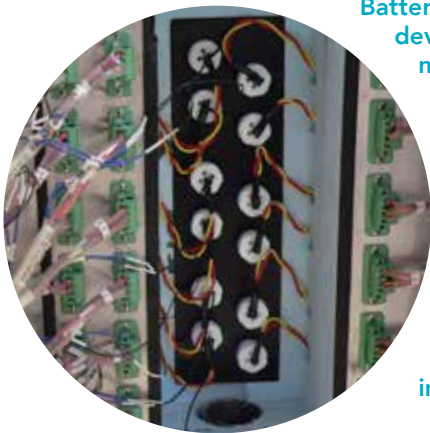


NRC'S FULL SCALE ENERGY STORAGE EVALUATION RESEARCH FACILITY

●●● For all your cell and system level testing requirements



Battery-based energy storage is a rapidly developing industry spanning multiple markets, from portable electronics to electric vehicles and grid power regulation. This presents unique research and business opportunities in developing new technologies or products. The NRC is committed to providing innovative testing, design, and analysis services to government organisations and companies, ensuring the safety and viability of the battery industry in Canada and abroad.

BATTERY PERFORMANCE AND SAFETY EVALUATION RESEARCH FACILITY

The NRC Battery performance and safety evaluation research facility offers innovative safety assessment testing as well as performance and environmental analysis of battery packs, modules or cells to industry and governmental organisations. Our group has acquired unique experience in the field and used their expertise to provide support to government regulators, original equipment manufacturers (OEMs) and suppliers. We are active in the electric vehicle and battery development sectors, and a key player in battery safety related research. By providing useful tools and insightful feedback to improve battery designs under a variety of situations and operating conditions, we have grown to be one of the leaders in battery safety assessment, propagation and thermal runaway testing worldwide.

WHY CHOOSE THE NRC?

The NRC has unique facilities staffed by dedicated teams of experts from diverse backgrounds working together as part of our specialized battery research and evaluation program. Our staff has considerable experience working with various types of batteries and is familiar with certification standards such as SAE G27, UL1642, etc. as well as the needs of the industry. Whether it is at the pack, module or cell level, we can provide services tailored to various sectors such as:


- Automotive
- Military
- Aeronautical
- Marine
- Energy storage
- Medical

OUR SERVICES

Performance analysis

- Cell aging analysis
- Thermal characterization
- Thermal management system evaluation
- Performance evaluation in controlled environments
- Galvanostatic rate mapping
- High-precision cycling
- Electric vehicle drive cycle
- Second-life battery applications





Our team is a leader in the field of battery system safety and evaluation, supported by state-of-the-art equipment and infrastructure.

Equipment and facilities

- Battery testers (5 V-800 V), Isocalorimeter
- Isothermal test chambers
- Temperature/Humidity controlled chambers
- Large scale destructive testing bay (<10 kWh)
- Mechanical, thermal (TRIM), and electrical integrity test equipment
- Vehicle lift
- Eco-friendly waste and emission processing

Safety assessment testing

- Analysis and characterization of thermal runaway and its propagation
- Mechanical, thermal (TRIM), and electrical abuse tests
- Thermal stress testing
- X-ray autopsy
- Electrochemical impedance spectroscopy (EIS)
- High-temperature storage
- Small cell immersion testing
- FTIR gas analysis and heat release rate determination

Benefits of battery testing

- Evaluation of your product in realistic scenarios
- Explore how your product reacts in hazardous situations and failure scenarios
- Evaluate the performance and safety of your product
- Test selected modes of failure
- Identify improvement opportunities

CONTACT

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