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# Convergent's Commitment to Safety

## OUR STANDARDS AND PROTOCOLS

### Commitment to Safety

Above all, Convergent is dedicated to ensuring the safety of our systems and the wellbeing of our customers, community partners, employees, and vendors. We have had zero safety incidents since our inception in 2011 and only contract with top-tier suppliers and types of equipment that have had zero incident rates in North America. As the largest independent developer of energy storage solutions in North America, we're constantly collecting data from the 120 MW / 240 MWh we have on the grid or under construction in order to evaluate our practices and procedures.

### Safety Standards and Protocols

All of our systems are both fully automated and monitored 24/7/365. Our systems exhibit numerous safety features including built-in alarms, self-activating fire-suppression systems, and NEMA3/4 battery enclosures specifically designed to withstand significant heat and pressure parameters.

Each system meets the latest safety standards dictated by UL 1741 (grid connections) and UL 9540 (battery connections) and uses UL-certified safety equipment (cUL in Canada). Although UL 9540 is not required in the United States, all of our projects meet this newer standard. In Canada, all of our projects are built and certified to meet the highly stringent CSA requirements.

We create a customized, site-specific Emergency Preparedness Plan for every energy storage system we operate. The plan provides a clear chain of command if there is any issue with the system. If there is an issue, our systems are designed to automatically disconnect and power down in a safe manner. In addition to training and educating our customers, we provide a tour for and train local fire departments. We work with fire departments directly to meet any and all local certifications.



“We live in a world full of uncertainties but the safety of our energy storage systems does not have to be one of those uncertainties, particularly if we follow the rules, use the right equipment for the right application, and avoid unnecessary risks.”

– **Robin Gray**  
SVP Engineering and  
Project Development

### CONTACT

**Robin D. Gray**  
SVP, Engineering and Project  
Development  
Convergent Energy + Power

**O:** 917.508.0198  
**M:** 347.784.2495  
rgray@convergentep.com

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## About UL (cUL in Canada)

UL is a global independent safety science company with more than a century of expertise innovating safety solutions from the public adoption of electricity to new breakthroughs in sustainability, renewable energy and nano-technology.

### UL 1741

Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources

- 1.1 These requirements cover inverters (the main piece of equipment in the battery system), converters, charge controllers, and interconnection system equipment (ISE) intended for use in stand-alone (not grid-connected) or utility-interactive (grid-connected) power systems. Utility-interactive inverters, converters, and ISE are intended to be operated in parallel with an electric power system (EPS) to supply power to common loads.
- 1.2 For utility-interactive equipment, these requirements are intended to supplement and be used in conjunction with the Standard for Interconnecting Distributed Resources With Electric Power Systems, IEEE 1547, and the Standard for Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems, IEEE 1547.1.
- 1.3 These requirements cover AC modules that combine flat-plate photovoltaic modules and inverters to provide AC output power for stand-alone use or utility-interaction, and power systems that combine other alternative energy sources with inverters, converters, charge controllers, and interconnection system equipment (ISE), in system specific combinations.
- 1.4 These requirements also cover power systems that combine independent power sources with inverters, converters, charge controllers, and interconnection system equipment (ISE) in system specific combinations.
- 1.5 The products covered by these requirements are intended to be installed in accordance with the National Electrical Code, NFPA 70 (the equivalent in Canada is ESA/CSA).
- 1.6 These requirements also cover rapid shutdown equipment and systems.

### UL 9540

Standard for Energy Storage Systems and Equipment\*  
\*UL 9540 is mandatory in Canada but is applied to all of Convergent's projects

- 1.1 These requirements cover energy storage systems that are intended to receive electric energy and then to store the energy in some form so that the energy storage system can provide electrical energy to loads or to the local/area electric power system (EPS) up to the utility grid when needed. The types of energy storage covered under this standard include electrochemical, chemical, mechanical and thermal. The energy storage systems equipment (constructed either as one unitary complete system or as matched assemblies that when connected are the system) may include equipment for charging, discharging, control, protection, power conversion, communication, controlling the system environment, air, fire detection and suppression system, fuel or other fluid movement and containment, etc. The system may contain other ancillary equipment related to the functioning of the energy storage system.
- 1.2 The systems covered by this standard include those intended to be used in a standalone mode (e.g. islanded) including "self-supply" systems to provide electric energy and those used in parallel with an electric power system or electric utility grid such as "grid-supply" systems, or applications that perform multiple operational modes.
- 1.3 Requirements for installation, with the exception of installation manuals and documents for installation provided with the system that are integral to the tested system are outside the scope of this standard. The installation instructions indicate that the energy storage systems are to be installed in accordance with the national and local electrical codes and other applicable codes. This standard assumes that the final installation of the energy storage system will be performed by qualified service personnel in accordance with the applicable installation instructions, installation practices and national installation codes. Energy storage systems are intended for installation subject to approval by the Authority Having Jurisdiction.

## ABOUT CONVERGENT

Convergent Energy + Power (Convergent) is the leading independent developer of energy storage solutions in North America. Powered by results, Convergent manages all aspects of the energy storage asset development cycle to help customers navigate an increasingly expensive, decentralized, and renewable-driven energy landscape. Convergent deploys state-of-the-art technology to significantly lower commercial and industrial customers' electricity bills and provide utilities with cost-effective grid solutions. With over 120 MW and 240 MWh of projects in operation, construction, or under contract, Convergent is also the largest independent operator of energy storage in North America. For more information, visit [convergentep.com](https://convergentep.com) or follow us on [LinkedIn](#) or [Twitter](#).