

Saddlebrook Solar + Storage Project

TC Energy is currently constructing and will operate a solar project in conjunction with an energy storage facility. The Project has two phases of construction. The first phase of construction includes a solar-generating facility and the second phase includes the construction of an energy storage system.

The Project is located on TC Energy-owned land at the Saddlebrook industrial Park, southeast of the intersection at Highway 2A and Township Road 200, in 31-19-28-W4M in Aldersyde, Alberta.



Saddlebrook Solar + Storage Project construction.

Project details

The Project is being developed in two phases:

Phase One

Phase One of the Project consists of the installation of 81 megawatts (MWac) of solar generation, which can generate enough electricity to power approximately 20,000 homes. The project will be operational at the end of 2023.

Phase Two

Phase Two of the Project consists of the installation of a utility-scale storage facility, up to 6.5 MW, 40-megawatt-hours (MWh).

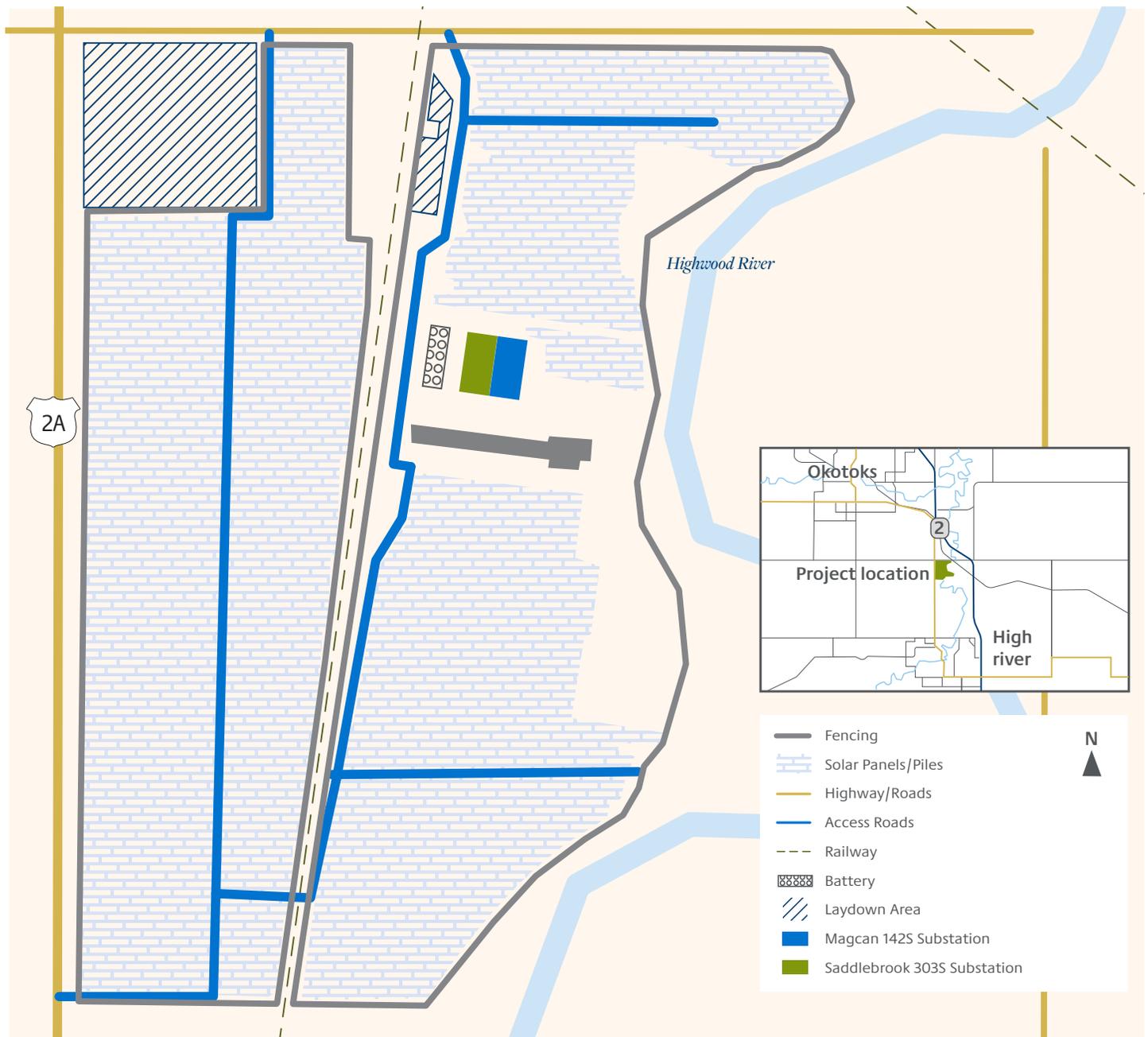
Both phases will utilize inverter technology to convert the electricity produced by the solar panels and battery into alternating current. The electricity produced will feed into the Alberta Interconnected Electric System (AIES) through an existing substation located on the Project lands.



Saddlebrook Solar + Storage Project Schedule

Completed	Distribute Stakeholder and landowner notification
Completed	Conduct survey and field work
Completed	File for land use amendment and development permit application through the County
Completed	File regulatory application with Alberta Utility Commission
Completed	Commenced construction activities for Phase One
Q4 2023	Anticipated in-service date for Phase One
Q2 2024	Subject to regulatory approval, commence construction activities for Phase Two
Q4 2024	Anticipated in-service date for Phase Two

Saddlebrook Solar + Storage Project Layout



Project technology

The Project uses bifacial solar panels that will generate electrical energy from both sides of the panel. The front side of the panel generates electricity from direct sunlight and the rear of the panel generates electricity from indirect sunlight, such as light reflected off snow-covered surfaces. The Project will be the first in Canada to utilize Lockheed Martin's GridStar® Flow energy storage system, a long-duration flow battery technology.

The energy storage system will be used to provide power to Alberta's electricity system in times of peak demand and provide other grid-stabilizing services.

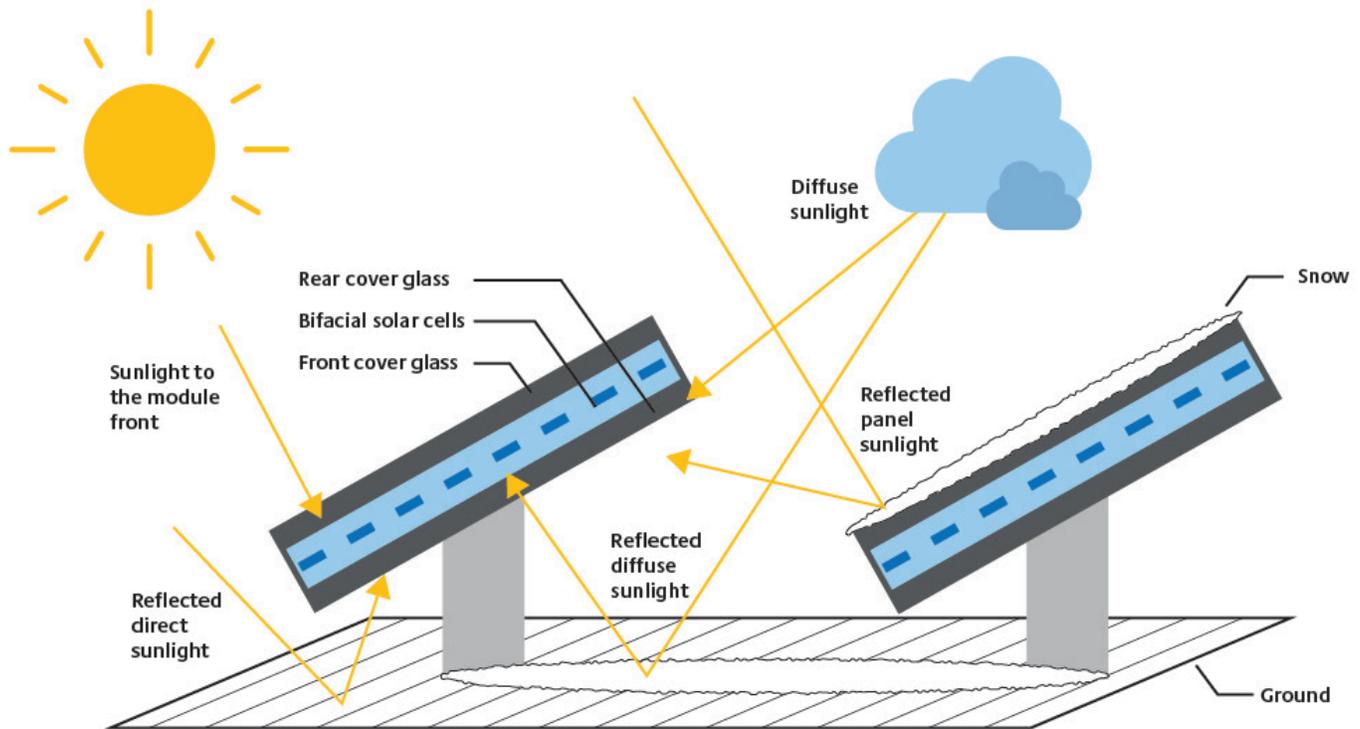
The Project's environmentally friendly technology is expected to reduce greenhouse gas (GHG) emissions and air pollutants by providing emissions-free energy to the grid and displacing fossil-fuel generation. The electricity generated by the solar panels is expected to directly reduce GHG emissions by

approximately 73,600 tonnes of Carbon Dioxide Equivalent (CO₂e) per year, which is the equivalent of taking approximately 16,000 cars off Alberta roads.

In addition to the solar panels and energy storage system, the Project will include the following:

- Substation with transformer and electrical control equipment
- Electrical inverter stations to convert the generated Direct Current (DC) power to Alternating Current (AC) power
- Buried (where possible) electrical collector lines to transmit AC power from the inverter stations to the substation
- Fencing around the perimeter of the project to regulate access to the site
- Internal site access roads

Bifacial Solar Panels



Emissions Reduction Alberta

The Project is partially supported by \$10 million in funding from Emissions Reduction Alberta (ERA) through their BEST Challenge, to support the development of a hybrid solar generation facility combined with a flow battery energy storage system.

ERA's BEST Challenge targets technologies that demonstrate the potential to reduce GHG emissions in Alberta and secure the province's success in a lower carbon economy. Innovators with technology scale-up, demonstration, and first-of-kind, implementation projects in the areas of biotechnology, electricity or sustainable transportation were invited to apply.

Regulatory process

All key permits have been approved by the Alberta Utilities Commission (AUC), under AUC Rule 007.

Site selection

The Project has a distinct advantage being located on the Saddlebrook Industrial Park, which is wholly-owned by TC Energy and consists of more than 300 acres of industrially zoned land suitable for the construction of the Project.

TC Energy employs a systematic and thorough site selection process using a variety of considerations such as:

- Desktop studies
- Ground verification and field surveys
- Engineering, geotechnical and environmental field studies

Site selection considered the following objectives:

- Minimizing total site footprint or land requirements
- Meeting applicable regulatory requirements
- Reducing the environmental footprint
- Carefully assessing overall construction complexity and our ability to meet customer needs

Commitment to engagement and addressing concerns

Our approach to consultation and engagement with stakeholders and landowners is focused on understanding any concerns raised and meaningfully addressing issues related to our projects and operations where possible. We engage and consult early and often, invite feedback, provide updates and address concerns throughout the regulatory process and throughout operations.

Our preference for addressing concerns is through direct and respectful discussion. Issues received or identified during these discussions are systematically tracked and followed to promote mutual resolution.



Project benefits

Our projects offer long-term economic benefits and help strengthen the economy on a local, provincial, and national level. Below is an overview of the anticipated benefits of this project:

Climate Benefits

- It will not only provide direct benefits through the generation of emissions-free renewable power, but it will also unlock the potential for long-duration energy storage while supporting and maintaining the reliability of Alberta's electricity system.

Employment and business opportunities

- Construction of the Project will create a demand for local goods and service providers, including equipment operators, mechanics, truck drivers, and labourers. Vendors interested in working with us can visit [TCEnergy.com/Vendors](https://www.tcenergy.com/vendors) to register as an interested local service provider. We award contracts to qualified construction contractors and work with them to provide local employment opportunities.

Annual revenue to support local services

- The Project's construction will result in tax payments to all government levels. When the Project is operational, annual tax payments will help support schools, hospitals, emergency services, and other local programs vital to the local community.

Investment in local communities and Indigenous groups

- Giving back to the communities where we operate has always been part of our culture. Whether it's partnering with community groups, supporting local initiatives, or encouraging our employees to be involved in their neighbourhoods, the goal of our Build Strong community investment program is to build strong and vibrant communities across North America. Visit [TCEnergy.com/BuildStrong](https://www.tcenergy.com/buildstrong) for more information on how TC Energy plans to give back to your community.
- Building and maintaining relationships with Indigenous groups near our proposed projects and existing facilities has long been an integral part of our business. We aim to conduct our activities in a way that fosters mutual understanding and benefit – this includes working with communities to identify and manage potential effects of our activities and provide enduring economic opportunities. TC Energy also provides business, employment, and training opportunities, and supports community-led initiatives of Indigenous groups that focus on safety, community, environment and education.

What to expect during construction

During construction there will be an increase in traffic in and around the Project area, as well as medium to heavy equipment on site for earthworks, pile and panel installation.

We have developed and adhere to project specific construction plans and an Environmental Protection Plan (EPP) to ensure that the impacts of construction activities on communities are minimized. After the facilities are constructed, there will be minimal traffic associated with ongoing operations and maintenance.

The majority of the workforce required for the Project is locally sourced; therefore no workforce accommodations are required. Access to and from site is based on a number of factors, including finding the safest and most efficient routes to our worksite, existing and new infrastructure required to support construction, and municipal planning. Access planning is refined through the Project development and communicated prior to start of work.

At the end of an asset's lifecycle, the asset is taken out of service with as much thought and care as when it was proposed and constructed. TC Energy submitted its preliminary Conservation and Reclamation Plan to the AUC in accordance with Alberta Environment and Park's (AEP) Conservation and Reclamation Directive for Renewable Energy Operations. This plan has been submitted to and reviewed by the AUC. This plan has been updated and executed in accordance with the requirements of the Directive at the end of the Project's life to ensure the land is returned to an equivalent land capability following operation of the facility.

Managing our environmental footprint

Whether it's designing, building, or operating energy infrastructure, we are committed to being responsible environmental stewards of the land we share – and our environmental principles of stewardship, protection and performance help guide our decisions.

The Project has been subjected to a regulatory approval process, and environmental assessments, including solar glare analysis, noise impact assessments, and wildlife, vegetation, and wetland assessments.

An Environmental Protection Plan (EPP) has been developed to ensure the necessary mitigation measures and best practices are implemented during construction. A copy of the EPP was included as part of the AUC application.

Emergency preparedness and response

Our goal is to ensure that the Project will operate safely every day and that the public, our employees, and the environment are protected during the unlikely event of incident involving our assets. All TC Energy safety initiatives are designed to advance one goal: Zero is Real. We are proud to have an industry leading safety record and continue to work towards our goal of zero safety incidents. Being prepared for the rare instance when something does go wrong is part of our commitment to ensuring the safety of the communities where we live and operate.

In the unlikely event of an incident, all our assets have site-specific Emergency Response Plans that outline the steps we'll take to respond. Our Emergency Preparedness and Response team is focused on quickly and effectively responding to emergencies and mitigating any impacts that may have occurred to public safety, property, or the environment in a timely manner.

If there is an incident, we work closely with authorities, emergency responders, and the media to ensure local residents are safe and aware of the situation.

In the event of an emergency, please contact TC Energy's 24-hour emergency line at 1-888-982-7222.

About the Alberta Utilities Commission

The Alberta Utilities Commission (AUC) is a quasi-judicial independent agency established by the Government of Alberta responsible to ensure that the delivery of Alberta's utility services takes place in a manner that is fair, responsible and in the public interest. They regulate investor-owned natural gas, electric and water utilities, and certain municipally-owned electric utilities to protect social, economic and environmental interest of Alberta where competitive market forces do not.

About Emissions Reduction Alberta

For more than 10 years, ERA has been investing the revenues from the carbon price paid by large final emitters to accelerate the development and adoption of innovative clean technology solutions. Since ERA was established in 2009, they have committed \$616 million towards 186 projects worth \$4.55 billion that are helping to reduce GHGs, create competitive industries and are leading to new business opportunities in Alberta. These projects are estimated to deliver cumulative reductions of 35 million tonnes of CO₂e by 2030. Learn more at ERAlberta.ca.

About TC Energy

We're a team of 7,000+ energy problem solvers working to move, generate and store the energy North America relies on. Today, we're taking action to make that energy more sustainable and more secure. We're innovating and modernizing to reduce emissions from our business. And, we're delivering new energy solutions – from natural gas and renewables to carbon capture and hydrogen – to help other businesses and industries decarbonize too. Along the way, we invest in the communities where we live and work to strengthen community resilience and build a stronger future, together.

TC Energy's common shares trade on the Toronto (TSX) and New York (NYSE) stock exchanges under the symbol TRP. To learn more, visit us at TCEnergy.com.

Privacy Commitment

TC Energy is committed to protecting your privacy. Collected personal information will be protected under the provincial Personal Information Protection Act. As part of the regulatory process for new generation projects, TC Energy may be required to provide your personal information to the AUC. For more information about how TC Energy protects your personal information, visit our Privacy website <https://www.tcenergy.com/privacy>.

Stay up-to-date with the progress of the Project through regular updates at TCEnergy.com/Saddlebrook-Solar.

Contact us

Contact us with any questions about our prospecting:

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Or write to us at:

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