

# Turning Sun Solar Project



## Frequently Asked Questions

### What type of project will be constructed and when?

The Turning Sun Solar Project (the Project) is a transmission connected ground mount solar photovoltaic facility which will have a generation capacity of 100 MW AC. The Project will utilize Single Axis Tracker panels with Bi-Facial solar PV modules that are approximately 3 m in height.

Turning Sun Solar is targeting Q3 2025 for construction commencement, with a target commercial operation date of December 1<sup>st</sup>, 2026. The Project will be designed and constructed to have an operational lifetime of 25 years.

### Who will own the Project?

The Project is owned by Turning Sun Solar Inc. (Turning Sun Solar) which is 90% owned by GSI Management Inc. (GSI) and 10% owned by Ocean Man First Nation (OMFN).

GSI has over 15 years of experience and more than 2.4 GW of solar and battery storage being developed or operational, globally. With extensive knowledge and expertise through all phases of the project lifecycle, from origination through to commercial operation, GSI has put significant emphasis on embedding core values into the internal workings of the company and its employees. These values include community connection, creative agrivoltaics efforts, respect for the land, and diverse educational and employment opportunities being at the forefront of our corporate culture.

OMFN is a true advocate of both the Turning Sun Solar Project and many other renewable energy initiatives within the province of Saskatchewan. At the beginning of their solar journey, OMFN developed and now operates two fixed tilt groundmount solar projects that are connected to the SaskPower grid and were permitted to do so under the Power Generation Partner Program in 2020 and 2021. The projects continue to be owned, operated, and maintained by members of the OMFN.

In partnership, GSI and OMFN proudly share the ongoing development of the 100 MW AC Turning Sun Solar Project located in the Rural Municipality of Estevan which executed a Power Purchase Agreement with SaskPower in late 2023.

### Where will the Turning Sun Solar Project be located?

The Project will be located in the Rural Municipality of Estevan, approximately 8 kilometers southwest of the City of Estevan. It is located in the northwest corner of the intersection of Range Road 2091 and Township

Road 14. The 550-acre Project footprint will utilize four quarter sections of SaskPower owned lands.

An interactive map and additional Project location related details can be found on the Project website.

### What equipment will the Turning Sun Solar Project require?

The Project will require approximately 200,000 Bi-Facial solar PV modules, 27 inverters, and 1 High Voltage transformer, all enclosed in 12 kilometers of perimeter fencing.

### How was the Turning Sun Solar Project site location selected?

The location of the Project was decided by SaskPower. SaskPower secured the land rights to the property before awarding the Project to Turning Sun Solar Inc. under a competitive procurement in 2023.

SaskPower put great consideration into the selection of the Project location. Four main factors were the primary drivers for the decided location:

1. Availability of good and predictable solar irradiance (i.e. sunny days)
2. Available and compatible land
3. The absence of sensitive natural heritage and cultural heritage areas
4. Distance to heavily populated areas

The Turning Sun Solar Project is proposed on four quarter sections, located approximately 8 km southwest of the City of Estevan as it satisfies these four critical drivers while also making use of land now owned by SaskPower.

### How is the Project addressing the concern that agricultural land is being taken out of production.

Turning Sun Solar aims to honor the agricultural roots and history of the province of Saskatchewan and the Estevan community.

At the end of Project life (25 years), the entirety of the Project facility will be decommissioned by trained professionals. All equipment and materials will be removed from the site for re-use, recycling, or disposal and the site will be restored to a state similar, or better, to that of pre-construction. After decommissioning, traditional agricultural land-use will continue at the property. The decommissioning process will adhere to best industry practices and follow regulatory guidelines in effect by the Province of Saskatchewan.

Additionally, Turning Solar has committed to working with the University of Regina on an environmental research project. This 5-year research project will be a Before-After-Control-Impact study to assess short-term and long-term impacts and benefits of new construction on the lands and use by wildlife and vegetation compared to similar unimpacted areas. The study will assess how a variety of prairieland species respond to construction and operation of the Project with special focus on:

- Changes to structure and composition of the vegetation community
- Changes to use of the site by breeding and migratory birds
- Changes to use of the site by bats

Moreover, Turning Sun Solar will be exploring an Agrivoltaics for Indigenous Student Program with OMFN. This program will include annual funding for a long-term program to explore the feasibility of planting plants, crops,

pollinators, native prairie grasses, and/or, traditional medical plants in the rows between solar panels of two operating solar projects at Ocean Man First Nation. If the Program shows success, Turning Sun Solar will look to expand the initiative at the Project.

In addition, the Project Team is exploring the introduction of grazing sheep within the perimeter fence at the Project to further preserve the agricultural land-use of the property. The Project site has adequate access to water which makes it ideal for sheep grazing. Alberta has seen successful agrivoltaics programs involving solar panels and sheep grazing and we hope to be the first to put to work this exciting compatible pair in Saskatchewan. If you know of anyone who might be interested in exploring this with our Project Team, please contact us via email at [turningsunsolar@greenwoodinfra.com](mailto:turningsunsolar@greenwoodinfra.com).

### Will the Turning Sun Solar Project produce any new jobs?

Project construction is targeted to commence in Q3 2025. The Project is targeted to be commercially operational in December 2026.

**Direct Job Creation:** There will be up to 150 jobs created throughout the development and construction phases of the Project from 2024 to late 2026. During operations, there will be three to five full time jobs required for Operation and Maintenance of the Project throughout its lifetime.

**Indirect Job Creation:** Throughout the development and construction of the Project, a surge of employees will be present within the Estevan area, requiring accommodation and lodging, and relying on local goods and services for the majority of their needs. This will help spur additional revenue for the local community.

The Project Team is committed to hosting a minimum of two job fairs in the RM of Estevan prior to construction start. Information related to the job fair locations and dates will be made available on the Turning Project website and through quarterly newsletter distribution.

If you are interested in being considered, please submit your contact information via this form ([bit.ly/3YLC9Yr](https://bit.ly/3YLC9Yr)) or please contact us at [turningsunsolar@greenwoodinfra.com](mailto:turningsunsolar@greenwoodinfra.com). Turning Sun Solar will share the collected contact information with the Project's selected EPC Team.

Turning Sun Solar is committed to providing quarterly newsletter updates during development and construction regarding project progress, key milestones, employment opportunities, opportunities for sharing concerns and information regarding public open house, job fairs, community sessions and workshops. These newsletters will be posted on the Turning Sun Solar Project website and can be mailed out to stakeholders upon request.

### How will the Turning Sun Solar Project panels and land be maintained?

Turning Sun Solar will be responsible for the operation and maintenance of the Project. The Turning Sun Engineering Team will be monitoring the performance of the Project throughout its operational lifetime and will be alerted via automated monitoring systems if any problems occur with the equipment's performance levels. A local Operations and Maintenance (O&M) team located in the Project area will be on-site during the day and conduct visits to the Project site as necessary for scheduled and unscheduled maintenance.

Ongoing snow removal at the solar facility is the responsibility of Turning Sun Solar. There may be times when modules are left with snow cover as the forecasted weather conditions suggest that is most economical to leave them as they are. When covered in snow, the solar Project does not generate electricity and consequently, does not generate any revenue.

Turning Solar will also be responsible for weed management on site. A Weed Management Plan (WMP) was

prepared for the Project, in collaboration with the RM of Estevan, to address best weed management practices that will be implemented during the construction and operational phases of the Project. The WMP includes:

- Best practices related to soils and vegetation on the site that will be implemented.
- Adequate vegetation covering accomplished by seeding the site upon construction completion to restrict weed growth.
- Engaging a maintenance crew to remove unwanted vegetation regularly.
- Routine visual inspections of the Project site will occur, to ensure the solar facility infrastructure and access roads remain clear of debris, weed, and vegetation.
- Mowing the Project area as necessary to keep from becoming over vegetated.

The Weed Management Plan has been made available on the Turning Sun Project Website.

#### What security measures will be in place on site?

A chain-link fence will be installed around the entire perimeter of the Project area. Additionally, security cameras will be installed in key locations of the Project site and will be utilized to monitor and surveillance the Project area and those accessing through the main access roads.

All main equipment and the substation will be further individually locked and secured, and signage will be placed in select areas warning of restricted area.

The Project site will be regularly visited by the local O&M Team and will be accessed by authorized personnel only.

#### What happens if a solar PV panel is damaged?

Solar panels are engineered and designed to be extremely durable and are manufactured with glass that is designed to be flexible and impact resistant. In the rare case that any damage occurs to the solar PV modules, there would be an immediate reduction in power production and the damage would be identified by our monitoring software. Consequently, the Turning Sun Solar internal engineering team will be alerted via automated monitoring systems. A local O&M team in the Rural Municipality of Estevan will be available to remove and replace the damaged panel. The damaged panel would be transported and disposed of in the appropriate facilities. An indoor storage location for spare panels will be located in the City of Estevan for safe keeping.

#### Will there be impacts on local roads during construction and operation of the facility and who will pay if roads need to be upgraded or traffic needs to be rerouted?

Turning Sun Solar will bear the responsibility of costs associated with any necessary road upgrades or road damages that occur throughout the construction and operational lifetime of the Project. An increase in traffic flow levels can be expected within the direct vicinity of the Project during the construction phase which is expected to begin in Q3 2025 and run for 12-18 months. Road use during construction will include daily use of cars and trucks for transportation of construction workers, weekly deliveries by transport trucks delivering project components, and occasional delivery of major construction equipment including pile drivers, excavators, graders and cranes. Construction will occur only within the allowable construction hours permitted by the province of Saskatchewan.

Once operational, there will be minimal changes to traffic due to the Project operations and maintenance. Daily access to the site will be via one or two regular pick-up trucks by the local O&M team.

Prior to on-site mobilization, Turning Sun Solar is committed to completing approximately 2-miles of road improvements along Township Road 14, along the southern edge of the Project, spanning from the corner of the intersection of Range Road 2091 and Township Road 14 at the eastern edge of the Project to the intersection of Range Road 2093 and Township Road 14, beyond the western-most end of the Project.

### Will existing shelter belts remain intact?

The Project site layout aims to retain shelter belts, where feasible, and include the planting of trees in key areas around the site for visual screening and wind protection based on feedback from landowners.

### How will the Project impact wildlife?

Turning Sun Solar engaged an experienced third-party environmental consultant to conduct all necessary field studies to confirm existing wildlife, wildlife habitat, vegetation, wetlands and water courses within the Project area.

To address and mitigate potential environmental interactions, the Project submitted an Environmental Impact Statement (EIS) to follow the requirements of the Saskatchewan Environmental Assessment Act. An initial baseline environmental assessment was completed for the Project area in 2022 by a third-party environmental consultant. This baseline assessment included a preliminary desktop assessment to identify potential wildlife habitat and species of concern using the Hunting, Angling and Biodiversity Information of Saskatchewan (HABISask), followed by field assessments using the guidelines for Saskatchewan Plant and Wildlife Pre-Construction Surveys for Renewable Energy Projects and Saskatchewan Species Detection Survey Protocols.

To date, on-site field surveys have been completed for:

- Amphibians
- Burrowing Owls
- Short-eared Owls
- Common Nighthawk
- Grassland Breeding Birds
- Sharp-tailed Grouse
- Piping Plover and Yellow Rail
- Rare vascular plants
- Raptors
- Bird Migration
- Landcover and Wetlands

Following completion of these surveys, preliminary Project siting incorporated the results of any identified features of interest and applied equipment setback distances in the site layout.

As part of the EIS process, Turning Sun Solar submitted a Terms of Reference (TOR) document to the Saskatchewan Ministry of Environment – Environmental Assessment and Stewardship Branch (MOE) on August 30, 2024. The TOR followed the Guidelines for the Terms of Reference and Environmental Impact Statement (Government of Saskatchewan 2021 guideline document can be accessed here: [bit.ly/3Cieaby](https://bit.ly/3Cieaby)) and recommendations from the MOE from previous engagement discussions. The MOE has reviewed the TOR document and received information and comments from the Saskatchewan Environmental Assessment Review Panel (SEARP), which is comprised of representatives from various provincial ministries and agencies with environmental and socioeconomic interests. A notice of the TOR submission was posted in

the Regina Leader Post, Saskatoon Star Phoenix, and the Estevan Mercury to allow members of the public an opportunity to learn more about the Project and environmental process.

In November 2024, the TOR was formally accepted by the MOE and served as a baseline guide for the environmental impact assessment and how information will be evaluated in the EIS.

All wildlife surveys have now been completed for the Project. A total of twenty wetlands were assessed in the Project area, the majority of which were classified as Class II (i.e., temporary) wetlands, which typically do not hold water longer than a few weeks each year and are cultivated and seeded each year. The Project avoids all Class III (Seasonal) or higher value wetlands which have greater water permanence and represent higher quality wildlife and vegetation habitat.

Turning Sun Solar's third-party consultant has completed the EIS document to assess all environmental and socio-economic components, including the results and a summary of:

- The stakeholder engagement and consultation process, efforts, and feedback received to date
- The process and results of the Project's first Open House that took place on September 5, 2024
- Any potential effects identified and proposed mitigation measures to address these effects

On June 26, 2025, the Minister of Environment issued formal approval for the Project to proceed with development following MOE, Saskatchewan Environmental Assessment Review Panel (SEARP), and a 30-day public review period.

This approval marks a significant milestone in the Project's environmental assessment process, positioning the Project well to advance into the final stages of development, with a continued focus on minimizing environmental impacts, meeting necessary regulatory and environmental standards, while maintaining open, collaborative engagement with the MOE and key stakeholders.

Please reference the following links for:

EIS Report: <https://publications.saskatchewan.ca/#/products/126152>

MOE Decision: <https://publications.saskatchewan.ca/#/products/126497>

### Solar Glare Hazard Analysis:

An experienced third-party consultant completed a Solar Glare Hazard Analysis (SGHA) for the Project to assess potential human health and safety considerations in the EIS. This analysis assessed whether the Project may cause any detrimental glare to airplanes flying overhead, to vehicles travelling on adjacent roadways, or to neighboring homes. Additionally, the assessment suggests tailored mitigation measures, if necessary.

Glint and glare refer to light reflected off smooth surfaces, either momentarily and intense (glint) or less intense for a more sustained period (glare). Solar PV technology is specifically designed to absorb as much sunlight as possible and modules are generally coated in an anti-reflective coating, as is the case with the modules selected for the Project. Solar PV sites have been developed alongside major transport routes and airports around the world, including adjacent to road infrastructure.

The SGHA glare guidelines followed for the Turning Sun Solar Project are the same solar project specific guidelines utilized by the Alberta Utilities Commission in the province of Alberta, which are the most comprehensive guidelines in Canada for assessing potential glare impacts.

The SGHA conducted for the Turning Sun Solar Project evaluated the areas within 4,000 meters of the Project for aerodromes and within 800 meters for any other receptors. The assessment



considered the following receptors near the Project:

- One observation point representing a nearby residential dwelling; and
- Three local roads: Township Road 14, Range Road 2091, and Range Road 2093

Upon review and evaluation, no registered or unregistered aerodromes within 4,000 meters of the Project site were identified. Additionally, no railways or highways within 800 meters of the Project site were identified.

The SGHA analysis conducted evaluated that the Project is not likely to have the potential to create hazardous glare conditions for the residential dwelling or the roads that were assessed.

The potential impact of glare on the affected receptors may also be reduced by sun-masking, as the glare occurs when the sun aligns with the glare spot and the observer, as the sun glances across the solar panel arrays at a shallow angle. The glare assessment represents a conservative approach, as it does not account for clouds, weather patterns, or obstructions that may further reduce glare.

Based on these results, the Turning Sun Solar Project is not expected to present a hazard to drivers along nearby roads or have an adverse effect on a resident's use of their home. As such, no mitigation measures have been proposed or recommended for the evaluated receptors.

The completed Solar Glare Hazard Analysis Report can be accessed on the Turning Sun Solar Project website

#### Noise Impact Assessment:

An experienced third-party consultant has completed a Noise Impact Assessment (NIA) for the Project to address the acoustic environment component of the EIS. The NIA ensures that the Project complies with provincial requirements and provides an assessment of noise as a human health consideration in the EIS. The single-axis tracker solar modules themselves do not emit any noise. The solar tracking system will operate asynchronously across the site for a few seconds every few minutes to adjust the tilt angle of the modules. Due to the trackers' infrequent and asynchronous operation, and their uniform distribution across solar sites, they would have limited potential to contribute to overall project sound levels and would not be considered significant noise producing Project elements.

The inverters and transformers do produce an audible hum when energy is being generated. No noise is generated at night. For the purposes of the noise assessment, it has been assessed that the only significant noise producing Project elements are the inverters/transformer stations and the Project substation.

The sound power level data for the inverter, transformer, and Project substation elements was used to model sound emissions for both daytime and night-time periods. The Project elements mentioned above were assumed to operate at full load, which is an inherently conservative modelling approach for night-time periods at a solar farm.

The NIA consisted of a review of aerial imagery of the Project, followed by an in-person Project site visit in August 2024 to verify details of the residential receptors and presence of existing third-party energy facilities.

Three receptors were identified within 1.5 kilometers of the Project boundary. All noise propagation calculations were performed using iNoise from DGMR Software (version Enterprise 2024.1). The software model was used to predict sound levels from the Project to determine compliance with noise regulatory requirements. Where applicable, cumulative sound levels were

incorporated from existing third-party energy facilities, the proposed Project, and ambient sources. A Low Frequency Noise (LFN) assessment conducted determined that sound from the Project was not likely to produce significant effects. The Project has been shown to be compliant with noise regulations, and the predicted noise impacts from the Project are considered acceptable for the assessed receptors in rural Saskatchewan.

The completed Noise Impact Assessment Report can be accessed on the Turning Sun Solar Project website.

#### Development Permit, Rural Municipality of Estevan No. 5 (RM of Estevan):

In consultation with the RM of Estevan, the Turning Sun Project Team has submitted a Development Permit Application (the Application). The Application follows established standards, regulations, and requirements stipulated in the RM of Estevan Zoning Bylaw No. 5-2014 for the development of renewable energy projects. The submission package included:

- Weed Management Plan completed in consultation with the RM of Estevan
- Emergency Response and Fire Suppressant Plan
- Project specific design and equipment details, planned Project construction processes and related information, and planned safety and security measures throughout the construction phase and operational lifetime of the Project
- Road Maintenance details and planned access routes
- Grading and Drainage Plan
- Decommissioning and Reclamation Plan
- Planned Pre and Post Construction Soil Analysis
- Necessary provincial and federal approvals and permits
- All completed Project related studies and assessments

Turning Sun Solar is committed to continuing to work with the RM of Estevan council and staff to ensure the Project development, design, and future construction is in accordance with the regulations and requirements of the municipality and best interest of the community.

#### What will happen once the Turning Sun Solar Project has reached the end of its lifespan?

At the end of the Project's life, which will be 25 years, the Project will be decommissioned. Decommissioning involves dismantling and removing all equipment and disposing of them in an environmentally and ethically conscious manner. Any required permits and necessary approvals at the time of decommissioning will be obtained from the appropriate regulatory and government bodies. Notification to the landowners, local municipality, and stakeholders will also be given in advance of the commencement of the decommissioning process.

The solar PV modules, once disconnected and dismantled, will be carefully handled, packed, and collected by trained professionals from the Project site, then transported to the appropriate facilities where the glass, metal, and semi-conductor materials will be separated and either recycled or disposed of appropriately and safely.

Once the metal (aluminum) and glass components of the solar PV modules are separated, 100% of the metal components and approximately 95% of the glass can be reused for future industrial purposes.

The entirety of the Project facility will be decommissioned by trained professionals in the field and will adhere to the practices and procedures followed by the Province of Saskatchewan.

A Decommissioning Report which details the various steps of the decommissioning process will be made available on the Turning Sun Solar Project website once finalized.



## How can I learn more?

Project Related Information: Please visit our website for all Turning Sun Solar Project information: [turningsunsolar.com](http://turningsunsolar.com)

Stakeholder Participation: Please reach out to us via email at [turningsunsolar@greenwoodinfra.com](mailto:turningsunsolar@greenwoodinfra.com) if you have any questions or would like to hear more about the Project. A member of the Project Team would be happy to arrange a phone call, virtual meeting, or in person visit.

Ongoing Project Updates: If you would like to be included on our distribution list to receive Project updates and quarterly newsletters by email or paper mail (<https://forms.office.com/r/2PCkz3fwqN>)

SaskPower: To learn more about the [SaskPower](#) projects including the interconnection of the Turning Sun Solar Facility, visit [Planning and Construction Projects \(saskpower.com\)](#). If you have inquiries, [Contact Us \(saskpower.com\)](#).