

# Saddle Hills Battery Energy Storage System Project

## Overview

June 2024

### Introduction

TERIC Power Ltd (TERIC) is pleased to introduce our proposed Saddle Hills Battery Energy Storage System (BESS) project (the Project). TERIC intends to apply to the Alberta Utilities Commission (AUC) regarding the construction and operation of a new 33-megawatt (MW) battery energy storage facility, called the Saddle Hills Battery Storage Project. The Project will be located at the NE-31-7-74 W6M land location in the County of Grande Prairie No.1 (the County), located roughly 9 kilometers (km) northeast of the Town of La Glace, Alberta.



The Project will consist of a 33 MW capacity battery storage system. The Project will be located on privately owned, previously cultivated land and will have a total footprint of less than 1.4 hectares. TERIC will be the developer and owner of the Project. Connecting to the local distribution system, this standalone facility will store electricity during times of high supply and release it during times of high demand, typically in the evening or at night. This can enhance both grid reliability and affordability. As an introduction, we are pleased to provide you with the following Project details:

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- Site Selection and Project Footprint
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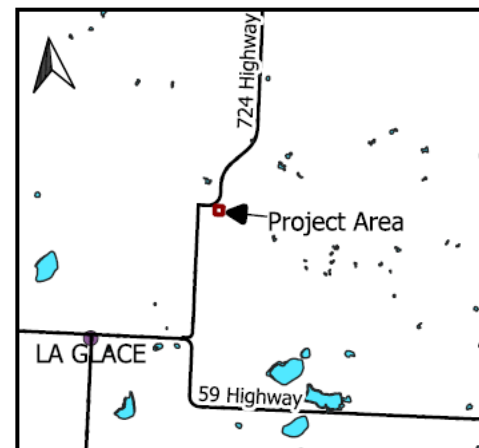
## Battery Energy Storage System Overview

Battery storage does not create new electricity, but rather holds previously generated electricity in large capacity batteries. For the Project, electricity will come from various sources on the Alberta electricity grid at times of high supply (typically during the day, when renewable energy generation is highest), and discharged upon demand from the Alberta Electricity System Operator (“AESO”). The battery energy storage system will effectively return energy to the electricity grid when needed for electric system support.

The worldwide need for energy storage, and specifically BESS, has increased in recent years<sup>1</sup>, as renewable energy sources such as wind and solar generation make up an increasingly larger percentage of the electricity supply mix<sup>2</sup>. While renewable power sources have a low carbon footprint, the output produced is intermittent. This requires dynamic grid management mechanisms and tools to match supply and demand, BESS installations provide a unique solution to this grid management opportunity while also being able to store energy and releasing it to the electricity grid when needed to meet supply requirements.

## Site Selection and Project Footprint

The Project location was selected for a number of suitable features which are supportive for a battery storage facility. Notably, the proposed site is on previously disturbed land, meaning minimal locational and environmental impact. The proposed site is also located directly adjacent to the ATCO Electric owned Saddle Hills 865S substation, which will result in reduced power losses and increased operating efficiency. ATCO Electric expects approximately 400m of new 25kV distribution powerline needing to be constructed.



The Project will cover a small footprint of less than 1.4 hectares, with a maximum height of 5.5 metres for the battery storage infrastructure. The battery units will be placed on foundations supported by pilings driven or screwed into the ground. For security, the facility will be enclosed within a fenced area with the units fortified with industry standard protective measures and monitored in real-time with installed cameras and sensors.

<sup>1</sup> Hannah Ritchie and Pablo Rosado (2020) - “Electricity Mix” Published online at OurWorldInData.org. Retrieved from: <https://ourworldindata.org/electricity-mix> [Online Resource]

<sup>2</sup> Alberta Electric System Operator (2022) – “Alberta’s Power System in Transition” Published online at aeso.ca. Retrieved from: <https://www.aeso.ca/future-of-electricity/albertas-power-system-in-transition/> [Online Resource]

<sup>3</sup> Rystad Energy (2023) – “New battery storage capacity to surpass 400 GWh per year by 2030 – 10 times current additions” Published online at rystadenergy.com. Retrieved from: <https://www.rystadenergy.com/news/new-battery-storage-capacity-to-surpass-400-gwh-per-year-by-2030-10-times-current> [Online Resource]

## **Technology Selection**

There are many installations of battery technology in Canada and throughout the United States, including sites currently under development and 10 utility scale projects operating in Alberta since 2017. Globally there are thousands of installed megawatts of battery storage<sup>3</sup>, with some operating for over two decades.

TERIC is currently working with top-tier global manufacturers of battery storage technology to select the appropriate battery equipment for the Project. It is important to TERIC to choose a supplier with an established history of installations for battery equipment with considerations for safety, operational efficiency, construction quality, and a proven reliability record.

## **Visual Impact**

The facility will have minimal visual impact, due to the low height, scale, and neutral line of sight. Operation of the battery storage system will not increase local traffic, with TERIC technicians periodically accessing the site from Township Road 750. During construction, the site will receive a number of semi-truck sized loads to bring the modular equipment into site, as well as project staff accessing the site with light duty pickup trucks.

## **Noise**

BESS have inherently low noise profiles, with minimal sound originating from the Project's heating, cooling, and ventilation features for the BESS units. A Noise Impact Assessment ("NIA") will be prepared for the Project to predict noise levels and confirm that levels are below the permissible noise levels outlined in AUC Rule 012: Noise Control. The NIA will evaluate potential noise impacts with consideration of any existing and proposed infrastructure in the area. The NIA report will be submitted with the AUC application.

## **Emissions and Air**

The battery equipment will not emit carbon dioxide (CO<sub>2</sub>) or nitrogen oxides (NO<sub>x</sub>). There will be minimal air emissions from vehicles and equipment during construction of the Project. No odours are associated with the construction or operations of the Project. An air dispersion modelling report will be completed for the facility and submitted with the AUC application.

## **Environmental Assessment**

The Project area is on previously disturbed land that has been used for agriculture and based on environmental assessments conducted to date the impact to habitat, wildlife, and the environment will be minimal. An environmental site assessment was conducted for the BESS site in November 2023 by a wildlife and environmental biologist to assess the potential impacts on wildlife, vegetation, and cultural resources. The results of the environmental site assessment will be included in the environmental evaluation report that will be submitted with the AUC application.

## Safety

The Project is developing and will implement measures to address and mitigate risks to the surrounding area from fire, project-related traffic, and public nuisance concerns from dust and noise. These measures are established by working closely and listening to input from stakeholders such as local emergency response teams. This stakeholder engagement continues throughout the Project life. The feedback received will be incorporated into the site-specific emergency response plan (ERP). TERIC will prioritize safety considerations to lead all key decisions when selecting industry leading equipment, to adhere to the highest applicable safety codes, standards, and specifications. A copy of the ERP will be submitted with the AUC application.

During operations, the site will be monitored in real-time using cameras, sensors, and alarms. In the event of a triggered alarm, trip or camera image of concern, facility operators will be alerted immediately and when required, the ERP will be implemented, and response actions initiated.

## Decommissioning and Reclamation

TERIC's decommissioning and reclamation plans address activities related to the restoration of any land negatively impacted by the Project. TERIC will work closely with the host landowner to ensure decommissioning and reclamation activities are carried out as per the lease agreement. At the end of Project life, the Project infrastructure will be disassembled and removed from site. Foundation pilings will be removed or cut below the ground surface and gravel will be removed. Topsoil, then grass seed will be spread over the disturbed area to return the site to a similar condition as prior to development. A report estimating the costs of reclaiming the proposed project will be submitted with the AUC application.

## Regulatory Approvals

**Alberta Environment and Protected Areas**— an environmental evaluation report will be submitted to the AUC and general project information will be provided to Alberta Environment and Protected Areas (AEPA) to confirm if an environmental assessment and an *Environmental Protection and Enhancement Act* (EPEA) application is required by AEPA. The Project has been sited to comply with current federal and provincial environmental legislation for the conservation and protection of wildlife and wildlife habitat. A summary of consultation with AEPA, including AEPA's review of EPEA requirements, will be submitted with the AUC application.

**Historical Resources Act** – TERIC assessed Historical Resources using the Alberta Online Permitting and Clearance database in April 2024. Based on the assessment with the Historical Resources Management Branch of the Alberta government, it was confirmed that there are no known historical, archaeological, or paleontological impacts that have a Historical Resource Value.

**AUC Rule 007 Application** – The AUC regulates the utilities sector, natural gas, and electricity markets to protect the social, economic and environmental interests of the province. The AUC is an independent, quasi-judicial agency of the province of Alberta and is responsible for ensuring that the delivery of Alberta’s utility services takes place in a manner that is fair, responsible, and in the public interest. Please review the enclosed AUC pamphlet which provides an overview of the AUC application process.

**Municipal Permitting** – In March 2024, TERIC initiated contact with representatives of the County of Grande Prairie to introduce the Project. Discussions are ongoing through TERIC's stakeholder engagement process, including required consultation, development permit application, and zoning and planning activities with the County. The Project land is currently zoned for agricultural use under the County’s land-use bylaw. The Project will apply to have the land use amended to include a BESS, if required, and will apply to the County’s development board to receive a development permit prior to construction.

**Project Schedule**



*\*The schedule is preliminary and future dates may shift as development progresses.*

**Project Information**

The Project team is seeking input on the proposed Project from interested stakeholders and is available to discuss the Project. We invite you to contact Dave Carscadden, TERIC Development Manager, to share your questions, comments, feedback, or to schedule a telephone consultation to discuss the Project. Please refer to the Contact information is listed on the following page.

## About TERIC Power

TERIC Power Ltd. is currently the largest BESS developer in Canada. An innovative developer, builder, owner, and operator of BESS projects, TERIC is a pioneer in utilizing proven energy storage technologies in innovative commercial and technical applications. Led and advised by a team of energy storage experts and pioneers, TERIC has worked to design and build innovative storage-enable clean energy projects that have helped TERIC to assist in the energy transition in Alberta. Noteworthy accomplishments include the conceptualization, development, and energization of 120MW of BESS projects and another portfolio of over 300 MW of BESS projects under development. Incorporated in 2013, TERIC is a Canadian-controlled private corporation with headquarters in Calgary, Alberta.

## Contact Information

For questions, comments, information or to discuss the project, please contact Dave Carscadden, Development Manager at:

403-497-6260 or [dave.carscadden@tericpower.com](mailto:dave.carscadden@tericpower.com)

For more information about TERIC or the Saddle Hills BESS Project, please visit:

<https://tericpower.com/project/saddle-hills-storage-project/>