CSIR'S ENERGY STORAGE TESTBED

The Council for Scientific and Industrial Research's (CSIR) Energy Storage Testbed is a pioneering initiative that exists under the framework of the World Bank's Energy Storage Partnership, in collaboration with the Flemish Government and Vlaamse Instelling voor Technologisch Onderzoek (VITO) or the Flemish Institute of Technological Research. Designed to promote energy storage in developing countries, this state-of-the-art facility is an indoor battery testbed focusing on battery cells, modules and packs. With its strategic collaborations and advanced infrastructure, the CSIR Energy Storage Testbed is revolutionising the battery testing landscape in South Africa.

Our value proposition

- **Comprehensive testing services:** The facility offers extensive testing capabilities, including performance and reliability testing, battery calendar life, storage capacity, cycle life, depth of discharge, verification and validation, aged battery services, battery aftermarket services and postmortem analysis.
- **Quality assurance:** Ensuring high standards and quality for lithium-ion batteries, the CSIR testbed helps protect industry and consumers from substandard technologies.
- **Innovative solutions:** By repurposing defective and used batteries, the facility supports waste reduction and promotes sustainable practices in the battery industry.

Unique selling points

1. **Advanced infrastructure:** Equipped with the latest technology, including a 32-channel Chroma battery tester and a 1 000 litre Weiss climate chamber, the facility can conduct rigorous and precise testing under various environmental conditions.
2. **Strategic collaborations:** Partnering with

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VITO and supported by the Flemish Government, the CSIR testbed benefits from international expertise and cutting-edge resources.

3. **Support for standards development:** Assisting the South African Bureau of Standards in creating comprehensive standards for lithium-ion batteries, filling a critical gap in the industry.
4. **Diverse applications:** Catering to a wide range of markets, including stationary batteries, microgrids, electric mobility, medical industry, agriculture and road works.
5. **Energy storage innovation:** Addressing the intermittency challenge of renewable energy and providing solutions for load shedding through large-scale battery storage systems.

Accessibility

Located within the CSIR premises in South Africa, the facility is easily accessible to local and international clients. The testbed's services are designed to be user-friendly and flexible, accommodating various client needs and schedules.

Speed and agility

The CSIR Energy Storage Testbed offers quick turnaround times for testing and results, ensuring that clients can promptly integrate findings into their operations. The facility's agility is reflected in its ability to handle a wide array of battery types and applications, from initial testing to postmortem analysis.

Pricing

The CSIR testbed provides competitive pricing tailored to the needs of different stakeholders, from large corporations to small and medium-sized enterprises (SMMEs). Custom packages and flexible pricing models ensure affordability and value for all clients.

Advantages

- **Cutting-edge equipment:** State-of-the-art testing devices ensure accurate and reliable results.
- **Expert team:** Highly skilled personnel with extensive knowledge in battery technology and performance testing.
- **Collaborative opportunities:** Open invitation for corporates and SMMEs to collaborate on research and development projects.
- **Sustainable practices:** Emphasis on repurposing and recycling batteries, promoting sustainability in the industry.
- **Consulting research and development services:** Skilled personnel provide expert advice on renewable energy and energy storage.

Why engage with the CSIR Energy Storage Testbed?

- **Trusted expertise:** Leverage the CSIR's reputation for excellence in scientific research and industrial support.
- **Comprehensive support:** From manufacturers to end-users, receive end-to-end support across the battery value chain.
- **Innovative edge:** Stay ahead with access to the latest advancements and best practices in battery technology.
- **Sustainable impact:** Contribute to environmentally friendly practices through the facility's focus on recycling and repurposing batteries.
- **Cross-cutting expertise:** Leverage the multidisciplinary expertise across a wide range of fields.

CONTACT INFORMATION

To learn more about the CSIR Energy Storage Testbed and explore collaboration opportunities, visit (CSIR's official **www.csir.co.za**) or contact the CSIR Energy Storage Testbed supervisor, **Renesh Thakoordeen** at rthakoordeen@csir.co.za.

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