

Impower brings BESS solution to Eastern Cape community

Impower has unveiled a pioneering PV solar and battery energy storage system (BESS) facility at Coral Beach Residential Estate. This solar facility, which employs innovative single axis tracking technology, is set to be a transformative step in the face of the country's energy crisis.



Aerial view of the Coral Beach estate.

Located 10-minutes outside East London, Coral Beach offers residents a secure, comfortable lifestyle that is also ecologically responsible. However, the estate's power supply, dependent on a frequently vandalised commercial line, was a significant issue. The result was regular, prolonged power outages, exacerbated by the routine load shedding schedule. A standard 2-5 hour backup power system was clearly inadequate.

Impower CEO Jay Naidoo explains that the solar power deployment was particularly challenging. "The new cutting-edge microgrid facility is a first for South Africa. Many have tried and failed, and numerous others are currently in development."



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Lindsey Schutters 11 Jan 2024



"It was a monumental task to get the project off the ground, but our partners JA Solar, SolarMD and Schletter Mounting Systems and we had the expertise and the technical know-how to successfully execute this complex project," he elaborates.

Future proof

Gabriel Kroes, the firm's head of engineering, explains the company was challenged to "build something future proof" and that "the newly launched system boasts a solar capacity of 388kW and a Li-ion battery energy storage system with a capacity of 1.5MWh".

“But what sets the Coral Beach facility apart is the unique single axis tracker system,” he says. “It allows the solar panels to follow the sun’s daily arc. That’s how we optimised the energy yield within the limited space we had to work with. This translates into an elegant, efficient system, offering consistent, reliable power for the residents.”

Harnessing the bright summer sun, the plant withstands the peak morning load, and is running at full tilt (no longer discharging batteries) by around 8, or 9 AM. As the community usage drops off around noon, and the sunlight reaches its mid-day peak, the BESS system is fully charged, and powering the community.

“At a time when so many are living in the dark due to loadshedding, we’re proud to be blazing a new trail with a solar-powered estate that’s able to provide our residents with reliable, sustainable energy,” says Coral Beach Estate owner Charles Pittaway.

“Thanks to Impower’s battery energy storage solution, we can ensure our Coral Beach Estate community remains unaffected by loadshedding while also giving back to the environment. We’re committed to doing our part to create a brighter future for our community and our country.”

“ *The facility provides the estate with eight hours of backup, as well as the cost savings that accrue from tapping a cheaper, cleaner energy source.* ”

One of the major obstacles to renewable energy adoption has been the prohibitive upfront costs, but these were mitigated through a 20-year Power Purchase Agreement (PPA) model, allowing the Homeowners Association to pay for the power on a pay-as-you-use basis, and eliminating the need for any upfront capex investment on their part.

Real stake in project success

Naidoo explains that the project is an “elegantly engineered solution, wrapped in a bespoke commercial model, which allows for a ‘win-win-win’ scenario.”

In this model, Impower and its partners are direct investors, with a real stake in the project’s success.

“The model was welcomed by the residents, who didn’t have to pay a cent for the installation or set up. We’re selling energy to the homeowners’ association, via a long-term PPA,” he explains.

“We currently match Eskom’s energy cost, but unlike conventional power, our energy costs won’t rise significantly over the years. This means that the residents of Coral Beach will enjoy increasing savings on their home energy costs for every year of the 20-year PPA.”

The Coral Beach Estate launch is the latest in a series of wins for Impower who have proven their mettle over an impressive portfolio of success stories.

Previous landmark installations include commercial-scale facilities at the Capitec Head Office in Stellenbosch, 24 Central Commercial Park in Sandton, and at the K90 Shopping Centre in Boksburg.

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