



**Kneehill Solar GP Inc., on behalf of its  
general partner, Kneehill Solar LP**

**Michichi Solar Generation Facility**

**September 12, 2019**

**Alberta Utilities Commission**

Decision 24363-D01-2019

Kneehill Solar GP Inc., on behalf of its general partner, Kneehill Solar LP

Michichi Solar Generation Facility

Proceeding 24363

Application 24363-A001

September 12, 2019

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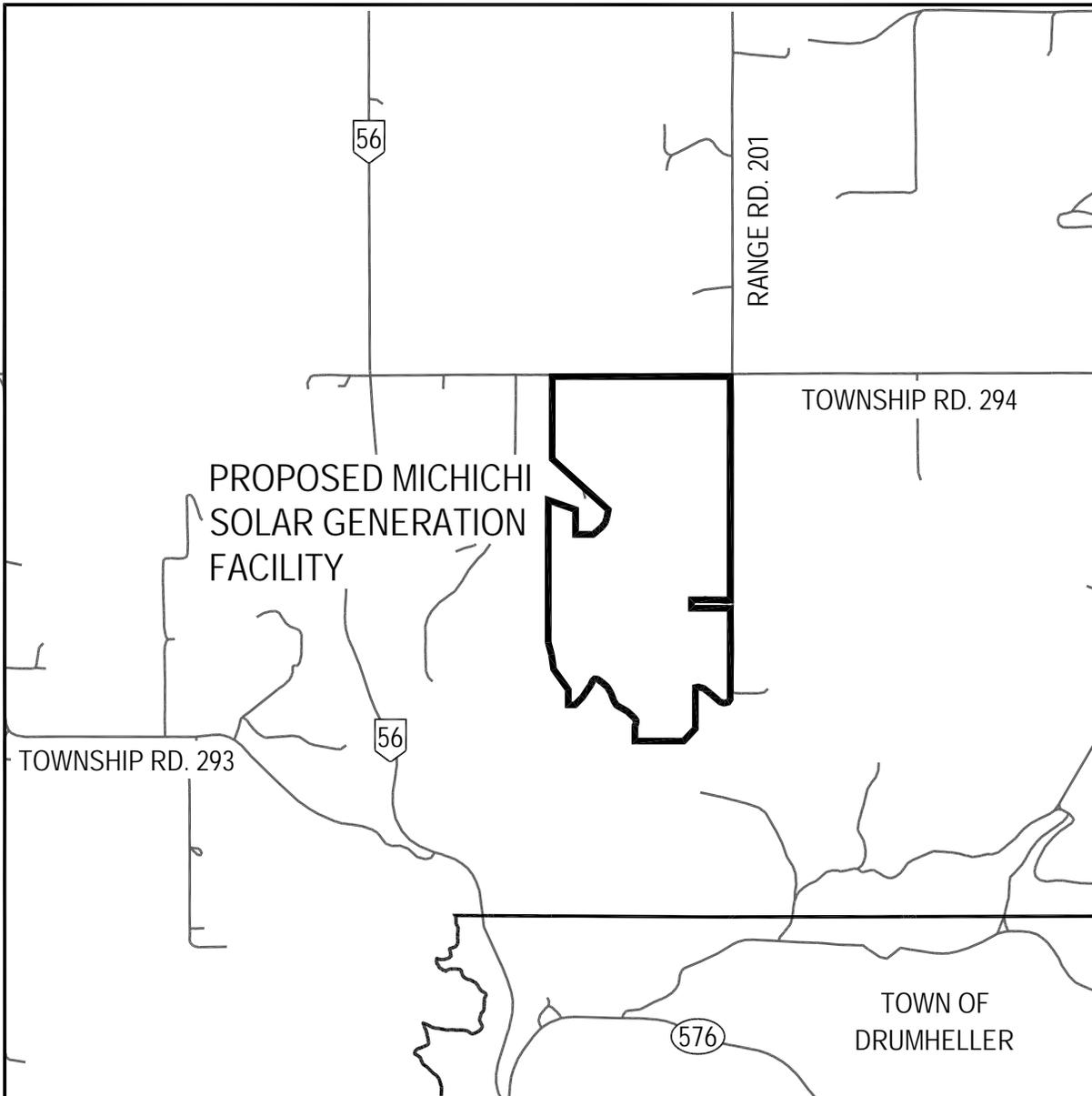
## **1 Decision summary**

1. In this decision, the Alberta Utilities Commission considers whether to approve an application from Kneehill Solar GP Inc., on behalf of its general partner Kneehill Solar LP, to construct and operate a 25-megawatt solar power plant designated as the Michichi Solar Generation Facility (the project), and to connect the power plant to ATCO Electric Ltd.'s 25-kilovolt electric distribution system.

2. After consideration of the record of the proceeding, and for the reasons outlined in this decision and subject to the specified conditions, the Commission approves the project, finding that it is in the public interest having regard to its social, economic and other effects, including its effect on the environment.

## **2 Introduction**

3. Kneehill Solar GP Inc. (Kneehill), on behalf of Kneehill Solar LP, a joint venture between ATCO Power Canada Ltd. and Samsung C&T Corporation, filed an application with the AUC to construct and operate a 25-megawatt solar photovoltaic power plant and to connect the power plant to ATCO Electric's electric distribution system through a 25-kilovolt distribution line that would connect to the Michichi Creek 802S Substation. The project would be located in the east half of Section 23, Township 29, Range 20, west of the Fourth Meridian, approximately one-kilometre northwest of Drumheller in Starland County, as shown on the map below.



4. The Commission issued notice of the application in accordance with Rule 001: *Rules of Practice*. In response to the notice, the Commission received a statement of intent to participate opposing the project from Philip and Natalie Dompnier, and a statement of intent to participate from Duane Olson in support of the project. The Commission also received a letter of support from Starland County in which it indicated that it did not want to participate further if a hearing were held. The Dompniers later withdrew their statement of intent to participate, and stated that they supported the project.<sup>1</sup> Although the Commission issued a notice of hearing for the project, it cancelled the hearing when the Dompniers withdrew their objection.

<sup>1</sup> Exhibit 24363-X0031, Dompnier Letter withdrawing SIP.

### 3 Discussion

5. The proposed project consists of a 25-megawatt power plant, including solar panels, inverter and transfer stations, access roads, a collector system and a switching substation connected to ATCO Electric's distribution system in the northeast quarter of Section 23, Township 29, Range 20, west of the Fourth Meridian.<sup>2</sup> The project would be sited on approximately 320 acres of privately owned agricultural land.

6. Kneehill submitted that the project would consist of approximately 85,000 to 100,000 solar modules, each with a capacity of approximately 320 to 385 watts. The photovoltaic panels would be connected to up to 20 inverters and 10 transformers housed within 10 voltage stations that would convert electricity from direct current to alternating current and step-up the voltage. Kneehill has not yet finalized the make and model of the solar photovoltaic panels, inverter and transfer stations it intends to use for the project, but indicated that conservative assumptions were used for the glare and noise studies with the anticipation that the final design would have an equivalent or lesser impact.<sup>3</sup>

7. Kneehill conducted a participant involvement program that included steps to notify all landowners and residents within 2,000 metres of the project boundary and consultation with residents within 800 metres of the project boundary. Kneehill was unable to contact two landowners and four industrial entities with interests in land located within 2,000 metres of the project boundary.<sup>4</sup>

8. Kneehill submitted a renewable energy referral report issued by Alberta Environment and Parks Wildlife Management (AEP-WM),<sup>5</sup> in which AEP-WM determined that the project is sited entirely on cultivated land and avoids named lakes, permanent watercourses and valley breaks. AEP-WM confirmed in the report that the project has been sited to avoid wildlife features, including wildlife habitat of species of management concern, and stated that the project was rated as low risk. AEP-WM determined that with the commitments made by Kneehill, the risk to wildlife entrapment due to the project fence is low and the risk of wildlife mortality is low based on avian use in the project area.

9. Kneehill submitted an environmental evaluation report that described the project's effects on the environment, recommended measures to avoid or mitigate adverse effects and outlined a monitoring plan to evaluate the efficacy of mitigation measures. The environmental evaluation report detailed a number of wildlife and wildlife habitat surveys which were conducted to predict the effects of the solar facility during siting, construction and operation.

10. The environmental evaluation report identified three unnamed watercourses in proximity to the project site. There were no reports of water or wetland vegetation in the watercourses and the watercourses were considered absent on the project site. The environmental evaluation report indicated that there were no wetlands, prohibited noxious weeds, raptor nests or sharp-tailed grouse leks found during the surveys.

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<sup>2</sup> Exhibit 24363-X0016, Michichi Solar Generation Facility Response to IR 2, PDF page 3.

<sup>3</sup> Exhibit 24363-X0007, Michichi Solar Generation Facility Responses Round 1, PDF page 2.

<sup>4</sup> Exhibit 24363-X0007, Michichi Solar Generation Facility Responses Round 1, PDF page 8.

<sup>5</sup> Exhibit 24363-X0001, Michichi Solar Generation Facility AUC Power Plant Application, PDF pages 128-135.

11. Kneehill stated that it would apply to Starland County for a municipal development permit if AUC approval is granted. In response to the Commission's information requests, Kneehill committed to developing an emergency response plan with Starland County and the Town of Drumheller prior to the project's construction and operation.<sup>6</sup>

12. A solar glare hazard analysis report was submitted by Green Cat Renewables Canada Corporation. In its report, Green Cat stated that the project would not produce red glare at any of the measured points throughout the year,<sup>7</sup> that the most affected road would be along Range Road 201 with a 35-degree-angle tilt of the solar panels, and that this route would have approximately 2,287 minutes of low intensity glare per year. Green Cat stated that Range Road 201 does not intersect with any roads south of the project boundary and is expected to generate little residential traffic. It also studied potential solar glare impacts at seven dwellings surrounding the proposed project and concluded that the most affected dwellings were predicted to experience low intensity solar glare up to 29 minutes a day during the early mornings between April and September. Green Cat indicated that the project is predicted to pose low potential for hazardous conditions at all receptors concerning solar glare. Kneehill distributed a summary of the solar glare report to potentially-affected stakeholders.

13. A noise impact assessment summary form prepared for the project indicated that the project's predicted cumulative sound levels would meet the permissible sound level during daytime and nighttime hours.

14. Kneehill stated that it plans to construct the project during the first and second quarter of 2020, and have the project commissioned in the third quarter of 2020.

15. Mr. Olson and Starland County both indicated their support for the project. Starland County expressed support for the diversification, job opportunities and increased tax assessment base that would result from the project.

#### **4 Findings**

16. The Commission is considering this application under sections 11 and 18 of the *Hydro and Electric Energy Act*. In accordance with Section 17 of the *Alberta Utilities Commission Act*, the Commission must assess whether the project is in the public interest, having regard to its social, economic and other effects, including its effects on the environment.

17. The Commission has considered the application with regard to the applicable legislative and regulatory framework. For the reasons that follow, the Commission finds that the project is in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act* having regard to its social, economic and other effects, including its effects on the environment.

18. The Commission is satisfied that the technical, siting, emissions, environmental and noise aspects of the project meet the Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments* and Rule 012: *Noise Control* requirements. The Commission finds that Kneehill's participant involvement program satisfies Rule 007. It is also satisfied that all concerns received in response

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<sup>6</sup> Exhibit 24363-X0007, Michichi Solar Generation Facility Responses Round 1, PDF page 7.

<sup>7</sup> Exhibit 24363-X0014, Solar Glare Study, PDF page 16.

to the Commission's notice of application have been resolved and no other public or industry objections or concerns were raised.

19. The noise impact assessment summary form demonstrates that cumulative sound levels for the project are predicted to be below the daytime and nighttime permissible sound levels set out in Rule 012. While these levels are within the permissible sound levels of 50 dBA (daytime) and 40 dBA (nighttime), Kneehill has not finalized its equipment selection and such changes may affect sound power levels. To address this, the Commission considers it reasonable to require Kneehill to provide confirmation of the project's continued compliance with Rule 012, among the Commission's other requirements, in the event of an equipment change and has conditioned the project accordingly below.

20. The Commission considers that the solar glare report was reasonable and is satisfied that no hazardous solar glare is expected to occur. It acknowledges however that there are currently no standards or regulations in place related to public safety associated with solar glare. To ensure that any glare associated with the project is addressed by Kneehill in a timely manner, the project's approval will be conditional on Kneehill filing a report 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 Kneehill's response. Kneehill shall file this report no later than 13 months after the project becomes operational.

21. The project is proposed to be located on privately-owned agricultural land. Because these lands have been previously disturbed, the Commission is satisfied that the project is likely to have minimal adverse impacts on the environment and area residents. The Commission is also satisfied that such impacts can be mitigated to an acceptable degree should they occur.

22. 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, Kneehill must comply with the requirements of Rule 033. Section 3(3) of Rule 033 requires approval holders to submit to AEP and the AUC annual post-construction monitoring survey reports. Kneehill shall submit an annual post-construction monitoring survey report to AEP and the AUC 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 Section 3(3) of Rule 033.

23. The Commission acknowledges Kneehill's commitment to develop an emergency response plan with Starland County and the Town of Drumheller prior to the project's construction and operation, and expects Kneehill to fulfill this commitment.

24. Because the final project equipment has not been selected, the Commission will require additional information once the design of the project is finalized. As indicated above with respect to potential noise impacts, it will require confirmation that any changes to the chosen equipment design will not alter the project's compliance with any applicable Rule 007 or Rule 012 requirements. The Commission therefore approves the project with a condition (detailed below) requiring additional information from Kneehill, once it has made its final equipment selection, confirming that the finalized project design will not increase its land, noise or environmental impacts beyond those reflected in the materials submitted in its application.

25. Having regard for the foregoing, the Commission approves the application to construct and operate the project subject to the following conditions:
- a. Once Kneehill has made its final selection of equipment for the project, it must file a letter with the Commission in which it identifies the make, model, and quantity of the equipment, and include an updated site plan if the equipment layout has changed. If the finalized equipment does not utilize solar panels with anti-reflective coating, Kneehill must provide an explanation of why it chose solar panels without anti-reflective coating. This letter must also confirm that the finalized design of the project will not increase the land, noise, or environmental impacts beyond those reflected in the materials submitted by Kneehill in its application and approved by the Commission. The letter is to be filed no later than 90 days before construction is scheduled to begin.
  - b. Kneehill shall file a report with the Commission detailing any complaints or concerns about solar glare that are brought to its attention during its first year of operation, as well as Kneehill's response. Kneehill shall file this report no later than 13 months after the project becomes operational.

## 5 Decision

26. Pursuant to sections 11 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 24363-A001 and grants Kneehill Solar GP Inc. the approval set out in Appendix 1 – Power Plant Approval 24363-D02-2019 – September 12, 2019 (Appendix 1 will be distributed separately).

27. Pursuant to Section 18 of the *Hydro and Electric Energy Act*, the Commission approves Application 24363-A001 and grants Kneehill Solar GP Inc. the connection order set out in Appendix 2 – Connection Order 24363-D03-2019 – September 12, 2019. (Appendix 2 will be distributed separately).

Dated on September 12, 2019.

### Alberta Utilities Commission

*(original signed by)*

Anne Michaud  
Vice-Chair

## **Appendix A – Summary of Commission directions and conditions requiring further submissions**

This section is intended to provide a summary of those directions and conditions that require follow-up with the Commission, for the convenience of readers. It is not intended to summarize all of the conditions imposed on the applicant. In the event of any difference between the directions and conditions in this section and those in the main body of the decision, the wording in the main body of the decision shall prevail. These directions and conditions will be tracked as conditions of Power Plant Approval 24363-D02-2019 using the AUC's eFiling System.

- Once Kneehill has made its final selection of equipment for the project, it must file a letter with the Commission in which it identifies the make, model, and quantity of the equipment, and include an updated site plan if the equipment layout has changed. If the finalized equipment does not utilize solar panels with anti-reflective coating, Kneehill must provide an explanation of why it chose solar panels without anti-reflective coating. This letter must also confirm that the finalized design of the project will not increase the land, noise, or environmental impacts beyond those reflected in the materials submitted by Kneehill in its application and approved by the Commission. The letter is to be filed no later than 90 days before construction is scheduled to begin.
- Kneehill shall file a report with the Commission detailing any complaints or concerns about solar glare that are brought to its attention during its first year of operation, as well as Kneehill's response. Kneehill shall file this report no later than 13 months after the project becomes operational.
- Kneehill shall submit an annual post-construction monitoring survey report to AEP and the AUC 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 Section 3(3) of Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants*.