



Investing in the Energy Transition in the Gulf Region: An Opportunity for Green Growth, Major Challenges and Political Balance

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Opportunities and Challenges of the Energy Transition

A large body of literature (Darwish et al., 2018 ; Basha et al., 2021; Beni et al., 2021; Alnaser et al., 2022; Al-Sarihi & Mansouri, 2022; Alsayegh, et al., 2023) explores key studies that discuss the opportunities and the challenges for the energy transition in the Gulf region:

- The Arab Gulf region is endowed with abundant renewable energy resources, particularly solar and wind energy.
- The utilization of these resources can help reduce dependence on fossil fuels and contribute to the mitigation of greenhouse gas emissions. Furthermore, investing in renewable energy can create job opportunities, enhance energy security, and improve air quality.
- Given the growing pressure to protect the Gulf's fragile environment, renewables offer a financially viable way and an opportunity to reduce the CO₂ emissions, tackle climate change and achieve green growth.
- Investment in the energy transition will yield several gains, such as the provision of hydrocarbon fuel by 200 million barrels of oil equivalent per year, as well as significant reductions in greenhouse gas emissions, providing economic and climate benefits to the GCC countries.

Opportunities and Challenges of the Energy Transition

While the GCC region has made significant progress in investing in energy transition, there are still several challenges to overcome:

- One of the main challenges is the dominance of fossil fuels in the energy mix, which has led to a lack of incentives and policies to promote renewable energy.
- The presence of high hydrocarbon subsidies and a low electricity tariff structure discourage the adoption of renewable energy technologies.
- The absence of a dedicated renewable energy regulator and regulatory framework, along with a highly controlled power market, creates barriers to entry for renewable energy projects.
- The political tensions and geopolitical rivalries among the GCC nations. These differences hinder the development of a cooperative approach to mitigate the effects of climate change and impede integrated regional collaborations.

The Current Landscape in The Gulf Countries to Invest in The Energy Transition

- The global energy landscape is rapidly changing due to concerns over climate change, energy security, and the need for sustainable development.
- The Arabian Gulf region is investing heavily in renewable energy projects, such as solar and wind.
- Each country has its own unique initiatives and goals to shift towards cleaner and more sustainable energy sources.

Table 1. The largest megaprojects in the GCC countries

Countries	Renewable Plants	Project Cost
Bahrain	Solar Power Plant, 100 MW, Askar expected to get commissioned in September 2023	---
Kuwait	Al-Dibdibah Solar Photovoltaic Plant, Shagaya 1,500 MW The Kuwaiti government has scrapped plans to build this project because of the coronavirus outbreak	\$1.2bn
Oman	Miraat Solar for thermal enhanced oil recovery (EOR) 1,021 megawatt, Amal oilfield, Commissioned July 2015	\$600 million
Qatar	Al Kharsaah Solar Power Project, Al Kharsaah area, Doha 800MW, Commissioned April 2022	QR1.7bn (\$462.3m)
Saudi Arabia	Sakaka Solar PV, Sakaka City, Al Jouf, 300 MW Commissioned April 2021	SAR1.2bn (\$302m)
United Arab Emirates	Noor Abu Dhabi Solar plant, Sweihan, Abu Dhabi, Total capacity of 1.2 GW, Commissioned April 2019 Mohammed bin Rashid Al Maktoum Solar Park, Saih Al-Dahal, Dubai, aimed to reach 3,000 megawatts, Commissioned October 2013 Phase I: 13 MW, Commissioned 2013; Phase II 200 MW, Commissioned 2017; Phase III 800 MW, Commissioned 2018; Phase IV: Stage 1 600, Commissioned 2017 Stage 2 100, Stage 3 217 MW Phase V: Stage 1 330 MW Commissioned 2021, Stage 2 600 MW until 2023	The total project cost is US\$870 million

The Arabian Gulf and the Geopolitics of the Energy Transition

- The Gulf region is at the core of the global waves of energy and climate change-related geopolitical development.
- Political tensions continue to affect investment decisions and make it difficult to implement energy transition projects effectively.
- To consolidate their security and political stability in the region:
 - balance their relations with the regional powers,
 - respond to the fallout of regional and global crises,
 - and to manage their political and economic systems amid the global shift away from carbon-based energy sources.

The Gulf States and the Post-Energy Era

- The Arab Gulf monarchies recognize the importance of preparing for the post-energy era and seek to diversify their economies and achieve sustainability in light of future challenges through economic diversification, investment in sustainable infrastructure and the development of renewable energy to enhance their resilience and adapt to climate-related risks.
- The success of this transition will depend on the capability of the Gulf countries to fulfill various conditions including:
 - diversifying their economies,
 - ecologically modernize their societies,
 - reduce environmental risks,
 - enhance GCC-wide cooperation and
 - promoting research in renewable energy.

The Gulf States and the Post-Energy Era

- The success of this transition will also depend upon the capacity of GCC states to mitigate environmental risks.
- It can be extremely difficult to achieve the GCC trajectory to net zero, without innovative and timely intervention (Al-Sarihi, 2023).
- GCC governments should use a range of economic tools that can play a crucial role in promoting climate change mitigation and adaptation in the region, including subsidy reform, green bonds, energy efficiency standards and carbon taxes (Miniaoui, 2023).

In a Nutshell

Intensive investment in energy

- The Arabian Gulf region invests heavily in renewable energy projects because of their great economic benefits to drive green growth and achieve sustainable development and their importance in reducing harmful gas emissions to the environment, especially through diversifying its economies and investing in energy efficiency.

Major challenges facing the region

- There are many challenges facing the Arabian Gulf region in investing in the energy transition, most notably dependence on fossil fuels, lack of infrastructure and technical expertise, high upfront costs, political and regulatory barriers, and geopolitical tensions.

The Arabian Gulf and the Geopolitics of the Energy Transition

- The Arab Gulf states are grappling with the reality of how to manage their political and economic systems amid the global transition away from carbon-based energy sources to ensure that they remain in a good position economically, politically and strategically internationally.

The Gulf States and the Post-Energy Era

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Thank You

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