

# ENERGY STORAGE UL CERTIFICATION RISKS



Are Battery Energy Storage Systems UL certified? certified battery energy storage systems (BESS) or stationary battery systems. Specifying and using UL certification for safety is an important practical step in implemen of the marketplace. Field Incidents Involving Battery Energy Storage SystemsUnfortunately,



How can ul help with large energy storage systems? We conduct custom researchto help identify and address the unique performance and safety issues associated with large energy storage systems. Research offerings include: UL can test your large energy storage systems (ESS) based on UL 9540 and provide ESS certification to help identify the safety and performance of your system.



Are energy storage systems safe? ttery Energy Storage System Incidents and Safety: A Technical Analysis by UL Energy Storage Systems continue to be deployed in increasing numbers, promoting improved grid performance and resilience complementing renewable energy technologies, and empowering energy consumers. While the deployment continues to be largely sa



What is ul 9540? UL 9540,the Standard for Energy Storage Systems and Equipment,is the standard for safety of energy storage systems,which includes electrical,electrochemical,mechanical and other types of energy storage technologies for systems intended to supply electrical energy.



Why do we need UL standards? and sustainable deployment of battery technologies and energy storage systems. The established UL requirements and Standards provide a sound foundation for diligently addressing safetyof these technologies,and UL encourages the use of the National Standards for safety as a proactive measure of

# ENERGY STORAGE UL CERTIFICATION RISKS



What services does ul solutions offer? UL Solutions' services cover the energy storage industry's entire value chain. We are a leader in safety testing and certification for battery technology. Our performance testing offerings include competitive benchmarking, charge/discharge and overcharge tests, as well as environmental and altitude simulation for system integrators.



UL certification is based on rigorous investigations built on a foundation of strong safety science. The UL Mark on a product is a powerful identification that the product has been independently ???



UL 9540A, a component of the UL 9540 certification, describes a test method to assess fire risks in particular. Additionally, Sections 68 & 69 of NFPA 855 provide guidance regarding BESS explosion protection (section 68) and prevention (section 69) measures, and NFPA 72 provides guidance for further fire, heat, and hydrogen safety testing.



NORTHBROOK, Ill., Nov. 27, 2013 - UL (Underwriters Laboratories), a world leader in advancing safety science, announced today that UL has been recognized by the US Environmental Protection Agency (EPA) as accredited to certify data center storage products for the ENERGY STAR(R) program. "The data center manufacturers enrolling in the Certification Bodies" (CBs) ???



??? Installation of Stationary Energy Storage Systems; SPE-1000 ???  
Field Evaluations; UL 9540 ??? Energy Storage Systems and Equipment;  
For producers, we can test against the following standard: UL 9540A ???  
Standard for Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems; For suppliers, on

# ENERGY STORAGE UL CERTIFICATION RISKS



Northbrook, Illinois ??? Oct. 13, 2020 ??? UL, a leading global safety science company, announced today the launch of a free online database recognizing manufacturers who have completed testing under the ANSI/CAN/UL 9540A Standard for Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems (BESS). The database allows manufacturers ???



NORTHBROOK, Illinois ??? Oct. 13, 2022 ??? UL Solutions, a global leader in applied safety science, today announced that BAE USA's stationary lead-acid battery energy storage system is the first to be certified to the third edition of ANSI/CAN/UL 1973, the Standard for Batteries for Use in Stationary and Motive Auxiliary Power Applications. BAE USA's energy storage system ???



Access UL certification data on products, components and systems, identify alternatives and view guide information with Product iQ. Safer and more sustainable energy storage. We recognize the transformative potential of battery storage and offer comprehensive strategies to mitigate risks before, during and after manufacture, installation



Energy Storage Systems and Equipment UL 9540 . ES Installation Standards 8 and code compliance will enable risk to be factored into business decisions 17 . 18 UL Certification Options Is the Energy Storage System ??? Part of a family of systems? Intended for multiple



UL Solutions has developed UL 3202, the Outline of Investigation for Mobile Electric Vehicle Charging Systems Integrated with Energy Storage Systems, to address safety concerns with these new mobile charging systems. UL Solutions published this Outline of Investigation on Feb. 23, 2024. Key aspects of UL 3202 include:

# ENERGY STORAGE UL CERTIFICATION RISKS



Exro Technologies Inc. (TSX: EXRO, OTCQB: EXROF) (the "Company" or "Exro"), a leading clean-technology company that provides proprietary propulsion system technology for e-mobility and proprietary battery control technology for stationary energy storage, is pleased to announce today that its Cell Driver??? stationary energy storage system has achieved ETL certification to ???



UL 9540 Second Edition: Understanding the Impacts of Requirement Changes ; UL Responds to Battery Energy Storage System Incidents and Safety; Canadian Code and Standards for Energy Storage Systems and Equipment; Energy Storage Systems: What You Need to Know about UL 9540 and 9540A; Performance of Batteries in Grid Connected Energy Storage Systems



For the energy transition to proceed at the required speed, these risks must be understood and mitigated as quickly as possible. To help assess the challenges involved in energy storage risk mitigation, UL Solutions convened a round ???



Access UL certification data on products, components and systems, identify alternatives and view guide information with Product iQ. regulatory and certification information along with powerful software to manage compliance and mitigate risks. Renewable Energy Supercharge Market Acceptance for Batteries & Energy Storage for Use in Motive

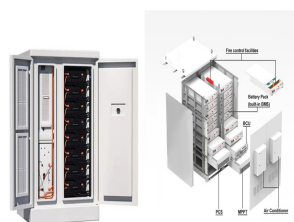


UL, a global safety science leader, in partnership with the Tamarindo Group, convened a special stakeholder event in November 2021 to help assess the challenges involved in energy storage risk mitigation.

# ENERGY STORAGE UL CERTIFICATION RISKS



Access to technical, regulatory and certification information along with powerful software to manage compliance and mitigate risks. Renewable Energy Software tools and data support for developing, assessing and operating renewable energy projects.



FRANKFURT, Germany, April 4, 2017 ???UL, a global safety science organization, today announced it will be exhibiting at Intersolar Europe 2017 in Munich, Germany ??? the world's leading annual exhibition for the solar industry, with a focus on how to enhance compliance and mitigate risks across the global energy value chain. Stationed in Hall A2, Stand #570 from May ???



As climate change becomes a core business risk for corporations, we help companies meet market demands through services that assist businesses in measuring, reporting, and verifying the impact of their products, enterprises, and tools on the climate. Access UL certification data on products, components and systems, identify alternatives and

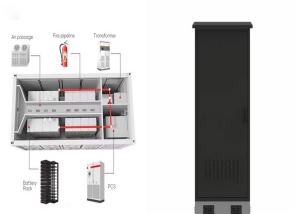


ul 9540?????ul 1973???????????????? 1/4 ?ler? 1/4  
 ???(R)???????????????? 1/4 ??????ul 1741????????????????<??(R)?? 1/4  
 ????????????????????? 1/4 ?????? 1/4 ????????????????? 1/4 ?????? 1/4  
 ?????????????????-?? 1/4 ??(C)?? 1/4 ?????????????????????  
 ??(R)???????ieee 1547???1547.1???csa fc1???nfpa 70???nfpa 2



Worse yet, unsafe products endanger users and property. UL-1973 certification mitigates these risks. Expanding to EU Markets . For manufacturers eyeing both US and EU markets, UL-1973 is a stepping stone. My whitepaper, "Energy Storage Systems: UL1973 Certification and Battery Components," delves deeper into UL-1973, its implications

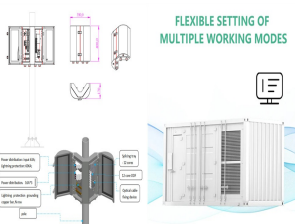
# ENERGY STORAGE UL CERTIFICATION RISKS



From standards development to testing and certification services for EV and industrial batteries, we help the energy storage industry understand the regulatory landscape, proactively address ???



NORTHBROOK, ILLINOIS ??? June 28, 2024 ??? UL Solutions (NYSE: ULS), a global leader in applied safety science, today announced a new testing protocol that addresses fire service organizations' demand for enhanced evaluations of battery energy storage systems for residential use. Commonly paired with rooftop solar installations and, in some cases, wind turbines, ???



UL 1973 is a certification standard for batteries and battery systems used for energy storage. The focus of the standard's requirements is on the battery's ability to withstand simulated abuse ???

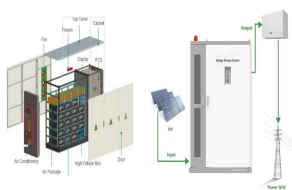


This white paper examines the yearly increasing renewable energy curtailment, how to manage intermittent renewable generation and mitigate curtailment at new and existing wind and solar photovoltaic facilities. Learn how energy storage devices, particularly BESS, are some of the most versatile and flexible asset solutions.

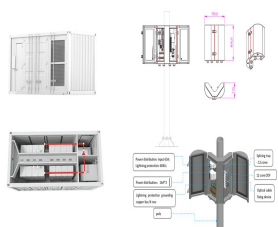


NORTHBROOK, Illinois ??? March 7, 2022 ??? UL, a global safety science leader, has released a report, co-authored with the U.S. Department of Energy's (DOE's) National Renewable Energy Laboratory (NREL), titled "Cybersecurity Certification Recommendations for Interconnected Grid Edge Devices and Inverter Based Resources." The report includes recommendations that ???

# ENERGY STORAGE UL CERTIFICATION RISKS



UL 9540 designates guidelines for fire detection and suppression in energy storage systems to mitigate the risk of fire-related incidents. Why should you choose an energy storage system with UL9540? Choosing an energy storage system with UL9540 certification ensures it meets rigorous safety and performance standards.



In order to achieve a UL 9540 certification or listing, a residential energy storage system must meet the unit level performance criteria of UL 9540A when the spacing between individual battery energy storage systems is less than 3 ft (0.9 m) in accordance with the ???



NORTHBROOK, ILLINOIS ??? May 30, 2023 ??? UL Solutions, a global leader in applied safety science, today announced its laboratory in Taipei, Taiwan, was named a Bureau of Standards Metrology and Inspection (BSMI) voluntary product certification (VPC) designated testing laboratory for electric vehicle (EV) batteries and energy storage system (ESS) batteries.



UL-1973 focuses on functional safety analysis and testing of battery systems and components. Here's why it matters: Risk Mitigation: Unanticipated breaches in materials or software failures ???



Learn the latest Canada regulatory developments around energy storage systems and equipment; Understand the key aspects and requirements of the ANSI/CAN/UL 9540 and ANSI/CAN/UL 9540A Standards for U.S. and Canada; Gain perspectives on how to mitigate product safety risks and achieve regulatory compliance; Speakers:

# ENERGY STORAGE UL CERTIFICATION RISKS

---



Our industrial battery and energy storage testing and certification services can help you address the complexities associated with creating, storing and repurposing battery and energy storage products. Access UL certification data on products, components and systems, identify alternatives and view guide information with Product iQ