# Submission to the Alberta Utilities Commission Power Plant & Interconnection Application

# Salt Flats Solar Farm 25.9MWac Brooks, Alberta

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Power Plant Application & Interconnection Application - Salt Flats Solar Farm

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List of Acronym	<u>15</u>		
ACO	Aboriginal Consultation Office		
AEPA	Alberta Environment and Protected Areas		
AGRASID	Agricultural Regions of Alberta Soil Inventory Database		
AUC	Alberta Utilities Commission		
DFO	Distribution Facility Owner		
EPP	Environmental Protection Plan		
ERP	Emergency Response Plan		
HEEA	Hydro and Electric Energy Act		
HRA	Historical Resources Act		
ISO	Independent Systems Operator		
km	Kilometre		
kV	Kilovolt		
LSD	Legal Subdivision		
LSRS	Land Suitability Rating System		
LUB	Land Use Bylaw		
m	Metres		
MDP	Municipal Development Plan		
MW	Megawatt		
NIA	Noise Impact Assessment		
PIP	Participant Involvement Program		
REO C&R	Renewable Energy Operations Conservation and Reclamation		
SSSGRAIN	Spring-seeded Small Grains		

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## **Executive Summary**

## **Project Overview**

The Salt Flats Solar Project (the Project) is being developed by PACE Canada Development LP ("PACE"), trading on behalf of its general partner, 2518365 Alberta Ltd. See uploaded document, **"PACE Corporate Certificate."** PACE proposes to construct and operate a 25.9 megawatt-ac (MWac) photovoltaic solar farm development on 175 acres of grazed land within the urban boundaries of the City of Brooks in Newell County.

Connection and land description:

- FortisAlberta Brooks 121S substation
- 25kV Feeder
- The legal land descriptions are Meridian 4 Range 14 Township 19 Section 5 -Southwest Quarter and Meridian 4 - Range 14 - Township 19 - Section 5 - Northwest Quarter.

The project has the following coordinates: 50 34' 55.74 N and 111 54' 51.38 W

PACE has completed and uploaded the following requirements per AUC's Rule 007 and Rule 012, including a solar glare hazard assessment, a noise impact assessment, and an environmental evaluation inclusive of an Environmental Evaluation and a conservation and reclamation plan. Study findings, as completed by hired consultants, Green Cat Renewables and Strum Consulting (formally McCallum Environmental Ltd.).

The experts who completed these studies determined no adverse solar glare, noise, wildlife or wetland impacts, and the project complies with all rules and regulations.

# **Project Schedule**

The preliminary Project schedule is as follows:

Initial Public Notification	December 8, 2022
Personal Consultation	December 8, 2022 - April 15, 2024
AEP Referral Waiver Letter	April 11, 2023
AUC Application	August 26, 2024
Anticipated AUC Approval	December 1, 2024

Municipal Development Permit Application	Post AUC permitting	
Municipal Development Permit Approval	Post AUC permitting	
Construction Start	April 1, 2025	
Commercial Operation Date	March 1, 2026	

# **Corporate Information**

PACE is a limited partnership jointly and equally owned by Pathfinder Clean Energy, a global clean energy development and investment company, and Goldbeck Solar Investments, a German firm specializing in constructing large-scale solar power plants with a comprehensive offering that positions it as a gateway to solar energy. The Salt Flats Project (the Project) is being developed by PACE Canada Development LP, trading on behalf of its general partner, 2518365 Alberta Ltd. <u>See the uploaded document "PACE Corporate Certificate."</u>

To create a market-leading platform for clean energy development and investment in Canada, PACE develops and manages every aspect of its clean energy projects, from site selection to permitting, design, financing, and offtake agreements. PACE has constructed and energized Joffre 1 & 2 (47MW) and Youngstown (6MW) and continues to develop a significant number of projects at various stages of the AESO process.

# **SP01 – Requested Approvals**

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.

PACE proposes a 25.9MWac utility-scale photovoltaic solar farm within the urban boundaries of Brooks, Alberta. The proposed Project will be built on 175 acres of grazed land. The electricity produced will be connected to the Fortis Alberta Inc. distribution network, tying into a 25 kV line and connecting to the broader electricity grid through the FortisAlberta Brooks 121S substation.

The Project is designed to include 51,360 Longi LR5 72HBD 545M 545wp bi-facial photovoltaic mono-silicon solar panels and 7 SMA MV, 4000kW inverters. The solar panels will be installed

on a single-axis tracking system supported by steel piles driven into the ground. Solar racking rows will be approximately 9 meters (m) apart and 2.9 m in height. The electrical collector systems will be installed above ground. Direct current (DC) electrical cabling will run from the combiner boxes underground to the inverters. Alternating Current (AC) electrical cabling will run from the inverters to the electrical house and switchgear building. The project will also include an access road, a small construction parking area, and a temporary laydown and storage area. The project area will be secured and enclosed with a six-foot chain link security fence with access points for maintenance and emergency response.

# **SP02 – Existing Approvals**

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

There are no existing approvals directly affected by this Project.

# SP03 – Ownership Structure

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.

PACE Canada Development LP is a limited partnership jointly and equally owned by Pathfinder Clean Energy, a global clean energy development and investment company in the United Kingdom, and Goldbeck Solar Investments, a German firm specializing in constructing large-scale solar power plants with a comprehensive offering that positions it as a gateway to solar energy. The Salt Flats Solar Project (the Project) is owned by PACE Canada Development LP on behalf of its general partner, 2518365 Alberta Ltd. <u>See the uploaded document, "PACE Corporate Certificate."</u>

PACE develops and manages every aspect of its clean energy projects, from site selection to permitting, design, financing, and offtake agreements, to create a market-leading platform for clean energy development and investment in Canada.

PACE is working with leading global and local capital to develop and build clean energy assets that lower the market's costs and provide attractive investment opportunities for effective and low-cost capital.

PACE, a global solar development and investment company and Goldbeck Solar, a gateway to solar energy, each own and fund PACE. Together, they provide development services to support project development in Alberta.

# SP04 – Municipal Interest

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.

# **SP05 – Project Location**

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 proposed Project is sited on actively grazed land within the municipal boundaries of the City of Brooks in Newell County.

The legal descriptions of the land on which the proposed Project will be located are as follows: ATS: The legal land description is The Alberta Township System (ATS) legal land descriptions are Meridian 4 - Range 14 - Township 19 - Section 5 - Southwest Quarter and Meridian 4 -Range 14 - Township 19 - Section 5 - Northwest Quarter.

A kml file containing the geographic data, solar array, substation location and project boundaries of the proposed Project can be found in the uploaded document entitled <u>"Salt Flats - Keyhole</u> <u>Markup Map."</u>

# SP06 – Project Maps

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.

## See the uploaded document entitled "Salt Flats - Provisional Layout."

- 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.

For landownership, including any residences and dwellings with the notification radius, see the uploaded document, "Salt Flats - Map of Landowners."

For the remaining drawing and maps, the uploaded document, "Salt Flats - Keyhole Markup Map"

# SP07 – Requested Approval Date

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.

PACE requests an approval date of December 1, 2024, from the Alberta Utilities Commission for a construction permit. Construction is expected to start on April 1, 2025, and be completed on February 1, 2026. The expected in-service date is March 1, 2026.

# **Project Connection**

# SP08 – Connection Order

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 being applied for concurrently.

# SP09 – Asset Identification Code

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.

PACE Asset identification code: not currently available until Cluster 2 studies are available.

AESO/Fortis Project ID number: P2755

### **SP10 – Interconnection Details**

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.

The project is connected to the distribution system via FortisAlberta Brooks 121S substation via a 25kv line, Feeder 2233L. <u>See the uploaded documents, "Salt Flats - Fortis Letter of Non-objection", "Salt Flats - Provisional Layout and Salts Flats - SLD"</u>

## **Emergency Response Plan**

## SP11 – Emergency Response Plan Overview

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.

PACE confirms it has a draft of a site-specific emergency response plan in coordination with local first responders. See SP13 for more details. <u>See the uploaded document, "Salt Flats -</u> <u>Draft Emergency Response Plan."</u>

## SP12 – Risk Management

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 will be put into place.

General site-specific risks identified to date include the following, as further detailed in the site-specific ERP:

- Medical Emergency: worker injuries
- Severe Weather/Catastrophic Emergency: thunderstorms, floods, wind and downed power lines, snow and ice.
- Fire: small fires, large fires, wildland/grassfire or electrical fire
- Hazardous Material Emergency: chemical spills, equipment failures,

environmental conditions dangerous to personnel.

The site will be monitored by a company hired by PACE to conduct dispatch control and a 24/7 monitoring station.

See the uploaded document, "Salt Flats - Draft Emergency Response Plan."

## SP13 – Emergency Response Consultation

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.

PACE shared a draft of the Emergency Response Plan with the City of Brooks Fire Chief Kevin Swanson and consulted with him via virtual conferencing to gather his feedback. Further details regarding roads and access points will be added to the ERP before the commencement of construction and shared with municipal and county fire authorities.

Fire Chief Swanson inquired about preventive measures used to mitigate the risk of grass fires. PACE offered the following response:

- Barriers around areas where potential welding is taking place along with onsite fire extinguishers, both class A & C
- Onsite water storage in the event potential welding or other fire risk activities may occur, supplied by an offsite water source solely for construction

After the AUC approval, the local responders requested that the following details be included in the ERP before construction commences.

- A map detailing roads, access points & flow of traffic
- Planned escape routes
- Gate entry code

## See the uploaded document, "Salt Flats - Draft Emergency Response Plan."

The feedback will be incorporated into the final ERP post-AUC permitting and prior to the start of construction.

## **Solar Glare Assessment**

## SP14 – Solar Glare Assessment Report

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.

Green Cat Renewables ("GCR") was hired to conduct a Solar Glare Hazard Analysis Report ("SGHAR") for the Project following the guidelines provided in AUC Rule 007 for the receptors. see the uploaded documents, "Salt Flats - Solar Glare Hazard Analysis Report" and "Salt Flats - Solar Glare Impact Map."

# SP15 – Environmental Evaluation

If preparation of either a federal impact assessment or a provincial environmental impact assessment report is 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 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.

PACE retained Strum Consulting (formerly McCallum Environmental Ltd.) to complete the environmental assessments for the Project.

See the uploaded documents, "Salt Flats Environmental Evaluation" and "Salt Flats - AEP Waiver Letter."

## SP16 – Projects on Federal Lands

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; The Project is not located on federal lands.

#### See the uploaded document "Salt Flats - LAIRT Map."

## **SP17 – Environmental Protection Plan**

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.

See the uploaded document, "Salt Flats - Environmental Protection Plan."

**End-of-Life Management** 

SP18 – C&R Plan

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.

See the uploaded document, "Salt Flats - Conservation and Reclamation Plan."

## **SP19 – Decommissioning and Reclamation Costs**

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.

See the uploaded documents "PACE Decommissioning Financing Structure," "PACE Reclamation Security," and PACE RBC Letter of Credit."

#### Noise

#### SP20 – Noise Impact Assessment

Provide a noise impact assessment in accordance with Rule 012.

PACE retained GCR to complete a Noise Impact Assessment (NIA) in accordance with Rule 012. <u>See the uploaded document entitled "Salt Flats Noise Impact Assessment."</u>

## SP21 – Other Acts and Approvals

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 Utilities Commission Act, S.A. 2007, c.A-37.2;
- Alberta Land Stewardship Act, S.A. 2009, c.A-26-88;
- Electric Utilities Act, S.A. 2003 c E-5.1;
- Environmental Protection and Enhancement Act, R.S.A. 2000, c.E-12;
- Historical Resources Act, R.S.A. 2000, c.H-9;
- Migratory Birds Convention Act, S.C. 1994, c.22;
- Municipal Government Act, R.S.A. 2000, c.M-26;
- Occupational Health and Safety Act, S.A. 2017 c.0-2.1;
- Public Highways Development Act, R.S.A. 2000, c.P-38;
- Safety Codes Act, R.S.A. 2000, c.S-1;
- Soils Conservation Act, R.S.A. 2000, c. S-15;
- Species at Risk Act, S.C. 2002. c.29;
- Wildlife Act, R.S.A. 2000, c. W-10;
- Water Act, R.S.A. 2000, c.W-3; and
- Weed Control Act, S.A. 2008, c. W-5.1.

Other approvals the Project may require include:

- NAV Canada Approval was received on August 15, 2024.
- Transport Canada— Approval was received on September 22, 2023.
- Historical Resources Act Approval was received on January 12, 2024
- Alberta Environment and Protected Areas A waiver letter was received on April 11, 2023
- City of Brooks Development Permit Application will be submitted post-AUC permitting.
- Alberta Transportation comments were received on January 12, 2024. A Roadside Development Permit is not required.

See the following uploaded documents:

<u>"Salt Flats - Historical Clearances Act"</u> <u>"Salt Flats - AEP Waiver Letter"</u> <u>"Salt Flats - Alberta Transportation Response"</u> <u>"Salt Flats - Transport Canada"</u> <u>"Salt Flats - NavCanada"</u>

#### SP22 – Renewable Energy Referral Report

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 the time of application, the applicant must clearly identify the reason and provide details of its status.

The proposed project is located within an urban area and, therefore not subject to Wildlife Directives. A waiver letter was received Alberta Environment and Protected Areas (AEPA) Fish and Wildlife Stewardship was received on April 11, 2023. <u>See the document entitled "Salt Flats - AEP Waiver Letter"</u>

#### SP23 – Historical Resources Act Approval

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.

See "Salt Flats - Historical Clearances Act"

## SP24 – Indigenous Consultation

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. There is no crown land within the consultation or notification radius, no expected off-site impacts and no Indigenous groups have access to the site to exercise Section 35 rights. The Project received Historical Resources Act approval on January 12, 2024. PACE pulled a LAIRT report as per AUC Rule 007 recommendations, and the closest First Nations reserve or Metis Settlement is the Siksika Nation located approximately 44 kilometres from the project area. See the uploaded document entitled <u>"Salt Flats - LAIRT Map."</u>

# Participant Involvement Program

## SP25 – PIP Overview

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 for Indigenous groups.).

The PIP Report includes a description of the activities undertaken and any engagement materials provided. <u>See the uploaded document, "Salt Flats - PIP Report."</u>

# SP26 – Agency Consultations

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 An unregistered aerodrome within 4,000 metres of the project boundary was consulted and provided a summary of any objections received, mitigations discussed, and any outstanding objections.

- See <u>"Salt Flats Alberta Transportation Response,"</u> noting no permit is required.
- There are no railway lines within 800 metres of the proposed project.
- Brooks Health Centre Helipad was consulted. There are no questions or concerns.
- No known unregistered aerodromes were identified within 4km of the Project during the PIP.

## SP27 – Stakeholder List

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 who were consulted as part of the participant involvement program.

See the uploaded document entitled "Salt Flats - Contact List."

# SP28 – Stakeholder Contact Information

Supply a list of contact information for all persons who have 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.

See the uploaded document, "Salt Flats - Contact List"

#### SP29 – Municipal Consultation

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

See the uploaded document, "Salt Flats - PIP Report"

#### SP30 – Stakeholder Concerns

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.

For details regarding questions and concerns raised during the PIP, see the uploaded document, "Salt Flats - PIP Report."

#### **Interconnection Application**

#### IC1 – Connection to the distribution system

Provide a statement that the local distribution facility owner has agreed to the interconnection, the legal subdivision (LSD) of the interconnection point, and an electric single-line diagram showing the interconnection point with the distribution facility owner.

Fortis Alberta has agreed to the interconnection. See the uploaded document entitled <u>"Salt Flats - FortisAlberta Letter of Non-objection" and Salt Flats - SLD.</u>"

## See the "Salt Flats FortisAlberta Letter of Non-Objection."

## IC2 – Connection to the transmission system

Provide a statement from the ISO, at such time determined by the ISO, that endorses the interconnection and confirms that the interconnection will not result in adverse effects to the interconnected electric system.

Not applicable; this Project is connected to the distribution system.

#### **AUC Interim Requirements**

#### Agricultural land requirement 001:

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).

CODE	PROJECT	AGRASI D POLY ID	LSRS RATING	LSRS DESCRIPTION	Overlappi ng project area (hectares)	% of Project within AGRASI D Polygon
ABM407	Salt Flats	2368	5M(9)	90% of the area is Class 5 with very severe agricultural limitations.	46.2	00.4
			4W(1)	10% of the area is Class 4 with severe agricultural limitations.	46.3	90.4
		2379	3M(6)	60% of the area is Class 3 with and suitable for agriculture with moderate limitations.	4.9	9.6
			5M(4)	40% of the area is Class 5 with very severe agricultural limitations.		

#### Agricultural land response 001:

The Farm Plan being developed for the Project area is designed to improve the agricultural yield of the Project area relative to its current production due to decisions informed by the results from soil sampling, active farm management, use of soil amendments and proper crop selection. Agronomic experiments guided by Steven Tannas are planned for Spring 2024.

See the uploaded document, "Salt Flats - Agrivoltaics Report."

#### Agricultural land requirement 002

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:

- Soil quality (i.e. compaction, rutting, salinity, sodicity, fertility, contamination, clubroot)
- Soil quantity (i.e. wind erosion, water erosion)
- 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.

#### Agricultural land response 002:

The Agricultural Region of Alberta Soil Inventory Database was consulted to provide soil data in the project area (Alberta Soil Information Viewer, 2019). The following soil series are found within the Project boundary:

The soil series identified in the Salt Flats Solar Project area are mainly characterized by Orthic Brown Chernozem, which is typical for the region. The detailed characteristics of the soil series are as follows:

- 1. Orthic Brown Chernozem (BVL18/U1h): This soil type is found on moderately coarse textured sediments (sandy loam) that have been deposited by wind or water. The area is marked as well-drained, with 53.11 hectares impacted by the project. The soil subgroup for this area includes poorly drained soils and those finer textured than the dominant or co-dominant soils.
- Orthic Brown Chernozem (CHN6/U1I): This variant is found on medium-textured sediments like loam or silt loam, deposited by wind and water. The area is also well-drained and spans 7.22 hectares of the project site. This polygon includes soils that are coarser textured than the dominant soils.

Polygon ID	Map Unit Name	Land Suitability Rating System Classification	Soil Subgroup	Drainage	Amount of area for each LSRS Class impacted by the Project (hectares)
2368	BVL18/U1h	5M(9)-4W(1)	Orthic Brown Chernozem / Orthic Gleysol	Well / Poor	53.11
2379	CHN6/U11	3M(6)-5M(4)	Orthic Brown Chernozem	Well	7.22

Both soil types described are typically fertile, characterized by a dark topsoil rich in organic matter, making them suitable for agriculture, although the site in question is currently used as tame pasture. These soils have varying degrees of drainage, from well to poor, and are situated in undulating landforms with slopes conducive to agriculture and construction activities like those planned for the solar project. See the uploaded document entitled <u>"Salt Flats -</u> <u>Environmental Evaluation"</u> section 6.2, pp. 16.

Please see the attached exhibit <u>"Salt Flats - Environmental Evaluation</u>" Appendix, section 6.2, pp. 16, which details material impacts on the soil quality and quantity and how it will be mitigated during the construction, operation and reclamation of the Project. PACE confirms that there will be no material impacts on the hydrology of the Project area.

Further, Alberta Environment and Protected Areas ('AEP") have indicated that no further assessment or mitigation is required because the Project is sited within urban boundaries. PACE submits that the Project will not have an adverse effect on either wildlife, wetlands or water bodies in the Project area. A copy of the correspondence received from AEP may be found in the uploaded document entitled <u>"Salt Flats - Environmental Evaluation."</u>

#### Agricultural land requirement 003

Describe all earthworks (e.g., stripping and grading) planned for the project, including the following information:

- Methodology to anchor structures (e.g. screw piles, concrete footings, etc.).
- The extent of stripping and grading, with an estimate of the area of agricultural land impacted.
- Description of how these activities have been reduced in extent and intensity (as practical) to protect the quality, quantity and hydrology of impacted soils.
- 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 before replacement on site.
- Description of how soils will be replaced on-site to preserve the quality, quantity and hydrology of the disturbed soils.

#### Agricultural land Response 003:

- Infrastructure foundations are anticipated to be piles (for solar panel areas) and piles and/or concrete pads (for inverter/transformer stations, switchgear, neutral grounding reactors, and control houses). PACE is also exploring using helical piles to reduce soil disturbance and the noise level during construction hours experienced with driven piles.
- The solar panels, inverters, and a control house will occupy a total surface area of approximately 50.50 ha. Except for new access roads, a control house, inverters, and transformer pads, the project is anticipated to be covered with low-growing perennial vegetation for grazing sheep. Of the total area impacted by the solar installation less than 7 acres will be altered from existing conditions. This represents the piling area, service roads and electrical equipment foundations.

 Permanent gravel access roads will be constructed using a suitable depth of granular material. Topsoil will be removed, and a berm created and seeded to prevent erosion. PACE is exploring a 0 disturbance road construction method that would see roads built on the surface of existing seed beds using filter fabric and varying sizes of aggregates. This will reduce soil stripping onsite.

Please see the uploaded document entitled <u>"Salt Flats - Environmental Evaluation,"</u> section 7.1.2 pp 10-13, for detailed information on civil works and the methodology employed to protect and restore the disturbed soils.

#### Agricultural land request 004:

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.

#### Agricultural land response 004:

PACE is collaborating with Steven Tannas of Tannas Conservation Services Ltd. and Dr. Rhonda Millikin from Nativus, serving as PACE's Chief Sustainability Advisor, to create an innovative Agrivoltaics Farm Plan ("AFP"). This initiative is designed to harmonize agricultural production with habitat enhancement, ensuring sustainable and productive farmland use alongside solar development. The AFP aims to provide a comprehensive strategy for agrivoltaic sites over seven years, focusing on boosting crop yields, minimizing pesticide and fertilizer use, and enhancing overall agricultural practices. It seeks to enrich soil health, increase yield, and improve the nutrient profile of the operations, ultimately leading toward organic certification for numerous projects.

The AFP will detail procedures for setting up a sustainable agricultural system, incorporating strategies for managing invasive species, controlling erosion, achieving organic certification, and implementing soil sampling and data analysis. It emphasizes the integration of advanced technologies, zero-emission vehicles, effective crop rotation, and club root mitigation to bolster farming efficiency and environmental stewardship. Soil samples from the project area will undergo thorough analysis to inform future agricultural practices and rotations.

Moreover, the plan will evaluate current land use and farming techniques to recommend enhancements, establish a robust monitoring framework for soil and ecosystem health, and adapt management strategies based on emerging insights. Periodic soil assessments will ensure the continuous improvement of agrivoltaic site management.

See the uploaded document entitled <u>"Salt Flats - Agrivoltaic Report"</u> for further details on the integration of agrivoltaics.

#### Agricultural land request 005:

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

Agricultural land response 005:

See the uploaded document, "Salt Flats - Qualifications."

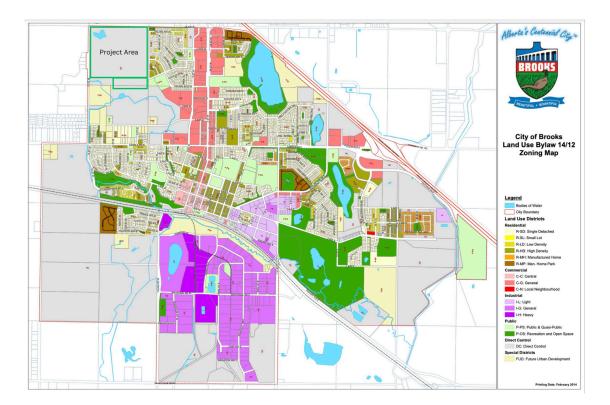
# Municipal land use

#### Municipal land use request 001:

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.

#### Municipal land use response 001:

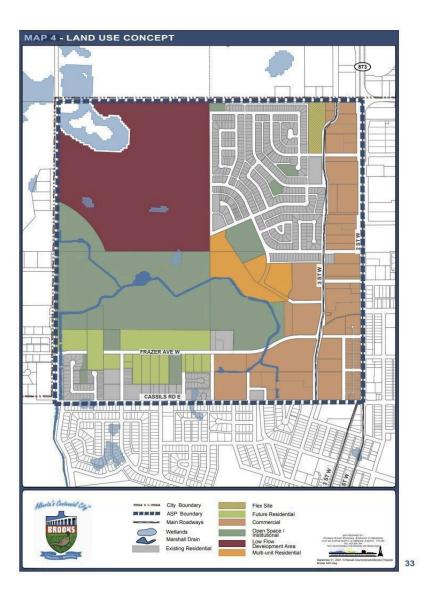
As shown on the map below, the Project will be situated in an area zoned Direct Control. As detailed in the City of Brooks' *Land Use Bylaw*, Section 34 pp. 18, utility-scale solar and battery energy storage are not listed as permitted or discretionary uses under Direct Control zoning. According to Section 4, 4.1 pp. 69, "any development proposed on a Direct Control lot shall be considered discretionary, and the requirements of sub-section 3.5 (Discretionary Use Applications) and 3.13 (Notice of Receipt of an Application) and 3.14 (Notice of Decision) shall apply. See the uploaded document, <u>"City of Brooks - Land-Use Bylaw."</u>



According to the City of Brooks, North West Sector Area Structure Plan, Section 2.4.3. Pp 19, the northwest portion of the plan area, including the proposed land, has site constraints that make standard development challenging. For these reasons, areas shown in Map 4 have been designated as a "Low Flow Development Area." A significant slough/wetland feature in the northwest corner of the Plan area will have to be

developed around it. This area also has high groundwater levels. The City of Brooks sanitary collection system lacks adequate capacity to carry more flows from new development without expensive infrastructure upgrades," Section 2.4.3 pp. 19. <u>See the uploaded document, "City of Brooks - North West Sector Area Structure Plan."</u>

The limitations identified in the ASP do not impact the proposed solar farm development, making PACE's proposal a good fit based on current land use limitations.



#### Municipal land use request 002

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

#### Municipal land use response 002:

As noted in the Municipal Land Use Response 001 response, a bylaw amendment or rezoning designation is required for a utility-scale solar farm and battery energy on the proposed lands. PACE will pursue this post-AUC permitting.

#### Municipal land use request 003:

Describe how the applicant engaged with potentially affected municipalities before applying to modify the proposed power plant or mitigate any potential adverse impacts on the municipality.

#### Municipal land use response 003:

PACE engaged the City of Brooks Council, Community and Economic and Development and Planning Consultant on multiple occasions, with the first step of engagement occurring on November 28, 2022, as a delegation before the Council prior to the launch of the development process. At the initial delegation, PACE provided the Council with the project details and answered their questions and concerns. Follow-up engagement included conversations with staff where PACE demonstrated alignment with the Northwest Corner Area Structure Plan and solar and battery energy storage as a sustainable land use practice based on local and current conditions and socio-economic trends. See the uploaded document, "Salt Flats - Planning Report." Conversations also included a discussion with staff on the City of Brooks Development Permit Requirements, which PACE has responded to with necessary setbacks and mitigation measures.

PACE Canada Development LP has also communicated with Newell County, apprising them of the proposed development. They did not note any questions or concerns.

# Viewscapes

#### Viewscapes requirement 001:

List and describe pristine 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 the project's impacts on these viewscapes.

#### Viewscapes response 001:

An environmental scan of provincial and national parks and points of historical or cultural significance produced the following results:

- Kinbrook Island Provincial Park: Located approximately 13 km south of Brooks
- Tillebrook Provincial Park: Located approximately 6 km east of Brooks on Hwy 1
- **Dinosaur Provincial Park**: Located approximately 48 km northeast of Brooks
- **Brooks Aqueduct**: Located approximately 9.5 km northeast of Brooks

- EID Historical Park: Located approximately 43 km northeast of Brooks
- Duke of Sutherland Site: Located approximately 2.7 km northeast of Brooks
- Brooks and District Museum: Located approximately 2.7 km northeast of Brooks

PACE has proposed an eco-buffer, recreational trail and interpretive centre along the east and west sides of the development. See the uploaded document, <u>"Salt Flats - Landscape</u> <u>Architectural Renders."</u>

# **Reclamation Security**

The Government of Alberta will develop and implement the necessary policy and legislative tools to ensure developers are responsible for reclamation costs via bond or security, with appropriate security amounts and timing to be determined by Environment and Protected Areas in consultation with Affordability and Utilities. The reclamation costs will be provided directly to the Government of Alberta or could be negotiated with landowners as long as sufficient evidence is provided to the AUC. The new requirements will apply to all approvals issued on or after March 1, 2024.

# Reclamation security request

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

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

# Response:

The site will be reclaimed to the standard required by AEP, the Municipality and any other applicable permit or approval conditions. Moreover, as detailed in the **Salt Flats Reclamation Report** pp. 5, "the Developer has committed to commencing decommissioning activities within 12 months of the lease term expiry. All Project equipment will be removed to a depth of 36 inches below ground level. Project lands will be restored to conditions similar to pre-project conditions. If the landowner requests, gravel roads will be removed, and terrain will be smoothed to reasonable conditions."

# Reclamation security request

How the amount of the reclamation security will be calculated.

# Response

Page 3 of the uploaded document, **Salts Flats - Reclamation Report**, details how the reclamation security will be calculated.

# Reclamation security request

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

# Response

SUNSET Renewable Asset Management Inc. recommends re-evaluating the processes and economics for this Project upon commissioning as well as throughout its lifespan at intervals of 5 years up to the 20th year and then every year thereafter, leading into decommissioning & reclamation to ensure decommissioning funding is in alignment with current industry costs and processes are in alignment with current industry standards. Please see the uploaded document **Salt Flats—Reclamation Report**, pp. 5.

SUNSET anticipates the costs of recycling to go down over time as they continue to develop the first Alberta-based solar recycling facility through:

• Advancement of technology, including onsite recycling using mobile-based processes, which is currently in development;

• Downstream revenue streams from key base components, such as the pelletizing of the materials to create a new local supply chain for aluminum and the resale of other base components.

Costs are expected to go down as technology develops, as these sites are designed for a 30-year or longer life Cycle. SUNSET is currently developing on-site recycling techniques as part of a hub-and-spoke model, which will reduce recycling costs. Processing on-site, where possible, will reduce the carbon footprint associated with transportation by over 600% and significantly improve the economics of reclamation.

PACE is committed to funding 50% of the reclamation costs through a letter of credit by the 6th year as per the terms of the lease and 100% by the 8th year. PACE is presuming the term 'estimated salvage value' that corresponds to the 'Typical' reclamation costs as per Section 10 of the Third Party Reclamation Costs and not the revenue portion, PACE is committed to funding as per the lease agreement and corresponding Letter of Credit:

- The third-party reports 'Typical' salvage value is \$39.5/kWp
- 50% of the 'Typical' salvage value is \$19.75 / kWp or 19,750 per MWp. As shown in exhibit 28641\_X0073, page 3 of 4,
- On the fifth anniversary of the Initial Letter of Credit being issued, the aggregate amount
- of \$17,100 per MW, the project's nameplate is 43.3% of the reclamation costs.
- On the sixth anniversary of the Initial Letter of Credit being issued, the aggregate amount of \$25,400 per MW nameplate of the project was issued, which is 64.3% of the reclamation costs.

• On the eighth anniversary of the Initial Letter of Credit being issued, the aggregate amount is \$50,000 per MW nameplate of the project, which is 126.5% of the reclamation costs. See the uploaded document **PACE Reclamation Security pp.** 

#### Reclamation security request

When the reclamation security is in place, it will be drawn upon, if needed.

### Response

See the uploaded document <u>PACE Decommissioning Finance Structure</u> for a detailed view of the financial modelling developed by PACE to support the reclamation security.

#### Reclamation security request

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

#### Response

The reclamation security will be a letter of credit. See the uploaded document, <u>RBC</u> <u>Letter of Credit.</u>

#### **Reclamation security request**

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

## Response

The Letter of Credit states, "in the event of default, the beneficiary (Landowner) can demand the LC by providing a written demand request to RBC. The standard wording in our basic LC state as follows: "The LC may be drawn on by you at any time and from time to time, upon written demand for payment made upon us by you, which demand we shall honor without enquiring whether you have a right as between yourself and our said customer to make such demand and without recognizing any claim of our said customer, or objection by it to payment by us". With this said, standard wording may be customized to specific demand requirements which would be followed by RBC in such a default event. See the uploaded document <u>RBC Letter of Credit.</u>

## Reclamation security request

How the beneficiary can access the security and any constraints on such access?

## Response

The RBC Letter of Credit states, "The Letter of Credit may be drawn on by you at any time and from time to time, upon written demand for payment made upon us by you, which demand we shall honour without enquiring whether you have a right as between yourself and our said customer to make such demand and without recognizing any claim of our said customer, or objection by it to payment by us. With this said, standard wording may be customized to specific demand requirements which would be followed by RBC in such a default event." See the uploaded documents, the <u>RBC Letter of</u> <u>Credit</u>, and also detailed within PACE's lease agreements, and the uploaded document, <u>PACE Reclamation Security</u>.