

Bright future for solar

Eskom increases make off-grid power more affordable

The developers of the Mall of Africa in Midrand could never be accused of not thinking big, writes Johann Barnard. Take, for example, its 4.7 MW solar rooftop installation that is expected to produce 7,800 MWh of electricity a year – enough to cover the daily power needs of the 131,000 m² retail shopping space.

The scale of this installation illustrates the appetite for self-generation projects, and highlights funders' appetite to back renewable projects for which the investment case is becoming clearer by the day.

This is why Michael Meeser, head of power and infrastructure finance at Investec Specialist Bank, is placing more emphasis on funding commercial and industrial projects.

"We are seeing a lot of people now installing solar panels, for which the payback period is shorter as the cost of the panels has come down. I think, over time, you'll see every shopping centre and commercial property have some form of self-generation capacity."

The case for self-generation, he adds, has been strengthened by lower-cost technology and has been really advanced by Eskom's tariff increases. The above-inflation increases it has enforced over the past number of years have narrowed the gap to make green-energy projects increasingly affordable by comparison.

The vast amounts of costing, engineering and financing knowledge picked up through



Mall of Africa ... developers have installed huge solar panels Picture: BUSINESS DAY

involvement in the renewable energy independent power producer procurement programme are now being applied to the self-generation model.

Paul Semple, portfolio manager of Futuregrowth's Power Debt Fund, says it is inevitable that these types of projects will take off.

"There is a lot of potential, but it's in its infancy in SA in terms of investment being made on a big scale," he says. "Often, companies just do it off their own balance sheet so they don't need dedicated finance for that. Having said that, there are opportunities coming up where larger projects are being developed."

One of the advantages of smaller-capacity self-generation projects is that different technologies and energy sources can be employed. Semple says one recent project Futuregrowth funded was a waste-plastic-to-energy conversion plant that has concluded an off-take agreement by a leading industrial fuel company.

Defined-term contracts – which in this corner of the market may be for 10 years or

more – help to simplify the investment decision, but Semple says the biggest consideration tends to be around the people involved.

"Track record is important," he says. "It's very rare that we'll invest in a start-up business, certainly from a debt point of view. This waste-plastic-to-oil deal is all equity-funded at the moment, but in time we'll consider putting debt in."

Though it's early days in the shift to small-scale self-generation, this trend could spell even more trouble for Eskom. Saddled with nearly R400bn in debt, and two new coal-fired plants, it needs to see an increase in demand, not a drop.

“More solar energy has come on line globally in the recent past than any other energy source

"If Eskom continues hiking tariffs at above the rate of inflation, electricity from the grid won't be competitive any more," Semple says. "I don't think we're there yet, because a lot of private generation is being done as a backup in case Eskom isn't able to supply."

"But it's fairly marginal whether it's cheaper to go off-grid or to go the Eskom route. It depends on whether the tariffs continue to go up at the same rate that they have done. Then it's only a matter of time before there's a tipping point and more people go off-grid than rely on Eskom power."

While the case for self-generation in SA has been accelerated by Eskom's decline, the rest of Africa is crying out for solutions to the absence of electrical grid infrastructure.

This was a key point of discussion at the Africa Energy Indaba at the Sandton Convention Centre in late February this year.

The ability to set up localised and minigrid installations, at reasonable cost and in far less time, makes solar a popular solution.

According to data from the energy conference, more solar energy has come on line globally in the recent past than any other energy source. The case for solar projects is supported by the International Energy Agency (IEA) predicting that solar photovoltaics will continue to grow strongly through to 2022. By then, global renewable electricity capacity is forecast to have grown by 43% to more than 920 GW.

Off-grid solar installations in Asia and sub-Saharan Africa, the IEA predicts, will triple by 2022 to more than 3,000 MW. ●