

Wildlife and Energy Storage

Similar to other stationary infrastructure, like warehouses, energy storage facilities generally have limited impacts and no unique wildlife interactions.

Key Takeaways

- 1 Battery energy storage systems (BESS) facilities are similar to stationary infrastructure.** With a limited footprint and self-contained units, standalone BESS facilities do not pose a threat to wildlife.
- 2 BESS developers comply with the requirements of relevant permitting authority or authorities** and typically conduct desktop site screening using geographic data layers to identify any potential sensitive resources within the proposed project area.
- 3 BESS facilities that are co-located with wind or solar projects** are typically considered within the overall facility scope when it comes to assessment and management of potential wildlife impacts.

BESS Design and Operation

Standalone BESS facilities are installations not co-located with generation. The facilities can range in size. A typical new utility-scale facility is between the size of a basketball court and a few soccer fields¹ and generally has a limited footprint of 0.1 acres per megawatt.^{2,3} BESS facilities consist of self-contained units — battery systems in specially engineered containers, outdoor-rated cabinets, or purpose-built buildings that keep out rain, dust, and other outdoor elements⁴ — with perimeter security fencing. It is most common to site standalone BESS projects on or directly adjacent to substation parcels or similar existing electrical infrastructure to access grid interconnection points. Batteries alone do not make noise, though there might be minimal noise from fans, HVAC systems, and transformers producing sounds at similar levels to standard commercial buildings. Lighting is also only required as dictated by electrical safety standards, though minimal lighting may also be present for site security and would not be more than typical streetlights.⁵



Photo credit: Plus Power

1 American Clean Power. What is Energy Storage? Accessed at: <https://cleanpower.org/resources/what-is-energy-storage/>
 2 Midwest Independent System Operator. Site Control Evidence Documentation Checklist. Updated April 15, 2024. Accessed at: <https://cdn.misoenergy.org/Site%20Control%20Submission%20Checklist625894.pdf>
 3 University of Michigan Graham Sustainability Institute Center for Empowering Communities. Planning & Zoning for Battery Energy Storage Systems: A Local Guide for Michigan Local Governments. July 2026. Accessed at: <https://graham.umich.edu/media/files/BESS-guide.pdf>
 4 American Clean Power. What is Energy Storage? Accessed at: <https://cleanpower.org/resources/what-is-energy-storage/>
 5 American Clean Power. Energy Storage Facts and Information. Accessed at: <https://cleanpower.org/facts/clean-energy-storage/#storage-faq>

Wildlife Considerations

Many BESS developers conduct routine desktop site screening for potential wildlife interactions, though these screenings are generally not expected or required by permitting authorities because there is no specific wildlife impact from BESS systems. Developers regularly consider and minimize various aspects of the facility that may also be perceived by wildlife, such as noise and light impacts to neighboring areas^{6,7,8} as best practice and as required by the permitting authority. Further, BESS facilities are built to fire safety standards that address equipment failure and containment. With the small footprint, self-contained units, and proximity to existing infrastructure, impacts to resources are generally limited, and BESS facilities have no unique wildlife interactions relative to other types of stationary infrastructure.

Sometimes energy storage facilities are co-located with energy generation infrastructure, such as a wind or solar energy project. In these cases, developers follow tiered site assessment practices and implement robust site design and operation considerations to address any relevant wildlife concerns for the wind or solar facility. Because a co-located BESS facility is within the same site footprint, the wildlife considerations for the generation component of the facility would also generally apply to the surveying and siting of the battery component of the facility. The BESS component does not contribute additional or specific considerations for wildlife due to the lack of unique interactions.

To learn more about the wildlife considerations made for wind and solar energy projects, please see ACP's fact sheets [Wildlife and Wind Power](#) and [Wildlife and Solar Power](#) respectively.



6 American Clean Power. Energy Storage: Considerations for Government Partners on Siting and Permitting. Accessed at: <https://cleanpower.org/resources/considerations-for-government-partners-on-energy-storage-siting-permitting/>

7 American Clean Power. U.S. Codes and Standards for Battery Energy Storage Systems. Accessed at: <https://cleanpower.org/resources/energy-storage-codes-standards/>

8 Solar Energy Innovation Network, U.S. Department of Energy. Best Practices and Considerations for Siting Battery Storage Systems. May 2022. Accessed at: <https://graham.umich.edu/media/files/BESS-guide.pdf>