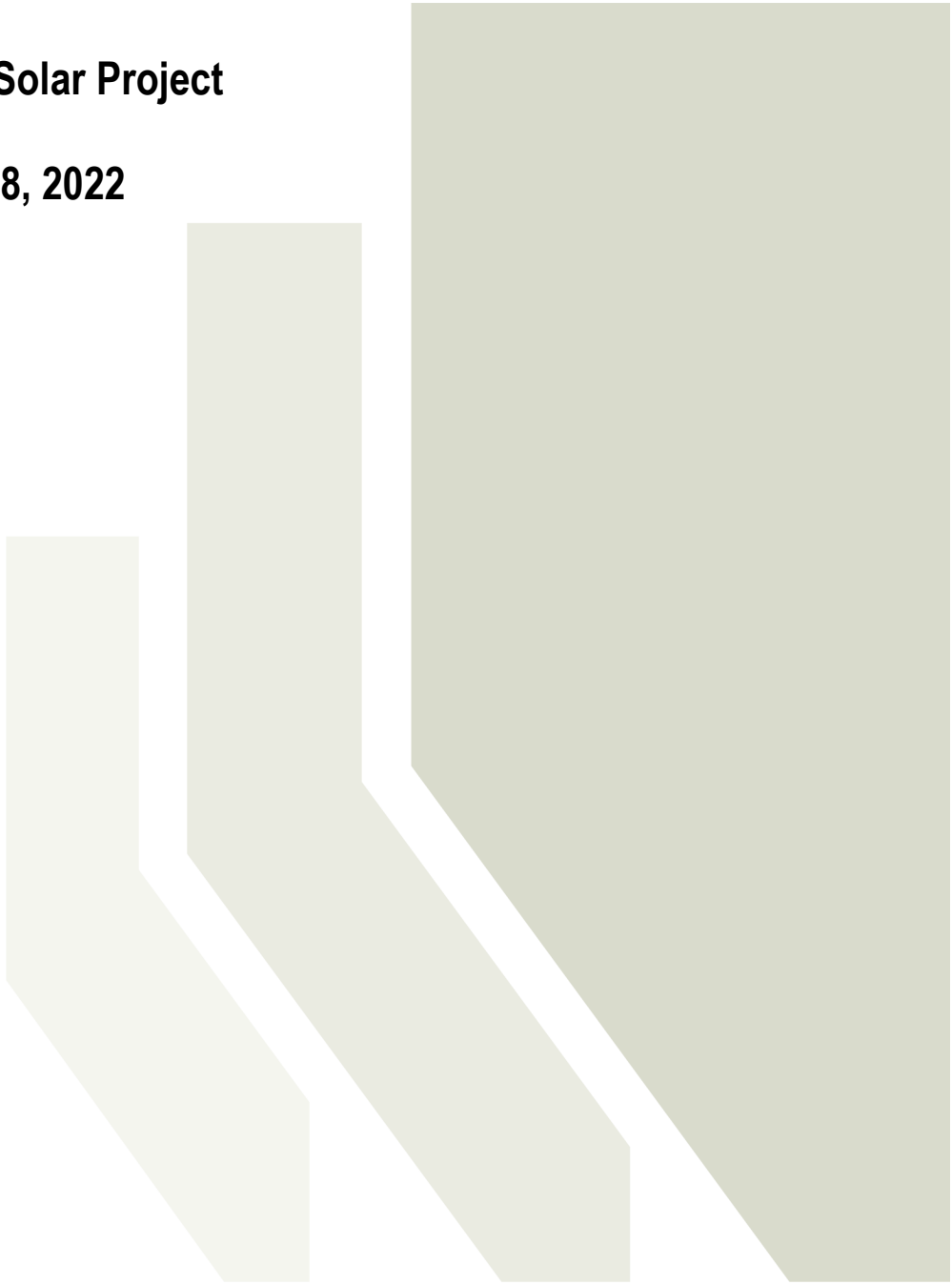




Moon Lake Solar Inc.

Moon Lake Solar Project

November 18, 2022



Alberta Utilities Commission

Decision 27433-D01-2022

Moon Lake Solar Inc.

Moon Lake Solar Project

Proceeding 27433

Application 27433-A001

November 18, 2022

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The Commission may, no later than 60 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.

Contents

1	Decision summary	1
2	Application	1
3	Findings	3
4	Decision	7
	Appendix A – Summary of Commission conditions of approval in the decision	8

List of figures

Figure 1.	Proposed Moon Lake Solar Project location	2
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1 Decision summary

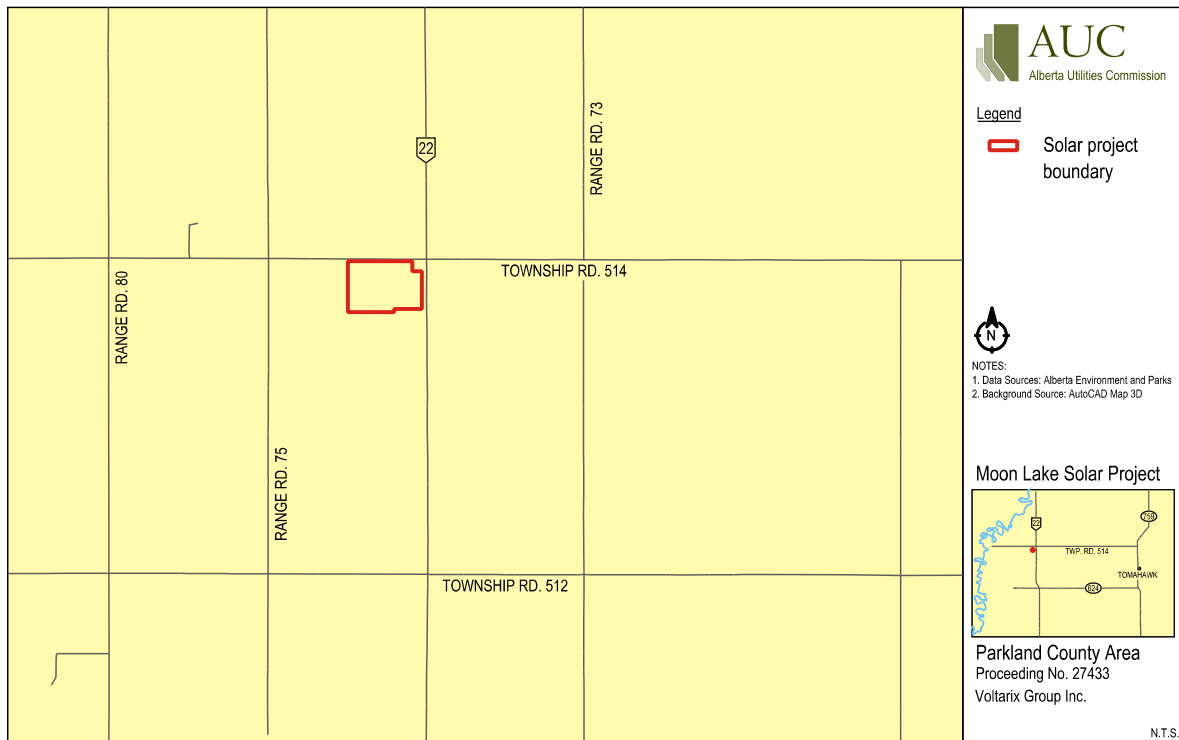
1. In this decision, the Alberta Utilities Commission approves an application from Moon Lake Solar Inc. to construct and operate a 25.49-megawatt (MW) direct current (18.4 MW alternating current) solar power plant, designated as the Moon Lake Solar Project, located on cultivated private land, 20 kilometres north of the town of Drayton Valley, in Parkland County.

2 Application

2. Moon Lake Solar Inc., wholly owned and operated by Voltarix Group Inc., filed an application with the Commission for approval to construct and operate the Moon Lake Solar Project (the project). The project would include approximately 46,342 550-watt Trina Bi-Facial, 35-degree, fixed-tilt polycrystalline solar panels, and four inverters.

3. The project area is located on approximately 130 acres of cultivated private land, in the northeast quarter of Section 20, Township 51, Range 7, west of the Fifth Meridian, as shown on the map in Figure 1. Moon Lake stated that the power plant would connect to the distribution system of FortisAlberta Inc.

Figure 1. Proposed Moon Lake Solar Project location



4. Moon Lake's application included:

- A participant involvement program (PIP) summary which detailed consultation with stakeholders within 800 metres of the project.¹
- An environmental evaluation for the project which described baseline environmental conditions and associated surveys or studies, identified potential environmental impacts from the project, and described mitigation to prevent or limit those impacts.²
- A renewable energy referral report from Alberta Environment and Parks Fish and Wildlife Stewardship (AEP)³ which ranked the project with an overall "low" risk.⁴
- A solar glare assessment completed by Green Cat Renewables Canada Corporation which predicted that glare from the project is not expected to present a significant hazard to drivers along adjacent roads and is not expected to have a significant adverse effect on a resident's use of their home.⁵

¹ Exhibit 27433-X0019, ML – PIP Complete Report.

² Exhibit 27433-X0006, ML – Environmental Evaluation.

³ On October 24, 2022, the Ministry of Environment and Parks was renamed the Ministry of Environment and Protected Areas. Any references to AEP in Rule 033: *Post-approval monitoring requirements for wind and solar power plants* and elsewhere that relate to forward-looking obligations or commitments between the applicant and AEP should be interpreted as meaning Alberta Environment and Protected Areas.

⁴ Exhibit 27433-X0018, ML – AEP RE Referral Report.

⁵ Exhibit 27433-X0007, ML – Glare Report.

- An initial noise impact assessment (NIA) and a revised NIA were completed by Patching Associates Acoustical Engineering Ltd. which predicted that noise from the project will comply with Rule 012: *Noise Control*.⁶
- Correspondence from FortisAlberta indicating that it is prepared to connect the proposed project, pending final execution of an interconnection agreement.⁷
- Correspondence from the Alberta Electric System Operator (AESO), confirming that a system access request was submitted by FortisAlberta and that it has been accepted by the AESO as a behind-the-fence project.⁸

5. Moon Lake expects to start construction April 1, 2023, with an in-service date of January 1, 2024.

6. The Commission issued a notice of application and received a statement of intent to participate from Parkland County. Parkland County stated that it has not received a development permit application for the project and outlined necessary requirements for a development permit application.

7. On September 8, 2022, the Commission issued its standing ruling which decided that Parkland County did not meet the test for standing;⁹ however, Parkland County was granted the opportunity to make a written submission outlining its concerns. Parkland County did not file any submissions beyond its statement of intent to participate. On September 16, 2022, Moon Lake provided a submission in response to Parkland County's statement of intent to participate, which indicated that it would submit a development permit application to Parkland County no later than October 17, 2022.¹⁰

3 Findings

8. For the reasons outlined below, the Commission finds that approval of the project is in the public interest having regard to the social, economic, and other effects of the project, including its effect on the environment.

9. The Commission has reviewed the application and has determined that the information requirements specified in Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations, Hydro Developments, and Gas Utility Pipelines* have been met.

10. BRITT RADIUS was retained by Moon Lake to complete a PIP for the project. The PIP included consultation and written notification to landowners within 800 metres of the project boundary, starting in September 2020, and personal consultation to landowners within 400 metres of the project boundary. The PIP summary stated that public notification and engagement conducted for the project also met the requirements of the Parkland County land use

⁶ Exhibit 27433-X0002, ML – Noise Impact. Exhibit 27433-X0035, ML NIA REVISED V2.

⁷ Exhibit 27433-X0021, ML- WSP Non Objection.

⁸ Exhibit 27433-X0014, ML – AESO Connection Letter.

⁹ Exhibit 27433-X0041, AUC letter – Ruling on standing.

¹⁰ Exhibit 27433-X0043, Moon Lake Response to Parkland County.

bylaw community consultation plan. A virtual open house was held on June 17, 2021. Moon Lake stated that there were minimal questions or concerns brought up during the PIP and that all have been resolved. The Commission finds that Moon Lake's PIP has satisfied the requirements of Rule 007.

11. Parkland County requested that the Commission condition the project's approval to ensure that the project meets all specific use provisions as required in Parkland County's land use bylaw and to confirm that the use is compatible with adjacent land uses and that any off-site impacts are mitigated. After the submission of Parkland County's SIP, Moon Lake stated that it contacted Parkland County to discuss the county's concerns and directed Parkland County to the documents submitted in its AUC application, which addressed many of the items noted in Parkland County's SIP. Moon Lake explained that it requested a meeting to review each item in advance of preparing a development permit application; however, Parkland County declined and requested that a development permit application be submitted with any supporting rationale.

12. In light of the foregoing, the Commission understands that Moon Lake has or will file a development permit application with Parkland County that meets the application requirements for a development permit. Parkland County requested that the Commission condition the project's approval to ensure that the project meets its land use bylaw. The Commission considers that Parkland County, and its development authority, are in the best position to work with Moon Lake, through the development permit process, to ensure that Moon Lake meets the requirements of Parkland County's land use bylaw. The Commission finds that it is not necessary to impose the requested condition.

13. An AEP renewable energy referral report and environmental evaluation was submitted as part of the application. In response to Commission information requests (IRs), Moon Lake updated its environmental evaluation, submitted an environmental protection plan, and committed to the completion and submission of an initial conservation and reclamation plan (C&R Plan).¹¹ These documents combined fulfill the environmental requirements outlined in Rule 007. Accordingly, the Commission imposes the following condition of approval:

- a. Moon Lake Solar Inc. shall file a copy of the initial renewable energy operations conservation and reclamation plan (C&R Plan) as set out in the *Conservation and Reclamation Directive for Renewable Energy Operations*. The C&R Plan must be filed 30 days prior to the commencement of construction.

14. The Commission accepts AEP's assessment that the project will have an overall low risk to wildlife and wildlife habitat because the project is sited entirely on cultivated lands, there is limited wildlife use in the area, and the mitigation and monitoring that Moon Lake has committed to implement will reduce wildlife impacts to an acceptable level. AEP has determined there is a high risk for the project to impact a fen wetland and the wildlife that use the wetland. Moon Lake has not committed to follow the wetland setback set out by the *Wildlife Directive for Alberta Solar Energy Projects* in this instance; however, the Commission understands that the fen wetland has been heavily modified by agricultural activities and is currently used to grow hay. Further, Moon Lake has committed to implementing mitigation to minimize impacts to wetlands including completing any work required within the 100 metre setback for Class III and

¹¹ Exhibit 27433-X0032, AUC IR01 Response, PDF page 11.

above wetlands under dry or frozen ground conditions and installing silt fencing or similar erosion control materials to minimize risk of sedimentation.

15. More generally with respect to wetlands, Moon Lake has committed to obtain approvals in accordance with the *Water Act* and will adhere to all conditions of the approvals.¹²

16. Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants* requires approval holders to submit annual post-construction monitoring survey reports to AEP and the Commission. Therefore, the Commission imposes the following condition of approval:

- b. Moon Lake Solar Inc. shall submit an annual post-construction monitoring report to Alberta Environment and Protected Areas – Fish and Wildlife Stewardship and the Commission no later than January 31 of the year following the mortality monitoring period, and on or before the same date every subsequent year for which Alberta Environment and Protected Areas requires surveys pursuant to subsection 3(3) of *Rule 033: Post-approval Monitoring Requirements for Wind and Solar Power Plants*.

17. Moon Lake submitted a NIA for the project with its application material. The NIA assessed compliance of the project for the daytime period only (i.e., between 7 a.m. and 10 p.m.), based on the assumption that the project would not be operational during the nighttime period (i.e., between 10 p.m. and 7 a.m.).¹³ However, in response to a Commission information request, Moon Lake clarified that in addition to the daytime period, the project will operate between 4 a.m. and 7 a.m. during peak summer months. Moon Lake submitted an updated NIA that assessed compliance of the project for both daytime and nighttime operations.

18. Moon Lake identified no adjacent noise emitting energy-related facilities, except the existing Moon Lake 131S Substation located at the northeast corner of the project. As such, cumulative sound levels were calculated as the sum of the ambient sound level, the noise contribution from the project and the Moon Lake 131S Substation. Moon Lake assessed compliance of the project by comparing the predicted cumulative sound levels to applicable permissible sound levels at specified receptors, and concluded that noise from the project will be compliant with Rule 012 for both daytime and nighttime operations. In addition, Moon Lake analyzed the potential for low frequency noise from the project and concluded that the potential for project-related low frequency noise is low.

19. The Commission accepts that noise from the project will be compliant with Rule 012 for daytime and nighttime periods. In particular, the Commission notes that for the most affected receptor, the noise contribution from the project and the Moon Lake 131S Substation is predicted to be 35.4 A-weighted decibels (dBA),¹⁴ and after adding this noise contribution to the nighttime ambient sound level of 35 dBA, the nighttime cumulative sound level will be 38.2 dBA, which is compliant with the nighttime permissible sound level of 40 dBA.

20. The solar glare assessment identified nine residences within approximately 800 metres of the project boundary, Highway 22 and a local road as receptors, and confirmed that there are no aerodromes within four kilometres of the project boundary. The assessment predicted that six out

¹² Exhibit 27433-X0042, Environmental Evaluation (IR01 Response) REV1, PDF page 26.

¹³ Exhibit 27433-X0002, ML-Noise Impact, PDF page 3.

¹⁴ Exhibit 27433-X0035, ML NIA REVISED V2, PDF page 4.

of nine residential receptors may experience up to 2,999 minutes or 50 hours of yellow glare¹⁵ per year, and other receptors (i.e., three residences and two transportation routes) will experience zero or negligible solar glare from the project (i.e., no more than 14 minutes per year).¹⁶

21. The solar glare assessment concluded that glare from the project is not expected to present a significant hazard to drivers along adjacent roads and is not expected to have a significant adverse effect on a resident's use of their home. The assessment stated that if glare is determined to be an issue during the project's operation, mitigation measures can be designed to reduce or eliminate its impact. Potential mitigation measures may include visual screening (e.g., fencing, foliage/vegetation, berms, etc.) that will partially or completely obstruct the glare. Mitigation design will need to consider factors such as height, location, extent, and mitigative properties to determine an appropriate solution.

22. The Commission notes that the predictions and associated conclusion in the solar glare assessment report were premised upon the use of an anti-reflective coating on the project solar panels. Therefore, the Commission imposes the following condition of approval:

- c. Moon Lake Solar Inc. shall use an anti-reflective coating on the project solar panels.

23. The Commission accepts the conclusion in the solar glare assessment that the project is not likely to have the potential to create hazardous glare conditions for the dwellings or roads assessed. That being said, the Commission notes that a number of nearby residences may experience yellow glare from the project. The Commission also notes that the solar glare assessment has discussed potential mitigation measures to reduce glare impacts from the project. The Commission requires that any glare issues associated with the project that may arise be addressed by Moon Lake in a timely manner. Therefore, the Commission imposes the following condition of approval:

- d. Moon Lake Solar Inc. shall file a report with the Commission detailing any complaints or concerns it receives or is made aware of regarding solar glare from the project during the first three years of operation, as well as Moon Lake's response to the complaints or concerns. Moon Lake shall file the report annually, with the first report no later than 13 months after the project becomes operational.

24. The Commission notes that Moon Lake has not finalized the equipment selection for the project. Consequently, the Commission imposes the following condition of approval:

- e. Once Moon Lake Solar Inc. has finalized its equipment selection and project layout, it must file a final project update to the Commission to confirm that the project has stayed within the final project update specified allowances for solar power plants, and it must also include confirmation that solar glare at the nine residences within approximately 800 metres of the project boundary will not

¹⁵ The solar glare assessment used colour codes to categorize effects of glare to a person's eyes. Green glare: glare with low potential for temporary after-image; Yellow glare: glare with potential for temporary after-image; Red glare: glare with potential for permanent eye damage.

¹⁶ Exhibit 27433-X0007, ML-Glare Report, PDF pages 20 and 21.

increase. The final project update must be filed at least 90 days prior to the start of construction.

25. The Commission considers the application to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act*.

4 Decision

26. Pursuant to Section 11 of the *Hydro and Electric Energy Act*, the Commission approves Application 27433-A001 and grants Moon Lake Solar Inc. the approval set out in Appendix 1 – Power Plant Approval 27433-D02-2022, to construct and operate the Moon Lake Solar Power Plant.

27. Pursuant to Section 18 of the *Hydro and Electric Energy Act*, the Commission approves Application 27433-A001 and grants Moon Lake Solar Inc. the order set out in Appendix 2 – Connection Order 27433-D03-2022, to connect the Moon Lake Solar Project to FortisAlberta Inc.'s distribution system.

28. The appendices will be distributed separately.

Dated on November 18, 2022.

Alberta Utilities Commission

(original signed by)

Renée Marx
Commission Member

Appendix A – Summary of Commission conditions of approval in the decision

This section is intended to provide a summary of all conditions of approval specified in the decision for the convenience of readers. Conditions that require subsequent filings with the Commission will be tracked as directions in the AUC's eFiling System. In the event of any difference between the conditions in this section and those in the main body of the decision, the wording in the main body of the decision shall prevail.

The following is a condition of Decision 27433-D01-2022 that requires a subsequent filing with the Commission and will be included as a condition of Power Plant Approval 27433-D02-2022:

- Moon Lake Solar Inc. shall file a copy of the initial renewable energy operations conservation and reclamation plan (C&R Plan) as set out in the *Conservation and Reclamation Directive for Renewable Energy Operations*. The C&R Plan must be filed 30 days prior to the commencement of construction.
- Moon Lake Solar Inc. shall submit an annual post-construction monitoring report to Alberta Environment and Protected Areas – Fish and Wildlife Stewardship and the Commission no later than January 31 of the year following the mortality monitoring period, and on or before the same date every subsequent year for which Alberta Environment and Protected Areas requires surveys pursuant to subsection 3(3) of Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants*.
- Once Moon Lake Solar Inc. has finalized its equipment selection and project layout, it must file a final project update to the Commission to confirm that the project has stayed within the final project update specified allowances for solar power plants, and it must also include confirmation that solar glare at the nine residences within approximately 800 metres of the project boundary will not increase. The final project update must be filed at least 90 days prior to the start of construction.

The following are conditions of Decision 27433-D01-2022 that do not require a subsequent filing with the Commission:

- Moon Lake Solar Inc. shall use anti-reflective coating on the project solar panels.
- Moon Lake Solar Inc. shall file a report with the Commission detailing any complaints or concerns it receives or is made aware of regarding solar glare from the project during the first three years of operation, as well as Moon Lake's response to the complaints or concerns. Moon Lake shall file the report annually, with the first report no later than 13 months after the project becomes operational.