

South Africa Solar Energy - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2026 - 2031)

Market Report | 2026-02-09 | 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:

South Africa Solar Energy Market Analysis

The South Africa Solar Energy Market was valued at 8.75 gigawatt in 2025 and estimated to grow from 9.76 gigawatt in 2026 to reach 16.88 gigawatt by 2031, at a CAGR of 11.58% during the forecast period (2026-2031).

Growth hinges on accelerating coal-to-solar substitution, record corporate demand for clean electricity, and persistent grid instability that prompts policymakers and investors to adopt proven photovoltaic solutions. Declining module and balance-of-system costs continue to compress levelized tariffs below Eskom's new-build coal benchmarks, while streamlined permitting under the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) shortens project lead times. A widening pipeline of corporate power purchase agreements (PPAs) from mining companies and data-center operators diversifies offtake structures, unlocking new capital from domestic banks, international climate-finance facilities, and development finance institutions. Nevertheless, grid bottlenecks in the Northern Cape, higher storage integration costs, and land-use conflicts in biodiversity zones insert friction that moderates deployment velocity and shapes technology choices across segments.

South Africa Solar Energy Market Trends and Insights

Declining PV Module Prices and Balance-of-System Cost Reductions

Average global module prices fell 42% between 2023 and 2024, pulling South African utility-scale tariffs to ZAR 0.58 per kWh,

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

which is well below the recently commissioned coal plants that exceed ZAR 1.20 per kWh. Comparable cost compression across inverters, trackers, and mounting structures widens project margins and increases bid competitiveness in REIPPPP Bid Window 7, which procured 2.6 GW of new solar capacity in 2024. Developers increasingly adopt bifacial modules and dual-axis trackers that elevate energy yields by up to 35% in the high-irradiation Northern Cape. Because hardware is mostly denominated in U.S. dollars, currency volatility introduces procurement risk, prompting sponsors to secure forward contracts and deepen local-content partnerships that temper exchange-rate exposure. These dynamics position cost leadership as the primary lever for differentiation among EPC contractors and developers competing for forthcoming Bid Window 8 capacity.

Robust REIPPPP Pipeline and Tender Schedule Acceleration

The Department of Mineral Resources and Energy has condensed tender cycles from an average of 24-36 months in earlier rounds to 18 months in Bid Window 7, in part through standardized grid studies and fast-track environmental approvals. The agency plans a 3 GW Bid Window 8 with a mandatory 4-hour storage requirement on 40% of the awarded capacity, reflecting the government's intent to secure dispatchable renewable profiles suitable for evening peaks. Newly instituted delay penalties sharpen execution discipline, while provincial development zones in the Northern Cape offer pre-approved sites that shave up to one year off typical development timelines. As a result, financiers perceive lower permitting risk, which drives narrower spreads on construction debt and improves the bankability of larger, multi-technology projects.

Grid Connection Bottlenecks and Curtailment Risk Escalation

Transmission circuits in the Northern Cape operate at 85-90% capacity utilization, extending grid-access queues beyond 36 months for new projects and triggering curtailment events that shaved 15-20% of annual output from certain operational plants in 2024. Eskom's planned ZAR 12 billion Aries-Oranjemond reinforcement faces funding gaps, deferring completion to 2027-2028. Revised grid codes now require advanced frequency response capabilities, adding ZAR 0.15-0.25 million per MW in control hardware expenses. Time-of-use access charges also shift cost responsibility to generators, challenging returns on merchant PPAs unless coupled with storage that arbitrages peak tariffs.

Other drivers and restraints analyzed in the detailed report include:

Urgent Grid-Stability Needs amid Eskom Load-Shedding
Abundant DNI & Solar Irradiation Levels
High Upfront Capital Expenditure for Storage-Ready Project Configurations

For complete list of drivers and restraints, kindly check the Table Of Contents.

Segment Analysis

Photovoltaic assets represented 92.62% of the installed capacity in 2025, translating to a dominant revenue position in the South African solar energy market. The segment maintained an 8.2% compound annual growth rate from 2019 to 2024 and now benefits from expanded REIPPPP allocations and surging private PPAs. CSP, although currently small, is poised for a 14.35% CAGR through 2031, as mining firms and industrial users favor its dispatchable profile, which aligns output with evening system peaks. The South Africa solar energy market size for CSP projects is projected to triple by the end of the decade, catalyzing a modest rebalancing of the technology mix without eroding PV's foundational role.

PV's momentum also stems from rapid innovation. Bifacial modules paired with single-axis trackers increase capacity factors to the 28-32% range, while laboratory advances in perovskite-silicon tandem cells indicate future efficiencies exceeding 35%. In contrast, CSP facilities such as Kathu and Bokpoort achieve capacity factors of nearly 65% thanks to 4.5-hour molten-salt storage, which supports grid stabilization after sunset. Hybrid designs that co-locate PV panels with CSP towers are under evaluation to

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

blend low-cost daytime energy with dispatchable evening output, potentially reducing levelized costs by up to 18%.

The South Africa Solar Energy Market Report is Segmented by Technology (Solar Photovoltaic and Concentrated Solar Power), Grid Type (On-Grid and Off-Grid), and End-User (Utility-Scale, Commercial and Industrial, and Residential). The Market Sizes and Forecasts are Provided in Terms of Installed Capacity (GW).

List of Companies Covered in this Report:

Scatec ASA ACWA Power Enel Green Power South Africa Juwi Renewable Energies SunPower Corporation Mainstream Renewable Power EDF Renewables South Africa Canadian Solar Inc. First Solar Inc. TotalEnergies Renewables SA Abengoa Solar Sonnedix Iberdrola JA Solar LONGi Solar Trina Solar Red Rocket South Africa Globeleq Mulilo Energy Seraphim Solar SA

Additional Benefits:

The market estimate (ME) sheet in Excel format

3 months of analyst support

Table of Contents:

1 Introduction

1.1 Study Assumptions & Market Definition

1.2 Scope of the Study

2 Research Methodology

3 Executive Summary

4 Market Landscape

4.1 Market Overview

4.2 Market Drivers

4.2.1 Declining PV module prices and BOS costs

4.2.2 Robust REIPPPP pipeline & tender schedule

4.2.3 Urgent grid-stability needs amid Eskom load-shedding

4.2.4 Abundant DNI & solar irradiation levels

4.2.5 Corporate PPAs from mining & data-center operators

4.2.6 International climate-finance inflows (JET-P, GFANZ, etc.)

4.3 Market Restraints

4.3.1 Grid-connection bottlenecks & curtailment risk

4.3.2 High upfront capex for storage-ready projects

4.3.3 Land-use conflicts in Northern Cape biodiversity zones

4.3.4 Local content rules causing supply-chain delays

4.4 Supply-Chain Analysis

4.5 Regulatory Outlook

4.6 Technological Outlook

4.7 Porters Five Forces

4.7.1 Threat of New Entrants

4.7.2 Bargaining Power of Buyers

4.7.3 Bargaining Power of Suppliers

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

4.7.4 Threat of Substitutes

4.7.5 Competitive Rivalry

4.8 PESTLE Analysis

5 Market Size & Growth Forecasts

5.1 By Technology

5.1.1 Solar Photovoltaic (PV)

5.1.2 Concentrated Solar Power (CSP)

5.2 By Grid Type

5.2.1 On-Grid

5.2.2 Off-Grid

5.3 By End-User

5.3.1 Utility-Scale

5.3.2 Commercial and Industrial (C&I)

5.3.3 Residential

5.4 By Component (Qualitative Analysis)

5.4.1 Solar Modules/Panels

5.4.2 Inverters (String, Central, Micro)

5.4.3 Mounting and Tracking Systems

5.4.4 Balance-of-System and Electricals

5.4.5 Energy Storage and Hybrid Integration

6 Competitive Landscape

6.1 Market Concentration

6.2 Strategic Moves (M&A, Partnerships, PPAs)

6.3 Market Share Analysis (Market Rank/Share for key companies)

6.4 Company Profiles (includes Global level Overview, Market level overview, Core Segments, Financials as available, Strategic Information, Products & Services, and Recent Developments)

6.4.1 Scatec ASA

6.4.2 ACWA Power

6.4.3 Enel Green Power South Africa

6.4.4 Juwi Renewable Energies

6.4.5 SunPower Corporation

6.4.6 Mainstream Renewable Power

6.4.7 EDF Renewables South Africa

6.4.8 Canadian Solar Inc.

6.4.9 First Solar Inc.

6.4.10 TotalEnergies Renewables SA

6.4.11 Abengoa Solar

6.4.12 Sonnedix

6.4.13 Iberdrola

6.4.14 JA Solar

6.4.15 LONGi Solar

6.4.16 Trina Solar

6.4.17 Red Rocket South Africa

6.4.18 Globeleq

6.4.19 Mulilo Energy

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

6.4.20 Seraphim Solar SA

7 Market Opportunities & Future Outlook

7.1 White-space & Unmet-need Assessment

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

**South Africa Solar Energy - Market Share Analysis, Industry Trends & Statistics,
Growth Forecasts (2026 - 2031)**

Market Report | 2026-02-09 | 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*	<input type="text"/>	Phone*	<input type="text"/>
First Name*	<input type="text"/>	Last Name*	<input type="text"/>
Job title*	<input type="text"/>		
Company Name*	<input type="text"/>	EU Vat / Tax ID / NIP number*	<input type="text"/>
Address*	<input type="text"/>	City*	<input type="text"/>
Zip Code*	<input type="text"/>	Country*	<input type="text"/>
		Date	<input type="text" value="2026-02-26"/>
		Signature	

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

