc. Neoen is an originator, developer, owner, and long-term operator of solar, wind, and BESS projects. Neoen is a corporation registered under the *Business Corporations Act*, RSA 2000, c B-9, thus making the Proponent a qualified owner. Neoen's Certificate of Incorporation is provided in Appendix 1.

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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) 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.
- 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.

The Project will be sited within portions of the following legal subdivisions listed in the table below:

Quarter	Section	Township	Range	Meridian
NE/NW/SE/SW	25	10	26	W4M
NE/NW/SE/SW	26	10	26	W4M
NE/NW/SE/SW	35	10	26	W4M
NE/SE	6	11	25	W4M
NW	36	10	26	W4M

The Project Substation and BESS will be located in the southwest quarter of Section 26, Township 10, Range 26, west of the Fourth Meridian (LSD 3-26-10-26-W4M).

A Keyhole Markup Language (.kml) file containing the geographic data for each of the major Project components, including the boundary of the Project and the location of the Project Substation is provided in Appendix 2. This file contains the key information shown on the maps submitted to address SP6, TS21, and ES11.

The Project will be connected to the AIES through AltaLink's 240kV transmission line 1038L, between SC1 266S and Windy Flats 138S, located approximately 14 km west from the Project area. This connection will be made via a newly proposed MPC Willow Creek 1132S 240kV switching substation and an approximately 14 km long transmission line from the Project Substation to the aforementioned switching substation. The MPC transmission line application will be submitted to the AUC for review under a separate application.

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

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

ii. Legible maps showing:

- The power plant site boundary.
- 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.
- 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.
- All registered aerodromes and any known unregistered aerodromes within 4,000 metres of the edge of the proposed power plant site boundary.
- Important environmental features and sensitive areas in the local study area.
- Any additional energy-related facilities within the project area.
- 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, and waterbodies; and
- Energy Facilities Map.

The Aerodrome Map is not applicable as no active aerodromes were identified within 4 km of the Project boundary. The Landownership Map including landownership and residences within 800 m of the Project boundary provided in Appendix B of the PIP Report (Appendix 12). The Site Plan including existing right-of-ways is provided in Appendix O of the PIP Report (Appendix 12). The Landcover Map including landcover types provided in Figure 1 of the Environmental Evaluation (Appendix 6).

SP7) 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, Neoen is targeting a Q3 2028, in-service date for the Project. Neoen is actively engaged with the AESO and will keep them informed of the Project timeline and development. To ensure that timeline is met, Neoen is planning to commence construction by Q3 2026. On this basis, Neoen is requesting approval from the Commission by February 2025 and a construction completion date of January 2029 to accommodate timing for completion of all works occurring post-energization.

Neoen has requested additional time to allow time to finalize equipment specification, prepare a Final Project Update, and account for any delays during construction due to equipment procurement and supply chain delays.

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Neoen 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. Neoen 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.

A connection order is not currently being applied for and will instead be applied for along with the Facilities Application for the transmission line and interconnection. The expected application date is Q2 2025.

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 asset identification code has not yet been assigned by the ISO. However, the Project ID number related to the System Access Service Request (SASR) is P2619 for the Project.

SP10) 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.

Not applicable. The MPC transmission line will be the subject of a separate application per SP8 above.

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.

Neoen prepared a site-specific Emergency Response Plan (ERP) in consultation with the MD of Willow Creek's Public Safety Team, which has been distributed to and discussed with emergency responders for review and feedback. The ERP is provided in Appendix 4.

SP12) Provide a summary of the following:

- The site-specific risks (construction phase and operations phase) that have been identified to date.
- The emergency mitigation measures that have been identified.
- 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 incidents (refer to Section 4 of the ERP);
- Chemical release (refer to Section 5 of the ERP);
- Medical emergency (refer to Section 6 of the ERP);
- Environmental hazards (refer to Section 7 of the ERP); and
- Theft and vandalism (refer to Section 8 of the ERP).

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The emergency mitigation measures include a Fire Risk and Prevention Plan, Spill Response and Emergency Response Procedures as well as training exercises developed to target emergency management in all areas of Prevention, Protection, Mitigation, Response, and/or Recovery. Details of the emergency mitigation measures are outlined in Appendix 4.

The ERP includes contact information of the relevant emergency response agencies and will include key personnel specific to each project phase (permitting, construction, and operations). The ERP also outlines the roles and responsibilities of the key personnel. Communication processes as well as an incident/spill/investigation report form are included in Appendix 4.

The Project will have automated control and monitoring systems designed to continuously monitor and detect operating conditions. If the Project experiences an abnormal condition, such as fire detection, the system will immediately notify operational personnel and emergency responders to intervene manually or remotely to enact protection modes, shut-offs, or other necessary protective measures.

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.

Neoen developed the Project-specific ERP in consultation with the MD of Willow Creek's Public Safety Team Deputy Fire Chief, Duncan McLean. The ERP draft was provided to the MD for review and comment. Upon review, the MD requested clarification on the following items:

- The hazards identified, which are the site-specific risks outlined above;
- Additional training that may be required in relation to confined spaces or any BESS considerations;
- Evacuation plans and size of the required evacuation area in the event of an emergency; and
- Whether the Proponent has a 'let it burn' policy in the event of a BESS emergency.

Neoen provided responses to each of the above items to the MD and provided a Lithium-Ion Battery Emergency Response Guide and a Fire Protection – Engineering Analysis specific to the proposed BESS equipment. Neoen also confirmed that the ERP will be updated prior to construction based on final equipment selection. The updated ERP will be provided to the MD for review and comment to ensure there are no concerns with the proposed plan.

The MD confirmed that their questions had been addressed and that they look forward to seeing any updates to the ERP as they become available.

Neoen is committed to ongoing engagement with the MD throughout the Project life.

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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:

- Describe the time, location, duration and intensity of solar glare predicted to be caused by the project.
- Describe the software or tools used in the assessment, the assumptions and the input parameters (equipment-specific and environmental) utilized.
- Describe the qualification of the individual(s) performing the assessment.
- Identify the potential solar glare at critical points along highways, major roadways and railways.
- 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.
- Include a map (or maps) identifying the solar glare receptors, critical points along highways, major roadways and railways and aerodromes that were assessed.
- 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 assessment for the Project that details the information outlined above is provided in Appendix 5. The Solar Glare Hazard Analysis (SGHA) report concluded that the Project is not likely to have the potential to create hazardous glare conditions for identified receptors, but notes that drivers along Highway 519 may experience some yellow glare within the ±15° field-of-view. The SGHA report recommended that Neoen discuss the report findings with Alberta Transportation and Economic Corridors (Alberta Transportation) to determine whether mitigation is required for the Project. Neoen provided this report to Alberta Transportation, who subsequently provided approval without the requirement of any mitigation for the Project as proposed. A copy of the Alberta Transportation Permit is provided in Appendix O of the PIP Report (Appendix 12).

Environmental Information

SP15) 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:

- Describe the present (pre-project) environmental and land use conditions in the local study area.
- Identify and describe the project activities and infrastructure that may adversely affect the environment.
- 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.

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- Describe any potential adverse effects of the project on the ecosystem components during the life of the project.
- 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.
- Describe the mitigation measures the applicant proposes to implement during the life of the project to reduce the 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.
- List the qualifications of the individual or individuals who conducted or oversaw the environmental evaluation.

Western EcoSystems Technology, ULC (WEST) completed an Environmental Evaluation for the Project which addresses all the requirements outlined above. Details have been provided in **Appendix 6**.

No federal impact assessment report is required for the Project since 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,* SC 2019, c 28, s 1. No provincial environmental impact assessment report is required since the Project is not a mandatory activity for the purposes of an environmental assessment described in Schedule 1 of the *Environmental Assessment (Mandatory and Exempted Activities) Regulation,* Alta Reg 111/1993 under the *Environmental Protection and Enhancement Act,* RSA 2000, c E-12.

SP16) 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) 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.

WEST completed an Environmental Protection Plan for the Project. Details have been provided in **Appendix 7**.

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.

WEST completed a Conservation and Reclamation Plan for the Project. Details have been provided in **Appendix 8**.

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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.

Information regarding how Neoen will ensure sufficient funds are available at the Project end of life to cover the costs of decommissioning and reclamation is provided under the "Reclamation Security" subheading in the Rule 007 Interim Information Requirements section of this application.

Noise

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

A noise impact assessment, compliant with Rule 012, was completed for the Project and is provided in **Appendix 9**.

Approvals, Reports and Assessments from other Agencies

SP21) 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;
- Highways Development and Protection Act, RSA 2004, c H-8.5;
- 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;
- Radiocommunications Act, RSC 1985, c R-2;
- 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 approvals will be obtained prior to construction.

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NAV Canada has been consulted on the Project, inclusive of the SGHA report, and approval will be obtained prior to construction commencement.

Transport Canada was also consulted on the Project, inclusive of the SGHA report, and provided approval on July 17, 2024, confirming that no marking or lighting is required for the Project. A copy of the Transport Canada approval is provided in Appendix N of the PIP Report (Appendix 12).

SP22) Submit a signed renewable energy referral report from Alberta Environment and Parks (AEP) Fish and Wildlife Stewardship. 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.

AEPA determined the overall risk ranking for the Project is low. The Referral Report is provided in Appendix 10. Section 6 of the Environmental Evaluation (Appendix 6) outlines Neoen's commitment to submit an annual post-construction monitoring survey report pursuant to Rule 033.

SP23) 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 Resource Act approval for the Project was received on November 9, 2023, and is detailed in Appendix 11. A Historic Resource Impact Assessment is not required for the Project.

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.

The PIP Report provided in Appendix 12 includes a section on Indigenous Consultation, which outlines the communities that were included in the PIP. The Project-specific Landscape Analysis Indigenous Relations Tool (LAIRT) report is provided in Appendix I of the PIP Report. Piikani Nation, Blood Tribe, and Siksika Nation completed a site visit and no concerns were raised by the Indigenous communities included in the PIP. Piikani Nation, Blood Tribe, and Siksika Nation provided non-objection letters, which are provided as appendices within the PIP Report (Appendix 12).

Participant Involvement Program

SP25) 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 Neoen to facilitate the PIP process. Neoen and SABR worked in partnership throughout the entirety of the PIP process to provide detailed correspondence to all associated stakeholders within 800 m of the Project boundary. The PIP was completed in compliance Appendix A1 and Appendix A1-B of Rule 007. The aim of the PIP was to notify and consult with potentially affected stakeholders within the notification area to provide information on the Project and address any questions or concerns raised about the Project.

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A summary of the PIP activities undertaken for the Project is provided in Appendix 12.

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.

Details of consultation with Alberta Transportation, a nearby aerodrome that is no longer active, and the MD are included in the PIP Report (Appendix 12). The Alberta Transportation Permit is provided in Appendix O of the PIP Report. There are no railway companies in proximity to the Project.

SP27) 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 stakeholder line list is provided in Appendix C of the PIP Report (Appendix 12).

SP28) 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 mailing list spreadsheet is provided in Appendix 13.

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

A summary of consultation with the MD is included in the PIP Report (Appendix 12).

SP30) 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 'Consultation with Landowners, Occupants and Residents' section of the PIP Report (Appendix 12) summarizes the Project-specific concerns raised throughout the PIP as well as the responses provided to try to resolve any concerns.

While Neoen was not able to resolve all stakeholder concerns, it endeavoured to be responsive to such concerns and propose reasonable mitigation measures, where possible. Neoen completed extensive engagement with Project stakeholders and designed its PIP to be compliant with AUC Rule 007 guidelines.

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Substation Application

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

Project Description

TS1) Provide a description of the proposed project.

Neoen is seeking a Permit and Licence to construct and operate the Project Substation pursuant to Sections 14 and 15 of the *Hydro and Electric Energy Act*. The Project Substation will be located in LSD 3 of Section 26, Township 10, Range 26, west of the Fourth Meridian and is approximately 100 m by 100 m in size.

TS2) Confirm if the application is for a customer project or an application related to a proposal for a market participant under Section 24.31 of the *Transmission Regulation*.

The Project will be connected to the AIES through AltaLink's 240kV transmission line 1038L, between SC1 266S and Windy Flats 138S, located approximately 14 km west from the Project area. This connection will be made via a newly proposed MPC Willow Creek 1132S 240kV switching substation and an approximately 14 km long transmission line from the Project Substation, designated as the 1160S Substation, to the aforementioned switching substation. The transmission facility application for the MPC connection is anticipated to be submitted to the AUC in Q2 2025.

TS3) Provide details of the 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 operator of the facilities that is seeking to acquire the permit or licence. Confirm that the applicant is a qualified owner.

Please see response to SP3.

TS4) Provide a list of existing approvals for facilities directly affected by this project, if any.

Please see response to SP2.

TS5) Provide a copy of the ISO direct assignment letter pursuant to the *Electric Utilities Act*. Alternatively, if a needs identification document was not required, provide a copy of the ISO approval letter pursuant to the abbreviated needs approval process, or provide a statement in the application that the project was exempt pursuant to the *Transmission Regulation* (as described in subsection 7.1 of this rule).

Not applicable as this application is specific to the Solar Power Plant, BESS, and Project Substation.

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

The final functional specification for the Project has not yet been issued by the ISO and will be part of the Facilities Application for the transmission line and interconnection.

TS7) Describe the design and ratings of the transmission line and major elements of the substation.

The Project Substation will connect to a new MPC transmission line and will include the following major equipment:

- Two (2) 150/200/250 MVA 240/34.5 kV power transformer with on-load tap changers (OLTC);
- Two (2) 240 kV circuit breaker with associated disconnect switches; and
- Three (3) 240 kV motor-operated disconnect (MOD) switches.

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TS8) If the ISO requires the facility applicant to determine the choice of conductors, describe the conductor size and arrangement selected and the basis for the conductor selection.

Not applicable.

TS9) If the application is not direct assigned by the ISO, provide the rationale for the rating/size of any proposed conductor or piece of major substation equipment.

Not applicable.

TS10) Describe the proposed transmission line structure type, including height and spacing; if more than one type of structure is proposed, state where each type will be used.

Not applicable.

TS11) State the right-of-way width and the basis for determining the width.

Not applicable.

TS12) Describe all major substation equipment being applied for, including the height of any telecommunications structure, and provide a list of the final major equipment that would be in the substation.

Please see response to TS7.

TS13) Describe the switching and protection features of the proposed transmission facilities.

Not applicable.

TS14) Describe the electrical interaction of proposed transmission facilities with other facilities, such as pipelines, railways, telephone, radio and television transmission facilities, and other surface structures.

Not applicable.

TS15) Describe the changes to existing facilities required to accommodate the proposed facilities.

Not applicable.

TS16) Describe any transmission line routing alternatives to the proposal, and compare the relative effects (environmental, social and economic, including any associated distribution costs) of these alternatives with the proposal. If the alternatives are segmented, include a comparison of the effects of each segment to the effects of its corresponding alternative segments.

Not applicable.

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 single-line diagram (SLD) (including BESS) and the substation layout is provided in **Appendix 14**.

TS18) Discuss the construction schedule, equipment and method of construction, and method of eventual right-of-way maintenance.

Not applicable.

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TS19) Provide the requested approval date from the AUC, the expected construction start date, the expected in-service date of the project and the requested construction completion date to be stipulated in the project permit(s) and licence(s).

Please see response to SP7.

TS20) If available, provide the location of any required temporary or permanent workspace areas and access roads, and state whether these locations are requested to be listed in a permit and licence.

Please refer to the Plant Site Map provided in Appendix 3, which shows the location of the Project Substation, laydown area and internal access roads.

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

i. A legible map defining the study area and state the reasons for the chosen area.

ii. Legible maps of the proposed facilities showing:

- The preferred transmission line route and any alternative routes or segments.
- Right-of-way widths.
- Location of the transmission line on the right-of-way.
- Location of the transmission line relative to property lines.
- Kilometre points along each transmission line route.

iii. Legible maps and air photo mosaics upon which the proposed transmission line route(s) and/or substation have been imposed and showing the residences, landowner names, and major land use and resource features along the routes and/or adjacent to the substation (e.g., agricultural crops or pasture, topography, soil type, existing land use, existing rights-of-way, existing or potential historical, archaeological or paleontological sites, and superficial and mineable resources).

iv. Legible maps showing the most relevant environmental features, wildlife and aquatic habitat, ecological communities, environmentally sensitive areas, protected areas and designations present in the local study area

The following Project maps are provided in Appendix 3:

- Plant Site Map including major Project components;
- Overview Map including neighbouring municipalities, local landmarks, and waterbodies; and
- Energy Facilities Map.

The Aerodrome Map is not applicable as no active aerodromes were identified within 4km of the Project boundary. The Landownership Map including landownership and residences within 800 m of the Project boundary provided in Appendix B of the PIP Report (Appendix 12). The Site Plan including existing right-of-ways is provided in Appendix O of the PIP Report (Appendix 12). The Landcover Map including landcover types provided in Figure 1, the Wildlife Features Map is provided in Figure 2, and the Soils Map including soil types is provided in Figure 3 of the Environmental Evaluation (Appendix 6).

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TS22) Provide a Keyhole Markup Language (.kml/.kmz) file that contains the geographic data of the transmission line centrelines for all applied for transmission route options and substation locations. This file should reflect the information shown on the drawings and maps submitted to address information requirement TS21.

Please see response to SP5.

TS23) If applicable, describe the measures proposed to minimize potential visual effects of the proposed development, including the identification of project components and locations that require screening and the screening measures (e.g., fences, earth berms, painting, landscaping) to be used.

No stakeholders included in the PIP expressed concerns about potential visuals impacts specific to the Project Substation. Furthermore, the Project Substation is located a minimum of approximately 1.6 km from the nearest residence and approximately 150 m from the nearest public road. Other infrastructure associated with the Solar Power Plant is sited between the Project Substation and the nearest residences. As such, screening or other mitigation measures are not considered to be necessary.

Environmental Information

TS24) Submit an environmental evaluation of the project. The environmental evaluation must:

- Describe the present (pre-project) environmental and land-use conditions for the proposed route, substation location and any alternatives.
- Identify and describe the potential effects of construction and operation of the project on the environment. In particular, describe any potential adverse effects on soils, terrain, vegetation species and communities, wetlands, wildlife species and wildlife habitat, aquatic species and habitat, groundwater, surface water bodies and hydrology, environmentally sensitive areas, and land use within the local study area following and referencing published Alberta Environment and Protected Areas (AEPA) guidelines if applicable.
- Describe the methodology used and any field surveys conducted to identify, evaluate, and rate any potential environmental effects and determine their significance, along with an explanation of the scientific rationale for choosing this methodology.
- Describe the mitigation measures the applicant proposes to implement during the life of the project to reduce the 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
- List the qualifications of the individual(s) who conducted or oversaw the environmental evaluation.
- Present an overall comparison of the proposed routes, in particular, identify the environmental features and any potential environmental effects (e.g., on native vegetation communities, rare plants, wetlands, topography, unique terrain features, sensitive soils, wildlife species setbacks and wildlife habitat, and environmentally significant areas), and identify land use and resource features (e.g., agricultural, residential, recreational, forestry, trapping and hunting areas, protective notations, and existing or potential archaeological sites) for each route in a table with stated units (kilometre, total number, etc.).

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- Summarize the compatibility of the proposed facility with various municipal services if a proposed transmission line passes through or immediately adjacent to an urban centre.
- If the project crosses agricultural land, describe any plans to prevent the spread of weeds and pests on agricultural land.
- If the project involves the modification or repair of an existing substation, describe any current or past on-site use of polychlorinated biphenyls (PCB) and summarize any site-specific incident spill records. Where soil disturbance will occur on or immediately adjacent to the substation site, describe any soil sampling or contamination assessment to be undertaken and describe any plans to safely manage, transport and dispose of contaminated soils.

WEST completed an Environmental Evaluation for the Project, including the Project Substation, which addresses all the applicable requirements outlined above (Appendix 6). The requirements related to the transmission line and a modification or repair of an existing substation are not applicable to this Project.

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 and Rule 012 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.

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.

WEST completed a project-specific Environmental Protection Plan for the Project, including the Project Substation. Details have been provided in Appendix 7.

TS27) Describe any decommissioning of existing transmission facilities and describe the reclamation plan that will be carried out, including for any temporary workspace areas and temporary access roads following commissioning.

WEST completed a Conservation and Reclamation Plan for the Project, including temporary workspace areas. Details have been provided in Appendix 8.

Noise

TS28) Provide a noise impact assessment in accordance with Rule 012 for new substations and transformer additions within an existing substation, clearly indicating the impact of the new substation and/or transformer addition.

A noise impact assessment, compliant with Rule 012, was completed for the Project, including the Project Substation, and is provided in Appendix 9.

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Approvals from Other Agencies

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.

Please see response to SP21.

TS30) For the preferred route and possible alternatives, applicants must provide a summary of feedback received to date from AEP (including the local wildlife biologist of AEP) addressing the environmental aspects of the project, and confirmation that AEP is satisfied with any proposed mitigation measures and monitoring activities, or identify any unresolved project aspects where agreement with AEP was not achieved.

AEPA determined the overall risk ranking for the Project is low. The Referral Report is provided in Appendix 10.

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, 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 Resource Act approval for the Project, including the Project Substation, was received on November 9, 2023, and is detailed in Appendix 11. A Historic Resource Impact Assessment is not required for the Project.

Participant Involvement Program

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).

Please see response to SP25.

TS33) List all occupants, residents and landowners within the appropriate notification radius as determined using Appendix A1 – Participant involvement program guidelines, as well as Indigenous groups and other interested persons that were notified or consulted as part of the participant involvement program.

Please see response to SP27.

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.

Please see response to SP28.

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

Please see response to SP29.

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

- The specifics of the concern(s).
- Steps taken to resolve the concern(s).
- Whether the concern(s) was resolved.

Please see response to SP30.

Economic Assessment

TS37) Provide an AACE Class 3 cost estimate for the preferred route and all alternatives on a common basis, in accordance with the requirements in ISO Rules Section 504.5 and the AESO Information Document #2015-002R, Service Proposals and Cost Estimating. The format of the cost estimate provided must take the form of the estimate summary that is obtained by completing the AESO's cost estimate template (available on the AESO web page). Where identifiable, include costs to be borne by persons other than the applicant and the applicant's customer(s) in the comparison. This information requirement may not be applicable to market participant and merchant line applications.

Not applicable.

Market Participant Choice

TS38) In addition to the above, if the applicant is a market participant applying under Section 24.31 of the *Transmission Regulation*, the applicant must also:

a. Provide confirmation that all required agreements are in place with the TFO including the asset transfer agreement, the written agreement with the TFO for the temporary operation of the transmission facilities, if available, and confirmation of ISO approval of the connection proposal.

b. Specify the temporary period for which the market participant expects to hold the operating licence, which may not exceed the term specified in the written agreement with the TFO for the temporary operation of the transmission facilities.

Not applicable.

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Energy Storage Facilities Application

The following information is provided in addition to the above requirements to demonstrate how the Project meets all energy storage facilities requirements of AUC Rule 007.

Project Description

ES1) State the approvals that are being applied for from the AUC.

Please see response to SP1.

ES2) Provide the total capability in MW and storage capacity in megawatt hour (MWh) of the project.

The BESS will have a total capability of 150 MW and a storage capacity of 300 MWh.

ES3) Describe where the proposed energy storage facility is charged from and discharged to.

The BESS facility is charged from the Solar Power Plant and discharged to the AIES.

ES4) Summarize the discussions held with the ISO, transmission facility owner, and/or distribution facility owner regarding the interconnection of the proposed energy storage facility, including any concerns indicated and solutions proposed.

Neoen submitted its System Access Service Request (SASR) to the AESO on July 30, 2022. Since August 2022, Neoen has maintained biweekly meetings with the AESO and AltaLink (as the TFO) to address any concerns related to interconnection topics. A MPC confidentiality agreement was signed on November 11, 2023, and a MPC onboarding meeting took place on December 5, 2023. To date, no concerns have been expressed by the AESO or the TFO regarding the BESS interconnection.

Neoen also submitted a Request for *Electric Utilities Act* Section 101(2) Exemption to FortisAlberta Inc. (as the DFO) in October 2022. The facility Coordination Agreement was received in November 2022. To date, no concerns have been expressed by Fortis regarding the BESS interconnection.

ES5) Provide a single-line diagram for the project including the metering points for the proposed project.

The SLD (including BESS) is provided in **Appendix 14**.

ES6) Describe the recycling plan, based on current regulations, for the energy storage facility at project end of life and confirm that the final recycling plan will be in accordance with the regulation in place at the time of decommissioning.

All BESS components will be recycled in accordance with the manufacturer's specifications and applicable regulations at the time of decommissioning, or end of useful life.

Neoen confirms a final recycling plan will be developed for the BESS components in accordance with regulations in place at the time of decommissioning.

ES7) Provide a list of existing approvals for facilities directly affected by this project, if any.

Please see response to SP2.

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ES8) 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.

Please see response to SP3.

ES9) Provide documentation confirming compliance with Section 95 of the *Electric Utilities Act*, if applicable.

Not applicable.

ES10) Describe the location of the project:

- Provide the legal description of the proposed project site (legal subdivision [LSD], section, township, range, meridian and/or plan, block, lot, municipal address for urban parcels) and connection point, if applicable.
- Provide a Keyhole Markup Language (.kml/.kmz) file that contains the geographic data for each of the major components and project boundary of the proposed project. This file should reflect the information shown on the drawings and maps submitted to address information requirement ES11

Please see response to SP5.

ES11) Provide the following drawings and maps with units of measure/scale and the direction of north specified:

i. A legible plant site drawing showing all major equipment components and the project site boundary.

ii. Legible maps showing:

- The project site boundary.
- 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.
- 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.
- Important environmental features and sensitive areas in the local study area.
- Any additional energy-related facilities within the project area.
- The 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.

Please see response to SP6.

ES12) 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.

Please see response to SP7.

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Project Connection

ES13) If a connection order is not concurrently being applied for, provide the expected date when the connection order application will be submitted.

Please see response to SP8.

ES14) 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.

Please see response to SP9.

ES15) If the energy storage facility 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 energy storage facility to the Alberta Interconnected Electric System.

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

Not applicable. The transmission line will be submitted as a separate application as outlined in SP8.

Emergency Response Plan

ES16) Confirm the applicant has or will have a corporate or site-specific emergency response plan for the construction and operation of the proposed energy storage facility. If the applicant will have a corporate emergency response plan, please explain why it decided not to develop a site-specific emergency response plan.

Please see response to SP11.

ES17) Provide a summary of the following:

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

Please see response to SP12.

ES18) 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.

Please see response to SP13.

Environmental Information

ES19) Provide a summary of feedback received to date from AEPA addressing the environmental aspects of the project and any mitigation measures and monitoring activities recommended by AEPA.

Please see response to SP22.

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ES20) 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:

- Describe the present (pre-project) environmental and land use conditions in the local study area.
- Identify and describe the project activities and infrastructure that may adversely affect the environment.
- 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.
- Describe any potential adverse effects of the project on the ecosystem components during the life of the project.
- 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.
- Describe the mitigation measures the applicant proposes to implement during the life of the project to reduce the 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.
- List the qualifications of the individual or individuals who conducted or oversaw the environmental evaluation

Please see response to SP15. In addition to the Air Quality section of the Environmental Evaluation (**Appendix 6**), a Project-specific Air Quality Dispersion Modelling and Risk Assessment report is provided in **Appendix 15**.

ES21) 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 proponent must address how it has considered AUC Rule 007 and Rule 012 and describe the steps taken, if any, to address specific requirements set out in these rules.

Please see response to SP16.

ES22) 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.

Please see response to SP17.

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End-of-Life Management

ES23) Provide an overview of how the operator will ensure sufficient funds are available at the end of life of the project to cover the cost of decommissioning and reclamation.

Information regarding how Neoen will ensure sufficient funds are available at the Project end of life to cover the costs of decommissioning and reclamation is provided under the "Reclamation Security" subheading in the Rule 007 Interim Information Requirements section of this application.

Noise

ES24) Provide a noise impact assessment in accordance with Rule 012.

A noise impact assessment, compliant with Rule 012, was completed for the Project, including the BESS, and is provided in Appendix 9.

Approvals, Reports and Assessments from Other Agencies

ES25) 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.

Please see response to SP21.

ES26) 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.

Please see response to SP23.

ES27) 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.

Please see response to SP24.

Participant Involvement Program

ES28) 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).

Please see response to SP25.

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ES29) 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 or other interested persons that were consulted as part of the participant involvement program.

Please see response to SP27.

ES30) 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.

Please see response to SP28.

ES31) Summarize consultation with local jurisdictions (e.g., municipal districts, counties).

Please see response to SP29.

ES32) Identify all persons who expressed a concern(s) about the project. For each person, include the following information:

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

Please see response to SP30.

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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 have been provided in the Soils and Terrain section of the Environmental Evaluation (Appendix 6). Specifically, details are included in Table 7 and the following subsection within the Environmental Evaluation: Land Suitability Classification for Spring-seeded Small Grains.

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 have been provided in the Soils and Terrain section of the Environmental Evaluation (Appendix 6). Specifically, details are included in Table 6 and the following subsections within the Environmental Evaluation: Soil Quality, Soil Quantity, Hydrology, and Mitigation Measures.

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 have been provided in the Soils and Terrain section of the Environmental Evaluation (Appendix 6). Specifically, details are included in the following subsection within the Environmental Evaluation: Earthworks.

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

Neoen is considering the co-location of agricultural activities on the Project site by way of sheep grazing or other feasible and economically viable opportunities for co-location, such as apiculture, crop growth, or a combination of mixed-use opportunities. Neoen intends to explore opportunities for co-locating agricultural activities in consultation with Project landowners and the MD as part of its ongoing engagement for the Project-specific Vegetation Management Plan. Details have been provided in the Soils and Terrain section of the Environmental Evaluation (Appendix 6). Specifically, details are included in the following subsection within the Environmental Evaluation: Co-locating Agricultural Activities.

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

Details have been provided in Appendix B of the Environmental Evaluation (Appendix 6).

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 Willow Creek No. 26 Municipal Development Plan (MDP) Bylaw No. 1765; and
- Municipal District of Willow Creek No. 26 Land Use Bylaw (LUB) No. 1826.

The Project is not subject to any area structure plans or inter-municipal development plans. The Project parcels are zoned Rural General.

The MDP states that "agricultural land is the predominant land use in the MD. It is important to protect the agricultural endeavours that occur in the MD while balancing the interests and pressures for non-agricultural uses". The messaging throughout the MDP is consistently that agricultural uses should be protected, while providing flexibility for non-agricultural uses. Neoen believes that co-location of agricultural activities with the Project balances the objectives of protecting agricultural uses and allowing for non-agricultural development.

Under the LUB, "Solar energy system, industrial" is a discretionary use in the Claresholm Industrial Area – CIA, Rural Industrial – RI, and Rural Commercial – RC Schedule 2 Land Use Districts, therefore a land use redesignation will be required.

Schedule 12, Part 4 of the LUB outlines the requirements for Solar Energy Systems and Alternative/Renewable Energy Systems. Siting requirements under this schedule are as follows:

> 4.3 The Development Authority will consider the following as preferable sites:
>
> (a) use of the poor quality lowest productive land and dry corners is preferred;
>
> (b) use of cut-off, fragmented, irregular shaped parcels is preferred;
>
> (c) to the extent possible, use of irrigated agricultural land should be avoided/minimized; and
>
> (d) the use of an unsubdivided quarter section of high-quality agricultural land that has or could contain irrigation system infrastructure shall not be considered as suitable unless the Development Authority determines special or unique circumstances may warrant its inclusion. Consideration of the proximity to electrical sub-stations and feeder distribution infrastructure in relation to the location of the development may be considered as part of the special circumstances present.

The Project is located on class 3 and 5 agricultural land that does not contain an irrigation system. Therefore, Neoen believes the Project complies with section 4.3 of the LUB in terms of siting.

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Setbacks for Solar energy systems, industrial, are defined as follows in Section 12 of the LUB:

- A Solar Energy System, Industrial Scale shall be setback:

  (a) not less than 30.5 m (100 ft) from all property lines not fronting on or adjacent to a municipal roadway; and

  (b) not less than 45.7 m (150 ft) from all property lines fronting on or adjacent to a municipal roadway; and

  (c) not less than 152.4 m (500 ft) from a dwelling unit within or adjacent to the solar farm project footprint boundary measured from the wall of the dwelling.

The Project adheres to all of the required setbacks.

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 proposed power plant complies with the above noted municipal planning documents.

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.**

As requested by the MD, the internal access roads for the Project were updated to align across existing municipal roads. Please refer to the PIP Report (**Appendix 12**) for details on engagement with the MD.

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.**

In the time since the interim requirements were introduced by the AUC, the Government of Alberta (GoA) has since provided direction to the AUC to create buffer zones around identified protected areas and other valued viewscapes, within which there is a requirement to complete a visual impact assessment. The GoA direction considering the impact to viewscapes has focused only on wind development, with no guidance or clear direction provided on other technologies, including solar power plants. GCR have provided a response to the current AUC consultation on changes to Rule 007 which outlines a recommendation that if other technologies are considered to require a visual impact assessment from identified and agreed valued viewscapes, then the visual impact assessment area should be directly related to the height of the structure proposed.

Notwithstanding the absence of clear direction in regard to visual impact assessment for solar, the Project is located approximately 22 km from the Head-Smashed-In Buffalo Jump interpretive centre and was within the 'Visual Impact Assessment Zone' for wind as identified by the draft GoA map (no longer publicly available). The Project is not located in proximity to any other valued viewscapes identified on the GoA map.

In the case of a solar project, the visual impact tends to be limited within an area of 1-2 km given the lower vertical extent of the structure. In some cases, when viewed from a higher elevation, the full horizontal extent of the Project may be observed, though in general these views are rare and would be diminished quickly with distance and absorbed into the landscape. Viewers from a lower or similar elevation, within close proximity to the array would not be expected to view the entire array, rather it is expected they would only be able to view the first rows of modules. In the case of this specific Project, the potential visual impact is shown in the visualizations, all within 620 m from the Project, included in the Open House Poster Boards provided as Appendix H of the PIP Report (**Appendix 12**).

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It is also important to consider elements in the landscape which may screen or limit views of the Project. Such features include buildings, fencelines, trees, and foliage. Between the Project and Head-Smashed-In Buffalo Jump, there is Highway 2, other local roads, localized trees and shrubbery.

Since there is no guidance or clear direction that a visual impact assessment is required for solar power plants, the Proponent has not completed a visual impact assessment for the Project. However, as outlined above, due to distance of the solar Project from the identified valued viewscape and the presence of existing elements that may screen the Project, the impact is expected to be limited and no mitigation is considered to be necessary.

Reclamation Security

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

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

Site reclamation will adhere to the requirements outlined in the Conservation and Reclamation Directive for Renewable Energy Operations (C&R Directive) administered by AEPA and as per the terms of Neoen's lease agreements with Project landowners. Neoen will restore the surface of the Project area to the equivalent land capability as defined in the C&R Directive, so far as is practicable (including, for certainty, soil quality reclamation), reasonable wear and tear and acts of God excepted, including removing all roads and removing all physical material related to the Project to a minimum depth of 1.2 m (concrete infrastructure) and any other remaining infrastructure associated with the Project to a minimum depth of 1.0 m. Pilings will be removed in their entirety, regardless of how deep they are.

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

The amount of reclamation security will be calculated based on the estimated decommissioning cost less estimated salvage value as estimated by a qualified engineering firm based upon detailed Project design, or as otherwise required by any reclamation security requirements that may be established by the Commission or the GoA. Please refer to the Reclamation Evaluation report that provides further details in Appendix 16.

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

The reclamation security will be reassessed with a report provided to Project landowners every 5 years, or as otherwise required by any reclamation security requirements that may be established by the Commission or the GoA.

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

The reclamation security will be put in place at least five (5) years before the expected end of commercial operation of the Project, or as otherwise required by any reclamation security requirements that may be established by the Commission or the GoA.

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

The reclamation security will be in the form of decommissioning insurance, a parent company guarantee, or an irrevocable letter of credit. The final form of reclamation security is to be decided through mutual agreement between Neoen and the respective Project landowner or as otherwise required by any reclamation security requirements that may be established by the Commission or the GoA.

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

The beneficiaries of the reclamation security will be the respective Project landowners.

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

In the event Neoen fails to remove Project facilities in the timelines outlined in the Project lease agreements, the respective Project landowners can access and draw on the security.

The bank will require the Proponent to deposit cash equivalent to the value of the issued letter of credit. The letter of credit functions similarly to a bank draft, designating a beneficiary (in this case, the Project landowner) who can claim the funds by presenting the letter of credit at the issuing bank.

h. 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.

The Reclamation Evaluation report is provided in Appendix 16.

i. 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.

As noted above, the final form of reclamation security is to be decided through mutual agreement between Neoen and the respective Project landowner or as otherwise required by any reclamation security requirements that may be established by the Commission or the GoA. A brief discussion of the three security options currently under consideration by Neoen is provided below.

An irrevocable letter of credit is a payment guarantee issued by a Chartered Canadian Bank that cannot be canceled or modified without the explicit consent of all three parties: the landowner, the bank, and the Proponent. These letters of credit are typically backed by cash, meaning the Proponent must deposit an amount equal to the value of the letter before it is issued. An irrevocable letter of credit provides strong payment security to the beneficiary, subject to the specific terms and conditions that outline the requirements the beneficiary must meet to receive payment from the bank. In this scenario, the letter of credit may include standard conditions enabling the landowner to access the reclamation security if the Proponent breaches its agreement or becomes insolvent, and consequently fails to carry out reclamation according to the lease agreement terms between the Proponent and the landowner.

A parent company guarantee (PCG) is issued on an irrevocable and stand-by basis by the parent company of Neoen Renewables Canada Inc. which has a proven solvency and financial capacity. The choice of this instrument is cost-effective for the project and at the same provides a very high level of payment security to the beneficiary. In terms of the attributes and priority in a bankruptcy, the beneficiary may action it against the parent guarantor even though the project owner or special purpose vehicle (SPV) is facing a bankruptcy. Should the project owner and operator be in default, the beneficiary may request the parent company to answer for the SPVs payment obligation.

A decommissioning insurance policy would work in a similar fashion to the two instruments above by securing a set compensation threshold in the event that the Proponent does not adhere to its decommissioning or reclamation obligations. In terms of the attributes and priority in a bankruptcy, the beneficiary may action the policy against the insurer even though the SPV is facing a bankruptcy. The choice of this instrument provides a very high level of payment security to the insured beneficiary.

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