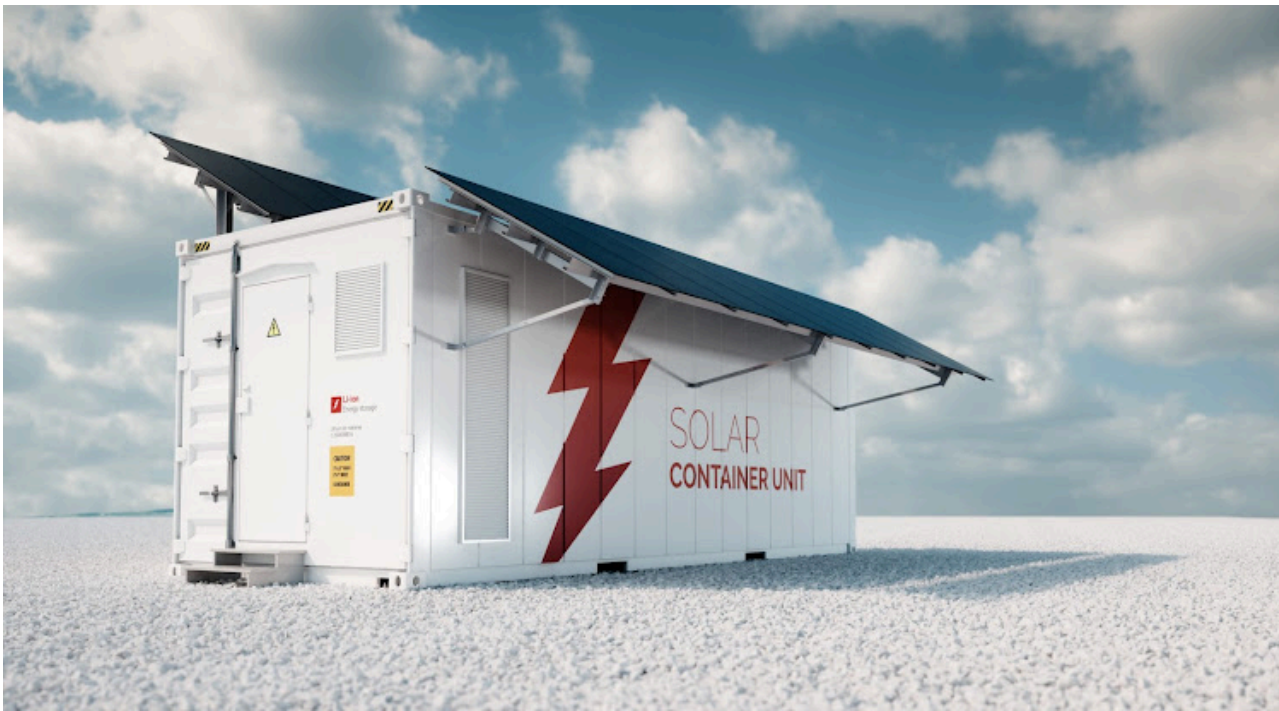


Battery industry set to boom

Energy storage systems could play crucial role in the shift towards green energy

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A 3D rendering of a solar system with battery storage. The units will be rolled out to some towns in a pilot project in the Western Cape to mitigate the effects of load-shedding. Stock photo.

Image: 123RF/malp

South Africa's battery energy storage industry is set to surge and the country needs to develop its lithium-ion battery value chain to boost energy security and create jobs, says Trade and Industry Policy Strategies (Tips) senior economist Lesego Moshikaro-Amani.

“We are able to add value to local minerals and we can implement a value-add for South African minerals. It allows us to improve efficiencies because battery value chains are hi-tech. It also allows increased revenue from export earnings.”

At the launch this week of a Tips report into the localisation of battery storage, Moshikaro-Amani said there was ample opportunity to boost local demand and Southern Africa had minerals that formed part of the value chain, including lithium, cobalt and copper.

Gaylor Montmasson-Clair, Tips senior economist and facilitator for the South African renewable energy masterplan, said as load-shedding emerged as a top national priority the energy crisis had precipitated market demand for battery technologies.

“Since 2012, South Africa imported \$2.5bn (R47.6bn) worth of lithium-ion batteries. But just in the first six months of this year, it was \$1.1bn. So you can just imagine the acceleration in the demand,” he said.

The Tips report said battery energy storage systems (Bess) would play a crucial role in the shift towards green energy.

Bess are networks of devices that store and release electricity from technologies that use gas, nuclear, wind and solar. They do not need to be centralised like other forms of storage, such as pumped storage hydropower, and being decentralised can provide benefits for users from industry to remote health-care centres.

The report said the systems support energy generation infrastructure and allow efficient use of transmission and distribution infrastructure, thus reducing costs.

“As of the end of 2020, the total installed capacity of energy storage systems globally had reached 191GW, with Bess accounting for approximately 17GW,” the report said.

Although Bess make up only 8.9% of the overall energy storage market, there was considerable potential for further deployment of battery storage technologies.

The limited number of projects in South Africa could possibly be attributed to insufficient technical ability, economic feasibility and cost competitiveness.

At African Energy Week, Eskom interim CEO Calib Cassim said the power utility wanted to facilitate renewable energy through its battery energy storage projects ahead of the coming bid windows of the 2023 Integrated Resource Plan (IRP).

“Eskom is busy with our own battery storage project. The battery storage is going well,” he told Business Times on the sidelines of the conference.

Eskom is developing a battery storage project in Msunduzi in KwaZulu-Natal and plans to build similar projects in the Eastern Cape and Northern Cape.

“For the country, we must not forget the transition technologies and battery storage with all the renewables is also key to keeping the integrity of the transmission grid at the necessary frequency, which is fundamental.”

Eskom could not wait six or seven years to expand the grid to connect independent power producers, he added.

“We must connect them as quickly as possible. And there may be some days during the year that we will curtail, but we will deal with it because it relieves pressure on the Eskom grid as well, but more importantly, it adds the additional capacity to the South African grid,” Cassim said.

He added that the return of the third unit at the Kusile power station allowed Eskom room to keep evening peak load-shedding at stage 2.

“We’ve seen the positive impact, especially with the third unit coming back. That helped us deal with the first two weeks in October, to keep stage 2 during the evening peaks and nothing during the day,” he said.

Also speaking at this week’s African Energy Week, minister in the Presidency for electricity Kgosientsho Ramokgopa said South Africa recognised the urgency of investing in various energy technologies in the coming decades, including battery storage and hydropower.

“I think it is important that we are able to industrialise on the back of this resource. So essentially, we are able to ensure that as we decarbonise, as we transition, we are able to provide Africa’s own interpretation of what constitutes a just transition,” he said.

Minister of mineral resources & energy Gwede Mantashe said at Africa Energy Week the continent must exchange best practices and standards in the development and beneficiation of minerals in the countries of origin as opposed to the pit-to-port approach to mining.

Mantashe told reporters earlier this month at the Africa Oil Week that the proposed


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- Eskom interim CEO Calib Cassim

2023 IRP was in the works and would be tabled before cabinet by the end of October.

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