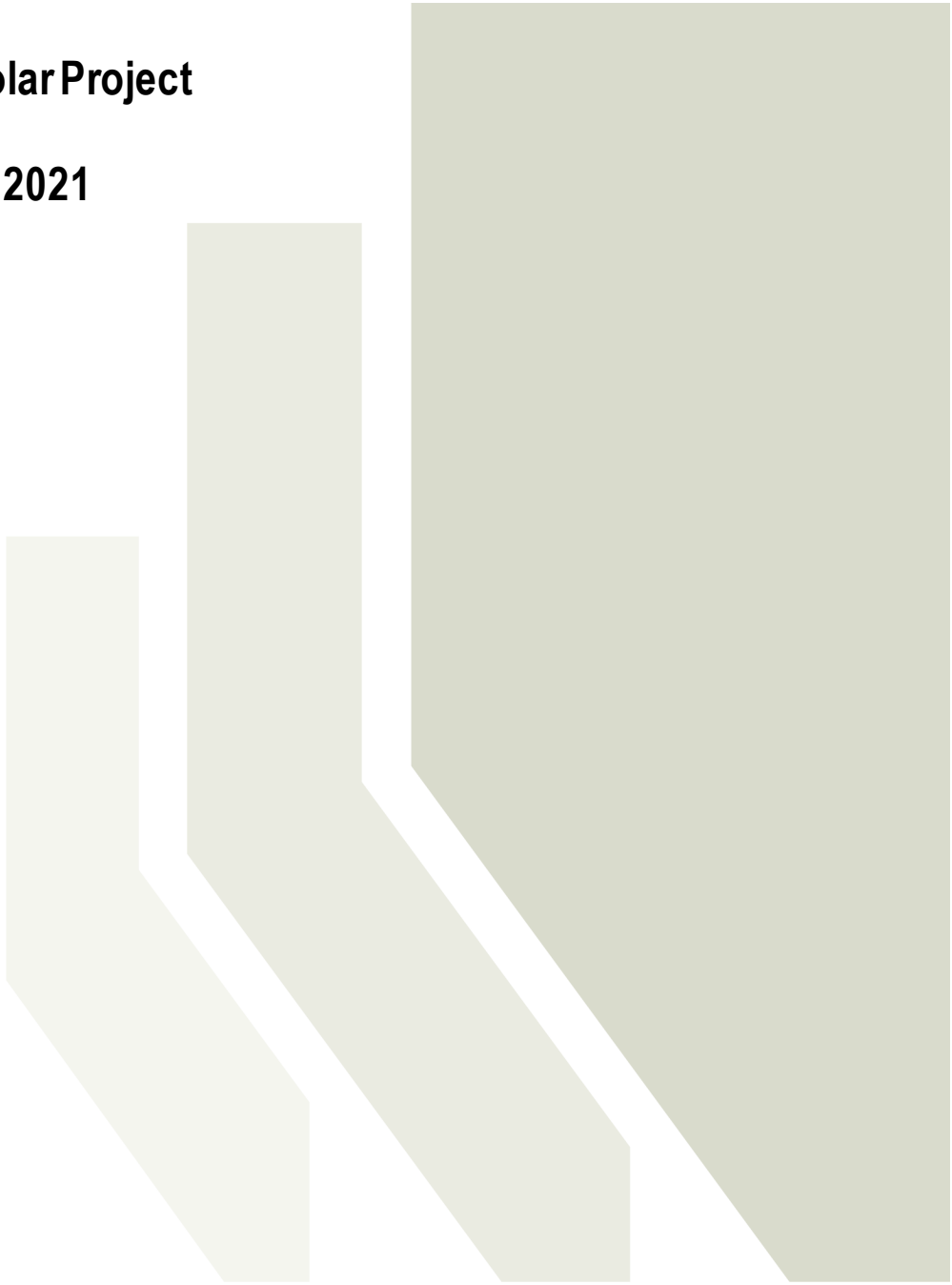




**Gleichen Solar Project Inc.**

**Gleichen Solar Project**

**October 19, 2021**



**Alberta Utilities Commission**

Decision 26767-D01-2021  
Gleichen Solar Project Inc.  
Gleichen Solar Project  
Proceeding 26767  
Application 26767-A001

October 19, 2021

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## **1 Decision summary**

1. In this decision, the Alberta Utilities Commission approves an application from Gleichen Solar Project Inc. to construct, operate and connect a 13.3-megawatt solar power plant, designated as the Gleichen Solar Project, located five kilometres north of the hamlet of Gleichen within Wheatland County.

## **2 Application**

2. Gleichen Solar Project Inc. (GSP) filed an application with the Commission for approval to construct and operate the power plant, and connect it to the FortisAlberta Inc. electric distribution system (collectively, the project). The power plant would consist of solar photovoltaic modules and seven inverter/transformer stations with an installed capability of 13.3 megawatts (MW). The photovoltaic panels would be mounted on fixed racking with a panel angle of 30 degrees.

3. The power plant is located across 71 acres of private, freehold land in the southeast quarter of Section 31, Township 22, Range 22, west of the Fourth Meridian, as shown on the map in Figure 1. GSP proposed to interconnect the power plant to the FortisAlberta Inc. electric distribution system within the same quarter section.

Figure 1. Proposed Gleichen Solar Project location



4. GSP's application included:
- A participant involvement program, which detailed consultation with stakeholders within 800 metres of the project and notification to stakeholders within 2,000 metres of the project.<sup>1</sup>
  - A copy of the renewable energy project submission filed with Alberta Environment and Parks (AEP), 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.<sup>2</sup>
  - The AEP renewable energy referral report, dated October 9, 2018, which ranked the project an overall low risk to wildlife and wildlife habitat.
  - An environmental evaluation that summarized the project's potential effects on the environment before it is constructed, the measures to avoid or mitigate the project's predicted adverse environmental effects, and the monitoring necessary to evaluate the effectiveness of the mitigation measures.<sup>3</sup>
  - A conceptual conservation and reclamation plan that describes the existing baseline conditions and land use associated with the project and outlines the site-specific conservation and reclamation activities that have been or will be undertaken to ensure that the desired reclamation outcomes and objectives are achieved at the project's end of life.<sup>4</sup>
  - A noise impact assessment, which concluded that with the implementation of recommended mitigation measures at receptor R03, the project would comply with permissible sound levels set out in Rule 012: *Noise Control*.<sup>5</sup>
  - A solar glare assessment, which predicted that glare from the project is not likely to have the potential to create hazardous glare conditions for nearby dwellings or transportation routes.<sup>6</sup>
  - *Historical Resources Act* approval dated November 6, 2017.<sup>7</sup>
  - A site-specific emergency response plan for the construction and operation of the project<sup>8</sup> that was developed with Wheatland County local responders and authorities and provided to Wheatland County Protection Services Department for further distribution.
  - Correspondence from FortisAlberta Inc., confirming that it is prepared to allow the interconnection of the power plant to its distribution system.<sup>9</sup>

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<sup>1</sup> Exhibit 26767-X0002, 2021-08-10 GSP Solar Power Plant Application, Section 9, PDF pages 20-25.

<sup>2</sup> Exhibit 26767-X0027, Appendix E-2 - Renewable Energy Referral Report (2018).

<sup>3</sup> Exhibit 26767-X0026, Appendix E-1 - Environmental Evaluation (2021).

<sup>4</sup> Exhibit 26767-X0015, Appendix C-4 - REO C&R Plan.

<sup>5</sup> Exhibit 26767-X0016, Appendix C-5 - Noise Impact Assessment.

<sup>6</sup> Exhibit 26767-X0013, Appendix C-2 - Solar Glare Study.

<sup>7</sup> Exhibit 26767-X0033, Appendix E-8 - Historical Resource Act Clearance.

<sup>8</sup> Exhibit 26767-X0012, Appendix C-1 - Emergency Response Plan.

<sup>9</sup> Exhibit 26767-X0003, Appendix A-1 - Letter from Fortis.

5. GSP expects the project to be in service by October 31, 2022, with construction starting in May 2022.

6. The Commission issued a notice of application and received a statement of intent to participate from Wheatland County.<sup>10</sup> Wheatland County clarified its submission was intended to: provide background information on its current setbacks and requirements; provide an update on proposed amendments to its Energy District zoning; provide suggestions for GSP's consideration based on feedback received previously for similar projects; and, ensure neighbouring landowners have the opportunity to participate in the Commission's engagement process. It confirmed that it was not seeking standing or to personally participate in a hearing.<sup>11</sup>

### 3 Discussion and findings

7. For the reasons outlined below, The Commission considers the application to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act*. More specifically, 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.

8. 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 and Hydro Developments* have been met. Additionally, the Commission finds that GSP's participant involvement program satisfies the requirements of Rule 007.

9. GSP sent notification letters to the following Indigenous groups: Blood Tribe, Piikani Nation, Siksika Nation, Stoney Band (Chiniki, Bearspaw, and Wesley), and Tsuut'ina Nation; none expressed concerns about the project. GSP also consulted with the Aboriginal Consultation Office, which indicated the project appeared to fall entirely on private land and that consultation through the Aboriginal Consultation Office was only required if the project was situated on public lands. The Commission issued the notice of application to the consultation contacts of the Stoney Band (Chiniki, Bearspaw, and Wesley), Tsuut'ina Nation, Blood Tribe, Piikani Nation and Siksika Nation and did not receive any submissions in response.

10. The Commission accepts AEP's assessment that the project presents an overall low risk to wildlife and wildlife habitat and finds that any residual environmental effects will be reasonably mitigated by the mitigation and monitoring measures to be implemented by GSP. In the 2018 renewable energy referral report, AEP ranked the project an overall low risk to wildlife and wildlife habitat, based on project siting, limited wildlife use in the area, and commitments made by GSP to mitigate and monitor wildlife impacts. Specifically, AEP stated the project has been sited to avoid wildlife features and abides by the required wetland setbacks and ranked the project a low risk to wildlife features, wildlife entrapment and wildlife mortality. To address any residual impacts, GSP committed to implementing the mitigations set out in its environmental protection plan for the project and those mitigations were reviewed and accepted by AEP in the renewable energy referral report. The renewable energy referral report expires on October 9, 2023. However, GSP has since updated its wildlife surveys and provided AEP with an

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<sup>10</sup> Exhibit 26767-X0051, WC Comment.

<sup>11</sup> Exhibit 26767-X0054, Wheatland county response.

update on the changes to the project. Significantly, AEP did not amend its referral report following receipt of the updated wildlife surveys.

11. The Commission does not consider it necessary to request that AEP update the renewable energy referral report in light of the subsequent changes to the project. This is because those changes result in the project occupying a smaller area within the same quarter section of land as originally proposed. As such, the environmental impacts are likely to be the same or lower than initially assessed.

12. 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:

- a. Gleichen Solar Project Inc. shall submit an annual 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*.

13. GSP retained Green Cat Renewables Canada Corporation to assess solar glare from the project. The solar glare assessment indicated that the project's solar panels would be mounted on a racking system with a fixed-tilt angle of 30 degrees and assumed that the project would use anti-reflective coating on the solar panels. Because Green Cat Renewables' assessment that the project is not likely to have the potential to create hazardous glare conditions for nearby dwellings or transportation routes was premised upon the use of an anti-reflective coating, the Commission imposes the following condition of approval:

- b. Gleichen Solar Project Inc. shall use anti-reflective coating on the project solar panels.

14. Green Cat Renewables identified seven dwellings within approximately 800 metres of the project and six transportation routes as receptors. The solar glare assessment predicted that the transportation routes and four out of the seven evaluated dwellings would not experience any glare from the project. Two dwellings would experience minimal yellow glare. The remaining dwelling (D1), which has solar arrays to the north, south and west, with the closest arrays located approximately 90 metres to the south, is predicted to observe yellow glare for up to 18 minutes/day during the evenings between March and September. Green Cat Renewables explained that the predictions are conservative and that the glare predicted at the evaluated dwellings is not expected to have an adverse impact on residents or the use of their property. While Green Cat Renewables did not expect mitigation to be required, it submitted that potential mitigation measures may include vegetative screening, fencing or other options that can be developed in consultation with concerned stakeholders. GSP confirmed that it provided a copy of the solar glare assessment to Transport Canada and any stakeholder that requested it during the consultation process.

15. While no objections to the project were raised by Transport Canada or any affected stakeholder, the Commission requires that any glare issues associated with the project that may arise be addressed by GSP in a timely manner. Accordingly, the Commission imposes the following condition of approval:



- c. Gleichen Solar Project 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 its first year of operation, as well as its response to the complaints or concerns. Gleichen Solar Project Inc. shall file this report no later than 13 months after the project becomes operational.

16. GSP retained RWDI Consulting Engineers and Scientists to conduct a noise impact assessment for the project. Predicted cumulative sound levels at noise receptors were compared with applicable permissible sound levels to assess the project's compliance with Rule 012. The noise impact assessment indicated that the major sound sources of the project are nine inverter/transformer units. RWDI stated that mitigation is required for Receptor R03 (the nearest dwelling, located approximately 59 metres from the project boundary) to meet compliance with the nighttime permissible sound level. RWDI used two acoustic barriers as mitigation measures in the noise model and predicted that cumulative sound level at R03 would be 39.5 dBA during the nighttime.

17. GSP stated that it does not intend to install acoustic barriers before the start of operation. In an information response, GSP explained that the noise impact assessment conservatively predicted an exceedance at Receptor R03 during the nighttime. Accordingly, it suggested a post-construction survey at R03 to determine if acoustic barriers are required for the project to achieve compliance with Rule 012. If sound levels are found to exceed the nighttime permissible sound level, GSP committed to install acoustic barriers and conduct another survey to verify compliance of the project.

18. As noted, the noise impact assessment predicts compliance with Rule 012 with the implementation of acoustic barriers at receptor R03. However, the Commission finds GSP's proposal to implement the recommended acoustic barriers at receptor R03, if required following a post construction sound level survey at that receptor, to be reasonable in the circumstances of this application. The noise impact assessment confirms that the noise model takes conservative approach to the noise predictions and it identifies the inverters and the transformers as the dominant noise sources located within the project. Since completion of the noise impact assessment, two inverter/transformer units have been removed from the project. This is likely to reduce the predicted noise levels associated with the project. Further, Receptor R03, is the residence of the landowner hosting the project; and as noted, GSP has committed to installing noise barriers, if required to achieve compliance with Rule 012. Accordingly, the Commission imposes the following condition of approval:

- d. Gleichen Solar Project Inc. shall conduct a post-construction comprehensive sound level (CSL) survey at Receptor R03, in accordance with Rule 012: *Noise Control*. Gleichen Solar Project Inc. shall file a report summarizing the results of the CSL survey no later than 60 days after the project commences operations. If the post-construction CSL survey demonstrates that the project is non-compliant with Rule 012 at Receptor R03, Gleichen Solar Project Inc. shall immediately cease nighttime operation until noise barriers or other mitigation measures sufficient to achieve compliance with Rule 012 have been implemented. If this mitigation is required, Gleichen Solar Project Inc. shall conduct another CSL survey to verify compliance of the mitigated project and file a report with the Commission that summarizes results of the second CSL survey and describes the mitigation measures Gleichen Solar Project Inc. has implemented.

19. The Commission notes that GSP has not finalized its selection of equipment for the project, including solar modules, inverters and transformers. Consequently, the Commission imposes the following condition of approval:

- e. Once Gleichen Solar Project 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. The final project update must be filed at least 90 days prior to the start of construction.

20. The Commission finds that the project has met all the requirements for a connection order. FortisAlberta Inc. has confirmed it is willing to allow the interconnection of the power plant, and the Commission has no outstanding concerns around the interconnection.

#### **4 Decision**

21. Pursuant to Section 11 of the *Hydro and Electric Energy Act*, the Commission approves Application 26767-A001 and grants Gleichen Solar Project Inc., the approval set out in Appendix 1 – Power Plant Approval 26767-D02-2021 – October 19, 2021, to construct and operate the Gleichen Solar Project.

22. Pursuant to Section 18 of the *Hydro and Electric Energy Act*, the Commission approves Application 26767-A001 and grants Gleichen Solar Project Inc., the approval set out in Appendix 2 – Connection Order 26767-D03-2021 – October 19, 2021, to connect the Gleichen Solar Project to the FortisAlberta Inc. electric distribution system.

23. The appendices will be distributed separately.

Dated on October 19, 2021.

#### **Alberta Utilities Commission**

*(original signed by)*

Carolyn Hutniak  
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 are conditions of Decision 26767-D01-2021 that require subsequent filings with the Commission and will be included as conditions of Power Plant Approval 26767-D02-2021:

- Gleichen Solar Project Inc. shall submit an annual 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*.
- Gleichen Solar Project Inc. shall conduct a post-construction comprehensive sound level (CSL) survey at Receptor R03, in accordance with Rule 012: *Noise Control*. Gleichen Solar Project Inc. shall file a report summarizing the results of the CSL survey no later than 60 days after the project commences operations. If the post-construction CSL survey demonstrates that the project is non-compliant with Rule 012 at Receptor R03, Gleichen Solar Project Inc. shall immediately cease nighttime operation until noise barriers or other mitigation measures sufficient to achieve compliance with Rule 012 have been implemented. If this mitigation is required, Gleichen Solar Project Inc. shall conduct another CSL survey to verify compliance of the mitigated project and file a report with the Commission that summarizes results of the second CSL survey and describes the mitigation measures Gleichen Solar Project Inc. has implemented.
- Once Gleichen Solar Project 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. The final project update must be filed at least 90 days prior to the start of construction.

The following are conditions of Decision 26767-D01-2021 that do not require subsequent filings with the Commission:

- Gleichen Solar Project 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 its first year of operation, as well as its response to the complaints or concerns. Gleichen Solar Project Inc. shall file this report no later than 13 months after the project becomes operational.
- Gleichen Solar Project Inc. shall use anti-reflective coating on the project solar panels.