

Decentralised PV on rooftops

The rooftops of businesses and homes offer a large space for solar photovoltaic (PV) panels. As the price of solar technology falls in relation to the cost of electricity, PV panel installation becomes more popular. There is currently little installed capacity (on a national scale) but this capacity is rapidly growing. A recent study has indicated that there is approximately 30 MW¹ of privately installed rooftop PV capacity in both the commercial and residential sectors.

Level 1

In this scenario the amount of electricity produced by decentralised PV in South Africa remains fairly constant, and negligible at a national scale, from now to 2050.

Level 2

In this scenario, there is steady but slow uptake of PV installation on rooftops. PV panels are installed on 50% of homes by 2050 – providing capacity of about 26,000 MW. In the commercial sector, adoption rate of solar panels is 5%, providing capacity of 8,900 MW by 2050.

Level 3

In this scenario, 75% of all homes have a solar PV system, providing overall capacity of roughly 40,000 MW by 2050. Adoption rate in the commercial sector is faster at 7%, adding capacity of 15,000 MW by 2050.

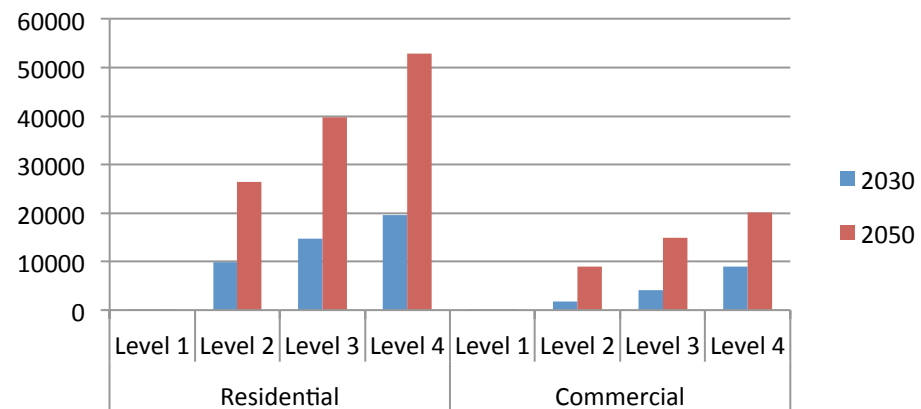
Level 4

In this scenario, all residential homes have a solar PV system, this provides capacity of 52,000 MW by 2050. Adoption rate in the commercial sector is at 10%, leading to a total capacity of about 20,000 MW by 2050.



The 542 kW rooftop PV installation at the Vodacom office in Cape Town.
Source: africabusiness.com

Installed (MW) rooftop PV



¹ Fischer T et al., Localisation strategy for PV industry in SA, presented at SAPVIA, February 2013