



Date: February 25, 2025

To: Special Areas Board

From: Devin Diano, *CEO/Director of Planning*

RE: Proposed Amendment to Land Use Order MSD: 064/24- Battery Energy Storage Systems

Purpose:

A proposed amendment to Land Use Order MSD: 064/24 to create definitions, uses and regulations for Battery Energy Storage Systems within Special Areas (Attachment 1).

Background:

Palliser Regional Municipal Services (PRMS) has received an application for an amendment to the Special Areas Board Land Use Order MSD: 064/24 (LUO). The application has been submitted by BER Hand Hills Wind LP (BluEarth). A copy of the application is attached (Attachment 2) and provides the rationale for the proposed amendment application.

In summary, BluEarth is proposing the Hand Hills Storage Project, a 10-megawatt (20 MWh) Battery Energy Storage System (BESS) located in Special Area No. 2, southwest of Hanna and southeast of Delia (SW-18-30-16-W4M). The project will be co-located with the existing Hand Hills Wind Facility and connected to the Highland 572S Substation. It will include six lithium iron phosphate storage containers, transformer skid systems, and a control building, all designed to meet Alberta Utilities Commission (AUC) regulatory standards. BluEarth is seeking a bylaw amendment to allow the facility as a Discretionary Use within the A-Agricultural District, with AUC approval expected by April 2025 and construction anticipated to begin in early 2026.

Proposed Land Use Order Changes:

Battery Energy Storage Systems (BESS) are technologies that store and discharge electricity, helping to balance energy supply and demand. There are two main types: Off-Site BESS, which are primarily designed to supply electricity to the grid, and On-Site BESS, which are intended to support on-site electricity needs but may also feed excess energy into the grid.

The proposed amendments introduce regulations for Battery Energy Storage Systems (BESS) by defining key terms and establishing where these systems are permitted or discretionary. Key changes include:

- **New Definitions:** Adding definitions for Battery Energy Storage Systems (BESS), distinguishing between Off-Site BESS, On-Site BESS-Small (<1 MW), and On-Site BESS-Large (≥1 MW).
- **Land Use District Updates:**
 - **Off-Site BESS** designated as a discretionary use in the Agricultural (A) and Rural Industrial (RI) Districts.
 - **On-Site BESS-Small** designated as a permitted use in multiple districts, including Agricultural (A), Hamlet (H), Rural Commercial (RC), Rural Industrial (RI), Grouped Country Residential (GCR), and Rural Mixed-Use (RMU).
 - **On-Site BESS-Large** designated as a discretionary use in the same districts as On-Site BESS-Small.
- **Development Regulations:** Establishing specific regulations for Off-Site and On-Site BESS, including Alberta Utilities Commission (AUC) approval requirements, setback requirements, and the need for Emergency Response Plans.
- **Permit Exemptions:** On-Site BESS-Small added to the list of uses not requiring a development permit

While the applicant's request specifically pertains to an Off-Site BESS, administration is proposing to add uses and regulations for On-Site BESS regulations at the same time, as these systems are becoming an emerging trend in energy storage. Adding these regulations now ensures a proactive approach to addressing future developments within the region.

It should also be noted that all BESS projects 1 MW or greater require an application process and approval through the AUC. Any permit issued by Special Areas for a BESS is required to be inline with the AUC approval, as per section 619 of the *Municipal Government Act (MGA)*.

Statutory Requirements

The proposed amendment to the LUO will require a public hearing, allowing those potentially affected by the amendment to present their concerns to the Board. The public hearing must be advertised in accordance with the *MGA*.

Recommended Motions:

1. The Board grant first reading to proposed amendments to Land Use Order MSD: 064/24
2. The Board set a public hearing date for March 25, 2025, allowing time for the proposed amendment to be circulated in conformance with the *MGA*.

Attachment 1: Proposed Amendments to Special Areas Land Order MSD 064-24

1. In Section 5: Definitions, add the following Uses and definitions in alphabetical order:

Battery Energy Storage System (BESS): One or more devices, assembled together, capable of storing and discharging electricity primarily intended to supply electricity to a building or to the electrical grid. This includes, but is not limited to, the following: battery cells; thermal, battery, and energy management system components; and accessory equipment, buildings and structures.

Off-Site Battery Energy Storage System: A Battery Energy Storage System (BESS) for the primary purpose of off-site use through the electrical grid.

On-Site Battery Energy Storage System- Small: A Battery Energy Storage System (BESS) with a nameplate capacity less than 1 Megawatt (MW), that is intended primarily to service on-site electricity needs but may, at times, discharge into the electric grid.

On-Site Battery Energy Storage System- Large: A Battery Energy Storage System (BESS) with a nameplate capacity of 1 Megawatt (MW) or greater, that is intended primarily to service on-site electricity needs but may, at times, discharge into the electric grid.

2. In Section 4: Land Use Districts, add Off-Site Battery Energy Storage as a discretionary use in the Agricultural District (A) and the Rural Industrial District (RI).
3. In Section 4: Land Use Districts, add On-Site Battery Energy Storage-Small as a permitted use in the Agricultural District (A), Hamlet District (H), Rural Commercial District (RC), Rural Industrial District (RI), Grouped Country Residential District (GCR) and the Rural Mixed-Use District (RMU).
4. In Section 4: Land Use Districts, add On-Site Battery Energy Storage-Large (BESS) as a discretionary use in the Agricultural District (A), Hamlet District (H), Rural Commercial District (RC), Rural Industrial District (RI), Grouped Country Residential District (GCR), and the Rural Mixed-Use District (RMU).
5. In Section 3: Specific Use Regulations, and the following specific use regulations in alphabetical and numerical order:

Off-Site Battery Energy Storage:

- 1) In addition to the Development permit application requirements stated in this Order, applications for an Off-Site Battery Energy Storage shall include a copy of the application and approval from the Alberta Utilities Commission (AUC).
- 2) Minimum setback requirements for an Off-site Battery Energy Storage shall adhere to the following:
 - a. setbacks from any provincial highway shall be as per Alberta Transportation and Economic Corridors.
 - b. setbacks from any municipal road allowance shall be 30.48m (100ft).
 - c. Where no road allowance is located between property lines where both parcels are included in the same Off-Site Battery Energy Storage project, no setback is required.
 - d. Where the adjacent parcel is not included in the Off-Site BESS project, the minimum setback shall be the greater of 30.48m (100ft). or the modeled sound level not exceeding 45 dBA to the adjacent property line.
- 3) An application for an Off-Site Battery Energy Storage must be accompanied by an Emergency Response Plan completed to the satisfaction of the Special Areas Board Fire Chief.

On-site Battery Energy Storage

- 1) In addition to the Development permit application requirements stated in this Order, applications for an On-Site Battery Energy Storage System- Large, shall include a copy of the application and approval from the Alberta Utilities Commission (AUC).
 - 2) An On-Site Battery Energy Storage must comply with all other municipal, provincial and federal regulations and legislation (e.g. the *Hydro and Electric Energy Regulation*).
 - 3) An application for an On-Site Battery Energy Storage-Large must be accompanied by an Emergency Response Plan completed to the satisfaction of the Special Areas Board Fire Chief.
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6. In Section 1.10 Development- Permit Not Required, Subsection 1.10.3, add On-Site Battery Energy Storage- Small, to the list of Uses not requiring a permit.
 7. Update Land Use Order Section references as required from the above changes.