



# Salay Prayzaan Project: Métis Crossing 4.86 MW Solar Farm



# Innovation

**Salay Prayzaan, a community-generation solar project, located in Smoky Lake County at Métis Crossing—Alberta’s first and only Métis cultural interpretive destination—was designed to fit in seamlessly with the site’s ongoing development. It is a key initiative under the Métis Nation of Alberta (MNA) Climate Change Action Plan (CCAP).**

**Operating since autumn of 2023, this 12,840-solar-panel project produces enough energy to power 1,200 Alberta homes. Beyond its environmental impact in fighting climate change, it fosters economic growth and cultivates local spin-offs for the Métis Nation and partner communities.**

**Building a sustainable energy source to empower Indigenous prosperity**

In 2017, the MNA unveiled its inaugural Climate Change Action Plan to “fully support and direct the MNA in [...] designing and undertaking climate change initiatives and programs, including actions aimed at reducing greenhouse gas emissions, increasing Métis involvement and awareness of climate change while creating capacity and economic opportunities for Métis citizens.”



## **Salay Prayzaan means gift from the sun in Michif**

“It perfectly captures the spirit of the project, as Métis people have always regarded nature with deep respect and appreciation,” says Andres Filella, MNA Director of Environment and Climate Change





It was within this framework that the foundations of Salay Prayzaan emerged. Together, the Town of Smoky Lake, Smoky Lake County and the MNA worked to develop this 4.86-megawatt solar project, which stands as the most northerly grid-connected solar generation initiative of substantial scale in Alberta.

ATCO, serving as the prime contractor for the construction, enlisted BBA to perform environmental assessments, engineering studies, detailed design of the solar farm (excluding the electrical design) and commissioning of the medium-voltage (MV) system. Key aspects of the mandate included:

- Civil design: General layout and site plans, earthworks and drainage, roads and paving
- Structural design: Foundations for inverters, transformers and the E-house

- Power system studies: Load flow, short circuit and arc flash, protection coordination and grounding
- Commissioning of the MV system: Transformers, cables, relays and switchgear
- Environmental assessments: Pre-construction assessments, field assessments, monitoring and documentation

The energy generated by the solar modules is fed back into the local distribution grid, where it flows to nearby communities, including Métis Crossing and Smoky Lake County. The successful implementation of this technology is significant for these communities, not only in terms of financial benefits, but also in reinforcing their commitment to sustainability.



# Complexity

## **Balancing a tight budget with uncompromising excellence**

The project was delivered within an extremely tight budget and was compounded by the solar park's location, which extends over an important community and tourist site for the MNA. It is also a habitat for many animal and plant species. As a result, maintaining both aesthetics and functions was imperative and non-negotiable.

BBA's environmental assessment experts, aware of the need to minimize their onsite visits without compromising quality, created an assessment form for ATCO. This form included a list of validation items and required photos. This cost-effective and environmentally friendly solution allowed BBA to perform remote audits.

## **Effectively managing space on constrained grounds**

Because the site is both inhabited and spatially limited, the teams had to be strategic in storing construction equipment. BBA evaluated the project's constructability and designated logical storage zones across the various phases. In terms of the environment, this required analyzing the soil and habitat to ensure



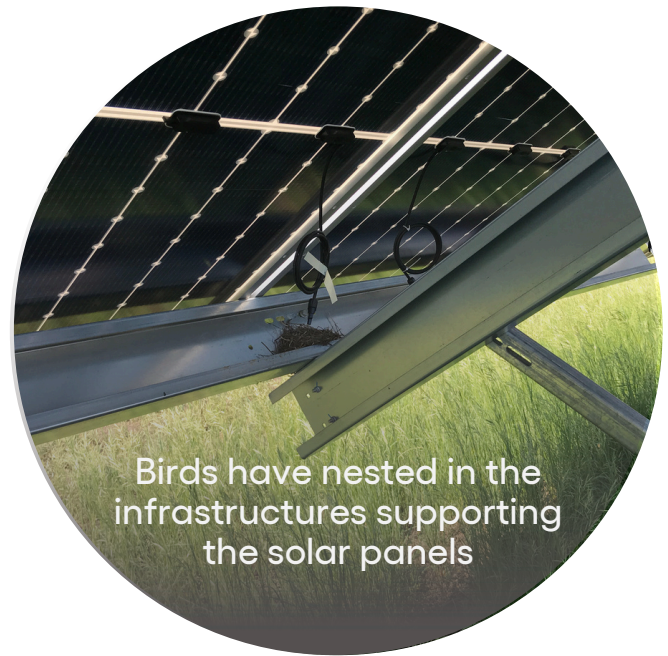


# Complexity

the spaces selected were less vulnerable to the environmental impact of equipment movement, thereby minimizing disruptions.

## **Safeguarding vulnerable habitats**

The site's proximity to a wetland underscored the need to carefully manage the work, especially during the amphibian breeding and bird nesting periods. Through proactive collaboration with the Indigenous community, biologists and contractors, and in compliance with federal legislation, we were able to implement tailored measures to protect these fragile habitats.



Birds have nested in the infrastructures supporting the solar panels





# Social and Economic Impact

## **Empowering Métis people through solar energy**

Salay Prayzaan is a 100% Métis-owned solar project. It is also the largest of its kind in Canada, according to the MNA. This initiative is shaping the community by fostering ownership and self-sustaining economic growth through job creation, infrastructure investment and revenue from clean energy sales. Developing this solar facility has brought about economic prosperity and community benefits by hiring and supporting Métis and local subcontractors. Generated profits are used to fund social and economic development initiatives and programs through the MNA, benefitting all Métis

through the MNA, benefitting all Métis people across Alberta. It also alleviates strain on existing transmission infrastructure.

## **Passing on valuable insights**

Métis history and culture are built on the foundations of knowledge. This project was no exception. It was an opportunity to raise community awareness of renewable energy, particularly solar energy, as part of a unifying project. Additionally, it provides technical training to community members, so they have the knowledge and technical expertise necessary for future projects.



**Building Métis  
sovereignty, and  
self-sufficiency**





### **A tribute to Métis heritage**

This project was developed by and for the MNA. It embodies Métis values as stewards of the land and seamlessly aligns with their history: “South of Métis Crossing, there are the white buffalos, where we share the stories of our past. And just to the north of us, we have our solar farm, which I think is a big move forward for the Métis people. It’s great and significant for us to be able to share our past and our future all at once.” says Juanita Marois, Juanita Marois, Métis Crossing’s chief executive officer.





# Environmental Impact

**The 4.86-megawatt solar power system generates enough electricity to power all MNA and affiliate buildings, equivalent to powering 1,200 Alberta homes. It is expected to lower greenhouse gas emissions by 4,700 tonnes of CO<sub>2</sub> in its first year of operation, the equivalent of taking 10,000 cars off the road.**

## **On the path to net-zero**

This marks a significant step for the MNA toward transitioning to net-zero emissions. This project embraces the energy transition. By enhancing the community's energy mix, it reduces volatility and paves the way for additional renewable energy and storage projects, substantially minimizing these community.

Moreover, a portion of project profits will support a Community Development Fund dedicated to encouraging sustainable development in the local community.



**“Métis Crossing is an integral part of the MNA’s growth and development, and sustainability is a key part of this journey. As stewards of our Homeland, we work every day to preserve and protect our environment for future generations. The Métis Crossing Solar Project is a huge step toward this goal, and I thank our partners for helping make it a reality.”**

**- Audrey Poitras, Former President, Métis Nation of Alberta**



# Meeting client needs

## **A collaborative one-stop shop**

ATCO and BBA teams worked closely and effectively to achieve project goals. BBA streamlined project management and execution and made the project more cost effective by providing cutting-edge services in various disciplines, from environmental studies to engineering and commissioning. Together, they helped deliver the project on time and on budget.

## **A trusted relationship based on fairness, honesty and integrity**

In 2020, BBA signed a relationship agreement with the MNA, laying the groundwork for in-kind support to assist the MNA in becoming private power producers or investing in clean energy projects. Both parties also identified potential projects where the MNA, Métis Nation businesses and BBA could work together in providing comprehensive services for major development projects in Alberta.

The MNA initiated this relationship agreement, and it reflects the commitment to bringing human relationships back to the core of its business dealings, as has been done traditionally within the community. By signing this declaration ahead of the solar

signing this declaration ahead of the solar farm project, BBA assured the MNA that it was ready to work according to their values and principles, supporting them in building a more sustainable and equitable future. Above all, BBA has demonstrated its openness and willingness to actively invest in the reconciliation process.

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**“Nothing starts with a project. It all starts with a human relationship. The story of Salay Prayzaan is primarily about people who got together, were genuinely interested in those they met and listened to them with respect and sincerity.”**

**- Art Cunningham, BBA’s consultant in Indigenous community relations and Métis Crossing board member**

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# About BBA

BBA has been providing a wide range of consulting engineering services for over 40 years. Today, its engineering, environmental and commissioning experts team up to quickly and accurately pinpoint the needs of industrial and institutional clients. The firm's expertise is recognized in the Energy and Natural Resources industry. With 20 offices in Canada and internationally (USA and Chile), offering clients local support and field presence, BBA is recognized for providing some of the industry's most innovative, sustainable and reliable engineering solutions.



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Mining and  
metals



Energy and  
Chemicals



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manufacturing  
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