

Botswana

Trilemma Rank
79

Trilemma Score
59.2

Balance Grade
DCC

Botswana's performance has improved across all Trilemma indicators with Energy Equity showing the biggest improvement in the last decade. Energy security is low due to reliance on imports for both electricity and liquid fuels. The government has made a voluntary commitment through its first Nationally Determined Contribution (NDC) to reduce the country's total greenhouse gas (GHG) emissions by 15% by 2030, compared with 2010 emissions. The country is also working to provide affordable and clean energy to align with the UN 2030 Agenda for Sustainable Development Goals, especially SDG7, and reduce GHG emissions. Botswana's balance grade is DCC and ranks 79 globally.

Population
2.3 (millions)

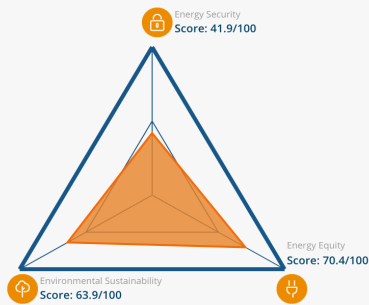
Land Area
566.7 (thousand sq. km)

GDP Per Capita
8,259 (PPP US\$)

Industrial Sector
29.3 (% of GDP)

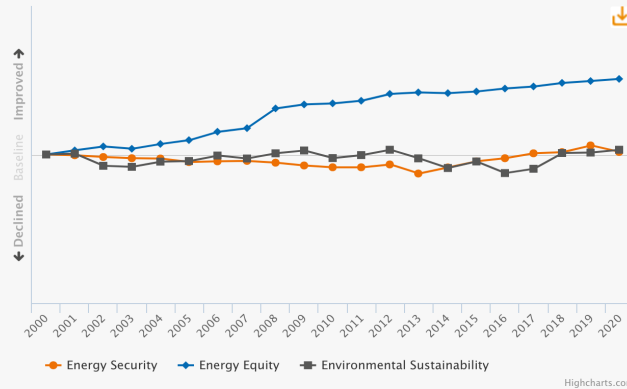
GDP Growth
4.5 (annual %)

Balance



Historical Trilemma Scores

Trend lines track the country's performance in each dimension, beginning with a baseline of 100 in the year of 2000



Trends and Outlook

Botswana has around 212 billion tonnes of coal reserves and relies on coal for much of its electricity generation. This accounts for a low score due to the lack of diversity of electricity generation fuel sources. Installed capacity stands at 892MW but demand exceeds supply, requiring imports from South Africa. The government has established a National Electricity Standard Connection Cost (NESC) programme to assist citizens by easing upfront electricity connection costs. This programme accelerated the national connection rate. An estimated 77% of the urban population has access to electricity but a much lower percentage of rural communities enjoy access. The government, through the state-owned power utility company continues to revise electricity tariffs to make them cost reflective, leading to a 22% increase in tariffs in April 2020. The Integrated Resource Plan (IRP) for electricity (2020) will boost the electricity sector's resilience. It is more focused on diversifying the energy mix and the sustainable use of available resources to generate electricity. IRP has recommended solar, wind and coal-bed methane as alternatives. The switch to less carbon intensive fuel and renewables is expected to reduce carbon emissions from the power sector. The IRP project has been aligned with the Renewable Energy Strategy and the Energy Efficiency strategy of 2017.

Botswana receives over 3,200 hours of sunshine per year and irradiation levels are amongst the highest in the world, making solar energy a promising renewable energy resource. The solar potential has not been highly utilised though there are plans to increase the share of solar. In 2019, Botswana Power Corp. re-issued a tender inviting independent power producers to build two 50MW solar parks. This should help to improve energy security given the difficulties faced by South Africa's Eskom, which has been filling the gap between electricity supply and demand in Botswana.

Botswana also imports 100% of its refined oil products needs, mostly from South Africa, since it does not have an oil refinery. The government is in the process of boosting its strategic fuel reserves from 18 days of national consumption to 90 days as an additional energy security measure.

The COVID-19 pandemic has affected the economy and disrupted the supply of refined oil products given the limited access points. Observing COVID-19 protocols significantly caused delays in fuel deliveries, resulting in shortages, highlighting the need to improve energy security to ensure resilience in the event of future disruptions.

Key metrics

Metrics are determined relative to other countries, with a full bar representing a score of 100.

