

United Arab Emirates



Trilemma Rank
44

Trilemma Score
69.7

Balance Grade
BAD

The UAE scores very highly on Energy Equity and its performance has been stable since 2010. The country provides universal and quality energy access though the removal of some energy subsidies in recent years has raised prices to end users. It also scores well on Energy Security though its ranking has slipped in the past decade after it became a net importer of natural gas and LNG. However, this is tempered by the diversification of energy sources for power generation, including renewable energy and, more recently, nuclear power. The Sustainability dimension is ranked low though the long term strategy of more diversity in energy supply is expected to improve its performance in the future. The gradual easing of energy subsidies in recent years is designed to curb consumption, which should also lift the Sustainability scores.

Population
9.4 (millions)

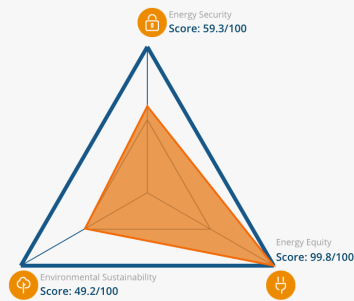
Land Area
71.0 (thousand sq. km)

GDP Per Capita
43,005 (PPP US\$)

Industrial Sector
46.8 (% of GDP)

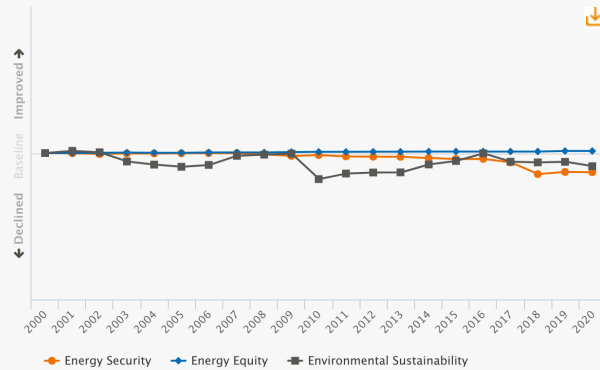
GDP Growth
1.7 (Annual %)

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

The UAE launched an economic diversification programme as early as 2012 and the benefits of its policies have started to make an impact with tourism, aviation, transshipment and services all contributing to growth of the non-oil sector. Its energy strategy is to increase the share of clean energy in the total energy mix to 50 percent by 2050 and reduce the carbon footprint of power generation by 70%. The Barakah nuclear power plant, which started up in July 2020, will supply 25% of the UAE's electricity needs once all four reactors are operational, providing an additional 5.6GW of capacity. Renewable and nuclear energy will gradually replace natural gas, the dominant fuel in power generation. Demand growth in the last decade turned the UAE into a net importer of natural gas and LNG, which affects its Energy Security scores. It is also a significant producer of crude oil and a member of OPEC. Although the UAE's economy has become more diversified, it is still affected by oil price fluctuations.

The UAE has embraced the digital age and innovative solutions. This has led to the rise of 'prosumers' with the rollout of a rooftop solar programme in some Emirates and the installation of smart meters. Off grid solutions are also being adopted. One of the UAE's largest manufacturing businesses has installed a solar plant with 2MW capacity while a recently completed floating solar power plant offshore Abu Dhabi will provide 80 kilowatts of electricity to a nearby resort.

The UAE's large scale solar projects have drawn record-breaking bids, the latest being a 2GW solar plant in Al Dhafra, which will take over the title of world's largest solar installation from the Noor Abu Dhabi solar park, which has capacity of 1.77GW. Dubai is meanwhile building what has been billed as the biggest solar tower and the world's largest single site CSP project.

Hydrogen production is also on the agenda. The first green hydrogen project is in the commissioning stage at the Mohammed Bin Rashid Al Maktoum Solar Park in Dubai. The project aims to test and showcase an integrated megawatt-scale plant to produce green hydrogen using renewable energy, store the gas, then deliver it for re-electrification, transportation, or other industrial uses.

The UAE maintained system reliability throughout the COVID-19 pandemic, ensuring uninterrupted energy supply. The UAE recognises the need to plan ahead to ensure the sustainability of the country's energy future and is developing a 50-year plan to 2071.

Key metrics

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

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