



**SolarTech Power Solutions**

# **Sodium-sulfur battery deployment in container base stations**



## Overview

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Why are sodium-sulfur batteries used in stationary energy storage systems?

Introduction Sodium-sulfur (Na-S) batteries with sodium metal anode and elemental sulfur cathode separated by a solid-state electrolyte (e.g., beta-alumina electrolyte) membrane have been utilized practically in stationary energy storage systems because of the natural abundance and low-cost of sodium and sulfur, and long-cycling stability , .

What is a sodium-sulfur battery?

Sodium-Sulfur (NaS) Batteries During electrochemical cycling of the batteries, NaS batteries oxidize (discharge) and reduce (charge) sodium, relying on the reversible reduction (discharge) and oxidation (charge) of molten sulfur.

Does BASF sell NaS batteries?

Today, BASF not only distributes the NAS battery worldwide, it is also working with NGK on the next generation of sodium-sulfur batteries, with product launches forthcoming in 2024. To learn more about NAS batteries, visit the BASF website [here](#).

Are molten sodium batteries the future of energy storage?

As research and development efforts continue in academia, national laboratories, and industry, widespread use of safe, cost-effective molten sodium batteries as well as implementation of new sodium ion-based batteries are expected to be important elements of the evolving energy storage community.

Where can NaS batteries be deployed?

NAS batteries can be deployed in all climate zones, in extreme cold as well as in extreme heat, without supplementary air conditioning equipment. All raw materials used in NAS batteries are abundantly found on earth. There are no issues with the supply chain or price volatility. NAS batteries require only

minimal preventive maintenance.

Are room-temperature sodium-sulfur (RT-na/S) batteries the future of energy storage?

Abstract Room-temperature sodium-sulfur (RT-Na/S) batteries are promising alternatives for next-generation energy storage systems with high energy density and high power density. However, some noto.

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