

# eReserve3 Battery Energy Storage System Project Overview

November 2020



## Introduction

TERIC Power Ltd (“TERIC”) is pleased to introduce our proposed eReserve3 Battery Storage Project (the “Project”). TERIC intends to apply to the Alberta Utilities Commission (“AUC”) for a permit to install the Project at the SE-02-73-05-W6M surface location, approximately 10 kilometers northeast of the Hamlet of Clairmont, in the County of Grande Prairie No. 1 (the “County”), Alberta. The facility will be located on privately owned and disturbed land.

The Project will consist of a 20-Megawatt (MW) capacity lithium-ion battery storage system. This standalone facility will be used to store electricity for discharge into the local distribution system upon demand from the Alberta Electric System Operator (“AESO”).

As an introduction, we are pleased to provide you with the following Project details:

- What is a Battery Storage System?
- Project Overview
- Site Selection
- Technology Selection
- Project Footprint & Visual Impact
- Sound
- Emissions and Air
- Environmental Assessment
- Safety
- Decommissioning & Reclamation
- Regulatory Approvals
- Project Schedule
- About TERIC Power
- Contacts

## What is a Battery Storage System, and why is it required?

Battery storage does not create new electricity, but rather holds previously generated electricity in large capacity batteries. For the Project, electricity will be drawn from the Alberta electricity grid, then stored in in batteries for a period of time, and eventually released as stored energy upon demand for the AESO. The battery storage system will effectively return energy to the electricity grid when needed for electric system support – generally when demand is high.

The worldwide need for battery storage systems has increased in recent years, as renewable energy sources such as wind and solar generation make up an increasingly larger percentage of the electricity supply. While renewable power sources have a low carbon footprint, the output produced is inherently intermittent and unpredictable. This situation has resulted in a challenge for grid management, in that these renewable electricity sources cannot be adjusted in response to increases or decreases in system demand. Battery storage systems provide a unique solution to this challenge, as battery technology can enable the shift of power output into other hours of the day or upon need from increasing grid demand.

## **Project Overview**

The Project is proposed at the SE-02-73-05-W6M surface location, approximately 10 kilometers northeast of the Hamlet of Clairmont, in the County of Grande Prairie No. 1, Alberta. With a nameplate capacity of 20-Megawatts (MW), the battery storage system will be used to store electricity that will be discharged to the Alberta electricity distribution grid upon demand. Charging of the battery will be fulfilled from the Alberta electricity grid, with no new transmission infrastructure required to accommodate the Project.

## **Site Selection**

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. With relatively close proximity to the ATCO Electric Ltd. (“ATCO”) owned Mercer Hill 728S substation, this will result in reduced power losses and increased operating efficiency. Due to this proximity, ATCO expects negligent 25kV distribution powerline needing to be constructed.

## **Technology Selection**

Lithium-ion battery technology is a safe, reliable and proven technology used around the world for the efficient storage of electricity. There are multiple installations of this technology in Canada and the United States, including sites currently under development or operating in Alberta since 2017. Globally there are thousands of installed megawatts of installed battery storage, with some operating for over a decade.

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

## **Project Footprint & Visual Impact**

The site will cover a relatively small footprint on privately-owned cultivated lands, covering approximately five acres with a maximum height of 35 feet. The batteries will be situated on a suitable foundation and secured within a chain link fence that will surround the containerized units. The containerized enclosures and buildings will be coloured neutrally to minimize adverse visual impact. For security, the facility will be enclosed within a fenced area with the containers fortified with industry standard protective measures.

The facility will have a low observable presence, 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 730 and Range Road 51. During construction, the site will receive a number of semi-sized loads to bring the modular equipment into site, as well as project staff accessing the site with light duty pickup trucks.

## **Sound**

Battery storage systems have inherently low noise profiles, with minimal sound originating from the Project’s heating, cooling, and ventilation features. The sound output will be below the approved noise levels as per the AUC’s guidelines. Engineering design practices will be used to ensure compliance with the AUC’s strict requirements. TERIC has engaged a noise specialist to conduct a Noise Impact Assessment (“NIA”) in October 2020. The NIA will evaluate potential noise impacts with consideration of any existing and proposed infrastructure in the area. A copy of the NIA will accompany the AUC application.

## Emissions and Air

The battery equipment will not emit CO<sub>2</sub> and NO<sub>x</sub>, which is in compliance with the Alberta Energy Regulator's ("AER") guidelines. There will be no air emissions or odours associated with the installation.

## 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. As required by the AUC, an environmental study will be conducted by wildlife and environmental biologists starting in September 2020 to assess the potential impacts on wildlife, vegetation and cultural resources. A copy of the environmental assessment will accompany the AUC application.

## Safety

The Project will leverage the expertise of the global battery manufacturers to mitigate risks such as rupture, explosion, fire, and leakage. The battery technology under evaluation is compliant with applicable safety codes and standards that will ensure the risk to public safety and surrounding environment is negligible. As part of TERIC's corporate Emergency Response Plan ("ERP"), the facility will be equipped with all required safety measures to manage the risks to facility equipment and to the surrounding area. The Project will operate using a Supervisory Control and Data Acquisition ("SCADA") system that directs information to TERIC's 24/7 operations team that oversees equipment function and responds to alarms/alerts. The ERP defines pre-planned procedures that will allow for an effective response in the unlikely event of an emergency. A copy of the ERP will accompany the AUC application.

## Decommissioning & Reclamation

TERIC's decommissioning and reclamation plans address activities related to the restoration of any land negatively impacted by the Project, and identifies battery technology suppliers with proven battery recycling plans in place. The Project lease also requires that we remove any improvements made to the land, which includes the removal of the concrete base and to restore the lands to their former use. TERIC will work closely with the host landowner to ensure decommissioning and reclamation activities are carried out as per the lease agreement and complies with current Alberta decommissioning regulations.

## Regulatory Approvals

**Alberta Environment and Parks** – TERIC's environmental assessment report will be available for review by the AUC and Alberta Environment and Parks ("AEP") to ensure proper siting and wildlife mitigation plans to comply with current environmental legislation identified in the AEP Wildlife Management policy for the conservation and protection of wildlife and wildlife habitat. The environmental report and AEP review (if any) will accompany the AUC application.

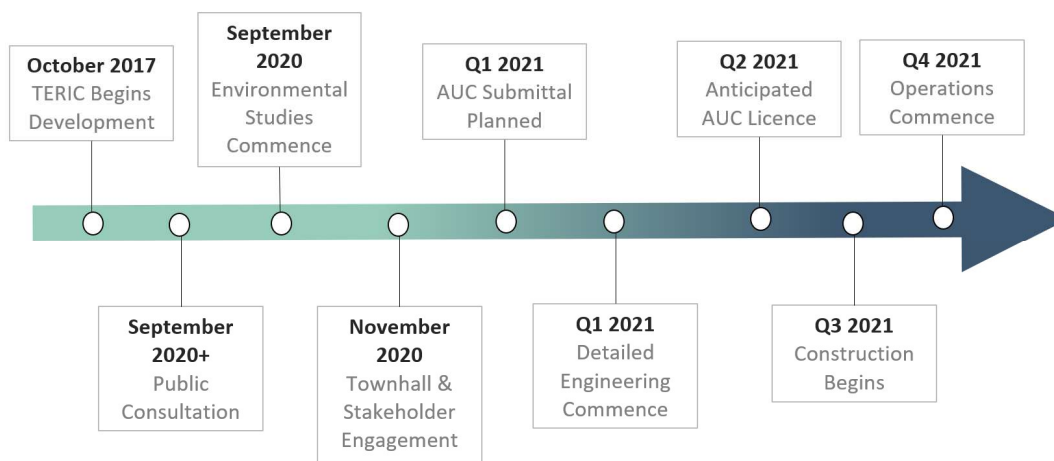
**Historical Resources Act** – TERIC conducted a Historical Resource Assessment ("HRA") in September 2020 to confirm that no historic resources would be impacted by the Project. Based on the assessment with the Historical Resources Management Branch of the Alberta government, it was confirmed that there are no historical, archaeological or paleontological impacts that have a Historical Resource Value.

**AUC Rule 007 Application** – The Alberta Utilities Commission regulates the utilities sector, natural gas and electricity markets to protect social, economic and environmental interests of. 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 service 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 application process.

**Municipal Permitting** – In October 2020, TERIC initiated contact with representatives of the County of Grande Prairie No. 1 to introduce the Project. The County committed to providing guidance and feedback for the Project, acknowledging that TERIC will be required to submit a municipal Development Permit application for approval of the Project. Discussions are ongoing through TERIC’s stakeholder engagement process, including all required consultation, application and planning activities with the County.

### Project Schedule

Subject to regulatory approval, construction of the battery storage facility is planned as follows:



### About TERIC Power Ltd.

TERIC Power Ltd. is an Alberta-based Independent Power Producer with a business focus on developing specialized portfolios of sustainable clean power generation projects. Since 2013, TERIC operates in both Alberta and Saskatchewan, with a number of waste-gas to power units including combined heat and power, flare gas capture to power projects and behind-the-fence power solutions.

TERIC’s vision is the delivery of better power generation solutions, focusing on locations where power demand is highest. TERIC’s management team is made up of “working owners”, who have the required management, engineering, and operational expertise to develop cost competitive projects and provide stable long-term power into the Provinces where we work and for the clients that we serve. TERIC develops, owns and operates industry-leading electricity generation projects in partnership with progressive stakeholders and leading technology providers.

For more information about TERIC Power Ltd. or the eReserve3 Project, **please visit:**  
[www.tericpower.com](http://www.tericpower.com)  
[www.ereserve-project.com](http://www.ereserve-project.com)