Power

Technology

Projects May 30 2014

Lesedi Solar PV Project, Kimberly

Lesedi Solar Project is a 75MW solar photovoltaic (PV) power project developed in Northern Cape Province near the town of Kimberly, South Africa.

Type

Solar photovoltaic (PV) power plant

Installed Capacity

75MW

Location

Northern Cape, Kimberly, South Africa

Start of Construction

January 2013

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Lesedi Solar Project is a 75MW solar photovoltaic (PV) power project developed in Northern Cape Province near the town of Kimberly, South Africa. The construction of the project started in January 2013 and full commercial operations began in May 2014.

US-based solar developer SolarReserve built the facility, along with its consortium partners Kensani and Australian

company Intikon Energy. The plant will be operated and maintained by Gransolar until 2019.

The plant is situated in an area with low population density and receiving 2,500 hours of sunshine a year. It annually generates approximately 150,000MWh of clean, renewable energy, which is enough to meet the yearly electricity needs of approximately 65,000 homes in South Africa.

The project significantly reduces carbon emissions, helping the nation to fulfil its commitment of developing 8,400MW of solar PV energy by 2030.

"The project will significantly reduce carbon emissions helping the nation to fulfil its commitment of developing 8,400MW of solar PV energy by 2030."

Development and benefits of the South African solar power project

South African Department of Energy's (DOE) Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) awarded the preferred bidder status to the consortium for the construction of the <u>Letsatsi</u> and Lesedi solar (PV) power plants in the first round of bidding.

The two projects together created more than 600 construction jobs and 100 permanent operational and maintenance jobs. The Lesedi project contributes towards rural development programmes, skills and technology transfer, and education enhancement, creating indirect and induced jobs across the supply chain.

Lesedi solar power plant details

The two solar power projects together are built on 150ha of land with 555,264 crystalline silicon solar PV panels. The PV cells are encapsulated with ethylene-vinyl-acetate (EVA) to enhance the quality and longevity of the modules. The Lesedi solar project will spend more than R2bn (\$190m) in operations and maintenance during its 20+ year operating

Power supply from the Lesedi project

The electrical output of the Lesedi solar project is fed to a 132kV distribution line owned by South Africa's state-owned power utility Eskom. A power purchase agreement was signed with Eskom to sell the power generated from the project for 20 years.

Financing for the Lesedi solar power project

The project was financed by a mix of equity and debt. Rand Merchant Bank (RMB) was the lead banker for debt financing. IDEAS Managed Fund, Kensani Capital Investments, GCL-Poly Energy Holdings, SolarReserve and Intikon arranged the equity. RMB also provided preference share equity.

The financial closure for the Letsatsi and Lesedi projects was jointly achieved in November 2012 making it the biggest project finance transaction executed in South Africa.

"The financial closure for the Letsatsi and Lesedi projects was jointly achieved in November 2012 making it the biggest project finance transaction to be executed in South Africa."

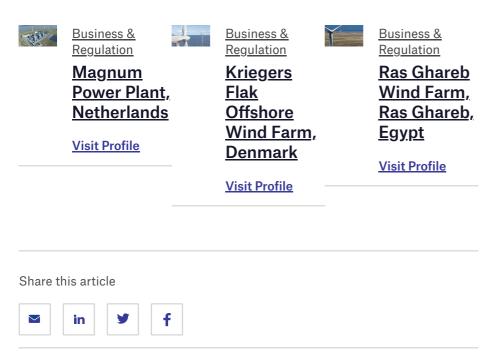
Contractors and suppliers involved

The engineering, procurement and construction (EPC) contract for the project was awarded to a consortium of ACS Cobra, Spanish firm Gransolar and South Africa's Kensani Energy. SgurrEnergy was appointed as the technical advisor for the project.

Raubex was subcontracted by Gransolar to perform certain civil and electrical temporary works.

Efacec supplied 22kV ring main units of FLUOFIX-type switchgear, which was installed in the project distribution network. Steel for the mounting structures built at the solar power project was supplied by Robor. Hanwha SolarOne was contracted in December 2012 to supply solar modules for the project.

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