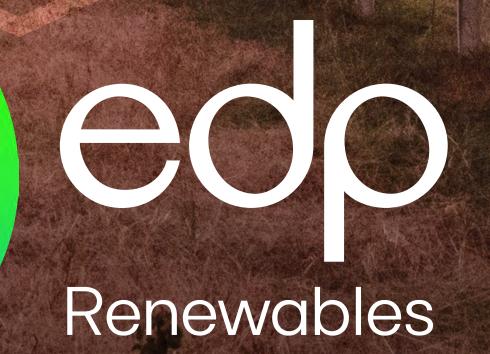
# MELCOME



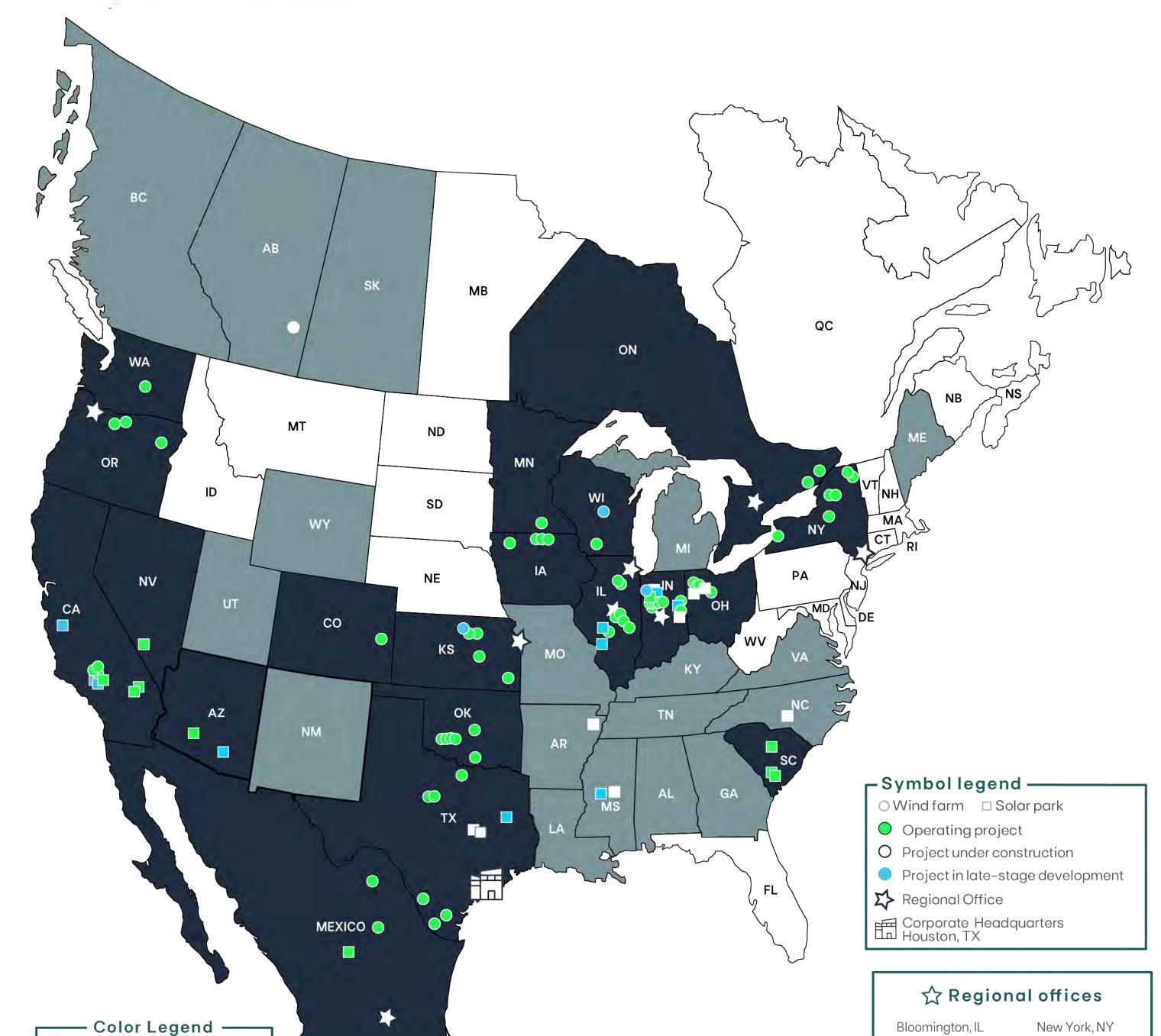
## BLUE BRIDGE SOLAR PARK

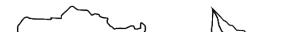




## bluebridgesolarpark.com

#### **ABOUT EDP RENEWABLES NORTH AMERICA**





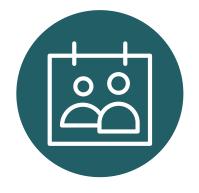
## **OPERATIONAL PROJECTS** 58 WIND FARMS 10 坩 SOLAR PARKS **8,400+** MEGAWATTS



Chicago, IL	Portland, OR
Indianapolis, IN	Mexico City, Mexico
Overland Park, KS	Toronto, Ontario

Revised August 2023

#### EDPR NA'S IMPACT

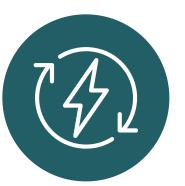


#### CREATED

1,090 permanent jobs 7,900+ construction jobs



GENERATED the equivalent of 2 million+ homes' energy consumption



MAINTAINED 278 million+ hours of operational history



PAID \$379 million+ to landowners **\$308 million+** to local governments

#### SAVED



12.4 billion+ gallons of water AVOIDED

**24 billion+ pounds** of  $CO_2$ 



INVESTED **\$17 billion+** (approx.) in capital

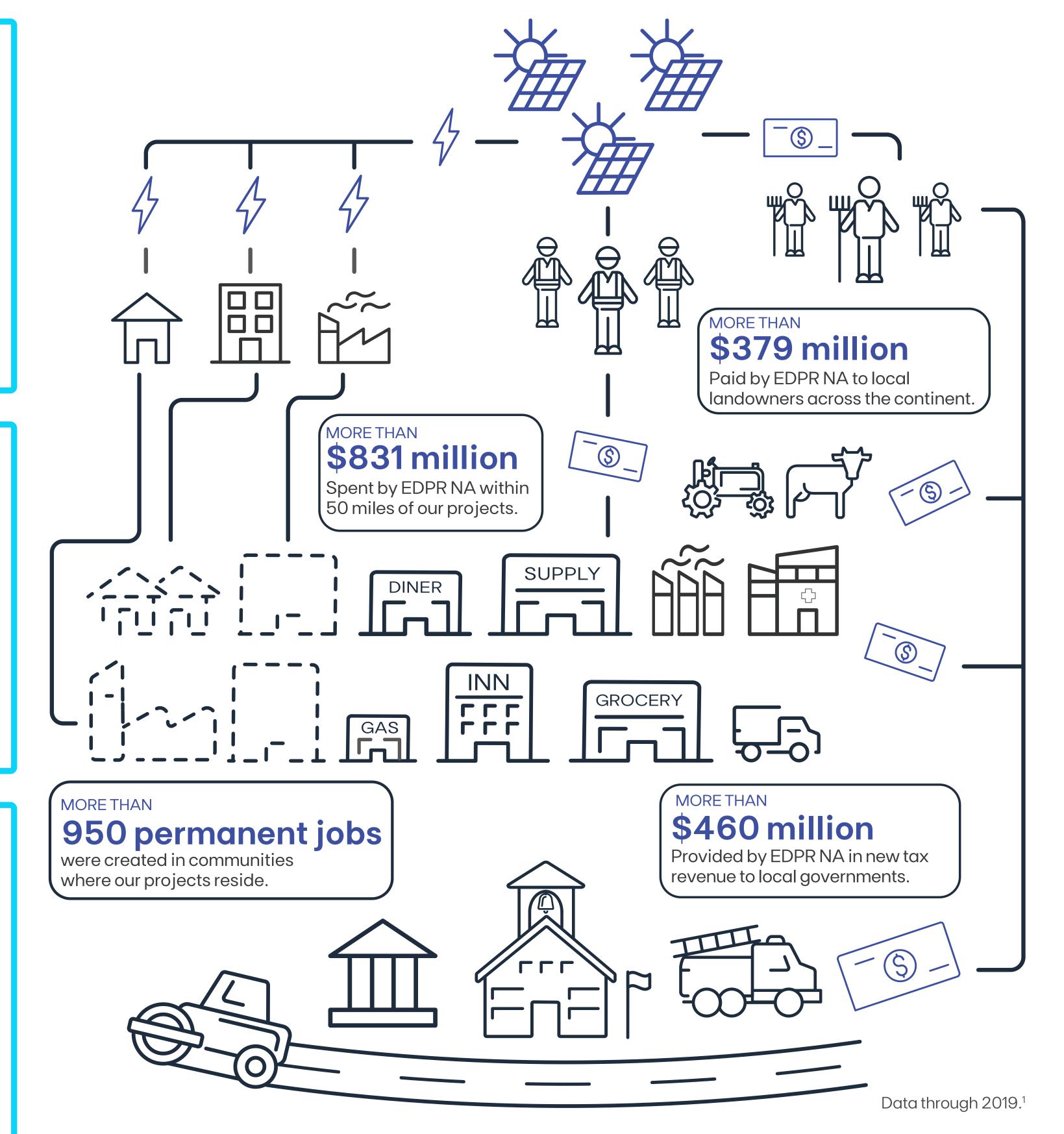


## SOLAR ENERGY: Powering Local Economies

Explore the town below to see how the economic benefits of an EDP Renewables North America solar park flow through a community.

#### PROVIDING STABLE INCOME

The reliable revenue stream provided by a solar park lease agreement can give landowners the financial freedom to expand their business, save for retirement, or pay for college.



#### REINVESTING IN THE COMMUNITY

With the additional income from a solar park lease, landowners have greater resources to reinvest in the community by increasing their spending at area businesses.

#### ATTRACTING GROWTH

Companies are increasingly interested in powering their operations with clean energy at a fixed price. The availability of clean power generated by the solar park can help attract further business development to the project area.

#### STRENGTHENING LOCAL INFRASTRUCTURE

Government payments directly from the solar park, as well as increased economic activity from landowners and local businesses supported by the solar park, help fund essential services such as roads, schools, and fire departments.

#### SUPPORTING LOCAL BUSINESSES

Solar park construction generates an economic boost for the project area, with hundreds of workers relying on local businesses for food, lodging, materials, and contractor services. Once the project is in operation, the solar park continues to count on local businesses for ongoing maintenance needs, such as mowing, panel washing, and equipment.



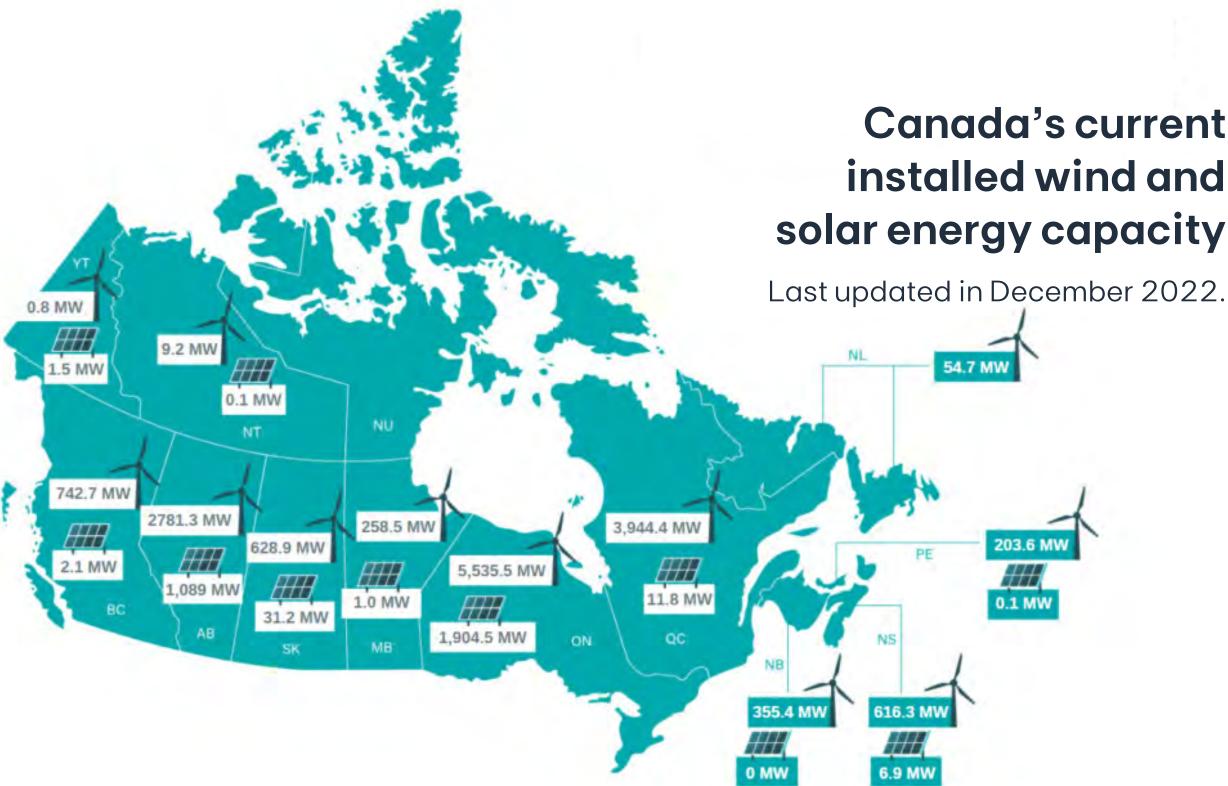
## About soldr

#### Canada solar energy facts

At the end of 2022, Canada had nearly 15 gigawatts (GW) of installed wind energy capacity and more than 4 GW of operational utility-scale solar energy, for a total of more than 19 GW of installed renewable energy capacity across the country.<sup>1</sup>

Most of Canada's solar PV capacity consists of utility-scale solar installations. The solar energy sector is poised for significant growth, driven by massive cost reductions and the need for non-greenhouse gas emitting electricity generation to address climate chanae.<sup>1</sup>



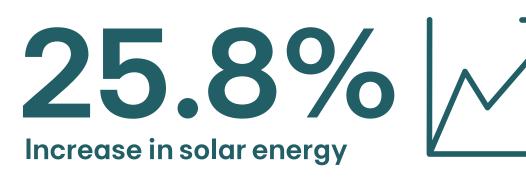


**Canada's current** installed wind and

There are around 48,000 solar energy installations across Canada.<sup>2</sup>

Ranked **22nd** 

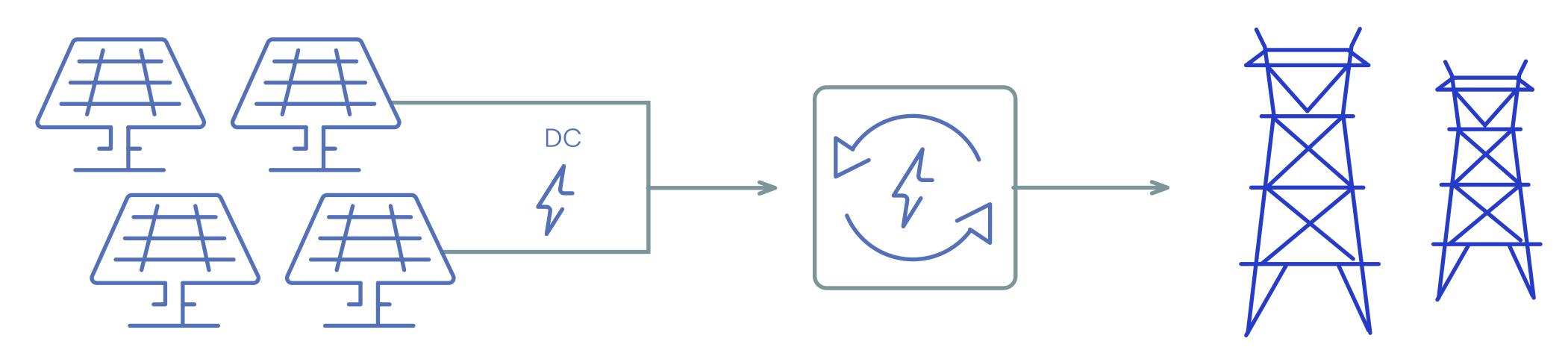
Canada ranked 22nd in the world for installed solar energy capacity in 2020.<sup>2</sup>



National solar energy capacity grew by 25.8% across Canada in 2022.<sup>2</sup>

Approximately 7% of Canada's 2020 electricity demand was met by wind and solar energy in 2021.<sup>1</sup>

#### HOW A SOLAR PARK GENERATES ENERGY



The solar panels absorb sunlight and generate direct current (DC) electricity. Many have trackers installed to tilt toward the sun as it moves across the sky.

The electricity goes through an inverter, converting it to alternating current (AC) electricity.

Then it flows into the grid, supporting the region's energy needs.

## Canada's energy transition

Overall, the wind, solar, and energy storage sectors grew by 10.5% from 2023.<sup>2</sup>

1. Canadian Renewable Energy Association, Solar Energy Resources. 2. Canadian Renewable Energy Association, CanREA's 2050 Vision Report. Canada has an installed capacity of more than 19 GW of utility-scale wind and solar energy.<sup>2</sup>

Canada added more than 1.8 GW of new generation

capacity in 2022, more than 2021's new capacity.<sup>2</sup>

## Solar Park Construction

Building a solar park is a major construction project that takes approximately a year to complete and employs hundreds of people. Here are some of the goods and services we try to source locally:

#### **TECHNICAL & CONSTRUCTION EMPLOYMENT**

- Civil contractors
- Concrete supply and delivery
- General laborers
- Safety staff
- Excavation and restoration
- Gravel supply and delivery
- Heavy equipment operators

#### **SERVICES**

- Accommodations and catering
- Vehicle and equipment
- maintenance
- Vehicle and equipment rentals
- Security
- Fuel supply

Throughout the construction process, we work closely with local stakeholders and officials to ensure everyone is informed and construction activities are minimally disruptive.

#### **SITE PREPARATION**

To prepare a site for a new solar project, vegetation and large rocks are first removed. In some cases, a grading technique is employed to provide a level foundation for the construction of the solar modules. Great care is taken to salvage topsoil, prevent erosion, and maintain natural drainage patterns.

## **SECURITY FENCE**

To protect the public during construction activities, as well as to prevent trespassing and vandalism, a chain link fence is erected around the perimeter of the project location.

#### LAYING UNDERGROUND CABLES

Buried electrical collection cables are installed to connect the solar arrays, inverters, and transformer. The buried lines are contained within the project location and buried to a minimum depth of three feet.

## **INSTALLING INVERTERS & TRANSFORMERS**

The electricity generated by the PV panels is in the form of direct current (DC). Inverters are installed to convert the DC output of the PV cells into alternating current (AC) suitable for supplying the electrical grid. The AC power then goes through a transformer to increase the voltage before connecting to the electrical grid.

**DRIVING & DRILLING PILES** 

Following site preparation, metal beams (typically steel or aluminum) are spaced out and inserted into the ground using piledrivers to serve as the foundation for the solar modules.

## INSTALLING TABLES, TRACKERS, & PANELS

A typical solar park is comprised of thousands of photovoltaic (PV) panels that are mounted to tables and affixed to the foundation to form a solar array. In most cases, trackers are installed to aim the panels toward the sun and increase power production throughout the day.

#### **INTERCONNECTION**

The power then passes from the project substation, where the voltage was increased, to a substation owned by the utility. From the utility's substation, the renewable electricity will be sent to homes, businesses, and utilities.

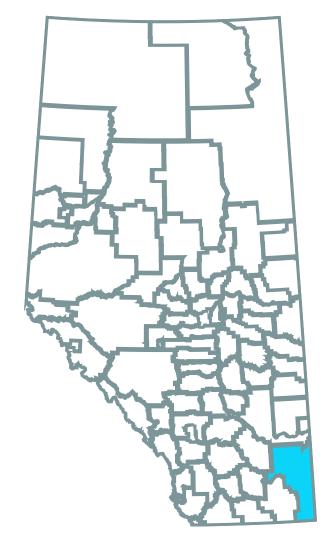
## **FULLY OPERATIONAL**

Once the solar project is complete, it will be monitored on a continuing basis to ensure all components of the system are operating properly. Vegetation within the project area will be maintained, and the solar panels will be washed on a regular basis.

### Blue Bridge Solar Park Cypress County, Alberta

Blue Bridge Solar Park will be located in Cypress County, Alberta, south of where the South Saskatchewan River crosses from Alberta into Saskatchewan. Cypress County is one of Canada's sunniest counties with an average of 300 sunny days per year. Blue Bridge Solar Park will complement the area's landscape while harnessing the region's abundant sun.





Renewables





Blue Bridge Solar Park's generation will be equivalent to the consumption of 命 more than **45,000 Alberta homes**.<sup>1</sup>



Blue Bridge Solar Park will save more than **721 million litres** of water each year and will prevent the air pollution that causes smog, acid rain, and climate change.<sup>2</sup>

> <sup>1</sup>Power generation calculated using a 25% capacity factor. Household consumption based on the 2018 EIA Household Data monthly average consumption by state  $^2$ Assumes 2.19 litres of water consumed per kWh of conventional electricity from Lee, Han, & Elgowainy, 2016

#### **Economic Benefits**

All economic data reflects the estimated amount throughout the life of the project.



CAPITAL INVESTMENT \$310 million



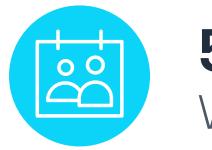


\$32.2 million WILL BE PAID TO LANDOWNERS



**Millions of dollars** WILL BE PAID IN PROPERTY, PROVINCIAL, & FEDERAL TAXES











#### **5** permanent jobs WILL BE CREATED

#### **350 construction jobs** WILL BE CREATED



Blue Bridge Solar Park will consist of **376,164** solar panels.



Blue Bridge will take advantage of the abundant Alberta sun to strengthen the Alberta electric grid.



Blue Bridge will **diversify the province's** energy supply.



National solar energy capacity grew by 25.8% across Canada in 2022.





#### **Project Timeline**

#### Q4 2023

- Open House
- Stakeholder Consultation

#### Q12024

- Round 3 Consultation
- Project Feedback End Date
- Anticipated AUC Filing Date
- Q22024
- Anticipated AUC Approval

#### Q32024

- Construction Start Date
- Anticipated Community **Development Permit Application**

#### Q4 2025

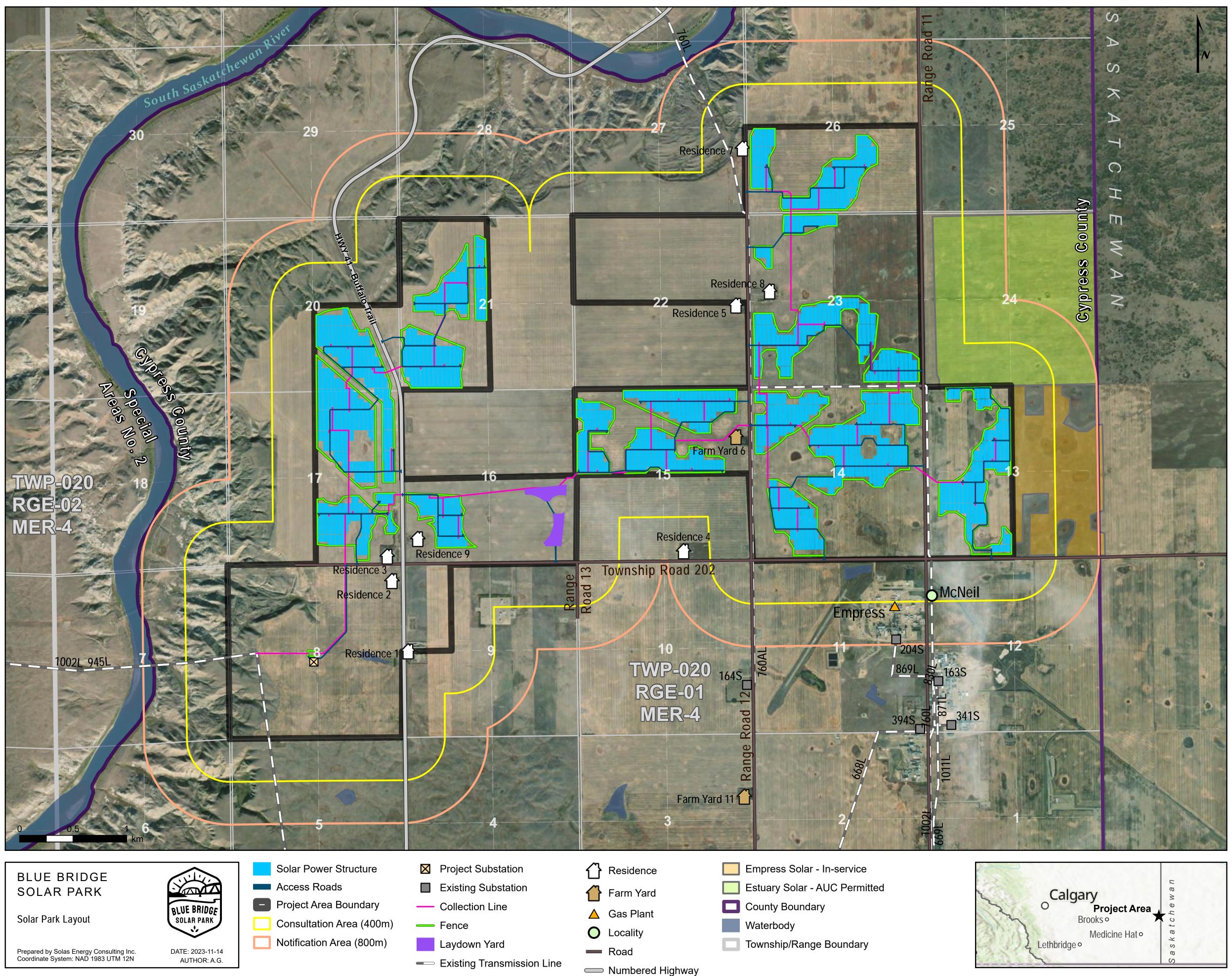
Commercial Operation

\*Schedule is subject to change.

#### **Contact Info**

**Project Manager:** Christian Pollard **Cell:** 437.242.5466 Address: EDP Renewables Canada Ltd. 219 Dufferin Street, Suite 117C Toronto, ONM6K3J1

Email: www.bluebridgesolarpark.com Website: bluebridgesolar@edpr.com







## Solar Projects & the Land

EDPR works with landowners who recognize the environmental and economic benefits of generating solar power on their land.



Preserving the Land for the Next Generation

In order to host a solar park, a section of a participating



Returning to Production After the Solar Park's Life

Renewables

At the end of the project's useful life, the project

landowner's property will be fenced off and planted with an environmentally-friendly seed mix designed for the local climate and soil type, in consultation with the county Ag Services department and the local landowner. During the 35 year lifespan of the project, the land is able to rest and replenish.

Through the solar lease, the land provides the landowner with a stable source of revenue that helps balance with the ups and downs of agriculture. This provides greater assurance that landowners will be able to keep the land in their family for generations, since it will be consistently producing revenue. We have heard from many landowners who felt the solar lease was the primary reason they were able to keep their land in their family. will be decommissioned or repowered. During decommissioning, the equipment will be removed and the land can return to its original use, including farming, ranching or wildlife habitat.

Through the project leases, EDP Renewables (EDPR) has provided financial assurances for the decommissioning of the project. We have posted a decommissioning bond for the project worth millions of dollars. The bond value will be updated once the project begins commercial operation. The bond value will be determined by a licensed professional engineer, and a licensed engineer will update the bond value every 5 years.



#### **Safeguarding the Environment**

As with all utility-scale solar parks in the North America, Blue Bridge Solar has undergone extensive studies and approval processes through local, state, and federal channels regarding natural resources, habitat conservation, and wildlife impacts. Through careful site selection and thoughtful project design, impacts to the land and nearby wildlife can be mitigated.

Solar modules are made of safe, well-tested materials commonly used in building and household products. The panels are fully sealed and do not contain any liquids. The materials in the modules include silicon, metals, and encapsulation materials, which are considered safe when used in solar panels.

<sup>1,2</sup> Department of Energy. Office of Energy Efficiency and Renewable Energy. "A Farmer's Guide to Going Solar."

"My land is very important to me.

EDPR hasn't done anything that can't be removed off the land.

They've planted grass on it to keep it from eroding. They really respect the land and the landowners."

- Walt P., South Carolina landowner



## Protecting Wildlife & the Environment

As a company committed to a clean energy future, we take our impacts on the environment extremely seriously and devote significant resources to ensuring proper permitting, siting, and mitigation steps are taken.

The following measures have been or will be taken to protect the environment that will host Blue Bridge Solar Park:





**AGENCIES WORKED WITH:** 

- Wildlife Survey Studies
- Spring and Fall Bird Migration Studies
- Sensitive Species Studies
- Habitat Studies
- Wetland & Watercourse Studies
- Native Grassland Field Investigation
- Water Act Studies



The project is designed to minimize or avoid:

- Alberta Environment and Protected Areas (EPA)
- Alberta Utilities Commission (AUC)
- Alberta Electric System Operator (AESO)
- Alberta Culture
- NAV Canada
- Cypress County



#### DECOMMISSIONING **COMMITMENTS:**

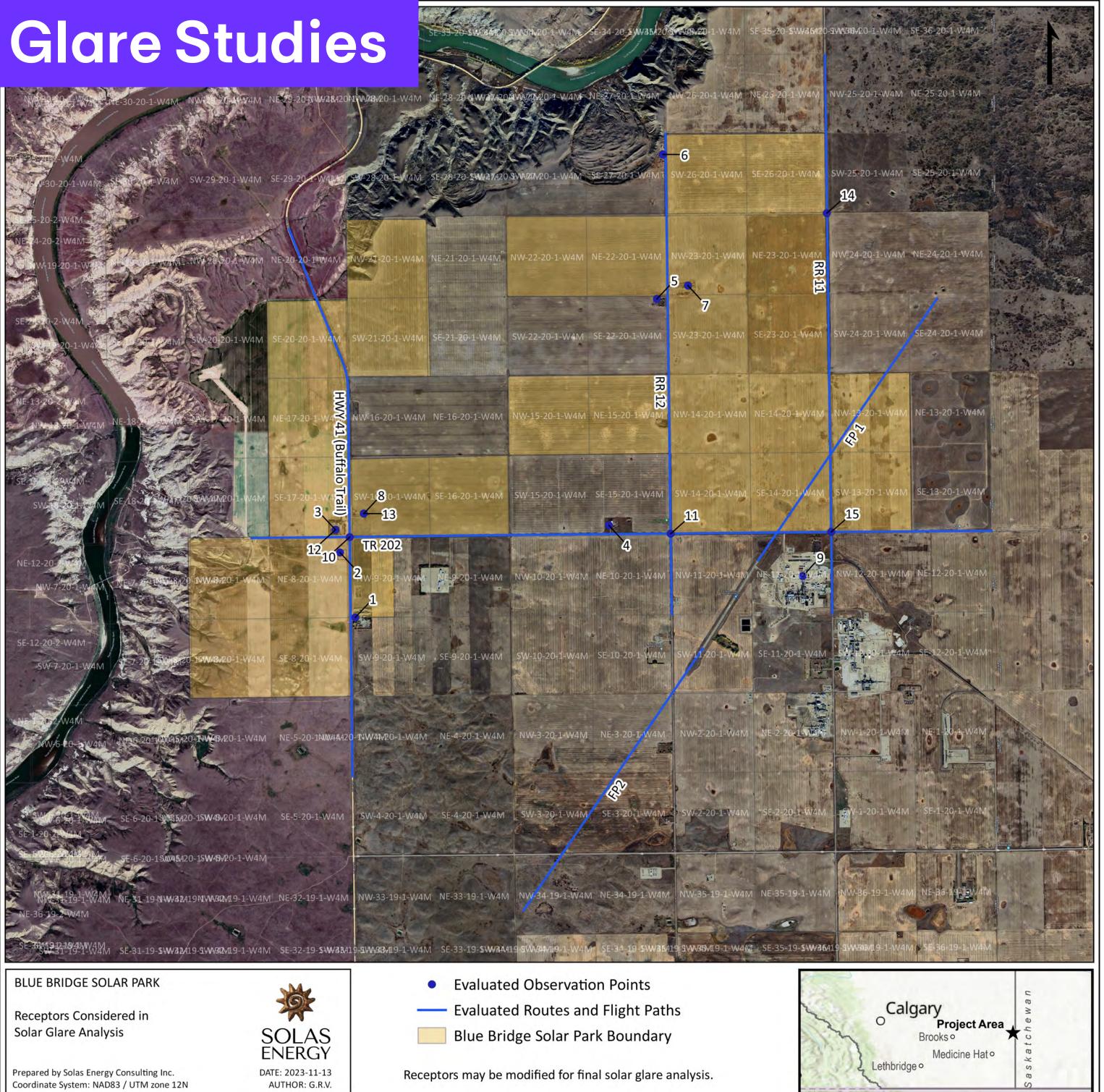
- Project leases obligate this project to remove all equipment after the project life and restore the land to as close to its pre-construction condition as possible.
- The project will also post a bond to cover decommissioning costs if lease obligations were not fulfilled.
- Impacts to natural vegetation
- Impacts to cultural resources
- Impacts from solar glare

 The project and EDP Renewables are committed to being good neighours and ensuring that we follow through on our reclamation and decommissioning commitments.

"I don't know anybody that works at EDPR who doesn't respect and love the environment. We strive for transparency, and we want to ensure that we honor things that others hold dear, like their land.

-Stevee Kennard, EDPR Senior Environmental Manager

### **Solar Glare Studies**



#### **Compliance with Alberta Utilities Commission Rule 007: Mitigating Glare**

Alberta Utilities Commission Rule 007 mandates a rigorous examination of solar parks to assess potential glare impact within 800 meters of the project area and up to 4,000 meters from aerodromes, encompassing roadways, railways, and residential zones.

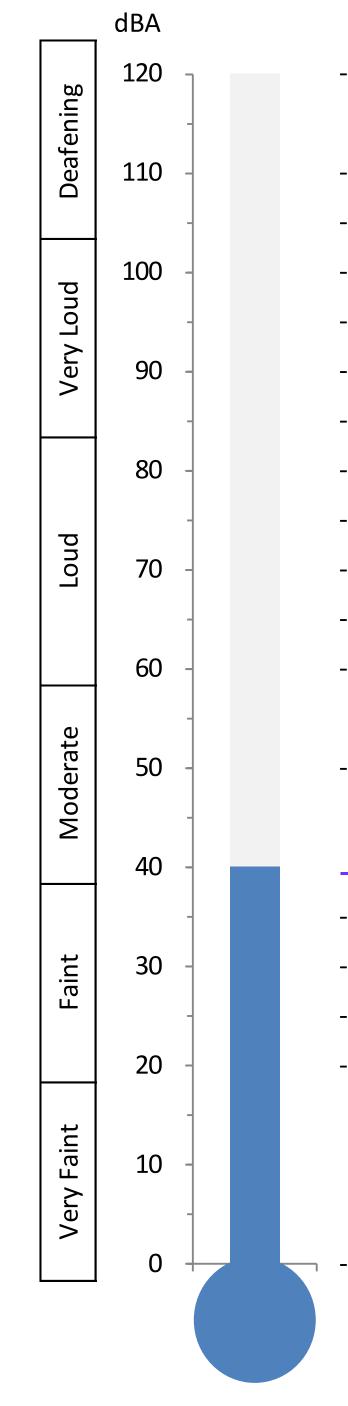
Glare, characterized as a persistent emission of bright light resulting from surface reflections, can be a concern with photovoltaic solar modules, which are shielded with glass and can reflect sunlight, particularly when sunlight strikes the modules at steep angles. This glare is categorized into three levels: Green (low potential for after-image), Yellow (some potential for after-image), and Red (risk of eye damage).

#### Blue Bridge Solar Park commits to mitigating glare caused by the solar park.

## Noise Impact Assessment

The Alberta Utilities Commission Rule 012 regulates the noise impact of a utility project. We have completed a study to check how much sound our solar park will make, and we are compliant with the AUC Rule 012.

#### The Relationship Between Solar Parks & Everyday Sounds



- Sources of Noise
- threshold of feeling / pain
- accelerating motorcycle a few feet distance
- loud auto horn 3 m (10 ft) away
- dance club / maximum human vocal output
- jack hammer at 15 m (50 ft) distance
- indoors in a noisy factory
- heavy truck pass-by at 15 m (50 ft) distance
- noisy bar or school cafeteria
- near the edge of a major highway / inside an automobile travelling at 60 km/h - noisy restaurant
- normal human speech (unraised voice) at 1 m (3 ft) distance
- typical background noise in large department store

- inside average urban home/moderate rainfall/quiet street

- approximate solar park sound level/typical sound in a library - average background sound level in remote Alberta (Per AER/AUC) - bedroom of a country home - average whisper

- deep woods on a very calm day

threshold of hearing

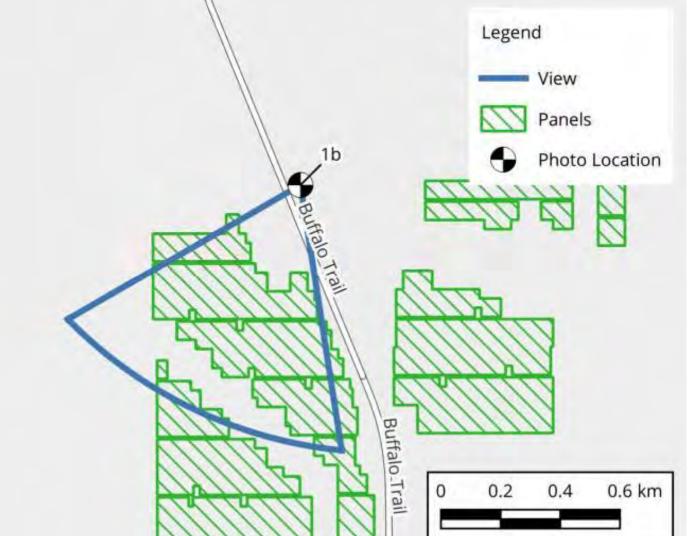


## VISUAL SIMULATION

## BEFORE & AFTER

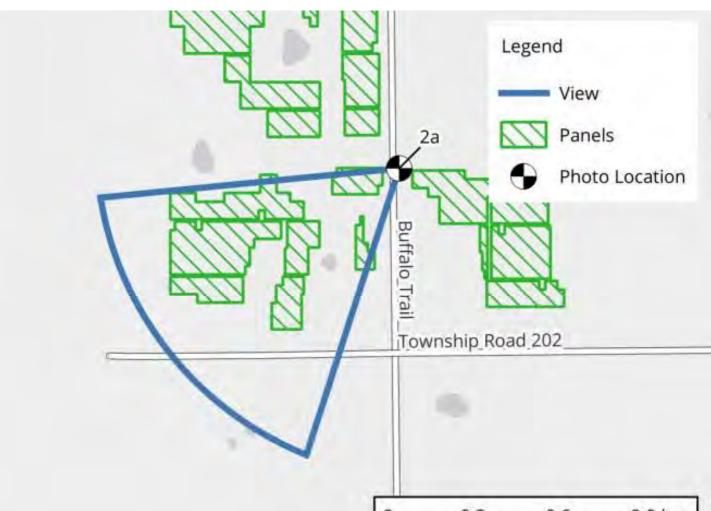


#### 1B – VIEWS SOUTH & WEST

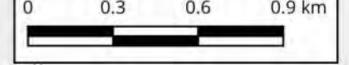




#### 2A – VIEWS SOUTH & WEST











## VISUAL SIMULATION





#### 4 - VIEWS SOUTH & EAST

