

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

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Saudi Arabia told the world in 2021 that it would strive for “net zero” greenhouse gas emissions by 2060, giving the kingdom 39 years to transform one of the earth’s most emissions intensive societies. At nearly 600 million tonnes, Saudi Arabia’s domestic carbon dioxide emissions in 2020 ranked ninth in the world, just behind South Korea and ahead of Canada. On a per capita basis, Saudi Arabia emits more CO₂ than even the United States—17 metric tons a year versus 14 in the US—on average incomes just 75% as large.

But Saudi Arabia also has numerous advantages in decarbonization. The kingdom has an enormous resource base in renewable energy and feedstocks for clean fuels, as well as vast reservoirs of geological pore space that can be used for storing carbon. It has concentrated emissions sources that are clustered in close proximity to geological storage. Saudi firms and universities hold an impressive reservoir of human engineering talent and demonstrated expertise in transporting and converting energy, and in leveraging geology. The Saudi government also has a high level of funding and policymaking autonomy without veto wielders.

Combined, these factors provide a strong competitive advantage in carbon reduction. Given modest success, the kingdom could later market carbon storage or offsetting services for other governments with fewer such attributes.

This paper lays out a potential step-by-step path toward decarbonizing Saudi Arabia, imagining a sweeping restructuring of a fossil fuel-driven society and economy. Transformational changes would alter energy consumption, electricity generation and storage, transportation and industrial operations. Many reforms made under the aegis of the Saudi “net zero” goal would serve other useful but unrelated purposes. The paper also examines the credibility of the net-zero announcement and desirability of decarbonization for the Saudi regime and economy. What does Saudi Arabia gain by joining a movement that ostensibly seeks to end the combustion of oil, Saudi Arabia’s main export commodity and the source of roughly 80% of its government budget? As recently as the 2021 COP 26 in Glasgow, delegates from Saudi Arabia (among others) lobbied a UN committee to temper language urging a

swift transition to cleaner energy.¹ That same year the Saudi oil minister vowed that his country would produce “every molecule” of its oil and gas reserves.² Are such actions compatible with the kingdom’s net zero goal?

And, given that prior grandiose energy initiatives were shelved soon after announcement, how seriously should observers treat the Saudi net zero commitment? At minimum, determining the regime’s level of compliance will require taking stock of whether Saudi Arabia reaches interim milestones toward the 2060 goal.

The Saudi government’s declaratory embrace of domestic decarbonization does not necessarily signal a change in climate strategy. Policymakers in the kingdom appear comfortable advocating diverging climate policies for Saudi Arabia, on the one hand, and for the rest of the world on the other.

Ultimately, the reward for successful implementation of Saudi Arabia’s Net Zero 2060 ambition could establish the kingdom as a credible player in the global climate arena, revitalizing the kingdom’s influence and allowing Saudi policymakers to shape the energy transition in ways that could retain a greater long-term role for hydrocarbons.

¹ Justin Rowlatt and Tom Gerken, “COP26: Document leak reveals nations lobbying to change key climate report.” *BBC News*, Oct. 21, 2021; <https://www.bbc.com/news/science-environment-58982445>

² Summer Said and Benoit Faucon, “Ahead of COP26, Saudi Arabia Resists Calls to Cut Oil Investment.” *Wall Street Journal*, Oct. 22, 2021; <https://www.wsj.com/articles/ahead-of-cop26-saudi-arabia-resists-calls-to-cut-oil-investment-11634911150>