

A German 2030 exit will isolate remaining EU coal power polluters

Germany's announcement that it will aim to exit coal power by 2030 leaves the EU's remaining coal countries exposed. New research by Ember reveals that Poland, Czechia and Bulgaria will be responsible for over 95% of the EU's planned electricity generation from coal in 2030. While the rest of the EU-27 will reduce coal power output by 99% between 2015 and 2030, Poland, Czechia and Bulgaria are offering a combined decline of just 42%. To limit global temperature rise to 1.5C *all* EU countries must play their part and end coal power by 2030.

Key findings

The EU is rapidly phasing out coal. Electricity generated from coal will fall by 83% in the EU from 2015 to 2030 (from 705 TWh to 118 TWh) according to the latest national government plans (including a 2030 German coal exit).

Coal phase-out plans are accelerating. In less than 2 years since EU countries submitted their [National Energy & Climate Plans](#), planned electricity generation from coal in 2030 in the EU has reduced by more than half (-58%). This will prevent an additional 89-152MT of CO2 emissions in 2030, equivalent to taking a further 53-90 million cars off the road.

The EU's remaining coal power countries are isolated. Three countries will be responsible for over 95% of the EU's planned electricity generation from coal in 2030: Poland (63%), Czechia (18%) and Bulgaria (14%).

Poland, Czechia and Bulgaria are transitioning away from coal much more slowly than the rest of the EU. Between 2015 and 2030, combined electricity generated from coal will fall just 42% in these three countries, compared to 99% in the rest of the EU-27.

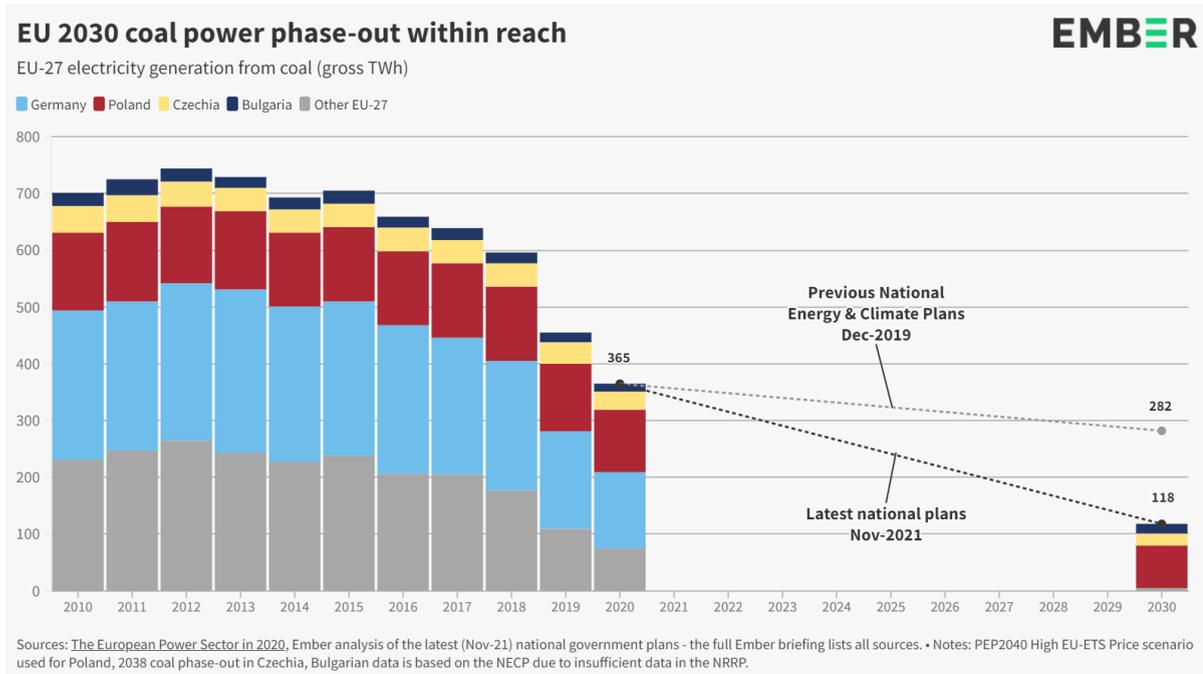
To limit global temperature rise to 1.5C all EU countries must phase out coal by 2030 ([IEA, 2021](#)). This research assesses the EU's progress against this critical objective according to the latest national government plans.

Charles Moore, Ember's Europe lead, said:

"A 2030 German coal exit leaves nowhere to hide for Poland, Czechia and Bulgaria. The rest of the EU are doing their part on coal and phasing it out this decade in line with what is needed for 1.5C. Those left behind will face high electricity prices, an uncompetitive economy and increasing pressure to act as the climate crisis unfolds."

The EU moves closer to a 2030 coal phase-out

By the end of 2019, all EU countries were required to submit [National Energy & Climate Plans](#) (NECPs) to the EU commission. Our November 2020 [assessment](#) of those NECPs revealed that EU countries were still planning to generate a combined 282 TWh of electricity from coal in 2030. However, since the publication of the NECPs, the EU has made considerable progress towards achieving a 2030 coal phase-out. Most critically, Germany announced it will aim to phase out coal by 2030 as part of the new government coalition agreement. Germany was previously planning to generate 134 TWh of coal power in 2030 (over a third of the original EU total identified in the NECPs).



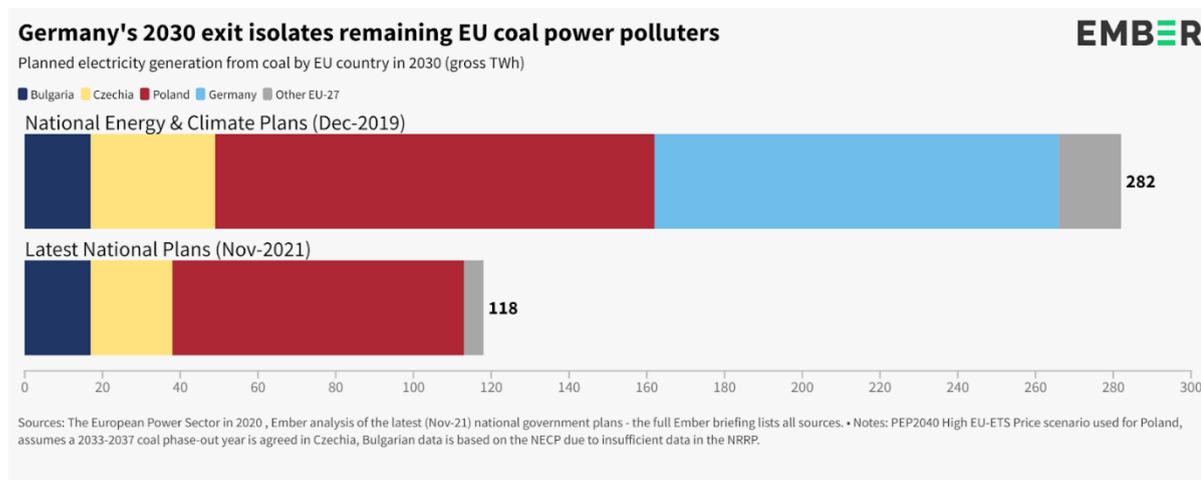
According to our new assessment of the latest national government plans (a full list of sources is provided below) electricity generation from coal is now expected to decline to just **118 TWh** by 2030, representing an 83% fall compared to 2015 levels. This means that in less than 2 years since EU countries submitted their NECPs, planned electricity generation from coal in 2030 in the EU has already more than halved (-58%). As a result, an additional 89-152¹ million tonnes of CO₂ will be avoided in 2030 equivalent to 2-3% of EU-27 1990 GHG emissions, or taking a further 53-90² million cars off the road.

¹ Lower end, all coal replaced with fossil gas, upper end, all coal replaced with zero emissions electricity. Assumes an average emissions intensity of electricity generated from coal (including both hard coal and lignite) of 925gCO₂/KWh and 380gCO₂/KWh for fossil gas.

² Average age of 11.5 years ([source](#)), 140gCO₂/km (2010 [EEA new cars](#)), 12,000km/year ([source](#)).

The EU's remaining coal power problem is focused in three countries

Nearly all EU countries are now doing their bit to phase-out coal in line with what is needed to limit global temperature rises to 1.5C, however a number of notable laggards remain. Poland (63%), Czechia (18%) & Bulgaria (14%) will be responsible for over 95% of the EU's planned electricity generation from coal in 2030. Between 2015 and 2030, combined electricity generated from coal will fall by just 42% in these three countries, compared to 99% in the rest of the EU-27.



Poland

In 2020, Poland generated 70% of its electricity from coal. Poland was responsible for 30% of total EU electricity generation from coal in 2020, this will rise to 63% in 2030. Poland has brought several new coal plants online in recent years and has refused to halt the expansion of the [problematic](#) Turów lignite mine. During COP26, Poland signed the '[Global Coal To Clean Power Transition Statement](#)' but later backtracked on agreeing to a coal exit in the 2030s by confirming it would exit coal by 2049 - just one year before the EU is due to reach climate neutrality. Consequently, a credible coal phase-out discussion on a national level in Poland has yet to start.

Czechia

In 2020, Czechia generated 40% of its electricity from coal. Czechia was responsible for 9% of total EU electricity generation from coal in 2020, this will rise to 18% in 2030. In August 2019, a multi-stakeholder 'coal commission' was established to assess the possibility of a coal phase-out in Czechia. Despite a number of studies (including [Ember's own analysis](#)) demonstrating that a 2030 coal phase is feasible and beneficial, the Czech coal commission recommended phasing-out coal in 2038. Since then, a new government was formed, its [coalition agreement](#) aims for a coal phase-out before 2038, however the final date is yet to be determined.

Bulgaria

In 2020, Bulgaria generated 33% of its electricity from coal. Bulgaria was responsible for 4% of total EU electricity generation from coal in 2020, this will rise to 14% in 2030. The Bulgarian government announced that the country will phase out coal in 2038 or 2040 in its draft National Recovery and Resilience Plan submitted to the European Commission on 15 October 2021. The coal phase-out plan falls far short of those of its direct neighbours, Greece, North Macedonia and Romania, which have announced 2025, 2027 and 2032 coal exit plans respectively.

Croatia, Romania and Slovenia plan a small amount of coal generation in 2030, but they will all phase out coal power in the early 2030s.

Sources and methodology

Countries with announced coal phase-outs by 2030 or earlier (including Germany), or which have no coal power plants are assumed to have zero electricity generation from coal in 2030. For countries which have not committed to a 2030 coal phase-out the sources for electricity generation from coal in 2030 are provided in the table below. Our data is displayed as gross electricity generation, where required a net to gross conversion factor of 1.1 has been applied. Historic electricity generation is sourced from [The European Power Sector in 2020](#). The text for the country profiles above has been adapted from *Europe Beyond Coal's* [coal exit tracker](#).

Country	Source	Electricity generated from coal in 2030	Notes
Bulgaria	National Energy & Climate Plan (2019)	17 TWh	In Oct-21, Bulgaria committed to phase-out coal by 2038 or 2040, however, there is currently insufficient data to assess if this will supersede the 2030 electricity generation from coal set out in the 2019 NECP.
Croatia	National Energy & Climate Plan (2019)	0.7 TWh	Croatia announced at COP26 that it would stop using coal in 2033 or sooner, however, there is currently insufficient data to assess if this will supersede the 2030 electricity generation from coal set out in the 2019 NECP. The country only has one coal-fired thermal power plant – Plomin 2.
Czechia	WiseEuropa meta-analysis of the electricity generation implications of different coal phase-out dates (2021)	21 TWh	The new government coalition agreement aims for a coal phase-out prior to 2038, however the final date is yet to be agreed. We assume a coal phase-out occurs between 2033-2037. As there have been a significant number of recent studies on the implications for electricity generation from coal according to various coal phase-out dates as part of the 'coal commission' process, there is sufficient data to make a 2030 coal estimate. To do so we use WiseEuropa's recent meta-analysis of the recent studies, averaging the electricity generation from coal in 2030 according to a 2033 (15 TWh) and 2038 (27 TWh) coal phase-out schedule.
Poland	PEP2040 (2021)	75 TWh	Two scenarios are presented in PEP2040, we use the "High EU-ETS price" scenario for our coal power data, which more accurately reflects the current carbon price environment.
Romania	National Recovery & Resilience Plan (2021)	1.4 TWh	The National Recovery & Resilience Plan indicates a remaining installed coal capacity of 810MW in 2030. We assume a load factor of 20%.
Slovenia	National Energy & Climate Plan (2019)	3.0 TWh	Slovenia announced at COP26 that it would stop using coal in 2033. However, there is currently insufficient data to assess if this will supersede the 2030 electricity generation from coal set out in the 2019 NECP.

About Ember

Ember is an independent, not-for-profit climate and energy think tank that produces cutting-edge research and high impact, politically viable policies that aim to accelerate the global transition from coal to clean electricity.