



Leapfrogging

The shale and tight oil revolution in the US

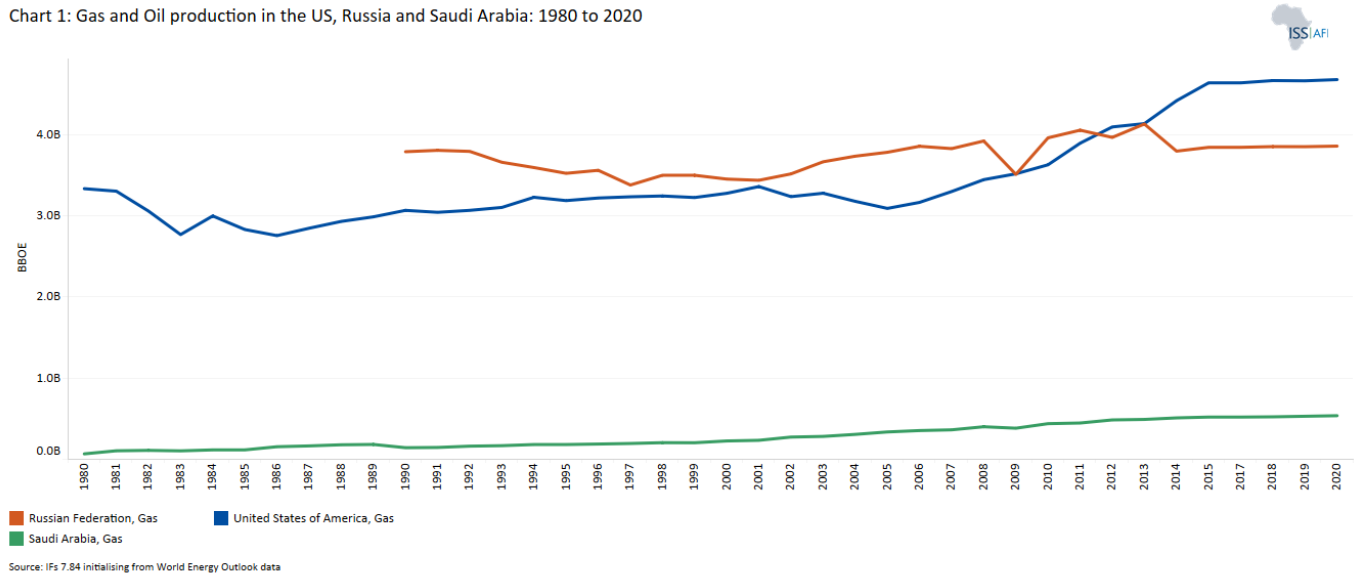
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The shale and tight oil revolution in the US

By 2005, US domestic oil production had declined for 35 years after its 1970 peak at 9.6 million barrels per day. The US was importing almost half of its total petroleum consumption. Then came the fracking revolution. By 2015 the US was the world's largest gas producer. From 2008, oil production followed, and by 2018, domestic US crude oil production was running at about 11.6 million barrels per day, a little ahead of Russia, then the world's second-largest producer.

Chart 1: Gas and Oil production in the US, Russia and Saudi Arabia: 1980 to 2020



The COVID-19 crisis of 2020/21 collapsed energy demand and the profitability of many shale gas and oil operators. With insufficient oil and gas, storage prices plummeted until Russia invaded Ukraine, and Europe sought alternative supplies of gas and oil, sending prices skyrocketing.

Whereas the shale gas revolution in the US is based on a large oil and gas industrial ecosystem that is still difficult to replicate elsewhere, rapid technological advances, such as those linked to renewable energy sources, require a much smaller technology footprint. They will have a significant impact on Africa.

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About the authors

Dr Jakkie Cilliers is the ISS's founder and former executive director. He currently serves as chair of the ISS Board of Trustees, head of the African Futures and Innovation (AFI) programme at the Pretoria office of the Institute, and is an extraordinary professor at the University of Pretoria. His 2017 best-seller *Fate of the Nation* addresses South Africa's futures from political, economic and social perspectives. His three most recent books, *Africa First! Igniting a Growth Revolution* (March 2020), *The Future of Africa: Challenges and Opportunities* (April 2021), and *Africa Tomorrow: Pathways to Prosperity* (June 2022) take a rigorous look at the continent as a whole.

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