

WHAT WE DID

On October 26 and 27, 2022, SaskPower hosted a site office in Estevan to hear feedback on the development of a 100 MW solar power facility in the area, which will be built, operated, and decommissioned by an Independent Power Producer (IPP). The process of selecting that IPP is currently underway; we expect to announce the successful IPP in summer 2023.

SaskPower is sharing the comments, questions and concerns we heard with all of the IPPs participating in the Request for Proposals (RFP) process.

WHO WE SPOKE WITH

Since the facility will be in a single community, SaskPower requested that IPPs not contact local Estevan representatives and stakeholders. All comments, questions and concerns came through SaskPower and are being shared with IPPs participating in the RFP process. SaskPower spoke with a range of stakeholders, landowners and interested parties to gather local input, including the RM of Estevan and Estevan City Council. We also posted a survey on saskpower.com.

WHAT WE HEARD

In this report, we have compiled what we heard in two sections:

- The first section includes comments that are specific to the solar facility.
- The second section contains background information.

Both sections contain information that may be used by IPPs to create a stakeholder engagement plan that they will use in responding to these local comments. This stakeholder engagement plan is to be submitted as part of each IPP's response to the RFP.

1. COMMENTS ON THE SOLAR FACILITY

LOCATION

Many stakeholders want to know why the facility is not being built on land that has been previously mined and is already owned by SaskPower.

SaskPower has secured an option to purchase seven quarters of land for this solar facility. SaskPower carefully evaluated the land that we owned in the area. Most of it was previously

mined and has been reclaimed. The fact that the ground had been previously disturbed was estimated to increase the costs of the project.

SaskPower is investigating the possibility of completing a pilot solar project of up to 10 MW on coal reclaimed land in this area; this will be in addition to the 100 MW solar facility. This pilot project will allow us to gather further information on the technical and financial implications of building solar on previously disturbed land, with the hopes that we may be able to use coal reclaimed land for future projects.

We're also looking into whether the reclamation process could be performed differently in the future for mined land to support potential solar development.

There is interest in what will happen with unused portions of the site.

SaskPower does not yet know if the 100 MW solar facility will require all the land being acquired. Our decision to secure this amount of land, however, gives the successful IPP some flexibility in how they design the solar facility to maximize its power generation capability.

Stakeholders were concerned that the land chosen for the facility will have to be plowed flat.

The land chosen for the facility is already relatively flat. Some groundwork may be required to ensure the solar panels are installed safely and securely but it is not anticipated that this will have a big impact on the existing landscape. The successful IPP will be responsible for this decision and any associated work as they design the facility's layout.

We heard that stakeholders are interested in keeping existing shelter belts intact.

The successful IPP will be responsible for deciding if trees need to be removed to accommodate the facility's layout.

OPERATION AND MAINTENANCE

There is interest in how many panels will be installed at the facility.

The number of panels that will be installed has not yet been determined. Each IPP will propose their own facility design.

People want to know if the panels will be fixed or if they will rotate to follow the sun.

This has not yet been decided. Each IPP will make their own determination if fixed or rotating panels are their preferred solution.

There is concern that SaskPower is being unclear on how much power the facility will produce.

This solar facility will be able to produce 100 MW of power in ideal conditions, which are sunny days in the summertime. Due to daily changes in the weather, the facility will not always be

able to produce the maximum amount of power, nor will it produce power at night. On average, SaskPower is counting on this facility to produce 100 MW of power about 30 per cent of the time. This generation capacity matches industry standards.

There is curiosity as to how much heat the solar panels generate.

Solar panels are warm to the touch and can be a few degrees warmer than the ambient air temperature.

There is interest in how the panels will be maintained and kept clean of snow.

The successful IPP will be responsible for maintaining the solar panels. Often times, snow falls off the solar panels on its own from the warmth of the panels. It can also be removed by rotating the panels (if a rotating panel system has been installed by the IPP).

Stakeholders asked how SaskPower will secure the facility and prevent impacts on wildlife.

Security of the facility is the IPP's responsibility. The successful IPP may choose to secure the facility with a fence to keep the public safe, as well as to keep nearby wildlife away.

There is interest in how the land under the solar panels will be maintained to avoid weeds.

As SaskPower will own the land, effective weed control is one of the requirements of SaskPower's lease with the successful IPP. In other solar facilities, grass has been planted under the panels to prevent weeds. Grazing sheep have also helped to manage weeds. The final approach to weed management and site maintenance will be determined once a successful IPP is chosen.

There are concerns that the solar panels cannot withstand severe weather and so it will not produce as much power as forecasted.

The solar panels and the structures that hold them in place are designed to operate in Saskatchewan's severe weather, including high winds and hail.

If the panels are damaged during operation, the IPP will be responsible for repairing and/or replacing them. The IPP's disposal of any broken panels must reflect RM regulations, requirements under the contract with SaskPower, and other regulatory obligations.

LOCAL IMPACTS AND ECONOMICS

There is interest in how many people will be involved in building and maintaining the facility.

The IPP will manage construction and coordinate resourcing, so we cannot provide an estimate on the number of staff that will be on site during construction. Solar facilities require very little maintenance, so there will be few maintenance staff involved in the solar facility once it is operational. Maintenance staff will be hired by the IPP. There is no requirement for the successful IPP to engage in any local hiring for construction or maintenance positions. IPPs will

be evaluated on the amount of Indigenous participation they include in the construction of the solar facility.

Local suppliers want to be part of the project.

The IPP will manage construction, operation and decommissioning of the facility. Once we select an IPP, we anticipate they will hold engagement sessions in the area so local and Indigenous suppliers can learn about opportunities.

There are questions about taxes on the property.

The RM of Estevan is responsible for determining the appropriate property class and taxation requirements for the land where the solar facility will be located.

There are questions about the impacts on local RM roads during construction and operation of the facility, and who will pay if roads need to be upgraded or traffic needs to be re-routed.

At this point, the exact impact of construction on local roads is not known, although the use of heavy trucks is anticipated to result in some impact on local roads.

The successful IPP will work with the RM to follow the RM processes for road upgrades. IPPs are expected to consider the costs of road upgrades within their responses to the RFP.

DECOMMISSIONING AND LAND RECLAMATION

There is concern about what happens to the solar panels at the end of the facility's life.

The facility has a planned operating life of 25 years. At the end of its operating life, the IPP will be responsible for decommissioning the facility in a manner that reflects provincial and RM guidelines and regulations. A decommissioning plan is one criterion that SaskPower will be looking for IPPs to address as we consider their proposals to build, operate and decommission the facility.

In the case that the IPP is not able to perform the decommissioning and site remediation, SaskPower will perform this work as the landowner for this specific project. SaskPower has included a remediation cost guarantee to ensure that IPPs are responsible for reimbursing SaskPower for these costs.

There are questions about what will happen to the plastics and rare metals in the solar panels at the end of the facility's life.

It is anticipated that the IPP will recycle as much of the existing materials and metals used in the solar panels as is possible. This is also something that SaskPower will be looking for IPPs to address when considering their proposals to build, operate and decommission the facility.

2. BACKGROUND INFORMATION

LOCATION

A lot of stakeholders believe SaskPower would save money by using their own land.

The cost of the land purchased for the solar facility cannot be disclosed due to the competitive nature of the IPP selection process. Most of the land SaskPower owns in the area was previously mined and has been reclaimed. The fact that this ground has been previously disturbed was estimated to increase the costs of the project when compared against the costs of purchasing land.

There are concerns that agricultural land is being taken out of production.

The decision to sell the land to SaskPower was made by a private owner. SaskPower has not conducted any calculations regarding the economic impact associated with removing this land from agricultural production.

SOLAR POWER AND FUTURE SUPPLY PLANS

There are questions about why SaskPower is building solar power.

Solar power is one of the options we're using to meet our province's power needs as we work on achieving a net-zero GHG emissions future. It is a cost competitive option that can help reduce the amount we rely on fossil fueled power. Solar power is only available when the sun is shining, so we will always rely on other generation to back it up and provide reliable power when our customers need it.

Besides solar, there is interest in nuclear, wind, and other options for the future.

Solar power is just one of the generation technologies SaskPower will need to supply power to Saskatchewan in the decades ahead. We recognize the decisions we make today will impact current and future generations. Anyone interested in our future plans can take part in [Planning Our Power Future](#). Read more about different supply options at [Balancing Supply Options](#).

People question why an interconnection line is being built to the U.S. to import coal power at the same time as SaskPower is shutting down coal-fired generation.

Most of SaskPower's coal facilities are reaching their end of life. In addition, federal regulations require all conventional coal facilities to shut down by 2030. Conventional coal provides baseload power; this is power that is available 24 hours a day, 7 days a week, in all seasons. Baseload power options in Saskatchewan are currently limited. As SaskPower works to develop new technologies, we must rely on natural gas generation and imported power to replace over 1,400 MW of conventional coal generation. Both options emit less than half of the GHG emissions compared to conventional coal.

Estevan 100MW Solar Power Facility Feedback Summary – November 2022

SaskPower has signed a 20-year agreement with the Southwest Power Pool (SPP) to expand the transmission line capacity between Saskatchewan and the United States. The increased capacity will enable the import and export of up to 650 MW of electricity starting in 2027. Currently, SaskPower’s total tie-in capacity in and out of the SPP is 150 MW.

Expanding connections with the SPP will help to manage the integration of more intermittent renewable power such as wind and solar while keeping costs as low as possible. It will also improve reliability in the event of planned or unplanned outages at SaskPower facilities and make it possible for Saskatchewan to export excess power, which would create revenue.

Stakeholders want to see a comparison of the price of solar generation vs. other generation options.

Due to the competitive nature of the IPP selection process, SaskPower will not be sharing exact pricing of solar generation or other options. The chart below provides a side-by-side comparison of a range of power generation technologies.

Generation Type	Cost	Dependability	Emissions
Coal	Low	High	High
Wind	Low*	Low	Zero
Solar	Medium*	Low	Zero
Hydro	Medium	High	Zero
Natural Gas	Medium	High	Medium
Small nuclear modular reactors	High	High	Zero
Coal with a carbon capture system	High	High	Medium

**Must always have back-up generation*

There are questions about the lifespan of this solar facility.

The solar facility is forecasted to have an in-service date in late 2026. The power purchase agreement will be for 25 years, although solar panels often can produce power longer than this.

TRANSMISSION AND STORAGE

There is interest in how the facility will connect to SaskPower’s grid.

We chose this area for the solar facility in part because it is already closely situated to Boundary Dam Power Station and existing transmission. A new transmission line to the facility will be required, but details on that are not known at this time. Once we find a route, we’ll negotiate landowner agreements to help us build, operate, and maintain the line. Impacted landowners will be notified.

There are questions about who this facility would serve.

Power from the facility would go to the provincial power grid serving all SaskPower customers. The grid functions like a pool, so it's difficult to say who uses the electricity. With the expanded connection to the U.S., at times some solar power may be exported for additional revenue.

Stakeholders want to know if power generated at the solar facility can be stored.

This facility will not be connected to battery storage. SaskPower is currently in the midst of a pilot project near Regina to assess the feasibility of battery storage and its ability to withstand Saskatchewan's extreme weather conditions.

LOCAL IMPACTS AND ECONOMICS

There are concerns this facility will fail, like another solar project in Medicine Hat.

As SaskPower works to reduce GHG emissions, solar power is an important cost-effective option that will contribute to a net-zero GHG emissions future.

We are confident in the viability of the Estevan solar facility. SaskPower will sign a 25-year power purchase agreement to buy the clean power generated by the facility, giving the successful IPP the opportunity to earn a return on their investment.

The 100 MW solar project in Estevan will use a different solar technology than the concentrated solar technology that was used in Medicine Hat. At the same time, changing economic conditions in the Alberta energy market made that project less desirable to operate and led to its closure. It may be reopened in the future as rising natural gas prices and the carbon tax make solar generation more economically attractive.

SASKPOWER OWNERSHIP

There are questions about why SaskPower is not building and operating the facility.

There are multiple IPPs in the industry that have experience owning and operating their own facilities. SaskPower is using a competitive procurement process to obtain the best price from the market, which means an IPP build is more cost-effective than SaskPower building and operating the facility.

There is curiosity about the total project cost.

Due to the competitive nature of the IPP selection process, SaskPower will not be sharing exact costs. SaskPower will pay the IPP for the electricity generated by the facility over a 25-year power purchase agreement; giving the IPP the opportunity to recoup their investment. Utility scale solar power is a cost competitive option in Saskatchewan compared to other supply options.

There is disappointment regarding the amount of detailed information that SaskPower could share on the solar facility.

More details on the project will be shared with local stakeholders once the IPP is chosen; we anticipate this will occur in summer 2023. We anticipate the successful IPP will also hold community engagement sessions in the area. At the same time, because of the competitive nature of the IPP selection process, cost and power purchase details will not be shared.