

# Christian County Sabertooth Battery Energy Storage System

## Project Narrative

December 12, 2023

Black Mountain Energy Storage submits this narrative and accompanying site plan in support of the Commissioner's Court approval to construct a Battery Energy Storage System (BESS) in Christian County.

### Project Location, Property Zoning & Surrounding Uses

The site is along Old Prospect Rd approximately 1300 LF west of the intersection with Elk Valley Road along the north side of street and is adjacent to the existing substation.

The site has no zoning as it is not located within an incorporated City limits but is within the jurisdiction of Christian County.

Surrounding uses to the north, west and east is undeveloped land. Across Old Prospect Road is a single-family residence located approximately 500' south of the ROW.

High-voltage transmission power lines run above the southern portion of the site that abuts the ROW of Old Prospect Road. The site surrounds the existing Oncor Ozark South Substation.

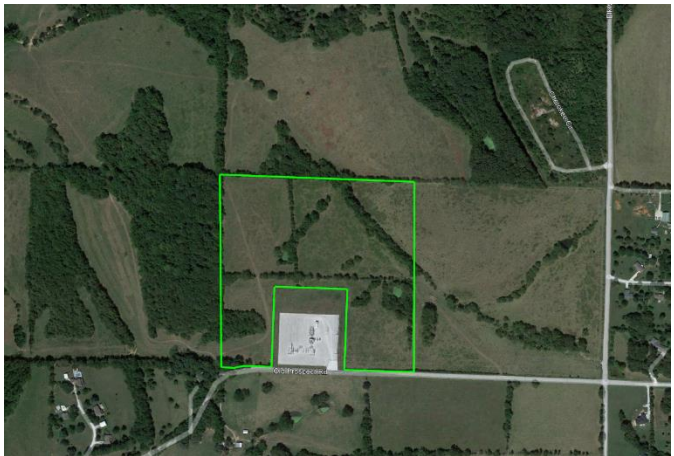


Figure 1 Aerial Exhibit with Project Area

## Project Description

Black Mountain Energy Storage will purchase the property to develop and construct a 75-Megawatt BESS. As a private business entity, Black Mountain Energy Storage will develop the facility known as Sabertooth BESS as a fully taxable development.



Figure 2 Site Plan Exhibit

The BESS will be a utility scale project intentionally located adjacent to the Oncor 138 Kilovolt substation. The substation was constructed in 2009 and is connected to the high-voltage transmission power lines that run east-west along Old Prospect Road on the south portion of both sites.

On-site construction will take 12-14 months and will involve 100-200 construction jobs. Whenever possible, Black Mountain Energy Storage prefers to hire local contractors to construct its facilities and maintain site landscaping.

The project will be a 300-Megawatt facility consisting of three operational elements:

### ➤ **Site Features-**

- Perimeter landscaping surrounding development with significant greenspace buffer areas;
  - The existing vegetation will be preserved in the buffer areas as much as feasible to maintain the fullness of the natural buffer.

- Fencing along the entire perimeter.
  - 6'-8' tall fencing will be provided on all sides of the development for security
- Stormwater detention.
- Private maintenance access drives through the site.
- Lighting will be provided throughout the site as necessary for security. Any lighting will have shielding in order to comply with any Dark Sky requirements from the County.



*Figure 3 Chain Link Fencing Example*

- **Site Substation-** a small substation for the BESS will have connectivity to the Oncor Substation and the rest of the transmission grid. General substation equipment is below:

- Main Power Transformer(s)
- Station Service Transformer(s)
- Switchgear(s)
- HV Breakers
- LV Breakers
- Current Transformers
- Potential Transformers
- Control Building
- Steel Framing
- Transmission Line
- Cabling



*Figure 4 Constructed Substation Facility*

- Please note, the substation equipment will all be below 45' however, final design may require a dead-end structure (final transmission pole that connects to the site) plus a lightning rod to be higher than 45'.
- The substation will be surrounded by an 8' tall chain link fence for security purposes.

- **Battery Energy Storage System Units-** approximately 56 metal battery systems will be installed at the site mounted on concrete pads.



*Figure 5 Constructed Battery Storage Facility*

- The enclosures will not exceed 40 ft in length, 8 ft wide and 8 ft tall.

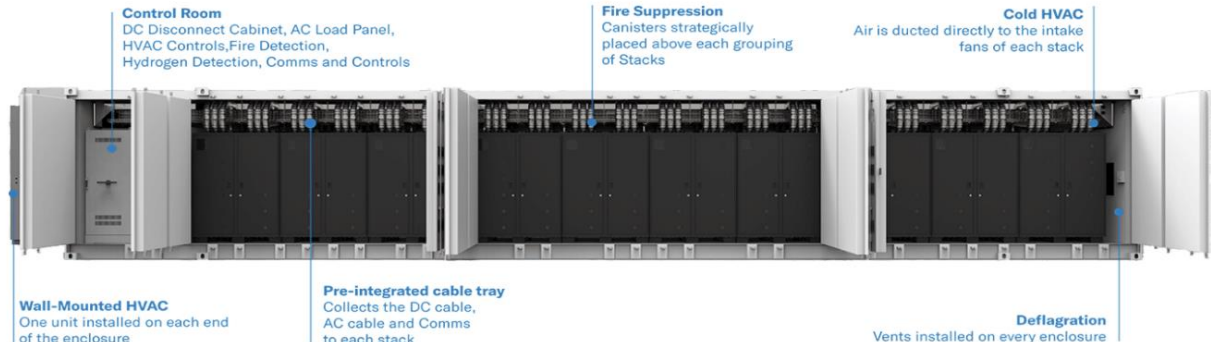


Figure 6 Layout of typical battery storage container

- Each enclosure houses lithium-Ion battery cells and related electrical components and is designed as self-contained operating unit with individual controls, dedicated power supply, HVAC, and emergency control systems.
- Other electrical components (transformers and inverters) will be connected by underground wiring. An enclosure typically provides around 3-5 megawatt hours of energy.
- Daily monitoring of the facility operations will be done remotely on a 24/7 basis. BESS maintenance will consist of 2-3 people a few times per month arriving in pickup trucks. Landscaping maintenance and snow removal will be performed by a local contractor.

## Conclusion

Black Mountain Energy Storage respectfully requests approval for the Sabertooth BESS.

Respectfully Submitted,

### **Black Mountain Energy Storage**

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### **Westwood Professional Services, Inc.**

Civil Engineers for Project