

MTN SA expands energy options with advanced tech for sustainable power

MTN SA is harnessing the power of multiple generation technologies, which will include additional solar, gas and battery energy systems, in one plant at its head office in Fairlands, Johannesburg.



MTN CEO Charles Molapisi. Image supplied

The plant will be a first in South Africa with five different generation technologies being housed in one plant, with a full load of 4.5MW during load shedding. MTN SA's head office hybrid facility currently has a 2MW gas trigeneration system, a 330kW Concentrating Solar Power (CSP) Plant and a fleet of backup diesel generators.

MTN SA now intends adding a 4MW Grid Tie Solar System (5MWp) and a 2MW/6MWh Battery Energy Storage System (Bess) to the existing plant. Phase 2 of the project will see a further increase in solar and battery energy with the potential opportunity to feed energy back to the power grid.

This, in turn, will drastically reduce MTN's carbon emissions footprint. MTN's intention is to align with the Paris Agreement scenario of limiting the global temperature rise to 1.5°C above pre-industrial levels.

"We are pioneering embedded generation technology and making swift progress. Everything is on track for us to soon become an IPP in our own right, allowing us to better manage our energy when load shedding strikes," says MTN chief executive officer Charles Molapisi.

“Once completed, our grid dependency will be significantly reduced. When load shedding starts, the facility will disconnect from the City Power grid and multiple non-interruptible power supplies (UPS) will power essential services. This provides time for the diesel generators to start and power each building in the facility.

When the system is stable, a controller will engage switch gear to energise a medium-voltage (11KV) distribution network. Following this, the 2MW gas engines in the trigeneration plant will be energised, allowing the diesel generation to be reduced, supported by the 2MW Bess. In the day, the solar plant will also assist, further reducing dependency on the diesel generators and BESS,” explains Molapisi.

During normal daily operation, the solar and Bess system will reduce the amount of energy required from City Power during daytime and peak demand periods.

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