

Mongolia

Trilemma Rank  
# 87

Trilemma Score  
55.5

Balance Grade  
DBD

Mongolia has made a significant improvement in its Energy Equity Trilemma performance but only marginal progress in improving its Energy Security and Environmental Sustainability scores due to high dependence on coal to sustain its economy and poor air quality. Mongolia's balance grade is DBD and its global ranking is 87.

Population  
3.1 (millions)

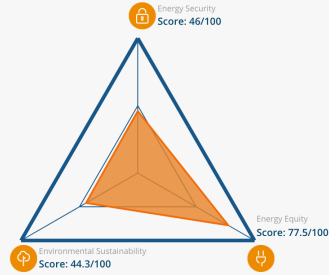
Land Area  
1,553.6 (thousand sq. km)

GDP Per Capita  
4,122 (PPP US\$)

Industrial Sector  
38.7 (% of GDP)

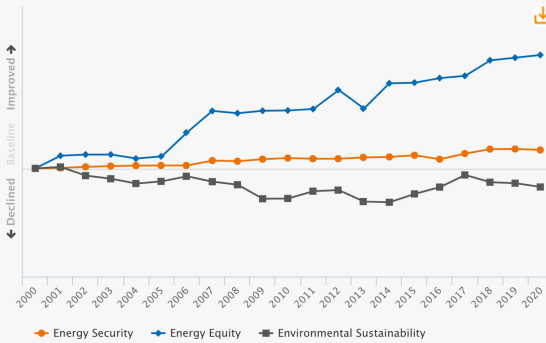
GDP Growth  
7.2 (annual %)

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

Mongolia faces the challenge of ensuring continued economic growth while reducing reliance on coal for power generation and curbing greenhouse gas emissions. In 2019, the energy mix was dominated by coal. Coal-burning CHP plants make up 80.3% of total installed capacity with the wind, solar and hydro and small-sized diesel generators only 0.02% of the mix. About 19.7% of electricity – mostly peak demand – is imported from Russia. Given the anticipated rise in future electricity demand, current generation capacity will not be enough to meet domestic requirements. Mongolia is seeking to address energy security issues through comprehensive measures, including efficiency, technological solutions and energy sector reform.

The government has made some headway in diversifying fuel imports and improving its terms of trade, while several mid-stream projects could allow for a domestic oil refining industry to be developed. At the same time, refurbishments of Mongolia's ageing power infrastructure starting in 2014 will ensure adequate electricity supplies for the next three years, but new greenfield plants are needed in the long term. New wind farms and solar parks will provide some respite, but larger coal-fired and hydroelectric plants at various planning stages will be key to balancing fluctuating supply and demand.

The country has significant potential for the development of different types of renewable energy, including solar, wind, and some hydropower. In 2013, the first utility-scale Salkhit Wind Park of 50 MW became operational. This was followed by the rapid growth of renewables deployment due to the introduction of feed-in-tariffs in the Renewable Energy Law and the total installed capacity of renewable energy rose to 240.4MW at the end of 2018 while the share of renewable energy in the total energy mix reached 18.1%, which potentially puts the country on track to reach its intended target of 20% by 2020, and 30% by 2030, in line with the State Policy on Energy 2015–2030. The ultimate goal is for Mongolia to become an energy exporter.

In April 2020, the Asian Development Bank (ADB) approved a \$100 million loan to help finance the first large-scale advanced battery energy storage system. The project will allow installation of 125MW of storage, making it one of the largest battery storage systems globally. The facility will discharge clean electricity to supply the national grid to meet peak demand. It will also increase renewable energy capacity, allowing for the supply of 44 gigawatt-hours of clean electricity annually during peak times. When completed, the project will support the integration of an additional 859 gigawatt-hours of renewable electricity, into the energy system grid, avoiding 842,039 tons of carbon dioxide emissions annually by 2025.

Mongolia's economy is likely to slow mainly due to the adverse impacts of the COVID-19 pandemic. Economic growth weakened to 5.1% in 2019 from 7.2% in 2018 and 5.4% in 2017 mainly due to the sluggish performance of the mining sector following declining commodity prices and lower quality of mineral exports. Despite abundant resources, Mongolia has struggled to shore up its energy security and lessen its dependence on Russia for refined oil products and electricity though recent projects will help to address this particular challenge.

Key metrics

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

