**Trilemma Rank**

Saudi Arabia has an unbalanced Trilemma triangle, ranking at #78 in the global index. Performance in Equity is consistently strong, with universal access and very affordable prices, while some fluctuations in recent years. The Security index for Saudi Arabia shows mid-range scores and slightly reducing trends, driven mostly by a lack of diversity in electricity generation sources. Particularly low and erratic are Sustainability scores, due to high GG emissions, worsening air quality indicators, and high energy intensity. The overall grade is CAD.

**Balance**

- **Energy Security**: Score 59/100
- **Energy Equity**: Score 78/100
- **Environmental Sustainability**: Score 37/100

**Historical Trilemma Scores**

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

**Trends and Outlook**

Saudi Arabia is among the top three crude oil producers globally and the world’s largest exporter of crude oil. The Saudi economy relies heavily on earnings from oil sales for roughly 80% of state revenues. In recent years, it has taken steps to diversify its economy, curb high domestic consumption, boost production of its vast natural gas reserves and introduce renewable energy sources. Due to its abundant natural resources and a policy of maintaining domestic energy prices at levels below international market values, Saudi Arabia scores highly on energy equity in the Trilemma index. The government has been removing energy subsidies gradually, but domestic fuel prices are still far below international market rates. The government plans to introduce targeted subsidies for lower-income consumers. It continues with the removal of price controls as an effort to curb consumption. Saudi Arabia ranks as the 10th largest energy consumer, according to the BP Statistical Review of World Energy 2017. Saudi Arabia also aims to earn a high score on energy security through recent geopolitical tensions and threats against its energy infrastructure are likely to have a negative impact unless resolved. Its exposure to oil price volatility is also a risk factor though there has been growth recently in the non-oil sector’s contribution to the economy, which should serve as a mitigating factor.

A wide-ranging economic reform programme is currently under way as outlined in the Vision 2030 plan designed to diversify the economy away from oil, encourage more private sector involvement and generate more electricity from renewable sources. Saudi Arabia has boosted production of cleaner-burning natural gas for use in power stations and has been reducing the amount of crude oil and other fossil fuels that are burned in electricity generation, a practice that is not environmentally sustainable. In recent years, Saudi Arabia was burning up to 1 million barrels per day of crude oil during the hot summer months to generate electricity, but volumes have come down as production of non-associated gas has increased. Additional volumes of natural gas are needed to supply feedstock to a growing petrochemicals industry and for water desalination.

Saudi Arabia plans to deploy renewable energy starting in 2023, tapping into its excellent potential of high irradiation levels to develop a solar industry alongside wind farms. Under Vision 2030, 30% of power generation will come from renewables, including nuclear. It plans to have more than 35 renewable parks with almost 60 GW of capacity by the end of 2030. The first tender for Saudi Arabia attracted the lowest ever bid for the 300 MW Sakaka solar PV park at 2.34 cents per kWh. The project is due to start up in 2019 with several other projects in the pipeline. This should improve the Environmental sustainability score, which is currently at the lower end of the index.

**Key metrics**

- **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**

**2019 Performance**

- **Trend 2010-19**