

## Ekurhuleni Metropolitan Municipality: solar PV installation

<b>What</b>	Leeupan solar photo voltaic (PV) project
<b>Where</b>	O. R. Tambo Centre, Leeupan, Benoni, Gauteng
<b>Why</b>	A post-COP 15 Council resolution was taken in 2009 to investigate and implement solar projects and increase renewable energy penetration
<b>When</b>	October 2012
<b>Who</b>	Ekurhuleni Metropolitan Municipality
<b>Funding</b>	Construction costs for the PV plant is budgeted internally in the Energy Department

Ekurhuleni Metropolitan Municipality showed its commitment to promote low-carbon technologies when it officially unveiled the first and only solar plant of its kind in the country on Friday 12 Oct 2012. The plant is owned by the municipality and is in line with Ekurhuleni's Energy Strategy, which identifies proactive promotion of green power as essential for creating a sustainable future for the municipality.



The solar PV plant is located in the O. R. Tambo Precinct, which showcases sustainable technologies and construction techniques including rammed earth, straw bale and cob wall construction, green roof technology, thermal mass earth flooring and solar water heating.



The plant powers nearby structures, such as the OR Tambo Narrative Centre and the Environmental Education Centre, and the surrounding low-cost housing area. The solar PV plant has a generation capacity of 200 kW from 860 solar PV panels; generating enough electricity to power about 133 low-cost houses. It is planned to expand the solar PV plant to 600 kW capacity over the next 2-3 years. An inverter converts direct electricity current generated by the solar panels into alternating current that is fed onto the municipal power grid. Since the system is grid interactive, no batteries are required for electricity storage.

An operations and maintenance contract will be established with the service provider for the first 3 years. The costs is planned be funded from capacity and energy charges for electricity production to be transferred to a special established Energy vote number. The operation and maintenance of the power plant is done by simple manual cleaning of the solar panels from rain water and dust. Solar panels are expected to last for 20 to 25 or more if they are properly maintained.