

Botswana

GDP: **\$14.8bn**

Five-year economic growth rate: **8%**

Population: **2m**

Total clean energy investments, 2006-2013: **\$6.2m**

Installed power capacity: **223MW**

Renewable share: **0.4%**

Total clean energy generation: **252.1GWh**

Top energy authority:

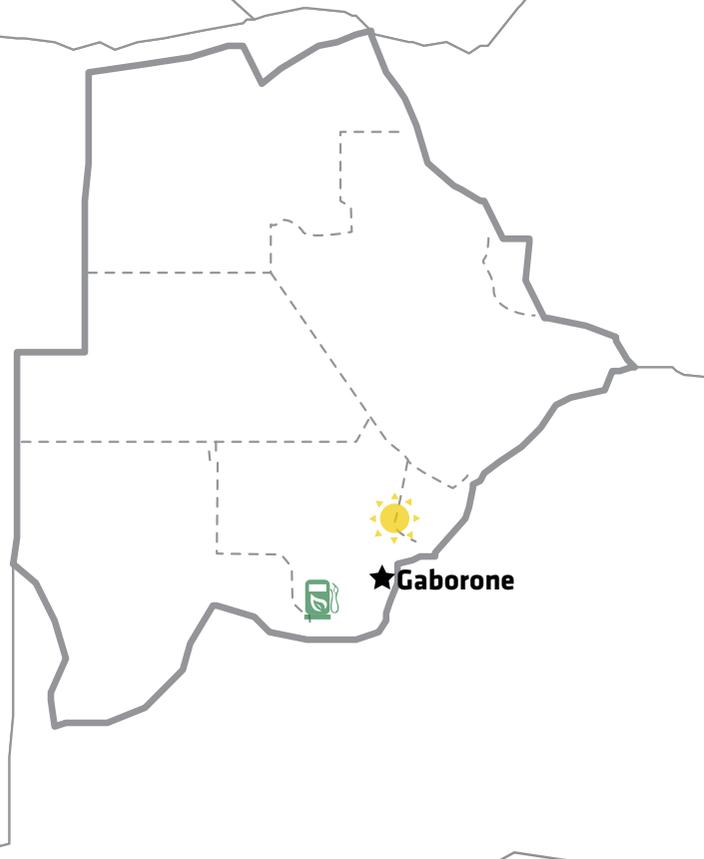
Ministry of Minerals, Energy and Water Resources

OVERALL RANKING
2014

48

OVERALL SCORE
2014

0.62



PARAMETER	RANKING	SCORE
I. Enabling Framework	43	0.77
II. Clean Energy Investment & Climate Financing	44	0.30
III. Low-Carbon Business & Clean Energy Value Chains	37	1.10
IV. Greenhouse Gas Management Activities	50	0.39

SUMMARY

Botswana placed 48th among *Climatescope* nations with an overall score of 0.62. It performed best on Low-Carbon Business Parameter III, especially related to the presence of distributed clean energy service providers.

The country's outdated power sector relies on coal for 60% of its generation, while approximately one-third of the population lacks access to electricity of any kind. Botswana depends on power imports from South Africa as its own generating capacity has regularly proven unreliable over the last eight years.

Nonetheless, the country has seen some activity in the off-grid solar sector.

The government is currently crafting a national energy policy, which outlines new strategies and highlights the need for renewables to be integrated into the power sector. However, the current policy framework provides no specific incentives for clean energy and the impetus for implementing the new policy in the near future is unclear.

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

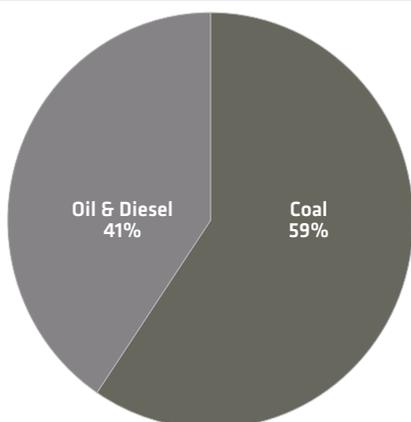
PARAMETERS AT A GLANCE

The vertically-integrated government-owned utility, Botswana Power Corporation, runs the power system, which until late 2013 consisted of the Morupule A 132MW coal-fired power plant. The utility has been trying to bring online the 600MW Morupule B coal plant, but technical issues have delayed the full operation of its four 150MW units.

To meet the shortfall in its 600MW peak demand, Botswana has been importing non-firm electricity from surrounding countries and running expensive back-up power plants. These include the 90MW Orapa peaker plant owned by independent power producer Debswana, which comes at a high environmental cost, as it consumes approximately 17,000 liters of diesel per hour. Meanwhile, Botswana Power Corporation has struggled financially due to the country's suppressed power prices. The utility has stated its intention to raise prices to match the cost of production.

INSTALLED POWER CAPACITY BY SOURCE, 2013 (%)

223MW total installed capacity



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

Botswana continues to explore the potential for locally-produced solar power and has considered feed-in tariffs, but not yet implemented them due to the government's focus on coal expansion and the potential cost. The country has recently completed feasibility studies for a 100MW concentrated solar thermal plant but it is doubtful this will go ahead due to the high upfront capital costs.

KEY POLICIES

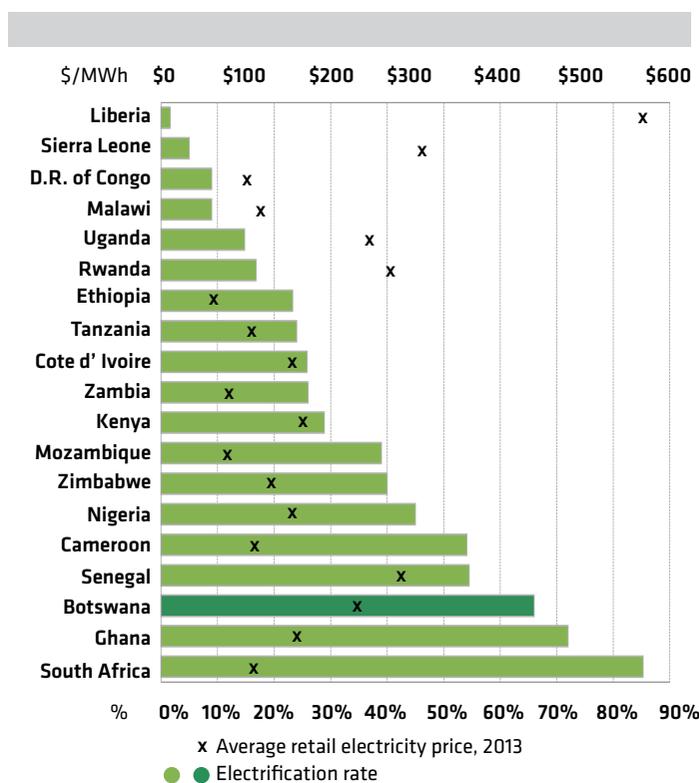
Policy Category	Description
Tax Incentives	Investors in manufacturing are eligible for a range of tax reductions and import duty exemptions.

Source: Bloomberg New Energy Finance Policy Library

Botswana ranked 44th on Enabling Framework Parameter I, due to weak policies (despite scoring for its energy access policies), low electricity prices and the lack of clean energy penetration. However, its installed capacity excludes off-grid solar generation, which has seen some growth in recent years as the government seeks to boost electricity access.

For Clean Energy Investment Parameter II, the country again finished 44th, only scoring in three out of the 14 indicators within the parameter. The country has received just \$6m in clean energy investment since 2006 for a single 1MW photo-voltaic plant.

ELECTRIFICATION RATES (%) VS AVERAGE RETAIL ELECTRICITY PRICES, 2013 (\$/MWh)



Source: Bloomberg New Energy Finance

Botswana placed 37th on Parameter III: while its on-grid value chain is almost non-existent, its score is bolstered by the presence of distributed clean energy service providers, including pay-as-you-go technology providers, importers and retailers. On Greenhouse Gas Management Activities Parameter IV, the country ranked 50th. It has no policies in place to reduce emissions, though it has one institution that is part of the PRI signatories.