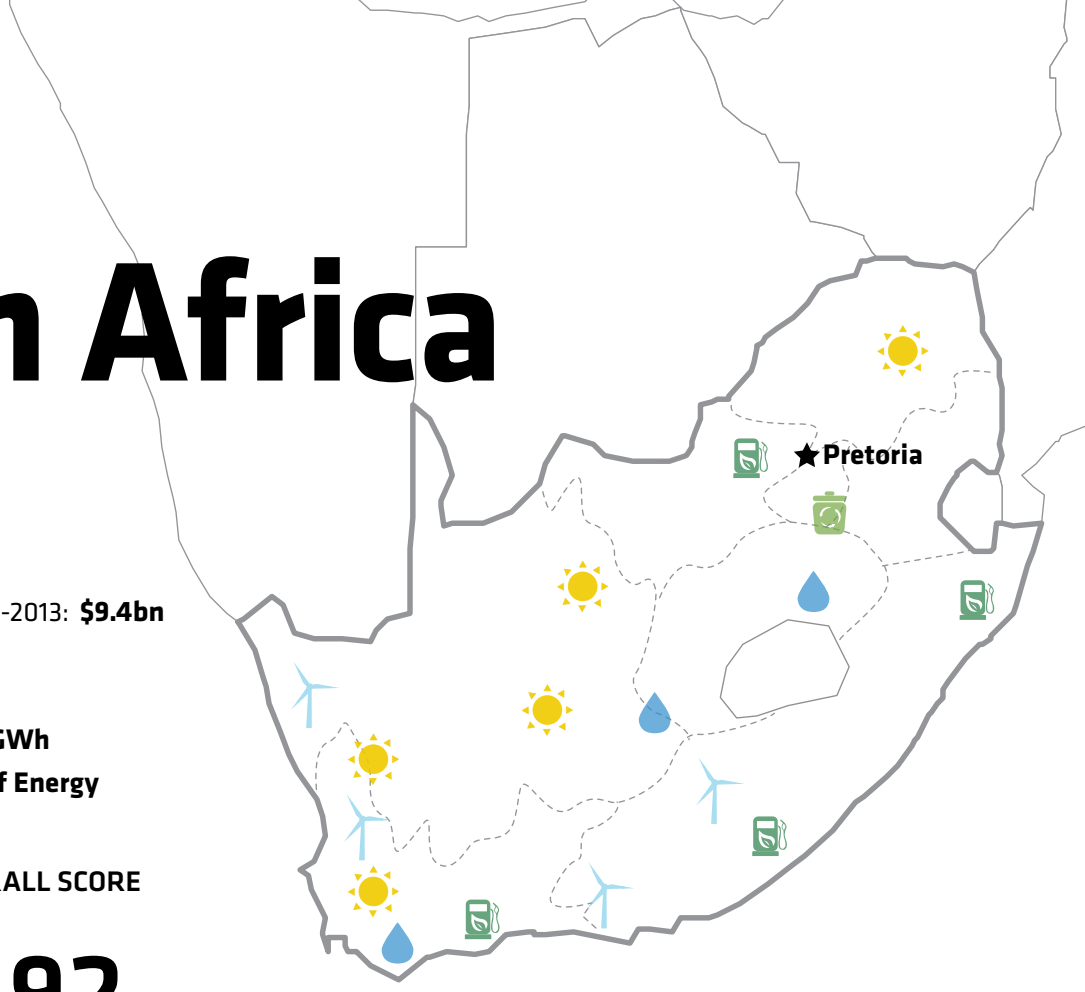
SOUTHERN AFRICA

South Africa



GDP: **$350.6bn**

Five-year economic growth rate: **4%**

Population: **53m**

Total clean energy investments, 2006-2013: **$9.4bn**

Installed power capacity: **43.4GW**

Renewable share: **1.2%**

Total clean energy generation: **1,553GWh**

Top energy authority: **Department of Energy**

OVERALL RANKING 2014

3

OVERALL SCORE 2014

1.92

PARAMETER	RANKING	SCORE
I. Enabling Framework	36	0.99
II. Clean Energy Investment & Climate Financing	02	1.53
III. Low-Carbon Business & Clean Energy Value Chains	03	4.34
IV. Greenhouse Gas Management Activities	06	2.78

SUMMARY

South Africa scored 1.92 to rank third in *Climatescope* 2014, and first among African countries. The country's clean energy sector has been transformed recently: in the last two years it has made it into the top 10 globally for clean energy investment and accounted for almost 90% of investment in sub-Saharan Africa during this period. Indeed, it was second-best globally on Clean Energy Investment, Parameter II, its highest ranking.

The country also scored well on Clean Energy Value Chains, Parameter III, taking third place overall. The manufacturing sector is expanding partly due to local content requirements.

Solar accounts for the largest share of clean energy investment to date, a total of $6.7bn out of $9.4bn since 2006. This is being driven by the push to install solar thermal projects.

South Africa's renewable energy sector was kick-started by the government's reverse auction program in 2012. Nevertheless, it ranked a relatively poor 36th on Enabling Framework Parameter I, by far its worst performance on any parameter, reflecting certain unfavorable aspects of the market (but not its clean energy policy).

South Africa's generation fleet is dominated by coal-fired power plants: in 2013, they generated more than 90% of the nation's electricity. Renewable energy is only a small part of the current energy mix, but this looks set to change over the coming years as the country's large renewable energy build-out program progresses.

For further information, access www.global-climatescope.org/southafrica

Climatescope 2014 Report by Bloomberg New Energy Finance
Multilateral Investment Fund part of the Inter-American Development Bank,
UK Department for International Development, Power Africa

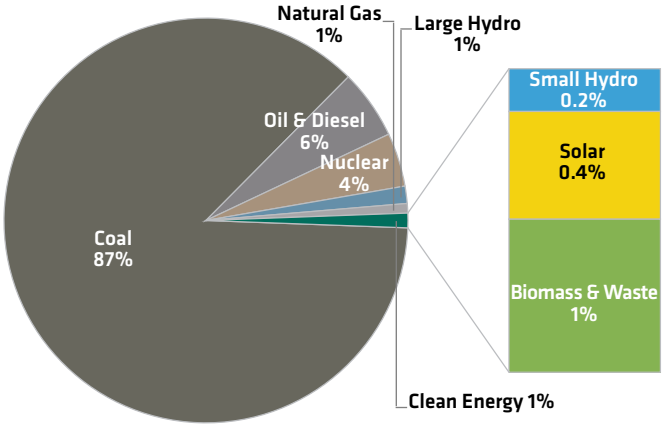
I. ENABLING FRAMEWORK

Ranking 36 / Score 0.99

South Africa's power sector is run by Eskom, a vertically integrated monopoly utility. While the country does have independent power producers, Eskom is the sole buyer of their power output. The country has suppressed power prices historically, which has created a large debt burden for the utility.

INSTALLED POWER CAPACITY BY SOURCE, 2013 (%)

43.4GW total installed capacity



Source: Source: Bloomberg New Energy Finance, Eskom
Note: Some values cannot be graphically represented due to scale, please see source data for the complete numbers

KEY POLICIES

Energy Target	Plan to build 17.8GW of new renewable capacity by 2030 under the Integrated Resource Plan.
Auction	Under the Renewable Energy Independent Power Producers Procurement Program a series of auctions for almost 7GW started in 2011.
Biofuels	Proposed mandate to blend up to 10% ethanol with gasoline and 5% biodiesel with diesel from 2015.
Debt/Equity Incentives	Several public funds available for early-stage financing of green initiatives, clean energy manufacturers and energy efficiency activities.
Utility Regulation	A demand-side management scheme obliges state utility ESKOM to implement efficiency measures either directly or through third parties.
Tax Incentives	Renewable energy and biofuel producers are eligible for accelerated depreciation, while a tax deduction is available for energy efficiency measures.

Source: Bloomberg New Energy Finance Policy Library

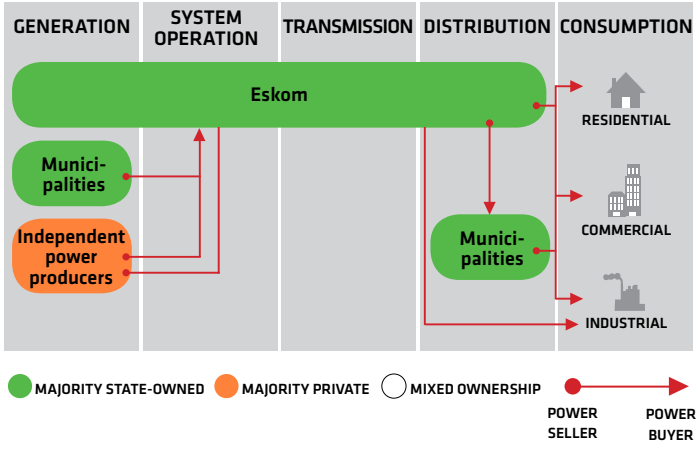
The country ranked 36th globally on Enabling Framework Parameter I, due to its low electricity prices and other market-limiting observations; for instance, it was one of very few nations to see a decrease in power demand in 2013. Only its clean energy policies scored well.

South Africa has five of the eight policies outlined for assessment by *Climatescope*, which helped to boost its clean energy policy score. In 2012, the country began a series of reverse auctions under the Renewable Energy Independent Power Producer Programme (REIPPP) as it set out to procure over 3.6GW of clean energy capacity. By the end of 2013, the government had opened three bidding windows. Apart from its reverse auctions, the country also has a range of financial incentives for clean energy equipment manufacturing companies.

South Africa scored poorly on the clean energy penetration indicator as only 511MW has been installed out of a national total of almost 43GW. In 2013, nearly 180MW was added, mainly in the form of solar, but even this rate of growth did not score well relative to other *Climatescope* countries. This growth trend looks set to continue as the country seeks to procure further renewable energy.

POWER SECTOR STRUCTURE

Regulator: CRE (Comisíon Reguladora de Eletricidad)



Source: Bloomberg New Energy Finance

II. CLEAN ENERGY INVESTMENT AND CLIMATE FINANCING

Ranking 2 / Score 1.53

South Africa took second place on Clean Energy Investment Parameter II with a score of 1.53, behind Uruguay. Despite logging some $9.4bn of investment between 2006 and 2013, it did not score particularly well in terms of volume alone. This was because the total was less impressive than some other countries' investment totals when levelized against national GDP.

However, the country did score highly for its clean energy investment growth rate, and for the quotient of locally based financial backers, which amounted to $2bn of the total $9.4bn.

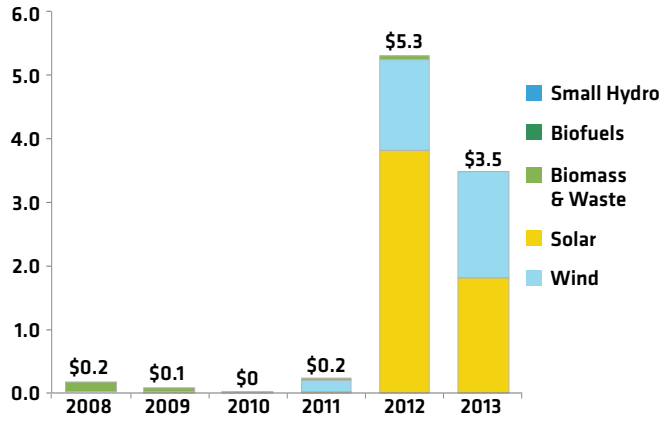
The introduction of the REIPPP in 2012 transformed the clean energy sector. Prior to this, just $0.6bn had been invested since 2006. Solar will continue to be the country's top performing sector, particularly due to investment in solar thermal, which amounted to $3.2bn in 2012 and 2013 alone. The country's largest deal in 2013 was the Eskom Upington solar thermal electricity generating (STEG) plant, which cost $1.2bn. All debt was provided by development finance institutions. The next largest deal was the 50MW Bokpoort STEG plant at a cost of $506m, with debt coming from local lenders.

South Africa's commercial banks have been major supporters of renewables and the main reason the country achieved a good score on the local investment indicator. Investment has also come from government institutions and asset managers within the country. The state's largest lender is the Industrial Development Corporation, which has financed 16 clean energy projects to date.

Local financing conditions are relatively favorable compared with other *Climatescope* countries. However, the country fared poorly on the loans and grants indicator as it attracted only $11m.

ANNUAL INVESTMENT IN CLEAN ENERGY, 2008-2013 ($bn)

$9.4bn total cumulative investment



Source: Bloomberg New Energy Finance
Notes: Total investments includes: Asset Finance, Corporate Finance and Venture Capital/ Private Equity Commitments.

LEAGUE TABLE

2013 Total Investors	$4,506m

Top Three Investors, 2013 ($m)

1st	Standard Bank Group Ltd	$622m
2nd	Old Mutual PLC	$490m
3rd	Investec Ltd	$299m

Top Three Asset Finance Deals, 2013 ($m)

Rank	Sector	Project (MW)	Developer	Value
1st		Eskom Upington Solar Termal Plant (100MW)	Eskom	$1197m
2nd		ACWA & SolAfrica Bokpoort Solar Termal Plant (50MW)	ACWA & SolAfrica	$506m
3rd		Cennergi Amakhala Emoyeni Wind Farm (134MW)	Cennergi	$412m

Source: Bloomberg New Energy Finance
Notes: Figures refer to asset finance investments committed in 2013 and include balance sheet commitments

III. LOW-CARBON BUSINESS AND CLEAN ENERGY VALUE CHAINS

Ranking 3 / Score 4.34

South Africa placed third on Clean Energy Value Chains Parameter III behind China and Brazil, performing consistently well across the financial, manufacturing and service provider indicators. The country has developed a strong value chain over the last three years due to the REIPPP and its local content requirements.

The clean energy manufacturing sector has flourished in recent years as a result of the government's push to create a manufacturing hub in South Africa alongside its clean energy incentives. The green economy is part of the government's Industrial Policy Action Plan, which outlines key areas for manufacturing growth, and is one of the six key sectors in which manufacturing companies can apply for grants.

Wind and solar manufacturing have seen a surge in the last few years given the government's local content requirements for companies taking part in the REIPPP. Biofuels, biomass and small hydro can be viewed as more mature industries as they existed in the country prior to 2012.

South Africa's financial institutions have played a key role in the development of its renewable energy sector. The country has at least one of each type of financial institution assessed under *Climatescope*, and as a regional powerhouse, the country has all but two of the service provider types assessed.

FINANCIAL INSTITUTIONS IN CLEAN ENERGY

✓	Banks	✓	Corporate Finance
✓	Funds	✓	Impact Funds
✓	Private Equity / Venture Capital		

Source: Bloomberg New Energy Finance
Note: Refers to types of institutions that finance clean energy projects. Check means that at least one institution is active in that segment in the country

CLEAN ENERGY VALUE CHAINS BY SECTOR

Sector / Quantity	**Available Sub-Sector,** Unavailable Sub-Sector
Biofuels	**Producers ; Engineering ; O&M ;** Equipment Manufacturing ; Distribution and Blending
Biomass & Waste	**Project Development ; Engineering ; O&M ; Equipment Manufacturing ; Feedstock Supply**
Geothermal	Project Development ; Engineering ; O&M ; Resource Development ; Turbines ; Balance of Plant
Small Hydro	**Project Development ; Engineering ; O&M ; Turbines ; Balance of Plant**
Solar	**Project Development ; Engineering ; O&M ;** Polysilicon/ingots ; Wafers ; Cells ; **Modules ; Inverters ; Balance of Plant**
Wind	Project Development ; Engineering ; O&M ; Turbines ; Blades ; Gearboxes ; **Towers ; Balance of Plant**

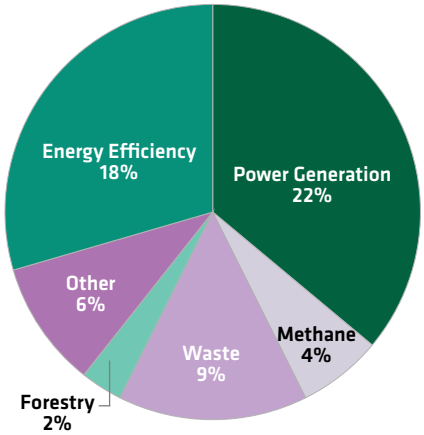
Source: Bloomberg New Energy Finance
Note: Colored icons represent the number of available subsectors for a given clean energy sector value chain. Bold text, on the right, illustrates at least one organization in that sub-sector is active in the country.

IV. GREENHOUSE GAS MANAGEMENT ACTIVITIES

Ranking 6 / Score 2.78

CDM OFFSET PROJECTS BY SECTOR

62 CDM projects



The country ranked sixth on Greenhouse Gas Management Activities Parameter IV. While scoring well within the carbon offsets and carbon policy categories, it lags behind on corporate awareness.

While South Africa is Africa's highest scorer, it is also its largest emitter by a considerable distance. To counter its high emissions, the government released the National Climate Change Response white paper in which it committed to reducing its emissions footprint by 34% below the 'business as usual' scenario by 2020.

There are 62 registered CDM projects in the country across five sectors, with the power generation sector the largest. Eskom is among the biggest greenhouse gas emitting utilities in the world.