



# Brasilia solid-state batteries

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Saft has been awarded a major contract by the Brazilian power utility CEB (Companhia Energetica de Brasilia) to design, manufacture and supply maintenance-free nickel backup battery systems for all 34 distribution substations serving Brasilia, the country's capital city. The Saft Uptimax batteries are replacing the existing lead-acid batteries at the CEB substations to provide a significant increase in reliability and availability while reducing battery maintenance and replacement costs.

Brasilia is the Federal Capital of Brazil and the seat of government for the country's Federal District. CEB controls electric power distribution, generation and transmission assets covering an area of more than 5,280 square kilometers, providing service to more than 990,000 clients and nearly 2.9 million residents.

The substation backup batteries play a critical role for CEB by ensuring a continuous 125 V supply to support all the auxiliary loads such as switchgear, automation and protection circuits for up to 10 hours if there is an interruption to the main power supply. Previously, the substations have been fitted with lead-acid batteries. However, this is a particularly demanding application with ambient temperatures reaching 35°C that contribute to the risk of unpredictable, premature battery failure.

To ensure total reliability of its backup systems CEB has now implemented a one-year program to replace the batteries at all 34 of its distribution substations with Saft Uptimax batteries. These batteries feature Saft's latest development in nickel pocket plate technology that delivers maintenance-free operation with a long, completely predictable service life even at elevated temperatures.

"Ensuring continuity of customer supply is a mission critical aspect of CEB's power distribution business. That's why we have made the decision to purchase nickel backup batteries for the first time in our company history", said Arthur Franklin, Substations maintenance manager of CEB. "This switch to Saft batteries gives us renewed confidence that our substation backup systems will always perform as required, whenever they are called upon."

Cambridge EnerTech Portals

Cambridge EnerTech Events

Advanced Automotive Battery Conference (AABC)

International Battery Seminar & Exhibit

Cambridge Innovation Institute



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Researchers from the Harvard John A. Paulson School of Engineering and Applied Sciences (SEAS) have developed a new lithium metal battery that can be charged and discharged at least 6,000 times -- more than any other pouch battery cell -- and can be recharged in a matter of minutes.

Lithium metal batteries could offer far better energy density and much lower weight than lithium-ion technology thanks to the replacement of heavier graphite with lithium metal as anode. However, one of the biggest challenges in the design of these batteries is the formation of dendrites on the anode's surface, causing the battery to rapidly degrade, short, and even catch fire.

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