



Alberta Solar One, Inc.

Alberta Solar One Project Amendment

February 24, 2020

Alberta Utilities Commission

Decision 25252-D01-2020

Alberta Solar One, Inc.

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Proceeding 25252

Application 25252-A001

February 24, 2020

Published by the:

Alberta Utilities Commission

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The Commission may, within 30 days of the date of this decision and without notice, correct typographical, spelling and calculation errors and other similar types of errors and post the corrected decision on its website.

1 Decision summary

1. In this decision, the Alberta Utilities Commission considers whether to approve an application from Alberta Solar One, Inc. for the amendment and time extension of a power plant designated as the Alberta Solar One power plant. After consideration of the record of the proceeding, and for the reasons outlined in this decision, the Commission finds that approval of the application is in the public interest having regard to the social, economic, and other effects of the project, including its effect on the environment.

2 Introduction

2. Alberta Solar One, Inc. (ABS1) pursuant to Approval 24191-D02-2019,¹ has approval to construct and operate a power plant designated as Alberta Solar One, in the Burdett area. March 31, 2020, was stipulated as the deadline date to complete construction.

3. ABS1, pursuant to Order 24191-D03-2019,² has approval to connect the power plant to the FortisAlberta Inc. electric distribution system.

4. ABS1 filed an application with the AUC for approval to alter, construct and operate the power plant (the project), and to extend the construction completion date of the power plant. The application was registered on December 31, 2019, as Application 25252-A001.

3 Discussion

5. ABS1 requested approval to increase the power plant's capability from 9.5 megawatts (MW) to 10.5 MW. It also requested a change to the project's construction completion date from March 31, 2020, to December 31, 2020.

6. ABS1 submitted that the capability increase was necessitated by a change in the racking system for the power plant from dual-axis tracker technology to fixed-tilt racking, as well as a change in inverter technology. ABS1 explained that, because the original tracker and inverter are no longer commercially available, and because there are no longer any market substitutes, it needed to revise the tracking system to a fixed-tilt system³ and reassess the inverter and transformer configuration.⁴ ABS1 submitted that a 1-MW capability increase would offset the generation lost from a switch to a fixed-tilt racking system.⁵ Additionally, ABS1 considered

¹ Power Plant Approval 24191-D02-2019, Proceeding 24191, Application 24191-A001, April 25, 2019.

² Connection Order 24191-D03-2019, Proceeding 24191, Application 24191-A002, April 25, 2019.

³ Exhibit 25252-X0007, Attachment LOE-F AESO Project Change Proposal, PDF page 5.

⁴ Exhibit 25252-X0015, Morgan Solar ABS1 LOE IR1 30JAN2020, PDF page 9.

⁵ Exhibit 25252-X0007, Attachment LOE-F AESO Project Change Proposal, PDF page 10.

four potential inverter and transformer configuration scenarios for the project and has yet to finalize the design.

7. ABS1 stated that the proposed changes are within the original fenced area, and that no new lands would be affected by the amendment. ABS1 submitted that the proposed amendment would result in no incremental change in impacts beyond those already assessed by the AUC.

8. ABS1 submitted a noise impact assessment (NIA) in accordance with Rule 012: *Noise Control*.⁶ The NIA concluded that the amendment would result in a reduction in noise emissions from the project and ABS1 stated that the project would remain compliant with Rule 012.

9. ABS1 consulted with Alberta Environment and Parks Wildlife Management (AEP) regarding the amendment. AEP confirmed that the risk to wildlife and wildlife habitat had not changed from the low risk ranking in the original referral report, and that an amended referral report was not required.⁷

10. ABS1 retained Solas Energy Consulting Inc. to complete an updated solar glare analysis report because the change in project technology resulted in changes to glare impacts. It was determined that three observation points near the project would experience increased glare impacts: two residences and a railway crossing. The residence closer to the project was expected to experience up to 127 minutes of yellow-grade glare per year. The residence farther from the project was expected to experience up to 22 minutes of yellow-grade glare per year and 301 minutes of green-grade glare per year. The railway crossing (the section of railway intersecting with Range Road 122) was expected to experience up to 219 minutes of yellow-grade glare per year.

11. Solas noted that the above estimates are conservative and do not take into account historical weather patterns and nearby physical obstructions that would mitigate glare. Solas also included an analysis for glare at the three observation points considering realistic weather patterns (typical cloud cover instead of clear sunny skies), which resulted in a reduced estimate for minutes of glare received per year.⁸

12. Finally, Solas provided a comparison analyzing the glare from a lake south of the project, and concluded that a train conductor approaching the railway crossing would experience more intense glare for a longer duration from the lake than from the project – up to 1,032 minutes of yellow-grade glare per year.⁹ Solas concluded that the project has a low potential to result in hazardous glare conditions.

13. CP Rail expressed concern that glare from the project could create a hazard and prevent westbound train operators from seeing a vehicle on the tracks at railway crossings. In response to CP Rail's concerns, ABS1 and Solas held two conference calls with representatives from CP Rail to discuss the glare report and potential for hazardous glare near the railway crossing. ABS1 submitted that CP Rail had not yet completed its internal review of the glare report, but re-confirmed its willingness to continue receiving feedback from CP Rail and to consider further

⁶ Exhibit 25252-X0004, Attachment LOE-C Updated Noise Impact Assessment.

⁷ Exhibit 25252-X0006, Attachment LOE-E AEP-WM Correspondence and Update Enviro, PDF page 2.

⁸ Exhibit 25252-X0005, Attachment LOE-D Updated Glare Impact Assessment, PDF pages 21-22.

⁹ Exhibit 25252-X0005, Attachment LOE-D Updated Glare Impact Assessment, PDF page 46.

mitigations should there be concerns raised after construction of the project.¹⁰ ABS1 endeavoured to remain in close contact with CP Rail until CP Rail had completed its internal review of the glare report and the issue was resolved to the mutual satisfaction of both parties.¹¹

14. ABS1 notified stakeholders within 2,000 metres of the project of the amendment, and consulted with stakeholders within 800 metres of the project. ABS1 also consulted with a variety of industry, government and municipal stakeholders regarding the amendment. ABS1 submitted that, with the exception of ongoing discussion with CP Rail, no other objections or concerns were raised.¹²

15. ABS1 submitted project change proposal forms for the capability increase and time extension. The forms were approved by the Alberta Electric System Operator.

4 Findings

16. The Commission has reviewed the application and has determined that the technical, siting, environmental and noise aspects of the power plant amendment have been met.

17. The Commission finds that the NIA submitted by ABS1 fulfills the requirements of Rule 012 and accepts that the project is likely to be compliant with the noise limits set out in Rule 012.

18. In its original applications, ABS1 indicated that it would not be contemplating any changes to the major components of the power generating equipment after filing its applications with the AUC.¹³ The Commission notes that ABS1 has since amended its original project design, but has yet to select a final design for the inverters and transformers associated with the project. The Commission also notes that the NIA considered four potential configurations for the inverters and transformers. Because the final project equipment and layout has not been selected, the Commission will require additional information specifying the detailed design of the project, once that is finalized. Further, the Commission will require confirmation that any changes to the chosen equipment design will not alter the project's compliance with any applicable Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments* or Rule 012 requirements. The Commission therefore imposes the following condition:

- Once ABS1 has made its final selection of equipment for the project, it must file a letter with the Commission to: identify the make, model and quantity of the equipment selected; include an updated site plan if the equipment layout has changed; and provide sound power level spectra for the final project sound sources (i.e., final design of inverters and transformers). This letter must also confirm that the land, noise and environmental impacts do not increase beyond what is reflected in the application and approved by the Commission. The letter is to be filed no later than 90 days before construction is scheduled to begin.

¹⁰ Exhibit 25252-X0015, Morgan Solar ABS1 LOE IR1 30JAN2020, PDF pages 5-6.

¹¹ Exhibit 25252-X0008, Attachment LOE-G PIP Summary, PDF page 9.

¹² Exhibit 25252-X0003, Attachment LOE-B LOE Checklist, PDF pages 3-4.

¹³ Exhibit 24191-X0001, Alberta Solar One AUC Application Dec2018, PDF page 23.

19. The Commission acknowledges ABS1's commitment to continue engagement with CP Rail and its willingness to work with CP Rail to address any future concerns related to glare caused by the project. Condition 9 of Approval 24191-D02-2019 states that:

9. ABS1 must promptly report to the Commission any complaints or concerns it receives, or is made aware of, regarding solar glare from the project.

20. The Commission is of the view that this condition shall remain in an approval for the project and expects ABS1 to report any further complaints or concerns raised by CP Rail regarding solar glare from the project.

21. Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants* came into force on July 1, 2019, and applies to all solar projects approved after September 1, 2019. Accordingly, ABS1 must comply with the requirements of Rule 033. The Commission notes that conditions 3 to 7 of Approval 24191-D02-2019 are covered by the requirements in the recently published Rule 033. Subsection 3(3) of Rule 033 requires approval holders to submit to AEP and the Commission annual post-construction monitoring survey reports for the period recommended by AEP in the project's referral report. Therefore, conditions 3 to 7 of Approval 24191-D02-2019 are updated to state:

- ABS1 shall submit a post-construction monitoring survey report to Alberta Environment and Parks (AEP) and the Commission within 13 months of the project becoming operational, and on or before the same date every subsequent year for which AEP requires surveys, pursuant to Subsection 3(3) of Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants*.

22. Based upon the information provided, ABS1 has demonstrated that the requested time extension is of a minor nature. The Commission approves a time extension to January 31, 2021, for the completion of the Alberta Solar One project.

23. Order 24191-D03-2019, to connect the power plant to the FortisAlberta Inc. electric distribution system, requires an update to reflect the increase in capability of the power plant from 9.5 MW to 10.5 MW. The Commission approves an amended order to connect the power plant to FortisAlberta's electric distribution system.

5 Decision

24. Pursuant to Section 11 of the *Hydro and Electric Energy Act*, the Commission approves the amendment and time extension and grants Alberta Solar One, Inc. the approval set out in Appendix 1 – Power Plant Approval 25252-D02-2020, to construct and operate the Alberta Solar One power plant.

25. Pursuant to Section 18 of the *Hydro and Electric Energy Act*, the Commission approves the amendment and time extension and grants Alberta Solar One, Inc. the order set out in Appendix 2 – Connection Order 25252-D03-2020, to connect the Alberta Solar One power plant to the FortisAlberta Inc. electric distribution system.

26. The appendices will be distributed separately.

Dated on February 24, 2020.

Alberta Utilities Commission

(original signed by)

Joanne Phillips
Commission Member