

# Net Zero Saudi Arabia: How Green Can the Oil Kingdom Get?

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## Abstract

Saudi Arabia's stated goal of reaching net zero by 2060 puts the kingdom in a paradoxical position. The Saudi leadership proposes to decarbonize an oil-intensive society and economy while selling oil to the world. As such, the credibility of the Saudi commitment will remain an open question until concrete progress toward restructuring the kingdom's energy system is demonstrated. Modest initial steps toward net zero include investments in renewables alongside pricing reforms of energy products and services. Another ongoing push involves oil-to-gas switching in the kingdom's power sector, which can be augmented by carbon capture and storage and, eventually, gas-to-hydrogen substitution. Doubts and difficulties aside, Saudi Arabia holds major advantages in decarbonization. These include unused land with copious solar radiation, as well as geological storage near carbon emissions clusters. The kingdom is also equipped with relevant knowledge and investment capital. Fully compensating for reduced oil export rents may not be possible if worldwide carbon neutrality plans come to fruition. Despite the short-term benefits of high energy prices after the Russian invasion of Ukraine, economic and geopolitical decline is a likely medium-term outcome for the kingdom. However, there are also opportunities including replacing oil revenues with those arising from carbon disposal for countries and firms lacking the kingdom's competitive advantages.

**Keywords :** Saudi Arabia, Net Zero 2060, decarbonization, oil and natural gas, Saudi Aramco, greenhouse gas (GHG), carbon dioxide (CO<sub>2</sub>), emissions offsets, renewables, hydrogen, energy subsidy reform, carbon intensity, carbon capture and storage (CCS), emissions clusters, credible commitment, Paris Agreement NDC, climate pledge, peak oil demand, Scope 1, 2 and 3 emissions

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