

# Battery Energy Storage System

BESS Services

## Grid Flexibility

The electric grid was not designed to withstand the demands we are requiring of it today. Capacity constraints, an aging infrastructure, and the rise in loads associated with initiatives such as electric vehicle (EV) charging, artificial intelligence (AI), and data center construction, will continue to put immense stress on the grid.

Battery Energy Storage System (BESS) harnesses energy from renewable sources like wind and solar. That energy is then stored in batteries and released when needed; for enhancing grid stabilization or during periods of high demand.

U.S. grid operators are being asked to connect thousands of proposed wind, solar, and EV fast charging projects to their transmission lines. Timely and expensive upgrades are needed to support the power requirements in demand, pressuring many companies to alter their upgrade plans and look towards BESS.

Electrical Reliability Services (ERS) understands the importance of power reliability and safety. You can count on our expertise and experience to provide the necessary electrical testing and maintenance services to keep you in compliance with industry standards and deliver power flexibility when you need it.

### Let Us Help You:

- Ensure your BESS integration project runs smoothly. We will conduct comprehensive testing to make certain your system is in harmony with your available renewable energy sources.
- Improve reliability during outages or surges in demand so that you have a constant and readily available energy supply.
- Optimize the cost and efficiency of your energy consumption by ensuring your BESS is functioning properly throughout the complete life-cycle of your system.
- Establish a system that is compliant with the current required standards for electrical power equipment and systems.



**We ensure your Battery Energy Storage System is installed and maintained properly, ensuring grid flexibility & reliability**

At Electrical Reliability Services (ERS), our NETA certified technicians, engineers, and project managers are well-versed on the components that make up your BESS solution. You can put your trust in our 50+ years of experience in providing engineering, acceptance testing and maintenance services.

### Engineering Services

As you begin to plan for a new project, you need accurate data and analysis to help you make important decisions. Below are some of the engineering services we provide:

- Single/three-line diagrams
- Short circuit/coordination studies
- Arc flash studies
- Power factor studies
- Grounding studies
- Power system studies
- Power quality/harmonics

### Acceptance Testing & Startup

Our comprehensive acceptance testing and startup services for BESS installations will ensure your next system runs smoothly from the start.

- Commissioning support
- Acceptance testing
  - Electrical system
  - Switchgear
  - Circuit breaker

### Ongoing & Preventive Maintenance

As a founding member of NETA, we understand maintenance is critical to the operation and optimal performance of your system. Maintenance services we provide are:

- Preventive maintenance
- Predictive maintenance
- Corrective maintenance
- Maintenance management
- Emergency service rapid response

## Services that support your sustainability and reliability goals

### Sustainability

With growing regulatory and commercial pressures, many facilities are tasked to improve energy efficiency and sustainability. BESS solutions are becoming more popular as they help facilities take full advantage of their renewable energy.

ERS can help ensure your next BESS integration project is set up properly by testing your renewable infrastructure.

If you do not already have a renewable energy system, we can help with that as well. These systems require a specific way of planning, designing, and executing for a new build. We have experts who are knowledgeable about the intricacies of renewable energy systems.

#### **Our renewable energy services include:**

- Electrical planning services
- Electrical engineering and design
- Grid and storage integration
- Electrical maintenance
- Performance optimization

### Importance of Maintenance

The battery system is the heart of every BESS solution and it requires preventive maintenance to keep it running smoothly. Our team of battery experts has the experience and knowledge to not only ensure reliability but to also confirm it is compliant with NERC and IEEE requirements.

Another key component within a BESS is the power converter. It enables efficient energy conversion and distribution. It is critical to conduct maintenance testing to ensure it can charge and discharge power most effectively.

Regular inspection and testing can extend the life of your equipment and minimize unplanned downtime. We are a leader in staffing Level 3 & 4 NETA technicians who are committed to ensuring your power reliability 24x7x365.



### Summary

The need for Battery Energy Storage Systems (BESS) will continue to rise over the next few decades. It will be critical that your facility can depend on BESS when energy consumption is in high demand or during power interruptions.

To ensure your BESS will be reliable, you'll want to partner with an electrical testing company that has experience working on the components within your BESS solution.

As a NETA-accredited company, we have deep knowledge and expertise across the entire electrical system. We help effectively manage risks, reduce costs and ensure safe, reliable operation of critical assets.

You can trust ERS to make certain your BESS integration project is compliant and that you have the flexibility and reliability you expect.

#### **Equipment we typically service for BESS are:**

- Power Conversion Systems
- Battery Systems
- Cabling
- Transformers
- Controllers

### More Information

To learn more about ERS BESS Services, please contact us at: (888) 468-6384 or visit [ERS.vertiv.com](https://ERS.vertiv.com).