



TERIC Power Ltd.

eReserve2 Battery Energy Storage Power Plant Project

August 21, 2020

**Alberta Utilities Commission**

Decision 25691-D01-2020

TERIC Power Ltd.

eReserve2 Battery Energy Storage Power Plant Project

Proceeding 25691

Application 25691-A001

August 21, 2020

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## **1 Decision summary**

1. In this decision, the Alberta Utilities Commission considers whether to approve an application from TERIC Power Ltd. to construct and operate the eReserve2 Battery Energy Storage Power Plant Project, and to interconnect the facility to FortisAlberta Inc.'s distribution system.
2. For the reasons outlined in this decision, 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.

## **2 Introduction**

3. TERIC Power Ltd. applied to the Commission for approval to construct, operate and interconnect a 20-megawatt (MW) battery energy storage facility, designated as eReserve2 Battery Energy Storage Power Plant Project (the project). TERIC sought approval of the project as a power plant, pursuant to Section 11 of the *Hydro and Electric Energy Act* and to connect it to FortisAlberta Inc.'s 25-kilovolt distribution system pursuant to Section 18 of that act. The application was registered on June 26, 2020, as Application 25691-A001.
4. The Commission provided notice of the application in accordance with Rule 001: *Rules of Practice*. No statement of intent to participate (SIP) was received in response to the notice.

## **3 Discussion**

5. The project would consist of 14, 1.5-MW (approximately) lithium-ion battery modules with a total nameplate storage energy capacity of 20 MW-hours. The modules would be arranged in groups of two and each group would be paired with a step-up transformer. The modules would be housed in a building with a heating, ventilation and air conditioning system as well as communications equipment and interface boards.
6. The proposed project would be sited on approximately eight acres of privately owned and cultivated land and located in the Municipal District of Wainwright No. 61, approximately 20 kilometres north of the village of Irma in the southeast quarter of Section 11, Township 48, Range 9, west of the Fourth Meridian.
7. TERIC stated that it developed and conducted a participant involvement program in accordance with Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments* and AUC Bulletin 2020-13: *Interim*

*changes to AUC participation involvement program and related information requirement;* one-on-one phone consultation was conducted with landowners, residents and occupants within 800 metres of the project and notification was provided to stakeholders within two kilometres of the project, including landowners, residents and occupants, leaseholders and other interest holders. TERIC also advertised and conducted a virtual community open house, accessible online or by phone to engage other potentially affected stakeholders outside of the two kilometres of the project's boundary. The Municipal District of Wainwright No. 61 provided TERIC with an acknowledgement of notification and verification of non-objection for the project.<sup>1</sup>

8. TERIC indicated that it had a telephone meeting with the fire chief of the Village of Irma Fire Services about the project. Project plans, including the project's emergency response plan (ERP) were introduced during the discussion with the fire chief, who determined that no changes to the project's ERP were required. TERIC committed to including the Village of Irma Fire Department in all project updates and other communications about the project.<sup>2</sup>

9. TERIC submitted a noise impact assessment for the project that identified the fans and transformers as the main sound sources. For the purposes of the noise assessment, the transformers were assumed to be operating at full load at all times, while the fans were assumed to be operating at full load during the daytime period and at 60 per cent during the nighttime period. The assessment predicted that the maximum sound levels from the project would not result in any net increase beyond the existing baseline sound levels. TERIC stated that the project is predicted to comply with both the daytime and nighttime permissible sound levels as defined in Rule 012: *Noise Control*. TERIC confirmed that the fan load operating capacity would not exceed 60 per cent during nighttime hours, and that it was designed as such to avoid affecting the battery facility's performance or operation.<sup>3</sup>

10. TERIC contracted Bear Tracks Environmental Services (2015) Ltd. to complete an environmental assessment report for the project. Bear Tracks concluded that the project area contains minimal habitat deemed suitable to wildlife species but that there is some suitable wildlife habitat in the area. It also concluded that the operation of the project is anticipated to have limited residual environmental effects.<sup>4</sup> TERIC committed to following all recommended mitigation and best management practices noted in Bear Tracks' report, as well as applicable guidelines and standards.

11. TERIC stated that an *Environmental Protection and Enhancement Act* industrial approval application is not required. It contacted Alberta Environment and Parks (AEP) to receive feedback on any mitigation or monitoring measures that AEP might recommend, however, AEP did not provide any feedback or recommendations beyond the requirements identified in TERIC's environmental assessment report.

12. TERIC submitted that because the project site is on freehold disturbed lands that have no listed or recorded historical resource value, an application for *Historical Resources Act* clearance is not required.

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<sup>1</sup> Exhibit 25691-X0013, Participant Involvement Program, PDF pages 67 to 76.

<sup>2</sup> Exhibit 25691-X0014, TERIC Power eReserve2 AUC Rule 007 Application, PDF page 6.

<sup>3</sup> Exhibit 25691-X0020, Response to IR - TERIC-AUC-2020JUL06-001 to 004, PDF page 2.

<sup>4</sup> Exhibit 25691-X0002, Environmental Assessment, PDF page 29.

13. TERIC stated that although its equipment supplier, make and model of the battery storage components have not been formally selected, it expects that the project would use lithium-ion battery modular units such as Tesla Megapacks or similar.

14. TERIC explained that the battery system is designed and tested to be resistant to single cell thermal runaway propagation. If a site fire occurs, it would be managed by standard fire service response equipment that utilizes water as a fire suppressant.<sup>5</sup>

15. TERIC indicated that the expected lifespan of the project is 20 years and that it plans to recycle batteries within North America at the project's end of life. The materials recovered from the battery modules would include nickel, cobalt, copper, aluminum, steel and lithium, for further refinement and use in new applications.<sup>6</sup>

16. TERIC committed to follow guidelines similar to AEP's *Conservation and Reclamation Directive for Renewable Energy Operations (C&R Directive)*. TERIC stated that it has protocols in place to ensure that sufficient funds are available for decommissioning and reclamation at the project's end of life.<sup>7</sup>

17. The battery energy storage facility would be charged from and discharged to the Alberta Interconnected Electric System (AIES) through an interconnection point with FortisAlberta's 25-kilovolt distribution system. TERIC received a letter from FortisAlberta stating that it was prepared to allow the interconnection of the project to its distribution system.<sup>8</sup>

18. TERIC stated that it has been having regular conversations with the Alberta Electric System Operator (AESO) about the project and that the project is currently in Stage 1 of the AESO's connection process. It confirmed that the project would participate in both the energy market and the ancillary services market. TERIC added that the AESO had not expressed any concerns with the interconnection proposal or the project in general.<sup>9</sup>

19. If granted approval by the Commission, TERIC plans to start construction work in April 2021. It anticipates completing project commissioning and testing in June 2021, with the expected in-service date in the early third quarter of 2021.

#### 4 Findings

20. TERIC applied to the Commission to have its proposed battery energy storage facility approved as a power plant. The facility would not be associated with any other existing or proposed power plant and the battery modules would be charged from, and discharge energy to, the AIES through an existing feeder at FortisAlberta's Buffalo Creek 526S Substation.

21. The Commission considered the issue of whether a stand-alone battery energy storage facility was a power plant or generating unit as that term is defined in the *Hydro and Electric Energy Act* in Decision 25205-D01-2020.<sup>10</sup> In that decision, which related to a battery energy

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<sup>5</sup> Exhibit 25691-X0014, TERIC Power eReserve2 AUC Rule 007 Application, PDF page 17.

<sup>6</sup> Exhibit 25691-X0014, TERIC Power eReserve2 AUC Rule 007 Application, PDF page 18.

<sup>7</sup> Exhibit 25691-X0002, Environmental Assessment, PDF page 33.

<sup>8</sup> Exhibit 25691-X0011, DFO Letter of Non-Objection.

<sup>9</sup> Exhibit 25691-X0014, TERIC Power eReserve2 AUC Rule 007 Application, PDF pages 16 and 17.

<sup>10</sup> Decision 25205-D01-2020: TERIC Power Ltd. - eReserve1 Battery Energy Storage Power Plant Project, Proceeding 25205, Application 25205-A001, April 6, 2020.

storage facility that was very similar to the one proposed in this proceeding, the Commission was satisfied that the project met the definition of a power plant under the *Hydro and Electric Energy Act*. The Commission is likewise satisfied that TERIC's proposed battery energy storage facility in this proceeding meets the definition of a power plant.

22. The Commission has determined that the technical, siting, environmental and noise aspects of the proposed project have met the Commission's Rule 007 and Rule 012 requirements. The Commission observes that there are no outstanding public or industry objections or concerns with the project and finds TERIC's participant involvement program to be adequate.

23. From an environmental perspective, the project area is relatively small in size and the land has been previously disturbed by cultivation. The Commission accepts the environmental assessment report's conclusion that the project lands include minimal habitat that is suitable for wildlife species. Construction activities are anticipated to take approximately two to three months, which is a relatively short construction period. Considering TERIC's commitment to follow all mitigation measures recommended in the environmental assessment report, and all applicable standards and guidelines, the Commission is satisfied that the project will have minimal impacts on the environment.

24. After considering the record of this proceeding and for the reasons stated above, 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, in accordance with Section 17 of the *Alberta Utilities Commission Act*.

## **5 Decision**

25. Pursuant to Section 11 of the *Hydro and Electric Energy Act*, the Commission approves Application 25691-A001 and grants to TERIC Power Ltd. the approval set out in Appendix 1 – Power Plant Approval 25691-D02-2020 – August 21, 2020.

26. Pursuant to Section 18 of the *Hydro and Electric Energy Act*, the Commission approves Application 25691-A001 and grants to TERIC Power Ltd. the connection order set out in Appendix 2 – Connection Order 25691-D03-2020 – August 21, 2020.

27. The appendices will be distributed separately.

Dated on August 21, 2020.

### **Alberta Utilities Commission**

*(original signed by)*

Anne Michaud  
Vice-Chair