

## European Solar and Energy Storage Solutions

# Selenkei solar power plant South Africa



## Overview

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Selenkei Investment Ltd is a special purpose vehicle incorporated in Kenya to develop, construct and operate a PV solar power plant.

FMO's funding will be used to construct a 40 MW PV solar power plant. The project site is located close to the city of Eldoret in Western Kenya.

This project has a low environmental and social risk with main impacts deriving from the construction activities of setting up a PV plant and are confined to general waste management, worker occupational health and safety, traffic.

West Kenya is in need of additional power complementing the existing hydroelectric power plant in the region. The project will supply renewable energy to the national grid. Long term debt.

Will Kengen build a floating solar power plant on Kamburu dam?

KenGen is seeking to build a 40MWp floating solar PV power plant on Kamburu Dam, which would make it Kenya's first grid-level floating solar plant.

Does South Africa have a solar power plant?

Unless indicated otherwise, the plant uses PV technology. According to the Department of Mineral Resources and Energy's IPP website, operational solar plants can provide over 2,700MW of clean electricity to South Africa's grid.

How many solar power stations are in South Africa?

There are 51 solar power stations that are feeding clean energy into South Africa's grid, as of October 2023. That is according to the Department of Mineral Resources and Energy's IPP Projects database.

Who built Kenya's first floating solar PV plant?

Power firm Ecoligo GmbH built Kenya's first floating solar PV plant in 2021. The small 69kWp plant was installed on one of the reservoirs at Rift Valley Roses farm in Naivasha. The energy produced by the solar system is solely for

self-consumption and is not fed back into the grid.

How many concentrated solar plants are there in South Africa?

Additionally, South Africa has six concentrated solar plants (CSPs) with a total capacity of 500MW. Unlike PV plants, CSPs harness the sun's thermal energy to produce electricity, using techniques like the linear concentrator system and power towers.

Where are the solar power projects in Mauritius?

Two of the projects, developed by Mauritius-registered Radiant Energy and Eldosol Energy Limited, are sited next to each other some 13 kilometres to the south east of Eldoret town in Uasin Gishu county. Another solar power plant is being developed by Alten Energy Solarfarms. It will be located just 1 km east of the Radiant/Eldosol sites.

## Selenkei solar power plant South Africa



### Radiant Solar Power Station

The power station has a capacity of 40 megawatts, that is sold directly to the Kenya Power and Lighting Company for integration in the national electricity grid. The electricity is evacuated via a substation near the power station, connected to a high voltage transmission line that passes near the power station. [1] The power shares a common substation with the neighboring Eldosol ...

### Top 10 Solar Power Plants in Africa

The KaXu Solar One project is the first commercially operated solar thermal electric power plant in South Africa. located near Pofadder in the Northern Cape province of South Africa, the 100 MW solar power plant was commissioned in 2015 and is capable of delivering reliable and clean energy to approximately 80,000 South African households

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- ✓ 100-215kWh High-capacity
- ✓ Intelligent Integration



### South Africa's Solar Energy Landscape: 51 Stations Generating ...

As of October 2023, South Africa boasts 51 solar power stations contributing clean energy to its grid. These independently operated facilities vary in capacity, ranging from 5MW to a substantial 175MW for multi-phase installations.

## Utility scale: 10 biggest solar projects in South Africa

Kaxu Solar One is a 100MW thermos solar plant located in the same complex as the Xina Solar One plant in Pofadder. When combined, the two plants make up the largest solar power complex in Africa. Kaxu's molten salt storage system has the capacity to generate electricity for 2.5 hours without sunshine.



## South Africa: Acwa Power's Redstone concentrated solar power plant

Saudi Arabia's Acwa Power has commissioned the 100MW Redstone concentrated solar power plant in South Africa's Northern Cape. It marks further progress for the technology, which offers both intermittent and dispatchable solar generation but is often seen as too costly to develop. The plant brings total African operational capacity to 1.7GW according to ...

### APPLICATION SCENARIOS



## Project detail

Selenkei Investment Ltd is a special purpose vehicle incorporated in Kenya to develop, construct and operate a PV solar power plant. What is our funding objective? FMO's funding will be used to construct a 40 MW PV solar power plant. The project site is located close to the city of Eldoret in Western Kenya. Why do we fund this investment?



## Project detail

FMO is an investor in Frontier Energy's II Beta K/S and a lender to many of the projects managed by Frontier Energy including the Selenkei and Cedate solar PV projects. The ELDOSOL (Cedate)

project is located close to Eldoret in Western Kenya, in a predominantly rural area.



## Revealed: Irony of solar plants denying Kenyans cheaper power

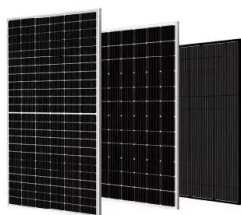
Energy and Petroleum Cabinet Secretary Davis Chirchir on Monday revealed that the connection of Selenkei, Cedate and Alten solar power plants to the grid stretched the capacity of the Turkwel-Ortum-Kitale transmission line. The line was initially used to evacuate power from the 106-megawatt Turkwel hydropower plant, which is owned by KenGen.

### Highvoltage Battery



## Three investors advance 120 MW solar power projects in Kenya

Each of the investors is proposing a 40 MW project to be developed under the independent power producers (IPPs) scheme with feed-in tariff that currently stands at KES 12 (USD 0.12/ EUR 0.11) per kWh.



## Power plant profile: Radiant Project Solar PV Park, Kenya

JinkoSolar Holding will be the supplier of the PV modules for the solar power project. The company is expected to install 140,800 modules

at the site. The project will utilise single axis tracker that are likely to be supplied by Trina Solar. For more details on Radiant Project Solar PV Park, buy the profile here. About Radiant Energy



## Project detail

Currently the projects in the operational phase are mostly hydro projects with two upcoming Solar projects (Selenkei and Cedate Solar PV power projects). FMO is an investor in Frontier Energy's II Beta K/S and a lender to many of the projects managed by Frontier Energy including the Selenkei and Cedate solar PV projects.

## South Africa's Solar Market Outlook: A Bright Future for ...

South Africa has abundant solar resources, making it a prime location for the development of solar energy projects. The country has set a target of generating 18 GW of renewable energy by 2030, with solar energy expected to make up a significant portion of this target. The government's Renewable Energy Independent Power Producer Procurement ...



## Five Biggest CSP Plants in South Africa

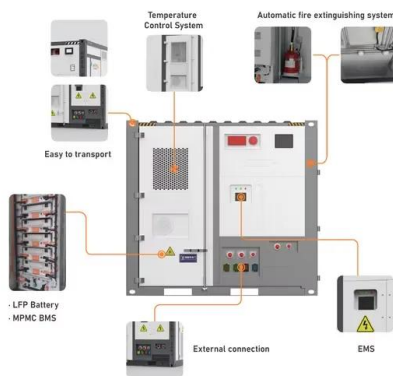
KaXu Solar One. The first CSP plant in South Africa to employ parabolic trough technology, the 100 MW KaXu Solar One CSP plant started operating in March 2015, following more than two years of construction. Translated to "open

skies" in the region's local Nama language, the KaXu Solar One plant is located 40km northeast of Pofadder and



## Selemela Solar Park

The solar PV plants comprise over 390 073 bifacial solar modules on single axis trackers, covering a total area of 430 hectares and generating 593 721 MWh of energy annually. Enough to power over 80 000 households with electricity. ...



## Solar Projects in South Africa: 10 Largest Solar Power Plants in ...

This is currently the largest of the solar projects in South Africa. The solar farm, which comprises 325,000 solar panels, sits on 150 hectares of land (277 acres). The plant's operation has created 44 permanent jobs, and electricity generated from the plant can power 80,000 homes. The grid-connected plant is owned by a consortium (see Table 1).

## Selemela Solar Park

The solar PV plants comprise over 390 073 bifacial solar modules on single axis trackers, covering a total area of 430 hectares and generating 593 721 MWh of energy annually. Enough to power over 80 000 households with

electricity. The Project will see over 420 760 tons of carbon dioxide emissions being avoided annually.

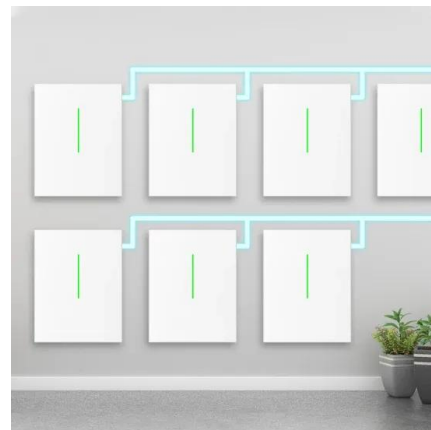


### Eldosol Solar Power Station

The power station has a capacity of 40 megawatts that is sold directly to the Kenya Power and Lighting Company for integration in the national electricity grid. The electricity is evacuated via a substation near the power station, connected to a high voltage transmission line that passes near the power station. [1] The power station comprises 140,800 photovoltaic modules and a ...

### Malindi Solar Plant in Kenya adding clean energy to the national ...

The 52MWp Malindi Solar Plant in Kenya is exporting 40MWac of power into the national grid since 14 December 2021. The power plant is delivering enough clean and renewable power to supply approximately 250,000 residential customers and will avoid 44,500 tons of CO2-equivalent emissions annually.



### Radiant Solar PV Project - Kenya - Frontier Energy

The 40 MW Radiant Solar PV project is a 40 MW project located in the Plateau area, close to Eldoret City in the North-Western part of Kenya.

The project achieved Commercial Operation date in August 2021 and is currently in operations.



## **The Tom Burke solar plant, South Africa , Enel Green Power**

That output is the equivalent of the annual consumption needs of around 38,000 South African households and it avoids the emission of over 111,000 tons of CO<sub>2</sub> into the atmosphere each year. Tom Burke was our first large-scale solar project and is the first plant in South Africa to use thin-film photovoltaic panels.



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