



Elemental Energy Renewables Inc.

Chappice Lake Solar Project Alteration

February 17, 2021

Alberta Utilities Commission

Decision 26213-D01-2021

Elemental Energy Renewables Inc.

Chappice Lake Solar Project Alteration

Proceeding 26213

Application 26213-A001

February 17, 2021

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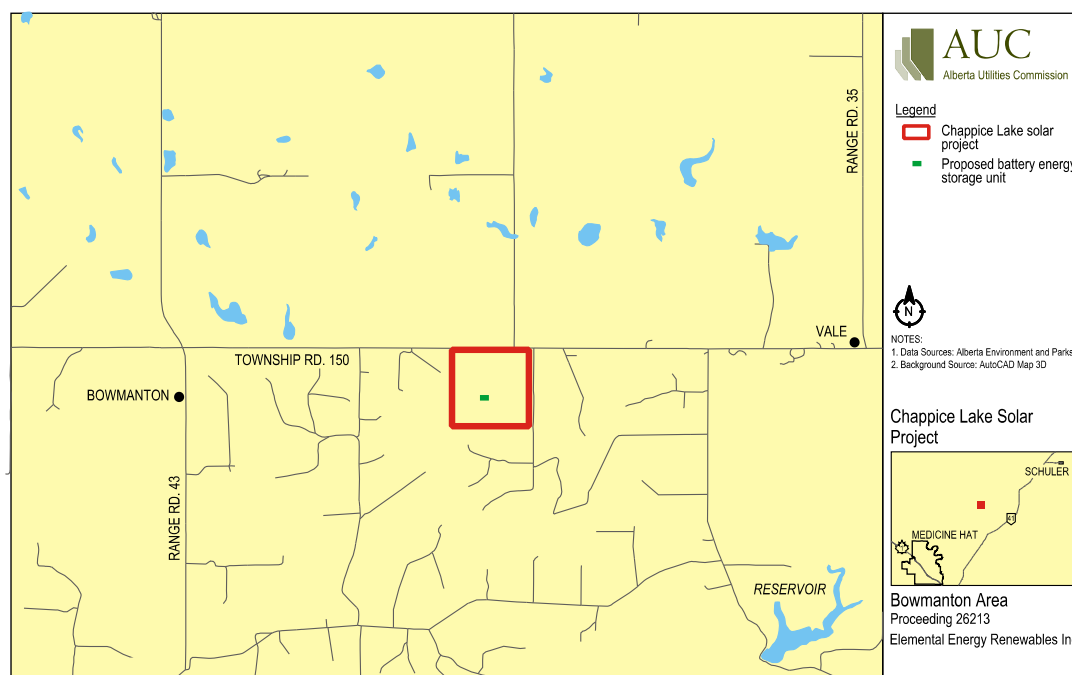
1 Decision summary

1. In this decision, the Alberta Utilities Commission approves an application from Elemental Energy Renewables Inc. (Elemental Energy) to alter the Chappice Lake Solar Project by adding a 3.6-megawatt/10-megawatt hour battery to the project for energy storage. Elemental Energy also finalized its selection of solar panels, racking system and inverter/transformer station.

2 Application

2. Elemental Energy previously filed an application to construct and operate a 15-megawatt solar power plant, designated as the Chappice Lake Solar Project, which was the subject of Proceeding 25451 and approved by the Commission in Decision 25451-D01-2020.¹ On December 22, 2020, Elemental Energy filed an application with the Commission for approval to alter the Chappice Lake Solar Project. The project area is located in the Bowmanton, Alberta area, as shown on the map in Figure 1.

Figure 1. Chappice Lake Solar Project boundary



¹ Decision 25451-D01-2020: Elemental Energy Renewables Inc. – Chappice Lake Solar Project, Proceeding 25451, Application 25451-A001, September 8, 2020.

3. Elemental Energy proposed the addition of a 3.6-megawatt/10-megawatt hour vanadium flow battery to the project. Elemental Energy stated the battery would help provide renewable electricity, avoid renewable power curtailment, and time-shift electricity production to discharge at times of peak demand. Elemental Energy submitted that the total export capability of the project would remain unchanged from the previously approved rating of 15 megawatts.

4. As a condition of the power plant approval,² Elemental Energy was directed to confirm the final selection of equipment for the project. Elemental Energy stated the project would utilize 47,320 Longi Solar's LR4-72HBD-440 and LR4-72HBD-445 solar panels and finalized its inverter and transformer selections. The racking design was revised to a single axis-tracking system to follow the sun's east-west trajectory.

5. Elemental Energy submitted that the battery posed no additional environmental risks as it is contained within a steel shipping container. The addition of the battery and selection of the equipment does not result in any expansion of the project area. A glint and glare assessment concluded that the final design would not generate glare that would be received by nearby dwellings, roadways or flight paths and the revised noise impact assessment demonstrated that the project was in compliance with the permissible sound levels.

6. Elemental Energy's application included:

- A participant involvement program, which included a project update newsletter. Elemental Energy confirmed it did not receive any feedback from stakeholders.
- A noise impact assessment summary form,³ which demonstrated that the project would comply with Rule 012: *Noise Control*.
- A solar glare impact review,⁴ which concluded that the previous glare assessment was valid and reaffirmed its prediction that the project would not generate glare that would be received at nearby dwellings, roadways or flight paths.
- Correspondence from Alberta Environment and Parks (AEP) Wildlife Management,⁵ which confirmed it had no concerns and that a revised renewable energy referral report was not required for the battery addition or selection of the final equipment.

7. Elemental Energy submitted that the alteration would not require an extension of time from the previous stipulated completion date. The project is expected to be in-service by December 1, 2022.

8. The Commission issued a notice of application and no submissions were received in response to the notice.

² Power Plant Approval 25451-D02-2020, Proceeding 25451, Application 25451-A001, September 8, 2020.

³ Exhibit 26213-X0015, Appendix 10 - Noise Impact Assessment.

⁴ Exhibit 26213-X0016, Appendix 11 - Glare Impact Review.

⁵ Exhibit 26213-X0022, AEP Final Equipment Response.

3 Findings

9. 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.

10. 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 Elemental Energy's participant involvement program satisfied the requirements of Rule 007.

11. The Commission finds that the noise impact assessment summary form meets the requirements of Rule 012. The most impacted dwelling is located 1,100 metres northeast of the project. When compared to the noise impact assessment prepared for the original application, the project is predicted to have an increased nighttime cumulative sound level of 0.1 dBA and no increase to the daytime cumulative sound level. Both the daytime and nighttime cumulative sound levels are predicted to be well under the permissible sound levels. Based on prediction results in the noise impact assessment summary form, the Commission accepts that the project will comply with Rule 012 and considers that the noise contribution from the project will be minor.

12. The Commission finds that the project will have minimal environmental effects because the addition of the battery and final project layout and components do not expand the project boundary from what was previously considered by the Commission. The battery is contained within a steel shipping container to minimize environmental risk and the selection of the final equipment did not introduce new environmental impacts. Further, AEP Wildlife Management provided correspondence that it had no new concerns related to wildlife and wildlife habitat disturbance and that the previously identified wildlife avoidance and mitigation plans have not been altered. AEP Wildlife Management confirmed the a revised renewable energy referral report is not required for the project and that the risk ranking has not changed.

13. Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants* applies to all solar projects approved after September 1, 2019. Accordingly, Elemental Energy must comply with the requirements of Rule 033. Subsection 3(3) of Rule 033 requires approval holders to submit to AEP and the AUC annual post-construction monitoring survey reports. Consequently, the Commission imposes the following as a condition of approval:

- a) Elemental Energy Renewables Inc. shall submit an annual post-construction monitoring survey report to Alberta Environment and Parks (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 Subsection 3(3) of Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants*.

14. There are currently no public safety standards or regulations in place associated with solar glare. The conclusion of the glare impact review for this project match those of the previous application. The Commission accepts the conclusion of GreenCat Renewables Canada's glare impact review that the project would not be predicted to produce a glare impact at any receptor. The Commission previously conditioned approval of the project on the use of a

standard anti-reflective coating for the project's solar panels, the reporting of concerns it receives or is made aware of regarding solar glare during its first year of operation to the Commission, and the reporting of its responses to these complaints to the Commission. Consequently, the Commission imposes the following as conditions of approval:

- b) Elemental Energy Renewables Inc. shall use a standard anti-reflective coating for the project's solar panels.
- c) Elemental Energy Renewables Inc. shall file 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 Elemental Energy Renewables Inc.'s response to the complaint. Elemental Energy Renewables Inc. shall file this report no later than 13 months after the project becomes operational.

15. As Elemental Energy has satisfied the condition that the final selection of equipment for the project will not increase the land, noise, or environmental impacts beyond those reflected in its previous application, Condition 3d of Approval 25451-D02-2020 has been removed.

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

4 Decision

17. Pursuant to sections 11 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 26213-A001 and grants Elemental Energy Renewables Inc. the approval set out in Appendix 1 – Power Plant Approval 26213-D02-2021– February 17, 2021, to construct and operate the Chappice Lake Solar Project.

18. The appendix will be distributed separately.

Dated on February 17, 2021.

Alberta Utilities Commission

(original signed by)

Carolyn Dahl Rees
Chair

(original signed by)

Cairns Price
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 26213-D01-2021 that require a subsequent filing with the Commission and will be included as a condition of Power Plant Approval 26213-D02-2021:

- Elemental Energy Renewables Inc. shall submit an annual post-construction monitoring survey report to Alberta Environment and Parks (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 Subsection 3(3) of Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants*.
- Elemental Energy Renewables Inc. shall file 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 Elemental Energy Renewables Inc.'s response to the complaint. Elemental Energy Renewables Inc. shall file this report no later than 13 months after the project becomes operational.

The following is a condition of Decision 26213-D01-2021 that does not require a subsequent filing with the Commission:

- Elemental Energy Renewables Inc. shall use a standard anti-reflective coating for the project's solar panels.