



Irrican Power Ltd.

Raymond eBAR Battery Energy Storage Facility

April 23, 2024

Alberta Utilities Commission

Decision 28805-D01-2024

Irrican Power Ltd.

Raymond eBAR Battery Energy Storage Facility

Proceeding 28805

Application 28805-A001

April 23, 2024

Published by the:

Alberta Utilities Commission

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1 Decision summary

1. In this decision, the Alberta Utilities Commission approves an application from Irrican Power Ltd. to construct and operate the 15.4-megawatt (MW)/30.8 megawatt-hour Raymond eBAR Battery Energy Storage Facility (the project) located in Warner County and to connect the project to the existing Raymond Reservoir Hydro Plant (hydro plant), which connects to AltaLink Management Ltd.'s transmission system.

2 Application

2. Irrican filed an application with the Commission for approval to construct and operate the project and to connect the project to the existing Irrican owned hydro plant, which connects to AltaLink's transmission system. The project would charge from either the hydro plant or the Alberta Interconnected Electric System (AIES), and discharge to the AIES

3. The project would consist of eight lithium iron phosphate Tesla 2XL Megapacks and four associated step-up transformers. The project would also include a control building to house protection and control equipment.

4. The project would be sited on approximately 0.5 acres of privately owned cultivated land adjacent to the existing hydro plant. The project is located in the southwest quarter of Section 30, Township 5, Range 20, west of the Fourth Meridian, approximately six kilometers south of the town of Raymond, within the County of Warner, as shown on the map in Figure 1.

Figure 1. Proposed Raymond eBAR Battery Energy Storage Facility boundary



5. Irrican estimated a construction start date in August 2024 with commercial operation beginning in February 2025.

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

3 Findings

7. 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.

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, Hydro Developments and Gas Utility Pipelines* have been met.

9. The Commission finds that Irrican's participant involvement program satisfies the requirements of Rule 007. The participant involvement program included notifying stakeholders, including landowners within 800 metres of the project boundary, and reasonable efforts for personal consultation with stakeholders within 400 metres of the project boundary and a community open house. Further, no submissions were received in response to the AUC's notice of application.

10. The project complies with the requirements of Rule 012: *Noise Control*, and the Commission notes there are no dwellings within 1.5 kilometres of the project area.

11. Irrican prepared an emergency response plan, including a risk assessment that considers fire preparedness and response in a rural location. Irrican also consulted with the local fire departments and the County of Warner. Irrican stated that the emergency response plan adequately addresses risks associated with the proximity to the hydro power plant, and that common ownership of both facilities will aid in a coordinated emergency response.

12. The Commission understands that the use of lithium iron phosphate batteries mitigates some safety concerns related to battery technology because the materials in a lithium iron phosphate battery are thermally and structurally stable chemical compounds that are less prone to thermal runaway than those in other types of lithium-ion batteries. Irrican stated that both local and remote monitoring of operating parameters will be employed, including the use of a thermal imaging camera for early detection of potential thermal runaway events. However, given that not all risks related to fire can be mitigated, the Commission imposes the following conditions of approval:

- a) Irrican Power Ltd. shall continually review and update the site-specific emergency response plan, and make any changes required to incorporate input received from local fire departments on mitigation measures and other related requirements, and from Warner County and other interested stakeholders. The updated plans are to be provided to Warner County and local fire departments.

- b) Irrican Power Ltd., and any subsequent operator, shall at all times during the construction and operation of the project, maintain insurance coverage that is sufficient to protect against any reasonably foreseeable liabilities.
- c) Irrican Power Ltd., and any subsequent operator, shall implement any ongoing upgrades to improve the safety of the project, including but not limited to firmware and software enhancements, monitoring capability enhancement, process changes and safety standards as they are developed and notify the Commission of these changes.

13. Irrican retained Calvin Consulting Group Ltd. to conduct air quality dispersion modelling and risk assessment report for the project. The modelling assumed a conservative scenario where 10 per cent of the batteries in one module would burn simultaneously until such time as all modules in a container have burned. The report stated it is highly unlikely for the fire to spread to other containers. The modeling outputs identifies that in the event of a fire, the *Alberta Ambient Air Quality Objectives* will be exceeded for hydrogen fluoride within 100 metres of the project footprint, however, exceedances will not be observed at two residential receptors within two kilometres. Likewise, for the air contaminants of concern, no offsite Immediately Dangerous to Life or Health values for hydrogen fluoride would be exceeded at or beyond the project fence line.

14. The Commission is satisfied that Irrican consulted with Alberta Environment and Protected Areas (AEPA) and determined that a referral report is not required for this project. Further, as noted in the project's environmental evaluation, the project area does not serve as high value wildlife habitat, is entirely on private, cultivated land, and is adjacent to an existing disturbance.

15. The Commission accepts Irrican's commitment to incorporate pre-disturbance site assessment (PDSA) outcomes into a PDSA report and the Commission expects the content of this report will be updated with any outcomes from construction monitoring, and interim monitoring. Likewise, the Commission expects this PDSA report will be used to inform reclamation planning to the satisfaction of the applicable reclamation criteria at the time of reclamation.

16. Irrican confirmed that the project will be decommissioned and reclaimed at the project end of life in accordance with applicable legislative requirements and the operator will ensure sufficient funds are available at the project end of life to cover the cost of decommissioning and reclamation. Further, Irrican plans to fully recycle the battery packs at their end-of-life through a recycling facility approved to recycle the content, in coordination with Tesla guidelines and as required by provincial and federal regulations at the time of decommissioning.

17. Given the size and attributes of this project, the Commission considers that Irrican's proposed reclamation plan is acceptable at this time. The Commission continues to expect applicants to fully reclaim projects and bear the costs of doing so.

18. The project is proposed to connect to the existing Irrican owned hydro plant, which connects to AltaLink's transmission system. Irrican stated that AltaLink would not require additional transmission lines or related infrastructure to connect the project to the AIES and that it is consulting with the Alberta Electric System Operator and AltaLink regarding the project's

connection. The Commission finds that Irrican has met the information requirements for a connection order of this nature.

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

4 Decision

20. Under sections 13.01(1), 18 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 28805-A001 and grants Irrican Power Ltd. the approval set out in Appendix 1 - Energy Storage Facility Approval 28805-D02-2024 to construct and operate the Raymond eBAR Battery Energy Storage Facility and Appendix 2 – Order 28805-D03-2024 to connect the project to the existing Raymond Reservoir Hydro Plant, which connects to AltaLink Management Ltd.’s transmission system.

21. The appendices will be distributed separately.

Dated on April 23, 2024.

Alberta Utilities Commission

(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 28805-D01-2024 that do not require a subsequent filing with the Commission:

- Irrican Power Ltd. shall continually review and update the site-specific emergency response plan, and make any changes required to incorporate input received from local fire departments on mitigation measures and other related requirements, and from Warner County and other interested stakeholders. The updated plans are to be provided to Warner County and local fire departments.
- Irrican Power Ltd., and any subsequent operator, shall at all times during the construction and operation of the project, maintain insurance coverage that is sufficient to protect against any reasonably foreseeable liabilities.
- Irrican Power Ltd., and any subsequent operator, shall implement any ongoing upgrades to improve the safety of the project, including but not limited to firmware and software enhancements, monitoring capability enhancement, process changes and safety standards as they are developed and notify the Commission of these changes.