

South Africa Solar Energy - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2020 - 2029

Market Report | 2024-02-17 | 127 pages | Mordor Intelligence

AVAILABLE LICENSES:

- Single User License \$4750.00
- Team License (1-7 Users) \$5250.00
- Site License \$6500.00
- Corporate License \$8750.00

Report description:

The South Africa Solar Energy Market size is estimated at 6.68 gigawatt in 2024, and is expected to reach 11.03 gigawatt by 2029, growing at a CAGR of 10.56% during the forecast period (2024-2029).

Key Highlights

- Over the long term, the growing demand for clean energy sources is expected to stimulate the market growth of South Africa's solar energy market. Furthermore, efforts to reduce over-reliance on coal-based power plants will also likely drive the market's growth.
- On the other hand, the rising natural gas consumption is expected to restrain the South African solar energy market during the forecast period.
- Nevertheless, expanding the indigenous solar manufacturing industry will likely create lucrative growth opportunities for the South African solar energy market in the forecast period.

South Africa Solar Energy Market Trends

Solar PV segment to Dominate the Market

- South Africa receives sunshine for more than 2,500 hours per year. Furthermore, the country has an annual solar radiation average of around 220 W/m²; due to this ideal condition, South Africa is one of the major hotspots for developing the solar energy market in the Middle East and African Region.

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- According to the Climate Commission of South Africa, transitioning South Africa from fossil fuel to renewable power system will require the deployment of roughly 150 GW of wind and solar capacity by 2050, a rate of 4 GW each year to net-zero.
- Furthermore, according to the Blended Finance Taskforce and Stellenbosch University's Centre for Sustainability Transitions report, South Africa will need USD 250 billion over the next three decades to transform its renewable energy system, which is around 3% of South Africa's GDP annually.
- The South African government introduced Renewable Energy Independent Power Producer Procurement Programme to facilitate these needs. From the inception of this program, over 6,000 MW of renewable energy projects were allocated to bidders, principally in wind and solar. Furthermore, to achieve this ambitious target, the government strategically invests in renewable energy projects, particularly solar and wind. As of 2022, the total installed capacity of solar photovoltaic energy was around 5,826 MW.
- In December 2022, Solar provider Solana Energy announced that South Africa is experiencing a residential solar installation boom, with households importing over USD 120.648 Million worth of solar photovoltaic (PV) panels. According to the South African Photovoltaic Industry Association (SAPVIA) - once this capacity is installed, it will surpass over a decade of what the government has been able to procure in solar energy.
- However, in 2022, South Africa launched a 300 MW renewable energy program. Under this program, the government launched the tender process to procure up to 300 MW of renewable energy capacity. The first round involves procuring independent power producer projects with capacities ranging from 5 MW to 20 MW; the power generation would be from solar photovoltaic (PV) technology. The second phase of the program involves the tender of projects of more than 20 MW.
- Therefore, owing to the above points, the solar PV segment is expected to dominate the solar energy market in South Africa during the forecast period.

Efforts To Reduce Over Reliance On Coal-based Power Plants are Expected to Drive the Market

- South Africa is the seventh-largest coal producer in the world, and the country is heavily dependent on coal-based thermal power plants. As of 2021, coal-based thermal power plants accounted for nearly 82% of the total installed capacity and 76% of the entire electricity generation in 2021. As of 2021, the country had 15 operational power plants with a net installed capacity of nearly 39.3 GW, making South Africa the most significant greenhouse gas emitter and the 11th largest in the world.
- In May 2023, South Africa's climate policy body announced that it is planning to delay retiring its ageing coal-fired power plants to address electricity shortages. It said a power crisis had put the country on track to meet its climate goals anyway. The African National Congress has recommended that state power utility Eskom delay decommissioning its ageing coal-fired power stations to help minimise rolling electricity outages.
- However, South Africa has abundant solar resources, making it a prime location for developing 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 (REIPPP) program has successfully attracted investment and supported the development of solar energy projects in the country.
- The energy crisis has been primarily caused by overreliance on older coal-based thermal power plants owned and operated by the national power utility ESKOM. Additionally, for ESKOM's coal-fired fleet, the Planned Capability Loss Factor (PCLF) for planned maintenance stood at 10.4%, and the Unplanned Capability Loss Factor (UCLF) due to unplanned outages stood at 24.6%. Other Capability Loss Factor (OCLF) stood at 2.9%.
- Such significant plant loss factor coefficients are primarily due to ESKOM's coal-fired fleet age. Excluding the newly built Medupi and Kusile facilities, the average age of ESKOM's coal-powered fleet is 41 years, which is significantly higher.
- In December 2022, Six private renewable energy developers signed 20-year power purchase agreements with South Africa's electricity public utility Eskom Holdings SOC Ltd to construct 13 solar photovoltaic plants sited in Western Cape, Free State and Northern Cape provinces. The PV power plants will have a combined capacity of 975 MW.
- Due to their advanced age, these power plants are inefficient by current standards, highly vulnerable to outages, and require

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

frequent maintenance, driving up operational costs. Additionally, electricity production is more polluting and generates a much higher amount of greenhouse gases. According to ESKOM, it will cost the utility approximately ZAR 300 billion to make its aging coal-fired fleet compliant with minimum emissions standards.

- According to IRENA, in 2022, solar energy intalled capacity was around 6,326 MW, with a growth rate of 0.15% from previous year.

- Therefore, owing to the above points, efforts to reduce over reliance on coal-based power plants is expected to drive the country's solar energy market during the forecast period.

South Africa Solar Energy Industry Overview

The South African solar energy market is moderately consolidated in nature. Some of the major players in the market (in no particular order) include Canadian Solar Inc., ARTsolar (Pty) Ltd, Energy Partners Holdings (Pty) Ltd, IBC Solar AG, and Segen Solar (Pty) Ltd., among others.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

Table of Contents:

1 INTRODUCTION

1.1 Scope of the Study

1.2 Market Definition

1.3 Study Assumptions

2 EXECUTIVE SUMMARY

3 RESEARCH METHODOLOGY

4 MARKET OVERVIEW

4.1 Introduction

4.2 Renewable Energy Mix, South Africa, 2022

4.3 Solar Energy Installed Capacity and Forecast, in MW, till 2028

4.4 Recent Trends and Developments

4.5 Government Policies and Regulations

4.6 Market Dynamics

4.6.1 Drivers

4.6.1.1 The Growing Demand for Clean Energy Sources

4.6.1.2 Efforts to Reduce Over-Reliance on Coal-Based Power Plants

4.6.2 Restraints

4.6.3 The Rising Consumption of Natural Gas for Power Generation

4.7 Supply Chain Analysis

4.8 PESTLE Analysis

5 MARKET SEGMENTATION

5.1 Technology

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 5.1.1 Concentrated Solar Power (CSP)
- 5.1.2 Solar Photovoltaic (PV)
- 5.2 End User
 - 5.2.1 Residential
 - 5.2.2 Commercial and Industrial (C&I)
 - 5.2.3 Utility

6 COMPETITIVE LANDSCAPE

- 6.1 Mergers and Acquisitions, Joint Ventures, Collaborations, and Agreements
- 6.2 Strategies Adopted by Leading Players
- 6.3 Company Profiles
 - 6.3.1 Canadian Solar Inc.
 - 6.3.2 Trina Solar Co. Ltd
 - 6.3.3 Jinko Solar Holding Co. Ltd
 - 6.3.4 ART Solar Ltd
 - 6.3.5 SegenSolar (Pty) Ltd
 - 6.3.6 IBC Solar AG
 - 6.3.7 Engie SA
 - 6.3.8 Enel SpA
 - 6.3.9 Energy Partners Holdings (Pty) Ltd
 - 6.3.10 Seraphim Solar

7 MARKET OPPORTUNITIES AND FUTURE TRENDS

8 The Expansion of the Indigenous Solar Manufacturing Industry

South Africa Solar Energy - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2020 - 2029

Market Report | 2024-02-17 | 127 pages | Mordor Intelligence

To place an Order with Scotts International:

- ☐ - Print this form
- ☐ - Complete the relevant blank fields and sign
- ☐ - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	\$4750.00
	Team License (1-7 Users)	\$5250.00
	Site License	\$6500.00
	Corporate License	\$8750.00
		VAT
		Total

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*		Phone*	
First Name*		Last Name*	
Job title*			
Company Name*		EU Vat / Tax ID / NIP number*	
Address*		City*	
Zip Code*		Country*	
		Date	2026-03-04
		Signature	

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com



Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com
www.scotts-international.com