



Alberta
SOLARONE

FINAL OUTCOMES REPORT

Alberta Solar One - Final Outcomes Report

Project Title: Alberta Solar One Project

ERA Project ID: R140382

Submission Date: May 3, 2021

Project Completion: March 31, 2021

Total Project Budget: \$20,548,592

ERA funds received: \$10,000,000

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1 Executive Summary

This Non-Confidential Report meets the requirements set by the Contribution Agreement between Morgan Solar Inc ("MSI") and Emissions Reductions Alberta ("ERA"), previously known as Climate Change and Emissions Management Corporation ("CCEMC").

ERA provided grant funding towards Alberta Solar One ("ABS1" or the "Project"), the first utility-scale demonstration of Morgan Solar's SimbaX technology. ABS1 is a 13.7 MW-DC project, consisting of approximately 36,500 Silfab Solar panels and 4 inverters. The project concluded final testing and commissioning on March 31, 2021.

We anticipate that the project will generate approximately 22,000 MWh annually, which will offset about 13,300 tonnes of carbon annually and is enough clean electricity to power the equivalent of 1,850 homes.

Alberta Solar One created job growth in the area, with 30 to 40 workers working on the project every day during the construction period. ABS1 will produce clean energy to be sold to Alberta Electric System Operator ("AESO")

Project accomplishments include the following:

- First use of SimbaX, Morgan Solar's proprietary optical film technology, in a utility-scale project
- Successfully followed the interconnection process of FortisAlberta, Altalink, and AESO from the beginning of development through to project commissioning
- Collaborating on this project with five other companies covering different roles to get this project to commission: Enbridge, Silfab, AllSky, ERA, and Sustainable Development Technology Canada ("SDTC")

Alberta Solar One is proof that utility-scale solar electricity generation is viable in Southern Alberta. Beyond that, this project proves that optical film technology, which boosts the energy generation of PV modules, can be successfully implemented at a utility-scale level. The continuous and open sharing of project learnings throughout the process has paved the way for others in the industry to develop large solar projects using this technology in Alberta.

2 Introduction

This Report meets the requirements of ERA, as set out in the Contribution Agreement as executed between MSI and ERA (formerly CCEMC). This report is made up of a summary of the project's outcomes, and resultant GHG emission reductions. Upon reading, a reader of this report should gain a significant understanding of the project which would enable them to use or adapt the results for research and analysis purposes.

3 Project Description

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3.1 Project Background

Alberta Solar One is a 13.7 MW-DC solar energy project located in the city of Burdett, Alberta. The land on which the project is located is owned by Thacker & Son Farms Ltd.

Originally, Morgan Solar Inc. applied for and received a funding contribution commitment from CCEMC. The project received a total contribution of \$10,000,000 to cover no more than 50% of eligible project costs. The Project was sold to Enbridge on June 2, 2020, who then led the Project, with Morgan Solar in more of a supporting role, providing the SimbaX technology, and assisting with ongoing permit-related and legacy matters.

The Project is located on approximately 75 acres of land in the County of Forty Mile No. 8 (the "County"), approximately four kilometers west of the hamlet of Burdett, and 14 km west of the town of Bow Island. The Project consists of over 36,500 PV modules, 4 inverters, and a variety of other necessary equipment. Alberta Solar One is interconnected to the FortisAlberta distribution system.

The ABS1 layout is shown in Figure 1 & 2 below.

Figure One: Alberta Solar One Land Boundaries

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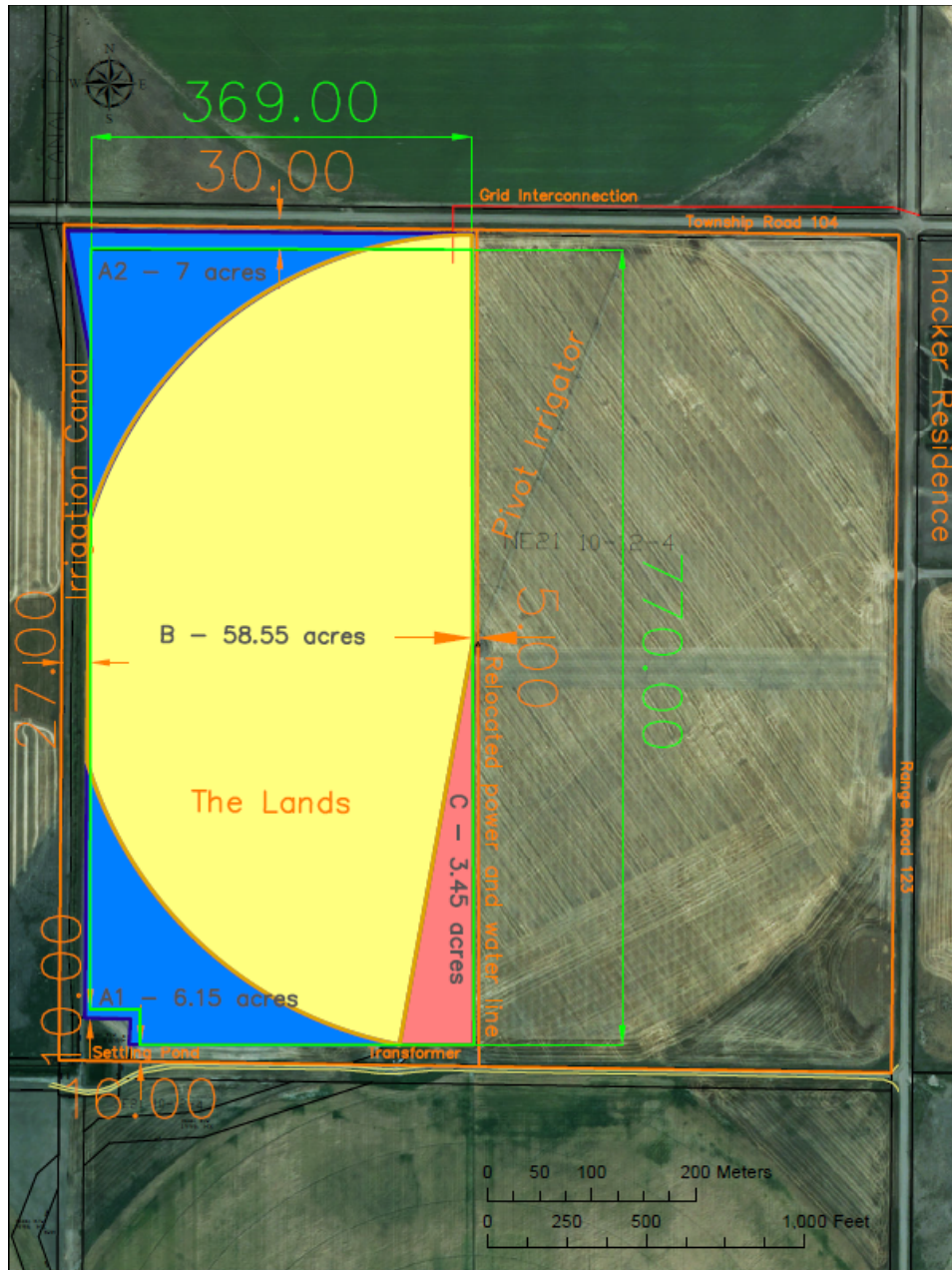


Figure 2: Alberta Solar One Site Layout

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3.2 Construction Scope

ABS1 selected Alltrade/Skyfire, a joint venture partnership ("AllSky") as the candidate to build and construct the solar project. The earliest EPC quotes were received in October 2019, and onsite activities began in August 2020. In late October, the first deliveries of the approximate 36,500 SimbaX-enhanced bifacial PV modules from Silfab Solar ("Silfab") started to arrive on site. Mounting of the panels started immediately after, along with DC interconnections between modules to the wire harnesses that terminated at the combiner boxes. The first rows were completed by early November 2020, around the same time that the main trenches from the inverter vaults to the substation were also excavated, filled with cables and backfilled.

These processes were repeated across the four blocks over the milestone period, with approximately half of the panels delivered by the end of November and the balance of deliveries was reached in mid-January. DC field testing using string-level IV Sweeps was completed by February 2021.

In mid-November, construction of the e-house foundation commenced. Also, the major AC equipment such as Sungrow inverters, transformers and switchgear arrived on site and the O&M garage started construction.

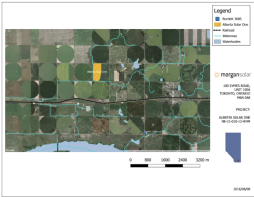
In early January 2021, the e-house was installed, and installation started on the upgraded high voltage electricity poles. Over the remainder of January and February, the remaining interconnections

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were completed. Fiber and dish-based communications and SCADA systems (Supervisory Control and Data Acquisition) were installed in late January, along with an uninterrupted power supply (UPS).

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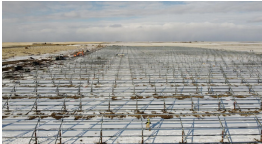

3.3 Schedule & Tasks

Milestone	Tasks	Start Date	Completion Date	Progress During Milestone Period	Photos
#1 - Development Phase One	<ol style="list-style-type: none"> 1. Site Selection and Site Control 2. AESO Stage 0 - 2 3. High Level Distribution Study, Detailed Distribution Study 	July 1, 2015	March 31, 2017	<ol style="list-style-type: none"> 1. Six sites in Southern Alberta were evaluated and Burdett was selected as the best option. An Option to Lease Agreement was executed with the landowner of NE-21-10-12-W4M 2. The project qualifies for the Behind the Fence application process. There are no violations caused by nearby potential projects. Gate 2 Completion Acknowledgement Letter was received. 3. Sites near the Burdett substation showed the most favorable results. FortisAlberta confirmed that the selected site is safely and economically interconnected to the distribution system 	
#2 - Development Phase Two	<ol style="list-style-type: none"> 1. AUC Public Consultation 2. Completion of Protection Study by Consultant 3. FA Generation Interconnection Agreement Draft Accepted 4. 25% Engineering Design Completed 	April 1, 2017	January 31, 2018	<ol style="list-style-type: none"> 1. MSI sought guidance from Dillon Consulting on the AUC permit approval process. MSI conducted Participant Involvement Program, involving mailing packages to stakeholders, hosting an open house, and obtaining personal non-objections. 2. Delays to completing FortisAlberta due to regulatory uncertainty. The Engineering Study Report was completed with involvement from MSI, AltaLink, AESO, and Fortis Alberta. 3. MSI reviewed the standard General Interconnection Agreement template from FortisAlberta. 4. An agreement with Silfab Solar was made for them to develop the SimbaX technology on their production lines. Savanna was selected as the tracker to be used. 	


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#3	<ol style="list-style-type: none"> 1. FA Phase 1 Completion: Pay Proposal to Provide Service 2. Glare Impact Assessment Completed 3. Geotechnical Assessment Completed 4. Stormwater Management Plan Completed 5. Water Act Approval Application Submitted to AEP 6. Wildlife support documents submitted to AEP 7. Noise Assessment Completed 8. 50% Engineering Design Completed 	February 1, 2018	November 30, 2018	<ol style="list-style-type: none"> 1. ABS1 received a quote from FortisAlberta in August 2018 detailing the cost to connect ABS1 via FortisAlberta's distribution system to Altalink's Burdett substation. MSI paid the deposit in November, completing FortisAlberta Phase 1. 2. Solas Energy was contracted to complete the Glare Impact Assessment, they determined that the glare is expected to be minimal and the report was ready for submission to AUC. 3. The project passed the geotechnical assessment by Tetra Tech. 4. Stormwater management plan was submitted, the plan involved hydrological flow draining towards a cultivated area, and a culvert being installed to allow access to Township Road 104 5. Water Act Approval Application was under review by AEP. 6. Stantec Consulting conducted wildlife assessments and prepared a technical wildlife report, Construction Operation Mitigation Plan, Post Construction Monitoring Plan, and Environmental Evaluation. We received our Wildlife Referral Report. 7. Patching Acoustics completed the Noise Assessment; it was determined that ABS1 was well under the maximum allowable threshold. 8. ABS1 contracted J. L. Richards (JLR) to design and optimize block arrangement for Savanna trackers using SimbaX panels. JLR also designed piles for the Savanna trackers, created a site grading plan, and prepared a single line diagram describing the electrical arrangement of the site and interconnection to the Burdett substation. 	
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#4	<ol style="list-style-type: none"> 1. Water Act Approval Granted 2. AEP Referral Report Submitted to AUC 3. AUC Application Filed 4. AESO Stage 3 & 4 Completed 5. Fortis Alberta Stage 5: Design of Interconnection Facilities Completed 6. EPC Quote Received 7. AUC Generator Facility License Granted 8. FNTF 9. EPC Mobilization and Long Lead Procurement 	December 1, 2018	August 31, 2020	<ol style="list-style-type: none"> 1. ABS1 filed for Water Act approval in March 2018, approval was granted in November 2018. AEP Water was updated with the new design in July 2020 and reissued the Water Act approval in August 2020. 2. The AEP Wildlife Referral Report was received from AEP in October 2018 and was submitted to AUC along with the power plant application 24191 in December 2018. 3. The AUC application was filed. 4. In filing the AUC application, AESO stages 3 & 4 were completed. 5. Interconnection facilities were designed and were ready for construction. 6. ABS1 tendered an EPC RFP starting in the fall of 2019 and selected AllSky as the candidate to build and construct the solar project. The earliest quotes were received in October 2019. 7. The AUC generator facility license was granted. 8. ABS1 reached FNTF in May 2020 once all agreements between Enbridge, Morgan Solar, AllSky, Silfab and ERA were finalized. The project was sold to Enbridge on June 2, 2020. 9. Enbridge triggered EPC mobilization in July 2020, onsite activities began August 2020 after obtaining the updated permit with AEP Water. 	
#5	<ol style="list-style-type: none"> 1. Building permit received from County of 40 Mile 2. Site Prep, Grading and Civil Engineering kick-off 3. FA Stage 6: Interconnection Facilities 	September 1, 2020	February 28, 2021	<ol style="list-style-type: none"> 1. Building permit was received from County of 40 Mile. 2. Over September and October, piles were installed followed by tables (ie. the fixed racks) shortly after. Concurrently, the trenches were filled with conduit and cabling and backfilled and the inverter vaults were installed. 3. The interconnection facilities were constructed. 4. In late October, the first deliveries of 	

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	<p>Constructed</p> <p>4. Receipt and installation of generation equipment</p> <p>5. DC interconnection & testing</p>			<p>SimbaX-enhanced bifacial PV modules from Silfab started to arrive on site. Mounting of the panels started immediately after. In mid-November, the major AC equipment such as Sungrow inverters, transformers and switchgear arrived on site and the O&M garage started construction. All generation equipment was installed by the end of February 2021.</p> <p>5. In late October, mounting of DC interconnections between modules to the wire harnesses that terminated at the combiner boxes began. DC field testing using string-level IV Sweeps was completed by February 2021.</p>	
#6	<p>1. Testing & commission complete</p> <p>2. AESO Stage 5 complete (COD)</p> <p>3. Close Out & Demobilization Complete</p>	March 1, 2021	March 31, 2021	<p>1. The project was completed and online. The remaining commissioning, which primarily consisted of SCADA testing, has been completed</p> <p>2. The project completed AESO Stage 5 (COD), a major milestone for all parties involved.</p> <p>3. The project has been closed out and demobilized. All the remaining punch list items will be completed in the next few months..</p>	

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3.4 Technology Description

For the most part, the technology deployed as part of this project can be described as utility-scale PV electricity generation technology with the purpose of generating energy for sale into the Alberta electricity grid. The following sections provide further detail on the technology in use at ABS1.

3.4.1 PV Modules

Prior to the selection of a module manufacturer, it was determined that ABS1 modules would incorporate Morgan Solar's SimbaX technology. The SimbaX optical film technology boosts energy generation beyond what a typical panel would achieve. SimbaX technology achieves this by redirecting otherwise discarded light onto PV cells. SimbaX technology is a film that is easily laminated into the backsheet of solar panels at a very low price and increases solar panel generation per cell.

SimbaX can easily be incorporated into any panel manufacturer's production process, so that did not create any limitations. As a North American manufacturing leader in the design and development of ultra-high-efficiency, premium quality PV modules, Silfab is an ideal choice of partner for manufacturing modules.

SimbaX-enhanced bifacial PV modules from Silfab were the chosen modules for this project. The panel development partnership between Morgan Solar Inc and Silfab enabled immediate mass production of a new technology, as approximately 36,500 panels incorporating SimbaX were produced within a year.

The datasheet for the SimbaX-enhanced modules made by Silfab is included in Appendix 1.

3.4.2 Inverter & AC Cabling

The project is equipped with four inverters. The inverter converts electricity that PV panels generate in direct current (DC) to electricity transmitted by the distribution and transmission grids in alternating current (AC). Each inverter has three main components: the recombiner, the inverter modules, and the step-up transformer. The recombiner aggregates incoming voltage DC cabling from each of the combiner boxes that feeds into that specific inverter; the inverter modules individually convert electricity from DC to AC; and the step-up transformer increases voltage from low voltage to high voltage, as the system interconnects to the FortisAlberta grid at 25 kilovolts (KV).

3.4.3 Combiner Boxes & DC Cabling

PV modules are daisy chained into groups of 26 modules called 'strings'. Combiner boxes are used to aggregate PV module strings into a single large underground DC cable that provides power to the inverters.

3.4.4 Racking

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Equipment costs, installation efficiency, operational requirements, and system performance must all be considered in choosing racking technology. For this project, a fixed tilt rack that was optimized for bifacial modules was selected from Axsus Solar (a division of Magna). The racks support the panels that are arranged in four horizontal rows such that support is provided along the length of the long rail of the module with no intra-module cross rails. This reduces the impact of shadows from the racks on the bifacial performance of the modules.

3.4.5 Foundations

Reliable foundation to support racking and modules is crucial in solar projects, especially considering the long life of solar projects. In northern regions it is important to consider how well the design can handle frost heave, which is when the initially frozen ground begins to thaw, expands, and lifts the attached foundations. There were multiple geotechnical assessments, pursuant to which several designs were considered and tested, including driven and helical piles, both with and without sleeves. Ultimately, the final design called for a helical pile without a sleeve.

3.4.6 Interconnection

Regarding interconnection, power leaving the inverters is stepped up by transformers co-located at the inverter pads from 630V to 25kV. Using underground cables, power is taken to the main Vista Switchgear. Power then passes through pole mounted current transformers and check meters before progressing to the 25kV motorized load break switch. From there, power is transferred to the FortisAlberta Revenue Metering pole, which is the point of interconnection.

3.5 Project Goals

The goal of this project was to successfully bring a project from development to commissioning that implements SimbaX light redirecting technology at a utility-scale in Southern Alberta. This project has proven that it is viable to utilize this advanced technology on a large scale. As one of the first utility-scale solar projects in Alberta, ABS1 also further validates the viability of solar power as a method of generation in Alberta. Being one of the first, ABS1 has dealt with issues such as regulatory uncertainty. Going through the process helped create firm regulations that will ease the process for those who follow. ABS1 taking the risk in an unknown location and successfully generating power will encourage others to do the same.

Alberta Solar One will produce approximately 22,000 MWh per year of emission less electricity. The electricity grid displacement with renewable energy is 0.62 tCO₂e, which is equivalent to a reduction in greenhouse gas emissions by nearly 13,300 tCO₂e per year.

4 Outcomes

4.1 Economic Development

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Alberta Solar One provided economic development to Alberta in general and specifically Forty Mile County No. 8. ABS1 was one of the first solar energy projects to begin development in Alberta and helped trailblaze the regulatory framework in the province and spur capabilities development among a wide network of consultants, for example with respect to glare modeling and mitigation.

The project was constructed by AllSky, a consortium of Skyfire Energy and AllTrade Industrial. Skyfire was one of the first solar energy contractors in Alberta, and AllTrade is a large infrastructure contractor primarily based in eastern Canada. The experience of ABS1 and the expanding renewable energy opportunity in Alberta has prompted AllTrade to develop a partnership with Skyfire and to relocate some senior personnel to Alberta in order to develop a lasting presence in the province.

During construction, ABS1 employed over 45 people in the surrounding area. Given the small population of the surrounding area, this was a significant impact. This project also helped with the municipal tax revenues for the County of Forty Mile.

Alberta's economy as a whole benefits from investments in Southeast Alberta..

ABS1 also outsourced work to many companies during the development and construction phases. Some of the companies that ABS1 provided work to include:

- Alltrade/Skyfire, a Joint Venture Partnership (EPC)
- Solas Energy (Permitting Consultant)
- Land Solutions (Land Services Consultant)
- Dillon Consulting (Permitting Consultant)
- Tetra Tech (Geotechnical Consultant)
- Sandgrass Consulting (Wetland Impact Consultant)
- Stantec Consulting (Wildlife Impact Consultant)
- Determination Drilling (Pile Installer)
- Tulloch Engineering
- Patching Acoustics (Noise Impact Consultant)
- Silfab Solar (Panel Supplier)
- J.L. Richards (Site Design Consultant)
- Western Solar
- Axsus Solar (Racking Supplier)

The economic impact that ABS1 had on so many different groups is exceptional, and they aren't simply erased when the project is complete. Particularly the impacts on Alberta and the County of Forty Mile will be long lasting. COVID-19 has been a difficult time for businesses to find work, and ABS1 offered work that could be done safely during the pandemic.

4.2 Construction Safety Record

The health and safety of AllSky and its subcontractors - an issue of significant importance for Enbridge and Morgan Solar - was of a high standard, which is all the more notable given the added challenges imposed by COVID-19. Enbridge has a strong safety culture and established strict COVID-19 safety protocols deployed at all its assets throughout North America very early in 2020.

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These protocols were adhered to onsite, along with Enbridge's broader safety programs, to help ensure the safe construction of the project.

4.3 Offtake

ABS1 will produce clean energy to be sold to Alberta Electric System Operator ("AESO"). This clean energy will offset energy drawn by Enbridge from the AESO pool to power its pump stations in a virtual 'self-supply' arrangement.

4.4 Interconnection

Alberta Solar One was one of the first utility-scale solar projects in Alberta, and therefore one of the first to progress through all stages of the FortisAlberta interconnection process, including the AESO's behind the fence (BTF) requirements. Although the general interconnection process exists for a distribution-connected utility-scale energy generating facility, the process varies by energy type and had only been completed for a solar project once prior to Alberta Solar One.

Therefore, there was a lot of regulatory uncertainty adding to the complexity of the process. Alberta Solar One worked collaboratively with FortisAlberta (distribution facility owner), AltaLink (transmission facility owner), and the AESO (system operator) to ensure all requirements to interconnect the Project were taken into consideration and met. As this process is undergone by more and more projects, the process will become more concrete and regulations will be clearer. By advancing through the process and providing feedback, Alberta Solar One has made the process more efficient and effective for those who develop solar projects in Alberta in the future.

4.5 Regulations & Standards

Alberta Solar One was one of the first solar projects to receive an AUC Power Plant Approval in Alberta. Prior to the application to AUC being submitted, a Participant Involvement Program had to be conducted. The program involves notification and informal discussions with potentially affected stakeholders (the public, local authorities, agencies, industry and government) to inform the community and gather feedback.

Some of the features of Morgan Solar's Participant Involvement Program include:

- Notification packages were provided to stakeholders within a 2 km radius of the project site; the package included a letter, brochure, and pamphlet describing the AUC process
- An open house was planned to allow open dialogue with potentially affected stakeholders
 - Noted that the County of Forty Mile is an agricultural community and decided to hold the open house in November when agricultural activities were generally not taking place in hopes for a better turnout
 - The open house was advertised in the local newspaper and County of 40 Mile Twitter feed
 - The open house was held in a drop-in format, to allow attendees to join as their schedules permitted

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- Boards provided general information on the project and were used to facilitate discussion with open house attendees
 - Visual representation of the solar facility from several vantage points were also available for viewing
- Stakeholders were offered various ways to provide their feedback: 1-800 number, mail, fax or email
- A web page dedicated to the project was added to the Morgan Solar company website

The project was well received by the community. The local community was generally familiar with solar project developments as there had been several open houses in the area.

4.6 Layout and Design Optimization

Morgan Solar started investigating possible project locations for Alberta Solar One in July 2015. Site selection for the project focused on Southern Alberta as this region has the highest solar resource in all of Alberta. AESO also commented that the transmission system south region was recently upgraded and should have excess capacity.

Potential sites were evaluated based on relevant selection criteria. Some of these criteria included: solar irradiance, wind speeds, proximity to substation, proximity to distribution lines, low land value/cost, size of land, topography, and flood risks. Based on these criteria, six high-level distribution study applications were submitted to FortisAlberta.

Of the six studies, the study performed near Burdett showed that the selected feeder and the associated substation has the capacity to accommodate the proposed energy generation with minimal interconnection upgrades. Additional high-level distribution studies were completed at three locations near the Burdett substation.

From there, suitable lands within a 1 km radius from favorable study locations were identified. All shortlisted lands were privately owned agricultural lands. Considerations were given to current land use practices, existing surface improvements and topography to confirm the lands' suitability for solar development.

The consultant then approached land-owners to gauge their interest in leasing land for solar development. Negotiations with the landowner of NE-21-10-12-W4M commenced in June 2016 and an Option to Lease Agreement was executed on August 2, 2016.

In July 2018, ABS1 contracted Tetra Tech to perform a geotechnical assessment of the project lands and report on the soil conditions and suitability for construction. The geotechnical assessment was used as an input in the design of the site layout, grading plan and stormwater management plan.

Furthermore, the selected site was ideal for an optimal site layout. It was a rectangle, the simplest shape to plan a solar field design for. After determining what land could not be used due to proximity to roads and other infrastructure, models were used to determine the optimal layout of the solar panels on the remaining land.

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4.8 Foundation Design

After extensive geotechnical study, a 5.5m non-sleeved helical pile design was ultimately selected for the project.

4.9 Extreme Cold Weather

The extreme cold weather conditions in Alberta require planning and preparation in order to prevent the conditions from significantly holding up a project.

The site was temporarily shut down in mid-February 2021, as a safety precaution, due to extreme cold. Given that the majority of ABS1 construction took place during the winter, it went very successfully, and the winter had very little effect on the project pace.

5 Greenhouse Gas and Non-GHG Impacts

Alberta Solar One will generate emission-free, renewable energy to be sold to the AESO. Approximately 22,000 MWh of clean energy will be generated per year. This project will help Alberta meet its goal to offset electricity generated by fossil fuels. The electricity generated by ABS1 will result in annual emissions reduction of about 13,600 tonnes of CO₂e per year.

The baseline scenario for this calculation is electricity purchased from the Alberta grid. The Alberta grid emission factor is currently 0.62 tonnes of CO₂e/MWh. $22,000 \text{ MWh} \times 0.62 \text{ tCO}_2\text{eq/MWh} = 13,640 \text{ tCO}_2\text{eq}$.

Enbridge has registered ABS1 with the Alberta TIER program and plans to use the emission offsets from the project as part of this compliance program. Enbridge submits data to the CSA Alberta Carbon Registry. The data is validated by CSA before being posted on the website.

6 Overall Conclusions

Alberta Solar One's success proved that utility-scale solar projects are possible in Alberta. When Alberta Solar One was initiated and in the early stages of development, there was only one prior successful solar project in Alberta. Taking on a project in such an unexplored region was a risk, particularly given that it was the first utility-scale demonstration of Morgan Solar's SimbaX technology.

Despite the risks, Morgan Solar took the project on and it paid off. This will encourage others to do so as well, after seeing that it is viable. Not only will Alberta Solar One encourage others to develop solar projects in Alberta, but the process will also be more predictable given that ABS1 has already gone through it.

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During the process for ABS1, there was regulatory uncertainty that slowed the process down and caused additional work at times. Morgan Solar gave the regulatory bodies feedback, and as they have more experience with the solar industry and its unique requirements, the process will become more concrete.

Alberta Solar One began producing electricity in April 2021, and will continue to for its lifetime. This project will help Alberta meet its goal to offset energy generation by fossil fuels with energy generation by renewable energy sources in the long term.

7 Communications Plan

Morgan Solar and several of its partners including Enbridge, Silfab Solar, Alltrade Industrial Contractors and Skyfire Energy have issued multiple press announcements, social media posts and / or provide quotes, facts and figures to journalists regarding the project. We have also discussed the experience of the project with interested industry groups, such as the Canadian Council of Innovators (CCI) and the Ontario Clean Technology Industries Association (OCTIA). When COVID based travel restrictions ease, Morgan Solar plans on resuming its in person conference attendance at events such as Globe, CanREA and others, where we would be commenting on our experience with the project. See attached appendix for the wide press coverage of the project including many of the premier PV magazines.

8 Next Steps

All stakeholders and parties involved will integrate the innovations and lessons they have learned into future projects. The project outcomes will also be open to anyone else who is interested in learning from the experience that was undergone in the development and construction of Alberta Solar One.

Morgan Solar's SimbaX technology is an optical film that redirects otherwise discarded light onto the PV cells to boost energy generation. Alberta Solar One was the first utility scale demonstration of the SimbaX technology and acted as a proof point for the effectiveness of SimbaX technology. Morgan Solar is currently working with partners on variants that can be incorporated into buildings, and that can generate 100% of the power with 90% of the cells and mitigate the impact of single axis trackers' shading on bifacial modules.

9 Appendix 1

Module Data Sheet.....#

Inverter Data Sheet.....#

Press Coverage.....#