Breaking Germany’s coal addiction

By Johan Rockstrom And Owen Gaffney /Berlin

Germany is about to break its coal addiction. Last year, the government created a 28-member “coal commission” – comprising scientists, politicians, environmental campaigners, trade unions, and utilities representatives – with the unenviable mandate of deciding when the country would get clean. Balancing pragmatic considerations with recognition of the reality of climate change, the commission has now set 2038 as the deadline for reaching zero coal, with the withdrawal beginning immediately.

The Wall Street Journal calls it the “world’s dumbest energy policy.” In fact, Germany’s shift is vital and long overdue. The real question is whether it will be enough to support meaningful progress in the global effort to mitigate climate change.

It is scientifically well established that if the world is to keep the average increase in global temperature “well below” 2C relative to pre-industrial levels – the “safe” limit

enshrined in the 2015 Paris climate agreement – no more than another 500-800bn tonnes of carbon dioxide can be emitted. On current trends, this would take just 12-20 years.

Instead, the world needs to follow a trajectory called the "carbon law," which requires reducing CO2 emissions by half each decade until, 30-40 years from now, we have achieved a carbon-free global economy. Growing evidence shows that adhering to the carbon law is technologically feasible and economically attractive. In this process, coal – the most polluting energy source – must be the first to go, exiting the global energy mix entirely by 2030-2035.

This will be particularly challenging for Germany, which, despite its reputation as a climate leader, has long had a dirty secret: the most polluting type of coal – lignite – remains the country's single biggest source of electricity. Although renewables have penetrated 40% of the electricity market, coal still accounts for 38%.

A decision to phase out nuclear power, spurred by the 2011 Fukushima disaster, left Germany with a significant energy gap, filled partly by coal. Germany has built ten new coal-fired power plants since 2011, bringing its total to about 120. As a result, it is set to miss its 2020 emissions goal (a 40% reduction, compared to 1990), and, barring decisive action, it could miss its 2030 target (a 55% reduction) as well.

The coal commission's plan – which still needs to be turned into legislation by Chancellor Angela Merkel and the Bundestag – would reduce Germany's coal emissions from 42 gigawatts today to 30 GW by 2022, and to 17 GW by 2030. This is a cut of more than 50% over one decade, making it even more ambitious than the carbon law trajectory – but only if coal is not replaced by natural gas. Indeed, if the coal phase-out is going to work, it will need to happen alongside a rising carbon price.

In any case, 2038 is still a long way off. A sluggish exit from coal by Germany – the world's fourth-largest economy – could send a signal to other coal-dependent European Union

countries that there is no rush. Countries like Hungary, Poland, and the Baltic states may even pursue a coal renaissance. This would further weaken the EU's climate leadership and its ability to reform its carbon-trading system. Confident that coal will continue to be burned in the long term, investors would keep the money flowing.

Moreover, because Germany's influence extends far beyond Europe, a weak stance on coal could trigger a domino effect – what we call the "road to hell" scenario. US President Donald Trump might cite Germany's slow action as proof of its double standards on climate change – and even attempt to use it to justify, however weakly, his effort to revive the US coal industry. Brazilian President Jair Bolsonaro might do likewise, as he distances his country from the Paris climate agreement.

Australia, where climate politics are tense and an election is pending, could also be tempted to increase coal use. China and India, too, could become more inclined to expand coal-fired power plants. With that, meeting the 2C threshold would become impossible, and the devastation of Hothouse Earth would potentially become inevitable.

But there is good reason to think this will not happen. Even if the 2038 deadline is not ambitious enough, the immediate pace of the coal phase-out follows the carbon law. If Germany implements what it has agreed on paper, one should not underestimate the symbolic value of a coal-dependent industrialised economy setting a clear end date for coal, and locking itself to a quantified phase-out plan. This, together with definitive shorter-term targets, would signal to investors that they can confidently invest in alternative energy sources.

This dynamic could well accelerate the timeline for Germany's exit from coal. A clause in the agreement creates the potential for an earlier exit from coal. After all, the best-performing major commodities in 2018 were European emissions allowances.

Designed to make coal less competitive, those allowances are

expected to double in price in the next year or two. Hedge funds and other investors have already taken notice.
A deadline on German coal use would reinforce confidence that the value of allowances will keep increasing,
creating a positive feedback loop of rising prices. Add to that a precipitous drop in the costs of wind and solar power, and it is not unrealistic to
imagine that the markets will bring about a much faster departure from coal than any policy would.
Sometime in the 2020s, it will
become cheaper to build new renewable systems than to continue running
existing fossil-fuel plants in parts of Europe. At that point, there will be little chance of stopping the fastest energy transition in history. — Project
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