



Q. What is large-scale energy storage?

A. Large-scale energy storage is the method and apparatus used to store energy within an electrical power grid. Electrical energy is stored during the day when there is an abundance of electricity being generated, and it is discharged during peak hours when the need is greatest. Advances in technology and materials, paired with economies of scale, have led to dramatically reduced costs associated with energy storage.¹

Q. What kind of energy storage application will be used for the South Ripley Solar Project?

A. The South Ripley Solar Project will include a 20 megawatt (MW) AC battery storage component. The project will use lithium ion batteries, which is the same type of battery found in everyday consumer electronics, medical devices, and electric vehicles.

Q. How is the electricity stored?

A. Rechargeable battery cells, very similar in composition to the small batteries used in consumer electronics, are arranged into protective cases, called modules, which are then arranged into groups of modules, called racks. These racks are stored in either containers or a building and are connected to the electrical grid. This will allow us to charge and discharge from battery storage project when there is a demand. An analogy is that the arrangement of battery racks is similar to a shoe rack in a shoe store; the battery cells are the shoes, the modules are the shoe box, and the rack is where you put the shoe box.

Q. Are battery storage systems safe?

A. At the end of 2019, 1300 MW of batteries had been installed on the U.S. electric grid.² Energy storage has a safety record that is similar to or better than other electricity generation, distribution, or management methods.³ Driven by the need for grid resiliency and reliability, grid-scale battery storage is projected to have a thirteen-fold increase over the next six years.⁴

Battery manufacturers perform extensive testing before deployment, and energy storage systems are required to be designed to high safety standards. These systems are designed with multiple layers of risk monitoring and mitigation in place. In addition, the site will be remotely monitored 24/7 by trained personnel to ensure no abnormalities are occurring on the system. Internal fire suppression and ventilation systems are designed as backstop protection should any abnormality occur. Moreover, the remote control center has the ability to emergency stop the system in addition to the on-site safety design measures.

Fencing will be erected to keep the public at a safe distance from our storage facility. Only trained personnel will be allowed inside the fenced area to minimize any risk.

In addition, we will comply with the safety measures required by the Federal Regulatory Energy Commission, the North American Electric Reliability Corporation, and applicable regional and local laws. We are also bound by the International Building Code, the International Fire Code, National Fire Protection Association codes and standards and state fire regulations.

1. <https://www.ubs.com/global/en/investment-bank/in-focus/2019/energy-storage.html>
2. https://energystorage.org/wp/wp-content/uploads/2020/04/ESA_AR_2020_FINAL.pdf

3. <https://energystorage.org/resources/thought-leadership/faqs/>

4. https://greentechnewstoday.com/renewable_energy/energy-storage-to-become-key-grid-asset-with-13-fold-growth-through-2024/

Q. Do you work with local fire departments in your project area?

A. Prior to operation, we will develop an Emergency Response Plan in accordance with industry best practices, which will outline the response procedures to be employed should an emergency arise at the project site. We will work closely and collaboratively with the local departments and authorities. We provide pre-construction training to all emergency response personnel, which includes a description of the project, any potential construction risks, and the role of emergency responders should an incident occur. After construction is complete, we will host the emergency response personnel for a site visit to make sure they are familiar with the system and our Emergency Response Plan.

Q. What are the benefits of energy storage?

A. Large-scale energy storage improves the way that we generate, deliver and consume energy, providing many benefits⁵:

- Energy storage has minimal developmental impacts. Storage projects occupy little land, can be screened to minimize visual impacts, are emission-free, and have a low noise profile.
- Energy storage smooths out the electricity supply from energy sources with variable outputs, ensuring that the energy generation meets energy demand.
- Energy storage has a rapid response time, discharging power to the grid quickly to maintain grid stability when rapid changes occur in energy demand.
- Energy storage cuts energy costs by reducing economic losses from major and minor power outages and allowing cheap energy to be stored for later use.
- Energy storage allows for energy diversification by allowing it to be consumed on demand and at a controlled rate.

Q. How long does it take to construct a battery storage project?

A. Depending on the size of the project, construction typically takes 4 to 6 months.

Q. What kind of signage will you use for the South Ripley Solar Project?

A. We will provide signs that include the project name, address, and emergency contact number, in accordance with the various regulatory authorities, such as the Federal Energy Regulatory Commission, North American Electric Reliability Corporation, International Building Code, International Fire Code, National Fire Protection Association, Occupational Safety and Health Administration, and New York State Uniform Fire Protection and Building Code, that require signage at all energy storage facilities. We will ensure that the signs at our sites meet all current requirements and provide sufficient safety notices as well as an emergency contact number.

5. <https://energystorage.org/why-energy-storage/benefits/>



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