

Turkey



Trilemma Rank  
**# 58**

Trilemma Score  
**66.6**

Balance Grade  
**BBC**

Turkey demonstrates a reasonably balanced Trilemma triangle, with good performance in the Energy Equity dimension. High levels of access to electricity and low oil and gas prices are reflected in Turkey's Equity score. Ongoing investments in renewable energy technologies have helped Turkey maintain relatively stable scores in the Energy Security and Energy Sustainability dimensions. While the diversity of electricity generation is increasing, CO2 emissions per capita have decreased since 2010. Turkey shares its position on the global ranking at 58 with Paraguay and gets a balance grade of BBC.

**Population**  
81.4 (millions)

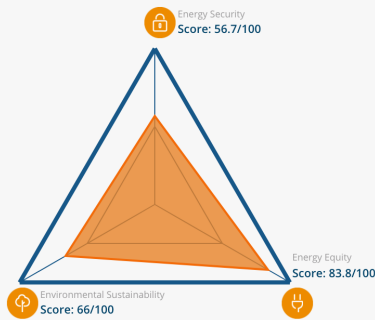
**Land Area**  
769.6 (thousand sq. km)

**GDP Per Capita**  
9,370 (PPP US\$)

**Industrial Sector**  
29.5 (% of GDP)

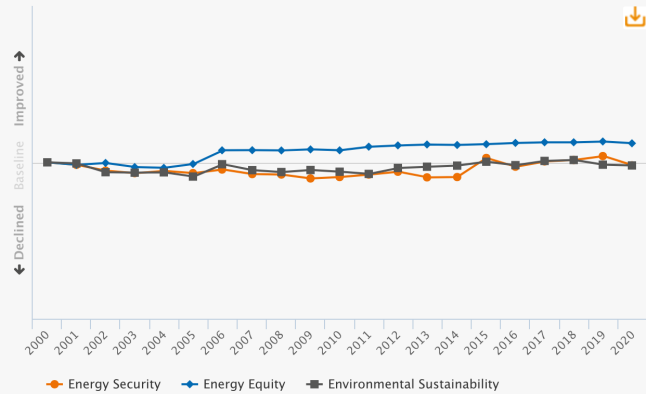
**GDP Growth**  
2.8 (annual %)

**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**

Turkey's energy outlook for the next several years will be defined by the government's implementation of several policy instruments, which favour the market uptake of renewable energy sources. In 2019, some legislative changes and improvements were carried out in the electricity generation and renewable energy sectors. These included developments on a nuclear power plant, the introduction and development of the electrical capacity mechanism to the market, developments on the Renewable Energy Resource Area and Renewable Energy Resources Support Mechanism, and legislative changes on unlicensed production.

Primary energy demand in Turkey continued to increase and reached 155 mtoe. The installed capacity of Turkey rose by 2,800 MW and reached 91,300 MW in 2019. Approximately 80 MW of solar panels have been installed, which doubled energy production from solar compared the previous year. The country tendered a total of 600MW of wind power. The share of renewable energy resources in total installed power, which was 44.7% in 2018, increased to 45.2% in 2019.

Developments in the natural gas sector also provided opportunities for Turkey to lower its energy bill. The TurkStream natural gas pipeline, with a total capacity of 31.5 bcm, began operations in 2019 and enhanced Turkey's role as an emerging hub for natural gas. Furthermore, prices in the LNG spot market have declined due to an increasing number of suppliers and Turkey expects to reduce not the import, but the cost of dependence in the coming years. In 2019, Turkey imported 27% of its natural gas in the form of LNG. The country continues to invest in exploration and drilling activities.

Despite the government's significant efforts to provide energy security through lower imports and a more diversified energy mix, Turkey still faces challenges. Tightening fiscal conditions, foreign currency fluctuations and demand uncertainty remain a concern for investors.

In the first five months of 2020, Turkey's electricity demand declined by 4% as compared to previous years due to the COVID-19 pandemic. However, after easing quarantine restrictions in June 2020, demand rebounded to 2019 levels within a short period of time. During that period, 66% of electricity production came from local and renewable sources.

**Key metrics**

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

	2020 Performance	Trend 2010-20
<b>Energy security</b>		
Import dependence	80%	▲
Diversity of electricity generation	70%	▲
Energy storage	20%	▼
<b>Energy equity</b>		
Access to electricity	100%	▲
Electricity prices	100%	▲
Gasoline and diesel prices	100%	▲
<b>Environmental sustainability</b>		
Final energy intensity	80%	▼
Low carbon electricity generation	20%	▲
CO2 emissions per capita	80%	▼
<b>Country context</b>		
Macroeconomic stability	80%	▲
Effectiveness of government	60%	▼
Innovation capability	60%	▲