

The coal whack-a-mole: Getting rid of coal power could make prices fall and demand rise elsewhere

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Credit: AI-generated image ([disclaimer](#))

The fight against climate change is full of inconvenient truths. The latest? Coal is going to be harder to get rid of than we had hoped. Every victory like the [rejection](#) of Clive Palmer's proposed Rockhampton coal mine seems to be offset by coal's gains elsewhere.

Potsdam Institute experts this week [published research](#) suggesting we have less than 5% chance of actually [ending coal use](#) by 2050. That would make the Paris Agreement goal of keeping global heating under 1.5°C all but impossible.

Why? Supply and demand coupled with domestic policies and priorities. While [coal power](#) is likely to drop sharply, coal use will rebound in other sectors, according to the research. Why? As some countries move to [clean energy](#), the price of coal will fall. Once coal is cheaper, other countries or domestic sectors such as steelmaking are likely to seize the opportunity and buy more. The researchers estimate for every 100 joules of coal not burned in [power plants](#), an extra 54 joules will be burned in other sectors, in a trend they dub "coal leakage".

Leakage poses a new challenge, just as the world seems set to accelerate climate action. The only answer? Accelerate [even faster](#).

Fossil fuels are extraordinarily resilient

What this study tells us is our current efforts won't be enough—even with the current tailwinds of Europe's gas crisis and plunging renewable costs.

In 2017, nations at the annual United Nations climate talks launched the [Powering Past Coal Alliance](#) in an effort to speed up action. But according to the Potsdam research, efforts by the 48 nations and 49 sub-national regions involved could be counterproductive.

That's because members of this alliance haven't taken steps to avoid the risk of rebound coal use—even elsewhere in their own economies.

Depressingly, this is part of a trend. The fossil fuel sector is proving powerfully resistant to change. The world [keeps on burning](#) more [fossil](#)

[fuels](#) despite the COVID lockdown drop in 2020. Coal burning increased by 6.3% in 2021, and the International Energy Agency estimates this figure [will have](#) increased again by 1.2% in 2022 to reach a historic high.

Russia's invasion of Ukraine saw coal use soar, as Europe weaned itself off Russian gas. Germany had to delay its plans to quit coal power within 15 years and [fire up coal plants](#) again over the winter, while Japan's reliance on coal has [only grown](#) in recent years.

In developing countries, coal is seen as a cheap, convenient and proven way to power the economy. China is far and away the world's largest coal user—and producer. The downside has been terrible air pollution. That forced the government to [force millions of households](#) to replace coal with natural gas or electricity for heating, while supercharging its renewable sector, which [now produces](#) almost 30% of its electricity.

But as China's economy slows and energy shortages increase, the government [has backtracked](#) and approved 300 million tons of new coal production capacity in 2022, on top of 220 million tons of capacity added in 2021. That's more than all the coal Australia produced in 2021 (478 million tons).

New coal power projects have also been boosted, with 65 gigawatts of new coal power projects approved by the Chinese government in the first 11 months of 2022—more than three times the capacity approved in 2021.

It's no wonder coal and other fossil fuel producers are enjoying windfall profits. Australian coal exporters earned [A\\$45 billion](#) over 2021–22 thanks to soaring prices in the international market.

What about the huge investment in renewables?

You might read this with your heart sinking and think—wait, wasn't 2022 the first year the world invested more than [US\\$1 trillion](#) (A\$1.44 trillion) in clean energy? How can coal rebound while we switch to clean energy?

Yes, we've seen stunning and welcome growth in green energy technologies and related industries. This has been driven by government policies, corporate demand for clean energy and the ever-increasing market competitiveness of solar, wind and offshore wind.

Unfortunately, what this new research tells us is that both are true. Renewables are racing ahead. But the world's demand for energy grows and grows as nations get richer and the population grows. To phase out fossil fuels remains the hardest challenge we face. The solutions will have to be hashed out politically.

After all, we now have [almost all](#) the technologies we need to stop burning fossil fuels. (Aviation, cargo ships and steelmaking are some of the hardest sectors to clean up.)

What do we do?

Put simply, we're almost out of time. Any delay in ending our reliance on coal and keeping those carbon-dioxide dense rocks safely stored in the ground is extremely dangerous.

Sustained political effort does work. Even though Germany had to reopen some coal plants, their reliance on coal for electricity fell from 60% in 1985 to below 30% in 2020.

To end coal means clamping down on free-riders. Australia is a good case study. The companies which own our doddering old coal stations are heading for the exit as quickly as they can. Even the newest coal

power stations are expected to have [shorter lifetimes](#) than anticipated. But to date, there's been little effort to ensure coal doesn't simply get burned in, say, steelworks.

Internationally, developed countries should offer greater [financial incentives](#) to help developing countries switch to renewables. In 2021, [rich countries](#) offered billions to South Africa to quit coal. Last year, they made a similar offer to Indonesia. This is welcome—but we need more.

Worldwide, 770 million people [still live](#) without access to electricity. For years, China used this [as a justification](#) for funding coal plants overseas. But in 2021, President Xi Jinping announced this [would end](#).

Moves like this are essential. We can't simply expect markets to end the burning of [coal](#) as quickly as we need. That means we'll need policies to do the work.

To nail down the coffin on fossil fuels, we have to embrace what economists call "creative destruction"—the ability for technologies [to disrupt](#) the old and create the new. Coal and oil ended centuries of reliance on horses for transport. Now it's time to end our reliance on fossil fuels—to destroy the old and make room for the new.

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