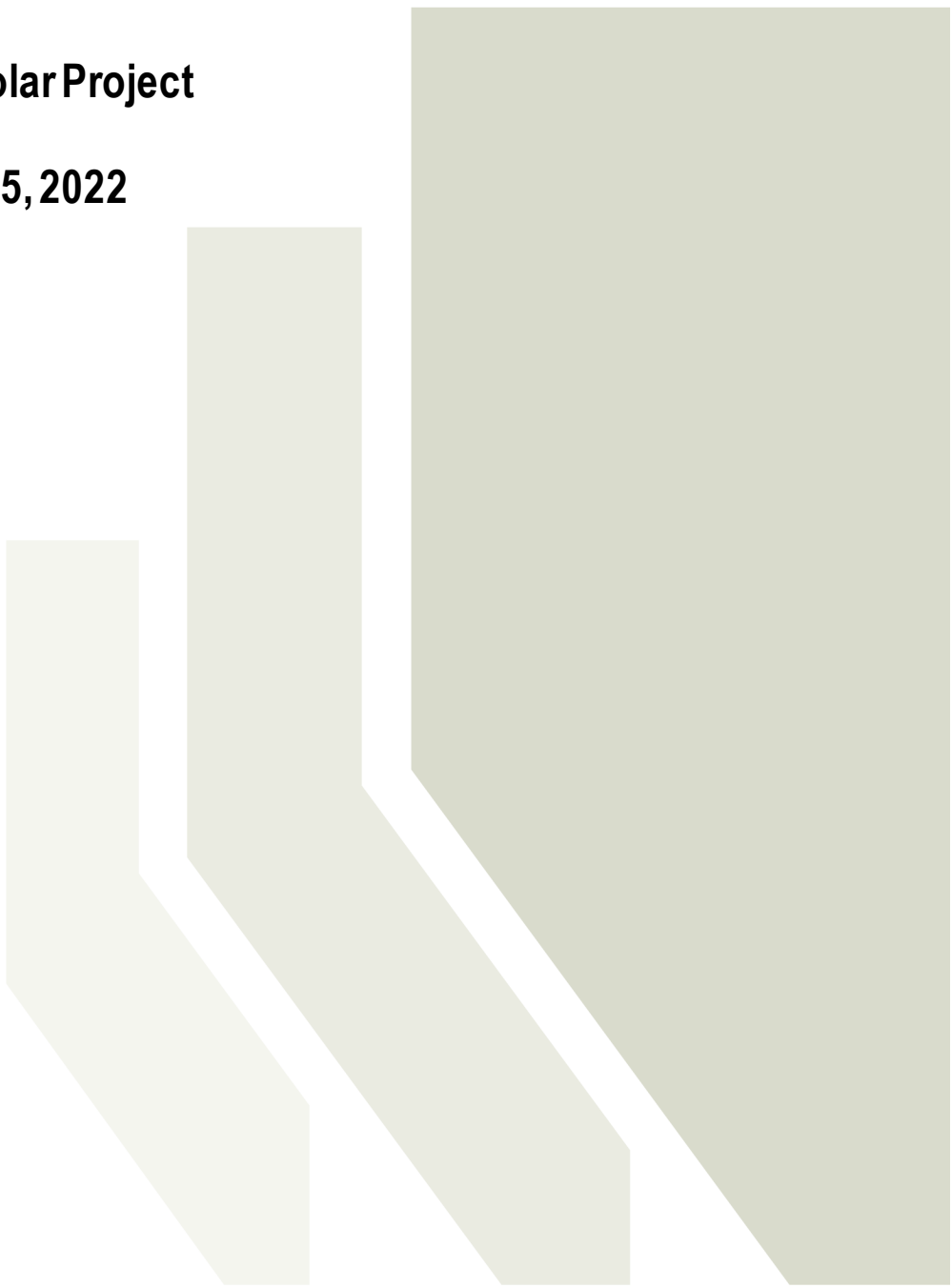




**Rocktree Solar Inc.**

**Rocktree Solar Project**

**December 15, 2022**



**Alberta Utilities Commission**

Decision 27445-D01-2022

Rocktree Solar Inc.

Rocktree Solar Project

Proceeding 27445

Application 27445-A001

December 15, 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.

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## **1 Decision summary**

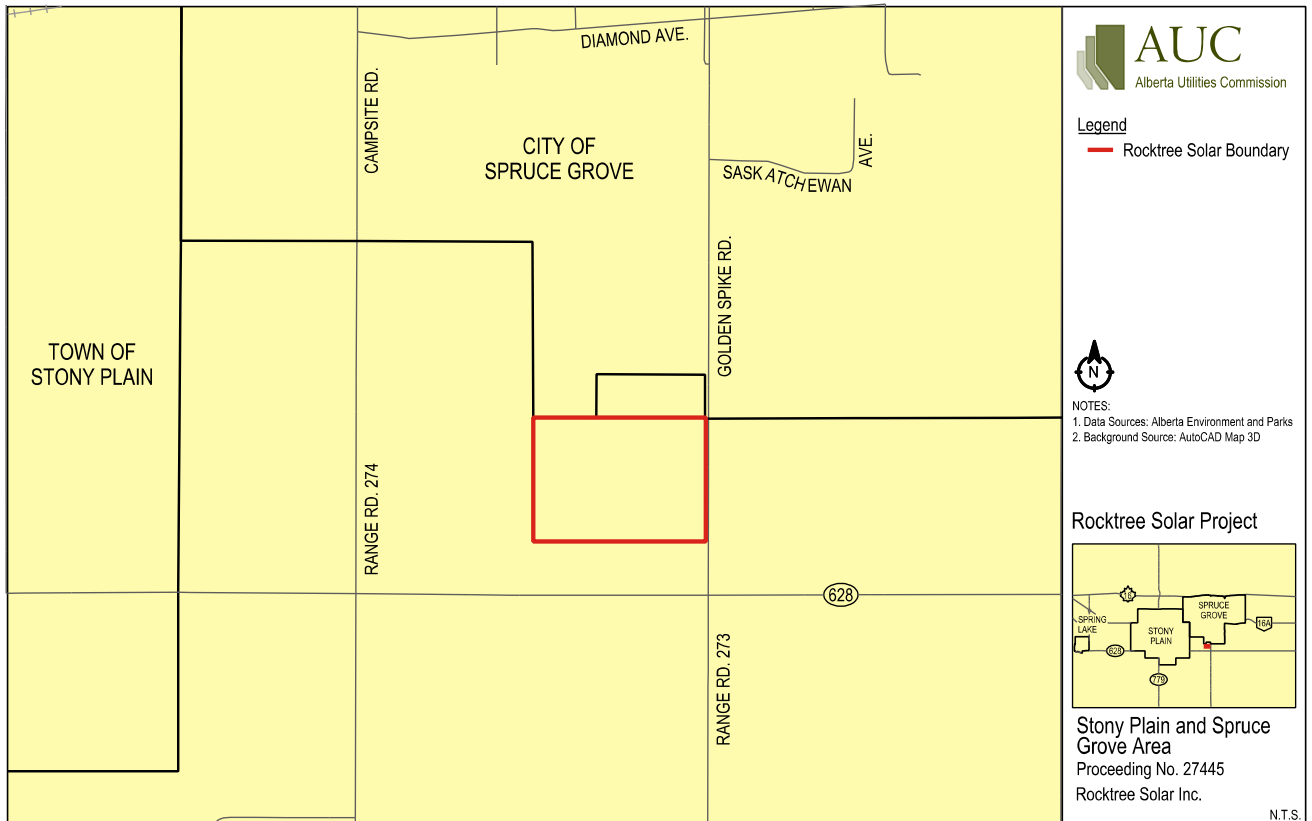
1. In this decision, the Alberta Utilities Commission approves an application from Rocktree Solar Inc. to construct and operate a 18.4-megawatt (MW) alternating current solar power plant, designated as the Rocktree Solar Project, located on cultivated private land, two kilometres south of the city of Spruce Grove, in Parkland County.

## **2 Application**

2. Rocktree Solar Inc., wholly owned and operated by Voltarix Group Inc., filed an application with the Commission for approval to construct and operate the Rocktree 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 110 acres of cultivated private land, in the southeast quarter of Section 28, Township 52, Range 27, west of the Fourth Meridian, as shown on the map in Figure 1. Rocktree stated that the power plant would connect to the distribution system of FortisAlberta Inc.

Figure 1. Proposed Rocktree Solar Project location



4. Rocktree's application included:

- A participant involvement program (PIP) summary which detailed consultation and notification with stakeholders within 800 metres of the project.<sup>1</sup>
- 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.<sup>2</sup>
- A renewable energy referral report from Alberta Environment and Parks Fish and Wildlife Stewardship (AEP)<sup>3</sup> which ranked the project with an overall "low" risk.<sup>4</sup>

<sup>1</sup> Exhibit 27445-X0022, PIP Complete Report.

<sup>2</sup> Exhibit 27433-X0002, Environmental Evaluation.

<sup>3</sup> 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.

<sup>4</sup> Exhibit 27445-X0017, Environmental AEP RERR.

- 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 residents' use of their home.<sup>5</sup>
- An initial noise impact assessment (NIA) and an updated NIA completed by Patching Associates Acoustical Engineering Ltd. (PAAE) which predicted that noise from the project will comply with Rule 012: *Noise Control*.<sup>6</sup>
- Correspondence from FortisAlberta indicating that it is prepared to connect the proposed project, pending final execution of an interconnection agreement.<sup>7</sup>
- 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.<sup>8</sup>

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

6. The Commission issued a notice of application and received three statements of intent to participate (SIPs):

- a. Parkland County stated that it has not received a development permit application for the project and outlined necessary requirements for a development permit application.
- b. Nicholl and Akers submitted a SIP representing an undisclosed landowner, which expressed concerns about drainage and glare. The land described in the SIP was identified to be over 1,000 metres from the proposed project.
- c. The Northern Alberta Institute of Technology (NAIT) submitted that it owns three lots immediately north of the proposed project, within 200 metres of the project boundary and expressed concerns regarding the project storm water management plan.

7. On September 8, 2022, the Commission issued a standing ruling in which it determined that Parkland County and the unidentified landowner represented by Nicholl and Akers did not meet the test for standing;<sup>9</sup> however, Parkland County was granted the opportunity to make a written submission outlining its concerns. The Commission granted NAIT standing and initiated a written hearing process.

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<sup>5</sup> Exhibit 27445-X0003, Glint & Glare.

<sup>6</sup> Exhibit 27445-X0009, Noise Impact Report. Exhibit 27445-X0034, RT NIA REVISED V2.

<sup>7</sup> Exhibit 27445-X0018, WSP Non Objection.

<sup>8</sup> Exhibit 27445-X0012, AESO Project.

<sup>9</sup> Exhibit 27445-X0043, AUC ruling on standing.

8. Parkland County did not file any submissions beyond its SIP. On September 16, 2022, Rocktree responded to Parkland County's SIP, and indicated it would submit a development permit application to Parkland County no later than October 17, 2022.<sup>10</sup>

9. Through the written hearing process, NAIT issued information requests to Rocktree requesting more information on the project's drainage plan, which Rocktree responded to accordingly. On October 28, 2022, NAIT filed a letter stating that it was satisfied with Rocktree's responses and had no further questions. Subsequently, the Commission requested that NAIT confirm it had no further concerns with the proposed project and whether it was withdrawing its SIP. No response was received by the stipulated deadline and the Commission continued processing the application.

### 3 Findings

10. 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.

11. 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. In addition, the Commission finds that Rocktree's PIP satisfied the requirements of Rule 007.

12. Parkland County requested that the Commission condition the project's approval to ensure that the project meets all specific land use provisions as required in Parkland County's land use bylaw and to confirm that the project is compatible with adjacent land uses and that any off-site impacts are mitigated. After the submission of Parkland County's SIP, Rocktree 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. Rocktree 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.

13. The Commission understands that Rocktree has or will file a development permit application with Parkland County that meets the county's requirements. The Commission considers that Parkland County, and its development authority, are in the best position to work with Rocktree, through the development permit process, to ensure that Rocktree meets the requirements of Parkland County's land use bylaw. The Commission finds that it is not necessary to impose the requested condition.

14. NAIT expressed concerns regarding Rocktree's drainage plans and that Dog Creek was identified as the natural drainage that runs through the Rocktree site and onto NAIT lands, ending in a natural storm water catchment northwest to the land owned by NAIT. NAIT requested information regarding water runoff rates and the storm water management plan for the project. As part of Rocktree's response, it stated that as part of its development application with Parkland County, Rocktree will submit a grading plan for review.

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<sup>10</sup> Exhibit 27445-X0046, Rocktree Response to Parkland County.

Rocktree committed to send this plan to NAIT upon its completion. Rocktree confirmed that no topsoil stripping, export of native soils, or import of materials will occur during construction or operations, and the surface grading and drainage will not be modified from existing conditions.

15. The environmental evaluation filed indicated that grading may be required and soil stripping could occur; however, in response to Commission information requests, Rocktree stated that the proposed location of the Rocktree Solar Project was selected because the site does not contain sensitive landforms and site grading could be avoided. Rocktree committed to implementing mitigation measures to minimize impact to soil which are summarized in the environmental protection plan.

16. Given NAIT was satisfied with Rocktree's response, along with Rocktree's commitment to send NAIT the grading plan, the Commission is satisfied that NAIT's concerns have been addressed and that drainage on NAIT's lands will not be impacted by the project.

17. An AEP renewable energy referral report and environmental evaluation was submitted as part of the application. In response to Commission information requests, Rocktree updated its environmental evaluation, submitted an environmental protection plan, and committed to completing and submitting an initial conservation and reclamation plan (C&R Plan) including the results of additional pre-disturbance soil surveys.<sup>11</sup> Accordingly, the Commission imposes the following condition of approval:

- a. Rocktree 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.

18. 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 Rocktree has committed to implement will reduce wildlife impacts to an acceptable level.

19. 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. Rocktree 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*.

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<sup>11</sup> Exhibit 27445-X0032, AUC IR01 Response, PDF page 7.



20. Rocktree retained PAAE to conduct an NIA for the project, which 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.). In response to a Commission information request, Rocktree clarified that, in addition to the daytime period, the project will operate between 4 a.m. and 7 a.m. during peak summer months. Subsequently, Rocktree submitted an updated NIA that assessed compliance of the project for both daytime and nighttime operations.

21. In both the original and updated NIAs, PAAE identified 22 dwellings located within or close to 1.5 kilometres of the project boundary as receptors, with the nearest receptor R05 being located approximately 90 metres (m) south of the project boundary. PAAE identified no adjacent noise emitting energy-related facilities, except an existing energy facility, a crude multi-well battery located approximately 1.7 kilometres north of the project. Cumulative sound levels at receptors were calculated as the sum of the ambient sound level and noise contribution from the project and the energy facility. PAAE assessed compliance of the project by comparing the predicted cumulative sound levels to applicable permissible sound levels (PSLs) at receptors, and concluded that noise from the project will be compliant with Rule 012 for both daytime and nighttime operations.

22. The updated NIA predicted the noise contribution from the project at the most affected receptor R05 to be 39.0 A-weighted decibels (dBA) daytime and 32.6 dBA nighttime.<sup>12</sup> Further, the updated NIA assumed the project will operate for two hours of the nine-hour nighttime period.<sup>13</sup> The Commission finds the difference between the predicted project contribution for the nighttime and daytime periods (i.e., a reduction of 6.4 dBA for the nighttime) appears to result from averaging predicted sound levels from the two-hour project operation over the entire nine-hour nighttime period. However, Rule 012 states “The predicted sound level for a facility operating intermittently for part of the daytime or nighttime period (e.g., solar project) is based on noise generated for the duration of the operation and must not be an average over the entire daytime or nighttime period.”<sup>14</sup> In accordance with Rule 012, the Commission assumes the noise contribution from the project at Receptor R05 will also be 39.0 dBA during nighttime operation (i.e., same as the daytime contribution). Based on this assumption, the nighttime cumulative sound level at Receptor R05 (i.e., the sum of 39.0 dBA project contribution and the nighttime ambient sound level of 35 dBA) will be 40.5 dBA, which is slightly greater than the nighttime PSL of 40 dBA.

23. The Commission acknowledges that the noise model for the project NIAs used conservative assumptions, including that all receptors are modelled to be downwind from all sound sources. That being said, given that the calculated nighttime cumulative sound level at Receptor R05 appears to be slightly over the nighttime PSL, Receptor R05 is approximately 90 metres from the project boundary, and the project will be a major sound source at this receptor, the Commission will require Rocktree to complete a post-construction comprehensive sound level (CSL) survey at Receptor R05 to verify compliance with Rule 012 once the project commences operation.

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<sup>12</sup> Exhibit 27445-X0034, RT NIA REVISED V2, PDF page 4.

<sup>13</sup> Exhibit 27445-X0034, RT NIA REVISED V2, PDF page 11.

<sup>14</sup> Rule 012, *Noise Control*, PDF page 22.

24. Solar power projects operate intermittently during the daytime and nighttime periods. In particular, Rocktree stated the proposed project will operate up to three hours during the nighttime period in the summer months.<sup>15</sup> Rule 012 explicitly requires valid sound levels for a facility operating intermittently be collected during the project operation and must not be an average of the entire nighttime or daytime period.<sup>16</sup> Therefore, the Commission requires Rocktree to collect valid CSL data when sound sources of the project are operating under representative conditions for both the daytime and nighttime periods. The Commission imposes the following condition of approval.

- c. Rocktree shall conduct a post-construction comprehensive sound level (CSL) survey, including an evaluation of low frequency noise, at Receptor R05. The post-construction CSL survey must be conducted under representative conditions and in accordance with Rule 012: *Noise Control*. The valid CSL data shall be collected when sound sources of the project are operating under representative conditions and must not be an average of the entire nighttime or daytime period. Within one year after the project commences operations, Rocktree shall file a report with the Commission presenting measurements and summarizing the results of the post-construction CSL survey.

25. 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, barriers, 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.

26. 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:

- d. Rocktree Solar Inc. shall use an anti-reflective coating on the project solar panels.

27. The Commission notes that a number of nearby residences and Highway 628 may experience yellow glare from the project. In particular, the most affected residence is predicted to receive up to 5,089 minutes (or 42 hours) of yellow glare from the project per year and Highway 628 is predicted to receive up to 9,864 minutes (or 164 hours) of yellow glare from the project per year. The solar glare assessment notes that the time of year when nearby residences are expected to experience the most glare coincides with when trees are expected to have to foliage. For the most affected residence, it is noted that existing trees located between the residence and the project, along with the local topography, are expected to act as a mitigative factor in how much glare the residence actually experiences.

28. 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 Rocktree in a timely manner and the Commission expects

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<sup>15</sup> Exhibit 27445-X0032, AUC IR01 Response, PDF page 3.

<sup>16</sup> Rule 012, *Noise Control*, PDF page 24.

Rocktree to be proactive with implementing any and all mitigation measures that may be required if nearby residences or users of Highway 628 are impacted by glare from the project. Therefore, the Commission imposes the following condition of approval:

- e. Rocktree 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 Rocktree's response to the complaints or concerns. If Rocktree implements mitigation to reduce solar glare impacts, the report shall detail the mitigation measures and associated stakeholders' feedback regarding the mitigation. Rocktree shall file the report annually, with the first report submitted no later than 13 months after the project becomes operational.

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

- f. Once Rocktree 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 eleven 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.

30. Rocktree did not file an interconnection application with the Commission to connect the Rocktree Solar Project to the FortisAlberta Inc. distribution system, although its power plant application described the interconnection point and included a single-line diagram showing this.<sup>17</sup> In addition, Rocktree's application included a letter from FortisAlberta indicating that it is prepared to allow the interconnection of the project to its distribution system.<sup>18</sup> As Rocktree has met the information requirements for a connection order, the Commission approves the interconnection.

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

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<sup>17</sup> Exhibit 27445-X0004 Interconnection Map and Exhibit 27445-X0010 Single Line Diagram.

<sup>18</sup> Exhibit 27445-X0018 WSP Non Objection.

#### 4 Decision

32. Pursuant to Section 11 of the *Hydro and Electric Energy Act*, the Commission approves Application 27455-A001 and grants Rocktree Solar Inc. the approval set out in Appendix 1 – Power Plant Approval 27455-D02-2022, to construct and operate the Rocktree Solar Power Plant.

33. Pursuant to Section 18 of the *Hydro and Electric Energy Act*, the Commission approves Application 27455-A001 and grants Rocktree Solar Inc. the order set out in Appendix 2 – Connection Order 27455-D03-2022, to connect the Rocktree Solar Project to FortisAlberta Inc.’s distribution system.

34. The appendices will be distributed separately.

Dated on December 15, 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 are conditions of Decision 27445-D01-2022 that require a subsequent filing with the Commission and will be included as a condition of Power Plant Approval 27445-D02-2022:

- Rocktree 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.
- Rocktree 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*.
- Rocktree shall conduct a post-construction comprehensive sound level (CSL) survey, including an evaluation of low frequency noise, at Receptor R05. The post-construction CSL survey must be conducted under representative conditions and in accordance with Rule 012: *Noise Control*. The valid CSL data shall be collected when sound sources of the project are operating under representative conditions and must not be an average of the entire nighttime or daytime period. Within one year after the project commences operations, Rocktree shall file a report with the Commission presenting measurements and summarizing results of the post-construction CSL survey.
- Once Rocktree 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 eleven 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 27445-D01-2022 that do not or may require a subsequent filing with the Commission:

- Rocktree Solar Inc. shall use anti-reflective coating on the project solar panels.
- Rocktree 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 Rocktree's response to the complaints or concerns. Rocktree shall file the report annually, with the first report no later than 13 months after the project becomes operational.