

THE SOUTH AFRICA POWER MARKET REPORT

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Contact:

janet.cronje@meridianeconomics.co.za

WHAT IT OFFERS:

- Independent, **credible insight** into the future of South Africa's power system.
- Scenario-based, modelled projections of **SAWEM spot prices** and renewable capture prices.
- Underpinned by **specialised power system software** used to model long-term system capacity expansion, and hourly merit order and dispatch.
- Long- and **shorter-term PPA pricing curves** to support investment and procurement decisions.
- Grounded in **real market dynamics** – policy and regulation, technology cost curves, legacy plant, financing conditions, and carbon pricing.
- Leveraging **deep sector and analytical expertise**, built through hands-on involvement across the SA energy system.

RECENT DEVELOPMENTS:

Batteries leap forward

- A 20% drop in costs in early 2025 supercharges solar-plus-storage.
- Prioritises batteries for new capacity services and delays need for new peaking plant.
- Reduces the scale of wind-power.

Gas loses ground

- ...combined with rising gas turbine prices, reduces the opportunity for CCGTs.

Tail-end renewables squeezed

- Lower forecast long-term fuel prices erode the residual value of renewables.

Carbon tax looms large

- System marginal prices swing sharply with plausible carbon tax scenarios – underlining policy-driven risk.

KEY INSIGHTS ACROSS THE SOUTH AFRICAN POWER LANDSCAPE



Electricity market projections

The report establishes various scenarios of market evolution and develops corresponding wholesale electricity price paths until 2060 from the Meridian power system modelling suite COMPASS.

Regular updates of the report will allow market participants to evaluate the direction of travel of the sector and make informed decisions about the likelihood of future energy price scenarios.



Renewable energy value

The economic value of solar and wind energy fluctuates based on real-time SAWEM market conditions. “Capture pricing” refers to the average price that a project can earn from selling power into the wholesale power spot market (possibly as a PPA back-stop). It is influenced by the timing of the project’s generation, and market supply-demand dynamics. The metric is crucial as it represents an important aspect of financial viability and value for money.



Regulatory developments

The report provides insights into the state of the regulatory framework and outlines regulatory developments, including regulatory tensions, that affect investment decisions in the power sector – particularly for renewable and low-carbon power. This includes both state procurement as well as market reforms.



Power market structure

The current market reform process, which involves the separation of Eskom into three distinct entities and the implementation of ancillary policies aimed at fostering a competitive market structure, will have a profound impact on investors, asset owners, and consumers within the power sector. The report comprehensively outlines the key market, institutional, and legal changes that are currently underway.



Low carbon transition

The power sector is central to the climate mitigation challenge. The report provides insights into the grid emission paths associated with the forecast scenarios. The relationship between carbon taxation and influences of climate policy and ‘just energy transition’ programmes on the sector are explained.



Market opportunities

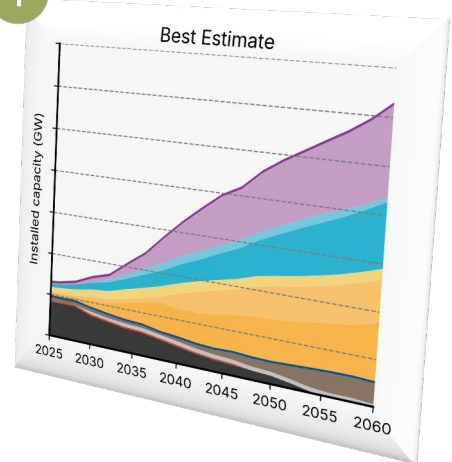
The report provides up-to-date information on public sector power procurement programmes as well as insights into the corporate and residential power markets being served by wheeling and behind the meter embedded generators. The projected electricity price paths under different scenarios are of particular significance for evaluation of investments in these market segments.



SAMPLE OUTPUT

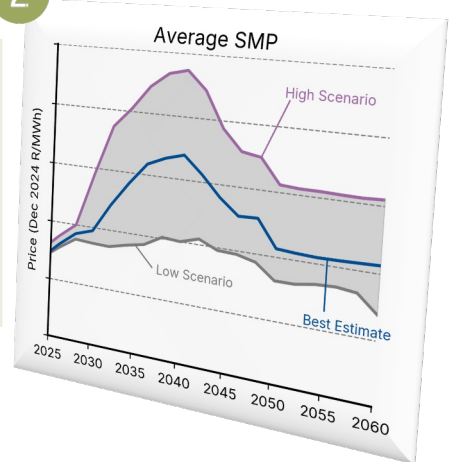
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The economic capacity for each technology is determined through to 2060 per scenario.



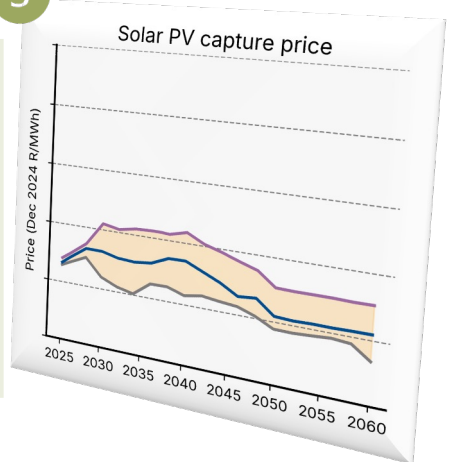
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The wholesale market price (system marginal price) is determined for each hour of every year.



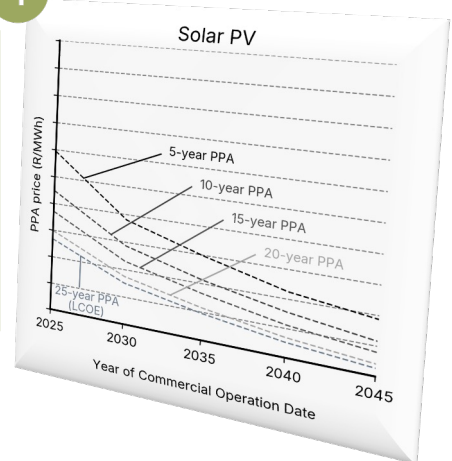
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Capture prices (the price different technologies realise in the market) are then determined for solar and wind generators.



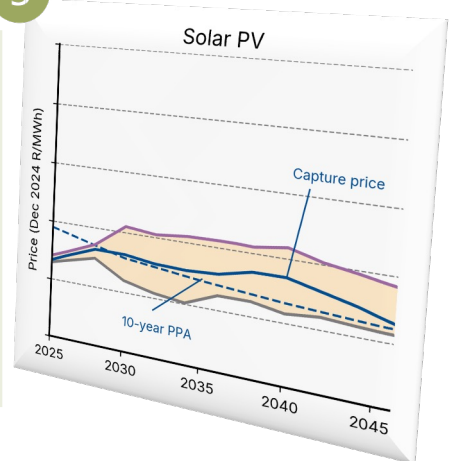
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PPA floor prices are determined for various terms based on projected capital and operating cost learning.



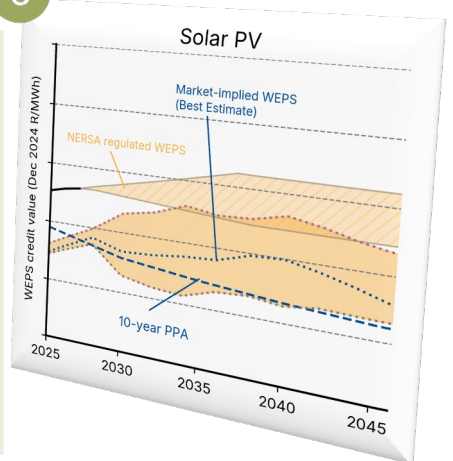
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The merchant value proposition for solar and wind is represented by the difference between the capture price and the PPA floor price.



6

Similarly, a consumer value proposition can be inferred from the difference between the market-implied WEPS credit value and the PPA floor price.



CUSTOMER BENEFITS

Banks and Non-Bank Lenders

- PPA pricing benchmarks.
- Evaluation of revenue and debt service cover risk.
- Evaluation of back-stop value of power generation in case of purchaser default and excess generation over sold power.
- Evaluation of refinancing risk of debt structures.

IPPs, Developers and Equity Investors

- Stress test of market-linked PPAs.
- Viability and IRR forecast of project developments.
- PPA pricing and structuring, and marketing to purchasers.
- Fair value assessment and reporting on generation assets.

Traders and market aggregators

- Model prices and trends and evaluation of portfolio risk.
- Validate internal price forecasts.
- Improved understanding and modelling of portfolio value at risk.

Large Power Users

- Energy infrastructure investment and energy purchase decisions.
- Evaluation of hedge value of PPAs and design of power price hedges.
- Energy optimization and energy efficiency investment decisions.
- Scope 2 emissions forecasts.

Policy-makers, Regulators & Industry Associations

- Independent analysis of alternative market trajectories .
- Risks and impacts of regulatory decisions or delays.
- Greenhouse gas impacts of alternative scenarios.



PURCHASE OPTIONS

INCLUDED	OFFERING	
	<i>Basic</i>	<i>Comprehensive</i>
Annual South Africa Power Market Report	X	X
Half-year modelling results update and variation report (optional)	X	X
Access to back issues	X	X
Licensed for internal use only	X	
Licensed for internal use and for engagement with external parties		X
Excel workbook incl: dashboard; assumptions and detailed time series price data		X
Two-hour Q&A with the report team on results		X



WHICH OPTION IS BEST FOR YOU?

USE CASE	OFFERING	
	<i>Basic</i>	<i>Comprehensive</i>
Understand the rapidly developing market	X	X
Strategy development	X	X
Benchmark market price projections		X
Evaluate offerings from IPPs and traders (large customers)		X
Model and assess IPP investment risk		X
Produce materials for customer engagement and negotiations (IPPs)		X
Provide modelling results for project finance with banks and investors		X



Contents

1 Introduction	1		
2 Electricity supply industry overview	2		
2.1 Demand			
2.1.1 Historic demand			
2.1.2 Composition of demand			
2.1.3 Demand for green power			
2.2 Generation and storage			
2.2.1 Installed capacity and generation mix			
2.2.2 Eskom generation			
2.2.3 Imports and exports			
2.2.4 Municipal generation			
2.2.5 Independent power producers			
2.2.6 Behind-the-meter			
2.3 Transmission			
2.3.1 Generation Connection Capacity Assessment			
2.3.2 Transmission Development Plan			
2.4 Distribution			
2.4.1 Security of supply challenges			
3 Policy and regulation	19		
3.1 Setting of tariffs			
3.1.1 Regulation of tariff levels			
3.1.2 Regulation of tariff structure			
3.2 Integrated Resource Plan			
3.3 Local air pollution regulation			
3.4 Climate policy and regulation			
3.4.1 International carbon pricing developments			
3.4.2 South Africa's international climate mitigation commitments			
3.4.3 Implications of climate policy and regulation for power sector decarbonisation			
4 The future wholesale market	24		
4.1 Overview of the new wholesale market design			
4.2 Impact of the wholesale market on distributors and retail tariffs			
4.3 Market arrangements for bilateral power purchase agreements			
5 Routes to market for independent power producers	32		
5.1 National procurement programmes			
5.1.1 Renewable Energy IPP Procurement Programme			
5.1.2 Battery Energy Storage IPP Procurement Programme			
5.1.3 Gas IPP Procurement Programme			
5.1.4 Nuclear			
5.1.5 Short-term procurement programmes			
5.2 Eskom credit status and government support			
5.2.1 Eskom credit status			
5.2.2 Government guarantees			
5.3 National wholesale spot and capacity market mechanisms			



Contents

5.4	Local government power procurement programmes	
5.5	Commercial and industrial market	
5.5.1	Wheeling PPAs	
5.5.2	Behind-the-meter power	
5.5.3	Traders	
5.6	Residential solar	
5.7	Wheeling frameworks	
5.7.1	Conventional wheeling	
5.7.2	Virtual Wheeling	
5.7.3	Token Wheeling	
5.8	Permitting and grid access	
5.9	Curtailment framework	
5.10	Supporting pricing instruments and tax incentives	
5.10.1	Income tax incentives	
5.10.2	Carbon tax offsets	
5.10.3	Environmental attributes	
5.11	A note on terminology	
6	Electricity market projections	46
6.1	Modelling and scenario framework	
6.1.1	Scenario framework	
6.1.2	Modelling approach	
6.2	Physical characteristics of the future power system	
6.2.1	Capacity expansion and energy generation	
6.2.2	Greenhouse gas grid emissions factor	
6.2.3	Load shedding / supply adequacy	
6.3	Pricing landscape	
6.3.1	Wholesale energy market price	
6.3.2	The value of capacity	
6.3.3	Market capture pricing for wind and solar	
6.3.4	Evolution of the wholesale tariff structure	
6.3.5	Renewables PPA pricing across various contract terms	
6.3.6	Composite outlook of the pricing landscape	
7	Concluding remarks	83
7.1	Key findings	
7.1.1	Opportunity for new generation investments	
7.1.2	Renewables offer sustained value	
7.1.3	A modest gas-to-power opportunity	
7.2	Future uncertainties	
7.2.1	Structural uncertainties	
7.2.2	Price-specific uncertainties	
8	Technical appendix	87
8.1	Modelling framework	
8.2	Renewable resource variability	
8.2.1	Generation forecasts	
8.2.2	Inter-year variability price impact	
8.3	Fuel costs	
8.3.1	Coal costs	
8.3.2	Diesel, clean fuels and gas costs	



Contents

8.4	Technical parameters for generation	
8.4.1	Gas plant operating assumptions and constraints	
8.4.2	Coal plant operating assumptions	
8.4.3	Wind build limits	
8.4.4	Potential for offshore wind	
8.5	Economic and regulatory assumptions	
8.5.1	Annual demand projections	
8.5.2	Carbon price assumptions	
8.6	Time of use	
8.7	Results comparison March/September 2025	
8.8	PPA pricing parameter stress sensitivity	
9	Interim market developments	103



RELATED ADVISORY SERVICES

MERIDIAN ECONOMICS OFFERS A RANGE OF BESPOKE ADVISORY SERVICES TO EXPAND ON THE RESULTS PRESENTED IN THE REPORT

These include:

- Customised model runs to test specific scenarios under revised input assumptions.
- Capture pricing for project-specific wind or solar PV generation profiles under different scenarios.
- Capture value analysis of battery energy storage under any specified operating regime.
- Optimal design of a generation portfolio based on investment return potential and investor risk appetite, over a wide range of future scenarios.
- Fair-value PPA analysis to supply some or all of a customer's power requirements.

We also offer:

- Integrated (electricity, process heat and mobility) company-level energy and emissions system optimisation modelling.
- Investment analysis, including project timelines, capital and operating costs, returns relative to reference scenarios, and key risks.
- Support on energy and carbon regulation, including tariffs, PPA procurement, own-build strategies, RECs, carbon offsets, CBAM compliance, carbon taxes, and green hydrogen opportunities.
- Modelling and assessment of energy supply and net-zero strategies as well as the financial and business model implications of these strategies.





Power Consumers

What is the best strategy for securing low-cost green power?



Power Suppliers

How are risk and value assessed when pricing forward contracts?



Energy & climate strategy advisory

- Power system & financial modelling
- Decarbonisation analysis & support
- Infrastructure economics & finance
- Regulatory & litigation support
- Policy & market analysis
- SA Power Market Report



Finance Sector

How do investors evaluate the bankability of clean energy projects?



Public Sector

What evidence and support is needed to guide decision-making in the power sector?



Public Benefit

How can expert power sector advice best support the public interest?

*“The goal of forecasting is not to predict the future
but to inform meaningful action in the present.”*

– Paul Saffo, “Six Rules for Effective Forecasting,”
Harvard Business Review (2007)

CONTACT US

Suite EB04, Tannery Park,
23 Belmont Road, Rondebosch, 7700
+27 21 200 5857
janet.cronje@meridianeconomics.co.za
www.meridianeconomics.co.za