

Oil bosses call phasing out fossil fuels a 'fantasy'—but an international agreement is plausible

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Amin Nasser, chief executive of the world's largest oil company Saudi Aramco, recently called on nations to "[abandon the fantasy](#)" to phase out fossil fuels, adding that the transition to renewable energy sources is "visibly failing." However, the [latest science](#) on climate change is unequivocal: the world must eliminate fossil fuel-based energy systems—and fast.

Such a phase-out requires international cooperation to restrict the supply of fossil fuels, including coal, oil and gas. This won't be easy, but it is possible. If such cooperative efforts are pursued alongside ambitious action to tackle the demand for fossil fuels, it could lead to environmental and [economic benefits](#).

Some countries are already taking unilateral action to [restrict fossil fuels](#), by, for instance, [banning](#) new oil and gas exploration or extraction. Yet their effectiveness is limited: if the supply of fossil fuels is restricted in one part of the world, it may simply increase elsewhere.

Getting countries to agree on ditching fossil fuels is hard. The latest UN [climate change](#) conference (COP28) proved this when a [row broke out between countries](#) over a shared statement on "phasing out" fossil fuels. Countries ultimately agreed to sign off on a call to "transition away" from fossil fuels, but failed to agree exactly [how this might be achieved](#).

While no international agreement on limiting the supply of fossil fuels yet exists, there are precursors which have tended to [take two different forms](#). In a "club model," several countries agree to restrict fossil fuel production without being legally obliged to do so. One example is the [Beyond Oil and Gas Alliance](#), launched by Denmark and several other countries in 2021. This is a coalition of countries pressing for an international commitment to set a date on ending oil and gas production.

Similarly, the [Powering Past Coal Alliance](#), led by the UK and Canada, requires members to sign a declaration that they will phase out coal power.

Another form is the "treaty model," in which participants sign up to a legally binding agreement to restrict their fossil fuel production. Civil society organizations have campaigned for such a deal in the form of the [fossil fuel non-proliferation treaty](#), which aims to halt new fossil fuel production and phase out existing production, and which has by now gained the support of several countries, including fossil fuel producer [Colombia](#).

What has motivated the few countries who have done it so far to call for a phase-out? Understanding what they have in common could indicate which are likely to lead an international coalition to end fossil fuels—and where pressure from [civil society](#) is likely to have the biggest impact.

[In a recent article](#), our multidisciplinary research team explored three possible factors which might make countries more likely to join such a coalition: relatively low reserves of fossil fuels, [existing policies](#) for limiting fossil fuel supply and a limited contribution of fossil fuel production to GDP.

Who's in? Who's out?

Using these criteria, our analysis showed that a coalition of the EU, Indonesia, South Africa, UK, the US and China could conceivably become the frontrunners in an agreement to restrict fossil fuels. They would be followed by countries that have low reserves and low profits from fossil fuels, such as Argentina, Brazil, India, Japan, Korea, Mexico and Turkey.

Countries such as Australia and Norway are less likely to join because they already have high fossil reserves per capita, even though some of these countries have adopted some policies to restrict fossil fuel supply, including fuel-rich Canada with its [Arctic offshore oil and gas moratorium](#).

Our data suggests that petrostates such as Russia and Saudi Arabia would be the most reluctant to join because fossil fuel production is so central to their economies.

Would such a tiered phase-out achieve the long-term temperature goals of the Paris Agreement? Perhaps, but only if it started early. In our study, we assumed that frontrunners could start as early as 2025 and phase out 70% of their fossil fuel extraction within 20 years, while the slowest countries would only start to phase out fossil fuel extraction from 2040.

We acknowledge that our scenarios for international efforts to phase out fossil fuels are not necessarily aligned with geopolitical realities. For one, there is the shaky relationship between key countries such as the [US and China](#) to consider. For another, ongoing resistance by fossil fuel-dependent countries like Saudi Arabia will not dissipate soon. Yet broad participation is essential. A club of like-minded countries could pave the way for a wider coalition, but major fossil fuel producers would need to join eventually for it to succeed.

Economic consequences

What about the costs of the phase-out to global GDP at the macroeconomic scale? Fossil fuel prices will inevitably rise as their supply is squeezed by a phase-out.

Our study shows that combining an international agreement for

restricting fossil fuel supply with strong measures to tackle fossil fuel demand (by adding a higher carbon price to fossil fuel products, for example) can limit negative impacts on global GDP and speed up the transition towards a renewables-based energy system.

Similarly, all major fossil fuels (coal, oil, gas) should be targeted around the same time. Only phasing out oil may result in higher economic costs, due to its ubiquity in global supply chains and production processes. Only phasing out gas might even increase emissions if that gas is replaced by more emissions-intensive fossil fuels such as coal.

International cooperation will be crucial, especially to lessen the economic impact on developing countries that are heavily dependent on imported fossil fuels. Any international agreement to restrict fossil fuel production should include a financial support mechanism for supporting countries in their just energy transitions.

The road towards phasing out [fossil fuels](#) will likely be long and bumpy, but the transition must start soon and be planned well to ensure just and equitable outcomes.

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