

Overview: National coal phase-out announcements in Europe

Status 22 April 2021

Many national governments have announced their intention to phase out coal. A total of 35.4 gigawatts (GW) of coal power capacity is located in countries which have announced they will phase out coal by 2030 or earlier, putting the coal plants in these countries on a pathway to closure.¹ This corresponds to 21% of Europe's currently operational coal fleet (25% in the EU). Germany's announcement to phase out coal by 2038 (or possibly 2035) means a further 17 GW are set to close after 2030. This document gives an overview of phase-out announcements and decisions in Europe. Following an announcement, governments need to implement it, which needs to lead to confirmed closure dates on plant level and plans for a managed, just transition away from coal. These actions need to be in line with climate, environmental and health responsibilities, and address the needs of the affected workers, communities, and regions. To be in line with the UN Climate Agreement struck in Paris, Europe and OECD countries need to be coal-power-free by 2030 (or earlier, depending on the country);² a fact also acknowledged by the governments that have signed on to the [Powering Past Coal Alliance](#).³

Country Overview

Country		Coal phase-out status
Austria	Coal-free since 2020	Austria is the second formerly coal-burning country that has become coal-power-free. The companies operating the last two coal plants in Austria closed them in 2019 and 2020, respectively. The Austrian coal phase-out was not government-driven. In January 2018, Austrian environment minister Elisabeth Köstinger <u>announced</u> the country would phase out coal by 2020, but this goal was <u>missing</u> in the energy

¹ For some of those coal power plants a definite retirement date has been announced, for most of them such a retirement decision at plant level has yet to be taken. This number includes the capacity in Germany that is set to close by 2030 or earlier; the remaining 17 GW (net) are set to close by 2038 or earlier.

² Climate Analytics (2019): "[Global and regional coal phase-out requirements of the Paris Agreement: Insights from the IPCC Special Report on 1.5°C](#)"

³ In November 2017, the UK and Canada initiated the [Powering Past Coal Alliance \(PPCA\)](#). The undersigned governments of the 'declaration' group within PPCA commit to phasing out existing traditional coal power in line with the Paris Climate Agreement, which is – according to the declaration – no later than by 2030 in OECD and EU member states, and no later than by 2050 in the rest of the world. [19 European](#) countries have signed on to the Alliance: Austria, Belgium, Denmark, Finland, France, Greece, Hungary, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Netherlands, Portugal, Slovakia, Sweden, Switzerland, and the United Kingdom. As a 21st country, Germany also joined PPCA, but not as a 'Declaration' member, because its 2038 '[we will try and do it before](#)' coal exit date is not yet Paris compatible.

		strategy published shortly thereafter and no measures were taken to ensure it.
Belgium	Coal free since 2016	Belgium was the first formerly coal-burning EU member to have become coal-power-free. The <u>last coal plant closed in March 2016</u> . It was not an announced government policy objective, but resulted from the progressive closure of ageing power plants covered by EU pollution control regulations.
Bosnia-Herzegovina	No phase-out discussion	Bosnia-Herzegovina is still planning new coal power plants. It is a hot spot for Chinese export of coal technologies with several coal-fired power plants projects under loan consideration by China's policy banks. The existing plants are expected to be compliant with EU pollution laws only by 2028, while the current fleet is old and <u>in breach of existing pollution limits</u> .
Bulgaria	No phase-out discussion	Bulgaria still does not have a long-term energy strategy and a coal phase-out is currently not being discussed. Old and polluting coal power plants are still in operation. The government relies on derogations from EU laws to keep the power plants active and avoids taking responsibility for just transition actions.
Croatia	No phase-out discussion	Croatia has two relatively small hard coal units, one of which was scheduled for closure in the end of 2017 to comply with the conditions under which Croatia became an EU member state. The operator is now considering whether to retrofit the unit.
Czech Republic	Phase-out under discussion	In August 2019, a multi-stakeholder 'coal commission' was established to assess the possibility of a coal phase-out in Czechia. Delayed by the Covid-19 pandemic, the commission concluded in December 2020 with recommending 2038 as the exit year for coal in Czechia. The government is expected to decide on it in February 2021. Environment and climate organisations demand a phaseout of all coal power plants by 2030 without compensations to the coal industry, and the closure of all combined heat and power (CHP) plants by 2035. The challenge will be to find sustainable solutions for CHP plants without a blanket switch to gas.
Denmark	Phase-out announced	Coal phase-out by 2028. In November 2017, Denmark was among the first signatories to the <u>Powering Past Coal Alliance</u> , declaring it would work to phase out coal by 2030. By now, all Danish coal plants have individual closure dates, the latest being Nordjylland closing in 2028. In 2017, Ørsted (formerly

		DONG) was the first Danish utility to <u>announce it will cease coal use by 2023</u> . CEO Henrik Poulsen said at the 2019 UN Climate Action Summit, the company <u>will already stop using coal from 2022 onwards</u> . The only other remaining operational combined heat and power (CHP) plant, Fyns, will close in 2022.
Finland	Phase-out decided	Coal phase-out by mid-2029. Following year-long pressure from civil society groups to end coal, in October 2018 the Finnish Government <u>introduced a legislative proposal for a ban on the use of coal in power generation after May 1, 2029</u> , which the parliament <u>adopted on 27 February 2019</u> . While the phase-out fell short of the needed date – Finnish NGOs are arguing for a 2025 phase-out date in light of the IPCC 1.5Deg report – the law includes to set up a €90 million fund for energy companies that opt to end burning coal by 2025. Unfortunately, this €90 million will be diverted from support for wind power and half of it be made available for biomass as a substitute for coal in combined heat and power plants. However, the other half will go to new solutions to provide better options than biomass and gas to replace coal-based heat.
France	Phase-out decided	Coal phase-out by 2022. At COP 22 in November 2016, France <u>had committed to a coal phase-out by 2023</u> under the previous administration. <u>President Macron has reconfirmed this commitment</u> , bringing it forward to 2022. In June 2019, <u>agreement over the coal phase-out</u> legislation was reached, which was enacted through the <u>energy and climate law in November</u> . The law contains an emission cap (0,7 kt eqCO ₂ /MW on an annual basis for power plants emitting more than 0,55 t eqCO ₂ /MWh), which will become effective on 1 January 2022, supposed to make the coal power plants unprofitable. Unfortunately, this keeps a door open for low running hours of coal plants beyond that date or the unsustainable conversion to a mix of coal and biomass. As all but one of the French coal plants have announced closure by 2022, this concern the Cordemais plant for which there are plans to co-fire it with biomass.
Germany	Phase-out decided but not ambitious enough	Coal phase-out by end-2038 with option 2035. In July 2020, the German <u>coal power exit law</u> , as well as a law that provides support to coal regions for the transition, were adopted. The first law stipulates a coal exit by 2038 with an option to forward it to 2035 and creates the basis for the retirement of an assumed 40 coal

		<p>plants with a capacity of 23 GW until 2030 (own calculation) - in addition to retirements that were announced already. We assume that about 15 coal plants with a capacity of nearly 19 GW are meant to operate after 2030, making the law <u>not</u> compatible with the UN Paris climate agreement <u>1.5oC requirements</u>.</p> <p>A public-private contract between the German government and the lignite industry, still to be signed, is supposed to grant 4.35 bln EUR in compensation to operators for closing down their lignite business. The compensations are still subject to approval by the state aid department of the EU Commission.</p> <p>According to German civil society organisations and former coal commission members, the law is substantially weaker than what was proposed by the multi-stakeholder government coal commission, which had <u>presented its final report</u> in February 2019. The criticism centres on the slowness of the exit, that it does not foresee the rescue of the villages threatened by lignite mining, the non-linear phase-out pathway of lignite plants, allowing the new coal plant Datteln IV to come online, the massive overcompensation for the coal industry for uneconomic and late plant closures as well as subsidies for coal-to-gas/biomass switching.</p> <p>Many factors are in play that will force Germany to exit coal in the power sector <u>faster</u>. This first showed in December 2020, when a set of three younger hard coal plants unexpectedly won in the first auction that determines hard coal retirements. As a result, we added it to the list of plants that are to retire before 2030 to show that we anticipate a quicker phase-out of German hard coal capacity is realistic.</p>
Greece	Phase-out announced	<p>Coal phase-out by 2025.</p> <p>At the United Nations Climate Action Summit in New York in September 2019, Greek prime minister Kyriakos Mitsotakis announced that Greece will close all its lignite power plants by 2028. The following December, operator PPC decided to cease operating all its existing lignite-fired power plants by 2023. That left just its under construction Ptolemaida V plant to operate until 2028. However, in April 2021, PPC announced that it would cease burning lignite at Ptolemaida V in 2025, citing rising carbon permit prices as the reason for the decision. With Ptolemaida V not scheduled to enter service until 2022, doubts persist as to whether it will ever burn lignite at all, meaning Greece's</p>

		coal phase-out could yet be brought forwards again. The conversion to fossil gas is being considered. With its huge potential for renewable energy Greece must ensure that the transition away from coal is one towards 100% renewables. A region in Greece (Western Macedonia) is a priority under the European Union's new Coal Regions in Transition Platform.
Hungary	Phase-out announced	<p>Coal phase-out by end-2025.</p> <p>At the United Nations Climate Action Summit in New York in September 2019, the president of Hungary, János Áder, <u>said that the country will stop using coal for electricity by 2030</u>. In March 2021, at its Global Summit, Hungary <u>joined</u> the Powering Past Coal Alliance <u>stating</u> to phase our coal in the last remaining lignite power plant by 2025. This last plant (Matra, 884 MW) is the number one CO₂ emitter of the country. Its closure by the end of 2025, also <u>officially confirmed</u> by the government, crowns years of dedicated efforts by environmental groups in Hungary, which advocate that Matra is closed by 2025.</p>
Ireland	Phase-out announced	<p>Coal phase-out by 2025.</p> <p>In March 2018, the Irish minister for climate action announced that Ireland joined the <u>Powering Past Coal Alliance</u> and will <u>end coal power use by 2025</u>. At the 2019 UN Climate Action Summit, Ireland's prime minister Varadkar <u>confirmed this date</u>.</p> <p>In addition, a ban on smoky coal (for domestic heating) started in autumn 2018 and will come into full effect by the end of 2019. In July 2018, the Irish parliament <u>passed a bill</u> to sell the country's shares in coal, peat, oil and gas, making Ireland the world's first country to divest from all fossil fuels.</p>
Italy	Phase-out announced	<p>Coal phase-out by 2025.</p> <p>In October 2017, the Italian government announced a coal phase-out by 2025 as part of the National Energy Strategy. The Strategy was signed the month after. However, it is non-binding. <u>Italy has to implement the phase-out through executive measures</u>. At the 2019 UN Climate Action Summit, Italy's prime minister Conte <u>confirmed this date</u>. While Italian coal utility Enel, operating two thirds of the coal capacity in Italy, has accepted the 2025 phase-out date, <u>it is planning to replace almost all of it with fossil gas generation capacity</u>.</p>

Kosovo	No phase-out discussion	With the <u>cancellation of the New Kosovo coal project</u> , the country has now no new coal plants planned anymore. The existing plants are expected to be compliant with EU pollution laws only by 2028, while the current fleet is old and <u>in breach of existing pollution limits</u> .
Monte-negro	No phase-out discussion	With the <u>cancellation of the Pljevlja II new coal project</u> , Montenegro has now no new coal plants planned anymore. However, there are plans to retrofit the existing Plevlja I plant and connect it to district heating. In February 2020, the country introduced a <u>cap and trade system for its major CO₂ emitters</u> , thereby continuing to lead the way for the Western Balkan countries. However, a coal phase-out date has yet to be determined.
Netherlands	Phase-out decided	<p>Coal phase-out by end-2029.</p> <p>In October 2017, <u>the incoming Dutch government announced in its coalition pact that all coal-fired power plants will shut by the end of 2029</u>. Three of the five remaining plants in the country have only recently entered operation in 2015 and 2016 respectively, meaning that they will operate for less than half of their expected lifetime. In May 2018, the Dutch government <u>announced a legal ban of electricity production with coal</u> to go into effect on 1 January 2030, which was <u>passed in December 2019</u>.</p> <p>In December 2019, the Dutch Supreme Court <u>confirmed</u> the Urgenda verdict, obliging the Dutch government to reach a 25% reduction in greenhouse gas (GHG) emissions by 2020 (relative to 1990). <u>With GHG emission still at -21% in 2019</u>, it means that short-term measures are needed. In early 2020, the cabinet <u>proposed</u> a 54 potential extra measures. A mixture of closing one of the three remaining coal plants ahead of the 2029 phase-out date and downscaling production <u>is among the measures</u>. In September, the climate minister <u>called</u> the operators of the coal plants to investigate the cost of closure.</p>
North Macedonia	Phase-out under discussion	In February 2020, North Macedonia <u>adopted a ground-breaking new energy strategy</u> , making it the first country in the Western Balkans to name concrete date options for a coal phase-out. Two of the strategy's scenarios entail a coal exit by 2025, with the third delaying closure of the Bitola lignite power plant until 2040. In the country's <u>draft NECP</u> , a phase-out in 2027 is foreseen. This date is pending on the submission of <u>the final NECP to the Energy Community</u> , which is expected early 2021.

Poland	No phase-out discussion	<p>Poland's coal industry is in a dire state. It has been hit hard by low demand and infections during the Covid-19 pandemic, a low coal price and a high carbon price. Polish coal utilities lost about 50% of their share price in the last 5 years, but are set to receive 14€bn in coal capacity payments from the public purse. Despite this, Poland is still bringing new coal plants online and planning new lignite mines.</p> <p>The government plans to restructure the energy sector with a <u>spin-off of coal assets</u>, and it recently announced that it will try to keep its state-owned coal mining company <u>PGG operating until 2049 using state aid</u>. The European Commission will have to determine in both cases if this is in line with EU state aid and competition rules. Consequently, a credible coal phase-out discussion on national level in Poland has yet to start with the government and the trade unions needing to accept climate science and the changing financial and energy market conditions for coal.</p> <p>Meanwhile, no longer waiting for the national government, the coal region Eastern Greater Poland (Wielkopolska Wschodnia) has <u>committed</u> to phase out coal by 2030 and achieve climate neutrality by 2040.</p>
Portugal	Phase-out announced	<p>Coal phase-out by end-2021.</p> <p>Two years after the first formal <u>Portuguese announcement to phase out coal before 2030</u>, the re-elected Portuguese Prime Minister António Costa used his October 2019 inauguration speech to announce that the country's last coal plant <u>will close by 2023</u>, bringing the phase-out forward by seven years. In July 2020, EDP announced it <u>will close its Sines coal plant in January 2021</u>, bringing the Portuguese coal phase-out forward for the second time, this time by two years. When the second and last coal plant, Pego, will close in November, Portugal will be the 4th coal-free country in Europe. The news comes on the back of efforts by environmental groups to <u>highlight that the early closure of all coal plants in Portugal is possible</u>.</p>
Romania	No phase-out discussion	<p>Ageing coal power plants are facing the big challenge of meeting air pollution requirements. The Romanian mining sector is facing significant economic pressures. The National Energy and Climate Plan (NECP) estimates installed coal capacity in 2030 at almost 2 GW, <u>even though this electricity is already unprofitable, and it is unclear how coal-based energy companies will survive until then</u>. Lignite energy production will have a share of 15% in 2030 according to the NECP. Moreover, in the National Energy Strategy, coal energy production is</p>

		envisaged until 2050. Currently there is no calendar nor a strategy for a coal phase-out in Romania, which jeopardizes Romania's just and green transition.
Serbia	No phase-out discussion	Serbia is still planning new coal power plants and has recently revived plans to build the <u>350MW Kolubara B lignite project</u> with the help of Chinese partners. It is also constructing a <u>new unit at Kostolac power plant</u> . The existing plants are expected to be compliant with EU pollution laws only by 2028, while the current fleet is old and <u>in breach of existing pollution limits</u> .
Slovakia	Phase-out announced	Coal phase-out by 2030. The environmental policy <u>strategy of the Slovak Republic</u> published in February 2019 states a coal phase-out by 2030. In a joint statement in June 2019 newly inaugurated president Caputova and then prime minister Pellegrini <u>announced</u> that the country will stop burning coal to produce electricity by the end of 2023. Later that year, Slovakia also <u>joined the Powering Past Coal Alliance</u> . Interestingly, the country only has combined heat and power (CHP) coal plants which also produce heat and <u>the Low-Carbon Development Strategy</u> contradictorily states that "the decommissioning of Vojany and Nováky [the two largest coal CHP plants] is expected in 2025 and 2023, respectively." Moreover, there is another coal CHP plant, Teko 1, which does not have a retirement date. Slovakia needs to clarify its phase-out date for coal heat and power, which needs to be 2025 the latest.
Slovenia	Phase-out under discussion	Slovenia added in 2015 the Šoštanj 6 coal power plant to the grid, which the operator wants to run until 2054. The building of this coal power plant has been <u>hugely expensive and wrought with a host of difficulties</u> . In the summer of 2019, after joining the EU coal regions in transition platform, the Slovenian government tasked a consultancy with developing a national coal phase-out strategy. The strategy is to be adopted by the end of 2021. In autumn 2020, the draft strategy was published, proposing three scenarios (2033, 2038 and 2042). The Ministry of Environment has commissioned an environmental impact assessment of the scenarios, analysing their compatibility with various environmental indicators. The draft of the environmental report was published in December 2020. The strategy and its environmental impact assessment are expected to enter public deliberation in spring 2021. During the process so far environmental NGOs have <u>criticised the proposed scenarios</u> and demand that the strategy includes a Paris-compatible 2030 scenario.

Spain	Phase-out under discussion	<p>Spain has seen a rapid decline of coal power generation in 2019 and 2020. A set of seven coal plants stopped operating on 30 June 2020 and one announced to retire (5.1 GW out of 9.9 GW), the seven being unable to comply with stricter EU air pollution standards, which applied as of Q3/2020. In March 2020, Spain submitted its <u>final energy and climate plan (NECP)</u> to the European Commission, which implies a phase-out of coal by 2030. However, closure announcements and generation trends indicate that Spain will be coal power free by the mid-2020s or even earlier.</p> <p>In February 2019, the Parliament of the Balearic Islands has <u>approved</u> a Law on Climate Change and Energy Transition that sets an end date for coal in the Balearic Islands. The islands' last coal power plant, Alcúdia, will close by 2025 (if an interconnector cable with mainland Spain is built) and run on low hours until then.</p> <p>With the end of hard coal mining subsidies in the EU in 2018, 25 of the 26 coal mining units scheduled to close <u>ceased</u> operation by 31 December 2018. In the end this was made possible through a just transition deal the Spanish government has <u>struck</u> with the regions.</p>
Sweden	Coal free since 2020	<p>Last plant closed in 2020.</p> <p>Sweden intends to be among the <u>first fossil fuel free industrialized countries in the world</u>. The last coal plant in Sweden was long planned to be <u>closed by 2022</u>. In December 2019, the operator <u>announced</u> to close the plant two years early, which it did by the end of the 2020 heating season. Sweden is the third coal-free country in Europe after Belgium and Austria.</p>
Turkey	No phase-out discussion	<p>Turkey <u>officially announced</u> an intention to <i>increase</i> its coal-fired capacity to 30 GW by 2023. For years, Turkey ranks among the top 4 countries globally with <u>the largest new coal risk</u>. Currently, around 33.7 GW of new coal capacity are in the development pipeline. One of the major players in this is state utility <u>EÜAŞ</u>, which has been trying to make lignite assets attractive for investors through generous state subsidies, exemptions, land allocations, and price & purchase guarantees. Retrofitting is a widespread practice, expanding the capacity and lifetime of <u>the country's oldest and dirtiest plants</u>.</p>
UK	Phase-out announced	<p>Coal phase-out by 2024.</p> <p>Announced just prior to the 2015 Paris climate meeting, the UK was the first country in the world to announce a coal phase-out policy. The UK government <u>confirmed its intended regulatory approach in January 2018</u>, but is still working on putting it into legislation. It is considering</p>

		<p>an <u>emission limit on coal power stations from October 2025 onwards</u>. Initially announced for 2025, prime minister Johnson <u>brought it forward to 2024</u> in the run-up to the 2020 Glasgow climate meeting. Since the UK introduced a carbon tax for power plants in 2013, installed coal capacity and coal power generation has already sharply decreased.</p> <p>In February 2020, England <u>decided</u> to phase out house coal and wet wood for burning at home by 2023.</p>
	No coal in electricity mix	<p>Albania, Cyprus, Estonia, Iceland, Latvia, Lithuania, Luxembourg, Malta and Switzerland have no coal plants. Norway has no coal apart from one very small CHP plant in the far North of <u>Longyearbyen</u>. Clean alternatives are currently under consideration.</p>

Timeline of National Coal Phase-out Announcements

Year of announcement	Country and phase-out year
2015	UK: First country in the world to announce a coal phase-out (2025).
2016	<p>Belgium: First formerly coal-burning country in Europe to go coal free.</p> <p>France: President Hollande announces plan to phase-out coal by 2023.</p> <p>Austria: Operator of the country's last coal plant without a closure date announces plan to close it by 2025.</p> <p>Finland: Government announces plan to ban burning coal to produce energy by 2030. It's passed into law in 2019.</p>
2017	<p>France: President Macron brings coal phase-out forward to 2022. It's later enacted under the 2019 energy and climate law.</p> <p>Sweden: Operator of the country's last coal plant announces plan to close it by 2022.</p> <p>Italy: Government presents national energy strategy with the aim of phasing-out coal by 2025.</p> <p>Denmark: Country joins the Powering Past Coal Alliance, thereby committing to phase-out coal by 2030.</p> <p>The Netherlands: Incoming government announces plan to phase-out coal by 2030. It's passed into law in 2019.</p> <p>Portugal: Minister for Environment announces plan to phase-out coal by 2030.</p>

2018	Ireland: Country joins the Powering Past Coal Alliance, with plan to phase-out coal by 2025
2019	<p>Austria: Operator of country's last coal plant brings its planned closure forward to 2020.</p> <p>Portugal: Prime Minister announces plan to bring phase-out forward by seven years to 2023.</p> <p>Greece: Greek Prime Minister Kyriakos Mitsotakis says his country will phase-out coal by 2028. Greece's only coal operator swiftly announces plans to close all its existing plants by 2023, leaving only one plant currently under construction.</p> <p>Hungary: Country's president announces plan to phase out coal by 2030.</p> <p>Slovakia: Country's new environmental strategy includes plan to phase-out coal by 2030.</p> <p>Germany: Country's coal commission recommends UN Paris Climate Agreement incompatible 2038 coal phase-out. This was passed into law in 2020.</p>
2020	<p>Austria and Sweden: Countries become the second and third countries in Europe to go coal-free, with Sweden going coal free two years early.</p> <p>Portugal: Operator of the country's last coal plant without a closure date announces plan to close it in 2021. It brings Portugal's coal phase-out forward by two years.</p> <p>UK: Country brings coal phase-out forward to 2024.</p>
2021	<p>Hungary: Country brings coal phase-out forward to 2025.</p> <p>Denmark: Last coal plant will close in 2028, thereby bringing the phase-out date forward by two years.</p> <p>Greece: Operator PPC brings coal phase-out forward to 2025.</p>

Summary of National Coal Phase-out Announcements

Category	No. of countries	Country names
Coal-free	3	Belgium (2016), Austria (2020), Sweden (2020)

Phase-out by 2025	7	Portugal (end-2021), France (2022), UK (2024), Hungary (2025), Italy (2025), Ireland (2025), Greece (2025)
Phase-out by 2030	4	Denmark (2028), Finland (mid-2029), Netherlands (end-2029), Slovakia (2030)
Phase-out after 2030	1	Germany (end-2038)
Phase-out under discussion	4	Czech Republic, North Macedonia, Slovenia, Spain
No phase-out discussion	9	Bulgaria, Bosnia-Herzegovina, Croatia, Kosovo, Montenegro, Romania, Poland, Serbia, Turkey
No coal in electricity mix	10	Albania, Cyprus, Estonia, Iceland, Latvia, Lithuania, Luxembourg, Malta, Switzerland, Norway

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