

South Africa potential energy storage

Is South Africa ready for battery storage?

The South African government has acknowledged the potential of battery storageand has set ambitious targets for its deployment. The 2019 Integrated Resource Plan (IRP) and Eskom's Transmission Development Plan (TDP) project a need for 2GW to 6.6GW of battery storage capacity to be installed by 2032.

Why is energy storage important in South Africa?

This enables storage to absorb excess capacity on the system when supply exceeds demand. In South Africa's constrained power system, energy storage can provide backup capacity that can be called on to reduce the extent of loadshedding. As noted earlier, energy storage offers accurate and swift /responsive dispatchability to the system.

What is South Africa's energy supply roadmap?

South Africa's electricity supply roadmap, the (2019 Integrated Resource Plan) has set a target for a battery storage capacity of between 2GW and 6.6GW by 2032. This aligns with the global push for a 25% annual growth in battery storage to reach 1,500 GW by 2030, according to IEA.

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The extent to which the South African market is ready for energy storage is considered in subsequent sections. The 2030 vision outlined in the National Development Plan (NDP) of 2011 set the objective to completely eliminate income poverty and reduce inequality in the country.

What is the energy storage capacity of ESS in South Africa?

As indicated in Figure 4-20, the existing and future pipeline of ESS in South Africa comprises of just under 18 GWh. The majority of this energy storage capacity is expected to come from the deployment of stationary energy storage under bulk generation, followed by the projects focusing on the transmission and distribution network.

Is energy storage a viable option for South Africa's power system?

In the longer term, however, at higher levels of variable generation, flexibility requirements will significantly increase demanding interventions to ensure secure and cost-efficient operation of the South African power system. Energy storage was specifically noted to be highly suitable for this purpose.

In order for South Africa to enable the development and growth of a stationary energy storage market in the country, the above-mentioned gaps in the policy, regulatory, procurement, tariff and financial environments will need to be addressed.

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As one of the leading countries in Africa and the world in terms of renewable energy and battery storage development, South Africa has the potential to become a regional hub and a global player in this emerging industry.

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3 ???· Investors, understanding the potential for in-Africa manufacturing of batteries, have been investing in the industry, with much of that activity focused on South Africa and Morocco. In November, another South Africa-based company, Balancell, opened a gigafactory in Ndabeni, Cape Town, with a production capacity of 1.7 GWh per year.

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