

Portugal



**Trilemma Rank**  
# 19

**Trilemma Score**  
76.8

**Balance Grade**  
BBA

Portugal's Trilemma performance is balanced across the three main indicators. The country's global ranking is driven mainly by a continued strong performance in Energy Security as a result of the diversification of electricity generation sources and reduced import dependence. The Sustainability index remained high, supported mainly by the increase in low carbon electricity generation technologies, which enabled the country to reduce its CO2 intensity. Improved macroeconomic conditions and enhanced innovation capabilities developed over the last decade have contributed to the sustained high score of Portugal in the over the last 10 years. Portugal's balance grade is BBA and its global ranking is 19.

**Population**  
10.3 (millions)

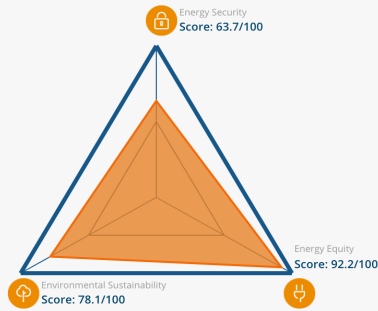
**Land Area**  
91.6 (thousand sq. km)

**GDP Per Capita**  
23,408 (PPP US\$)

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

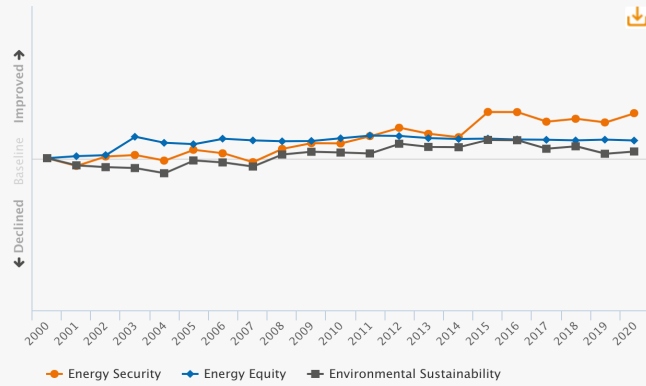
**GDP Growth**  
2.4 (annual %)

**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**

To support the commitment to climate neutrality by 2050, Portugal established the National Energy and Climate Plan for 2030 and the Roadmap to Carbon Neutrality by 2050, which lay out the plans to decarbonise the energy sector. By 2030, the country hopes to have achieved a target of 80% renewable electricity and 47% renewable energy in final consumption. The strategy for 2030 is designed to speed up decarbonisation efforts, improve energy efficiency, strengthen energy security and bolster the internal market while reducing energy poverty.

Portugal is currently a world leader in integrating variable sources in electricity generation, mainly from wind and, more recently, solar PV. To increase the use of renewables, the 2020 auction for solar power generation has the novelty of permitting combined solar and storage systems (batteries, concentrated solar and hydrogen). It is also exploring new technology options such as a floating offshore wind installation and floating PV systems. Ultimately, smarter grid management, better interconnections with Europe and clear policy measures supporting the effective functioning of the European energy market are needed to fully develop the national potential in zero-carbon electricity generation and increase the security of supply.

Improving energy efficiency is a cornerstone of the strategy being implemented, increasing competitiveness, and reducing energy poverty. Building retrofits to improve energy performance and installing heat pumps are being rolled out to improve efficiency. In the transport sector, it hopes to encourage more use of electric vehicles.

To address energy uses for which electric technologies are not technically or economically viable, Portugal is preparing the integration of renewable gases into the energy mix, has launched a National Hydrogen Strategy. To enable its widespread use, a proper regulatory framework and support mechanisms are being designed. It is expected that hydrogen and related fuels may be used to reduce emissions from industries, long-range road mobility, and other forms of transport. The blending into the natural gas grid may enable a quick scale-up of green hydrogen production. Large-scale production and export of hydrogen would also be transformative for Portugal, significantly reducing its external energy dependency and fostering economic development.

**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	██████████	▲
Diversity of electricity generation	██████████	▲
Energy storage	██████████	▲
<b>Energy equity</b>		
Access to electricity	██████████	▶
Electricity prices	██████████	▼
Gasoline and diesel prices	██████████	▲
<b>Environmental sustainability</b>		
Final energy intensity	██████████	▼
Low carbon electricity generation	██████████	▲
CO2 emissions per capita	██████████	▼
<b>Country context</b>		
Macroeconomic stability	██████████	▲
Effectiveness of government	██████████	▲
Innovation capability	██████████	▲