

CASE STUDY: Solar power installation at Lourensford Wine Estate

The Lourensford wine cellar in Somerset West, Western Cape processes its own and imported grapes and produces its own wines on site as well as under contract. The cellar is a modern facility, designed and constructed in 2001, with the first production year in 2003. On 23 May 2014 Lourensford commissioned a solar PV panel system made up of 2000 solar panels, mounted on the roof of the winery. The installation provides energy to the cellar, restaurant and coffee shop and has already resulted in energy savings and reduced the overall dependency on grid provided electricity. The peak demand of the winery is during the harvesting period that runs from end January to end April. The huge cellar roof is covered with 2000 solar panels with a capacity of 500 kWp (kilo Watt peak), which will generate approximately 750 MWh (Mega Watt hours) of energy in the first year of operation. This will save 750 tonnes of coal per year - a great investment in sustainability.

The solar installation covers 100% of the annual consumption of the wine cellar and 15% of Lourensford's annual consumption.

TECHNOLOGY INSTALLED: 750MW solar energy installation with 2000 solar panels on the cellar roof and 33 inverters. The power output is 500 kilo Watt peak (kWp).

COST OF INSTALLATION: R8 million in total. An 80% IDC rebates have been received.

FINANCED THROUGH: Dr. C. Wiese

EXPECTED PAY BACK PERIOD: 8 years

RESULTS TO DATE: The cellar, restaurant and coffee shops runs on the solar energy. To date 536 ton CO2 emissions have been prevented.

The Lourenford website report on what the direct and broader benefits of the facility is to their business.

Direct benefits of the facility are:

- Reduced electricity cost at the Estate
- A hedge against rising electricity prices
- Lowering carbon emissions

The broader benefits:

- Alleviates a constrained electricity supply

- Increasing the proportion of renewable energy promotes sustainability with the energy sector
- Liberalization of the electricity sector



Minister Alan Winde, Dr Christo Wiese, Koos Jordaan at the solar installation (*Source: Lourensford website www.lourensford.co.za*).