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REPORT MAY 2021

CHARTING THE COURSE AWAY FROM COAL: THE G7'S LEADERSHIP OPPORTUNITY

G7 COAL SCORECARD – SIXTH EDITION

**CHRIS LITTLECOTT, LEO ROBERTS, OYKU SENLEN,
HANNA HAKKO & REBEKKA POPP**





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About E3G

E3G is an independent climate change think tank accelerating the transition to a climate-safe world. E3G builds cross-sectoral coalitions to achieve carefully defined outcomes, chosen for their capacity to leverage change. E3G works closely with like-minded partners in government, politics, business, civil society, science, the media, public interest foundations and elsewhere.

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Cover image

A storm surge hits not far from Carbis Bay, Cornwall, which will host the 2021 G7 Leaders' Summit. Credit: Tony Armstrong-Sly



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CHARTING THE COURSE AWAY FROM COAL: THE G7'S LEADERSHIP OPPORTUNITY

SUMMARY

2021 is the most important year for climate diplomacy since the Paris Agreement was signed in 2015. The UK is hosting both the G7 and the COP26 UN Climate Conference and has put climate action at the centre of the geopolitical and COVID recovery agenda.

Throughout early 2021, pressure has been building for explicit action to reduce coal power generation. At the **Powering Past Coal Alliance summit** in March, UN Secretary General Guterres said “G7 members should take the lead and commit to this [coal] phase out at the G7 June summit at the latest.” Similarly, the IEA’s Fatih Birol **has highlighted** that quitting coal power is the ‘single most important’ step in the six months before COP26.

In a major speech on 14 May, **COP26 President Designate Sharma stated** that the conference must enable emissions reductions of 50% by 2030 to keep the 1.5C temperature target alive. Sharma stated that “if we are serious about 1.5 degrees, Glasgow must be the COP that consigns coal power to history”. He called for COP26 to ensure that countries abandon coal power, adding that he is “seeking the G7 to lead the way”.

2021 is the year for G7 action on coal

The G7 aspires to take a leading role in shaping the multilateral agenda and setting norms for government action and international cooperation. After four years of diplomatic disruption the Trump Presidency, there is no better moment for the G7 to restate its climate leadership. As Sharma highlighted in his speech:



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“All G7 nations now have 2030 emissions reduction targets, aligned with net zero by 2050.”

Since 2015 E3G has tracked G7 progress on coal through a series of scorecard reports that assess G7 member performance and their collective influence. In our view, 2021 provides the most positive conditions for the G7 to chart the global course away from coal, reflecting developments spanning political leadership, diplomatic engagement, and real-world trends.

Our 2021 analysis highlights that:

G7 action on coal matters. G7 countries are home to 68% of OECD (Organization for Economic Cooperation and Development) & EU coal capacity (as of May 2021). G7 progress on coal is an essential enabler of a broader coal exit by 2030.

The G7 can seize the opportunity to phase out coal by 2030. Since 2010, G7 countries have already retired around 174GW of coal power plants, with a further 138GW scheduled to retire by 2030. This means that around 59% of collective coal power capacity across the G7 has either closed already since 2010 or is scheduled to retire by 2030.

Performance has improved in all countries for the first time in six editions of E3G’s annual progress report. The underlying direction of government policy actions is positive, providing a platform for both further acceleration of national coal phase out efforts and G7 cooperation. This confirms **an emerging ‘hidden consensus’** that major economies like the EU, US and UK are on track for a zero-carbon power system by 2035.

Country headlines:

- > **Canada, France, Italy and the UK** are all on track for 100% phase out, with multiple coal power plants already closing.
- > **Germany’s** revised climate law will require its 2038 coal phase out date to be brought forward to 2030. EU Emissions Trading Scheme prices and cheap renewables are already making coal uneconomic.
- > In the **United States**, the Biden Administration’s commitment to 2035 net zero power would see coal generation offline around 2030. This would provide a strong foundation for US international diplomacy.
- > **Japan’s** commitment to 46-50% greenhouse gas reduction by 2030 will require a step change in power sector decarbonisation. Japan’s plan to retire its less efficient coal units by 2030 can be expanded. Meanwhile,



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the cancellation of the final two projects not yet under construction means that no new coal plants are under development across the entire G7.

- > The **EU** has emerged as a player on coal diplomacy, following a **call from its foreign ministers** in January to phase out coal globally. This creates more opportunities for strengthening G7 efforts and linking international commitments with domestic efforts across Europe and the rest of the OECD.

G7 collective leadership on coal: E3G recommendations

Drawing on our analysis of G7 member progress and global trends, E3G has three recommendations for G7 collective efforts to accelerate the broader transition away from coal power:

1. **Acknowledge that power sector transformation requires both coal exit and clean energy additions**

The G7 should explicitly recognise for the first time that its members will aim to phase out coal power generation by 2030 and encourage other OECD countries to do likewise.

2. **Confirm an end to international coal finance**

The G7 should commit to ending all international public finance for coal power generation and associated facilities, including through working together to strengthen the OECD export credit regime.

3. **Enable the retirement of coal power generation**

G7 members should recognise the growing need for financial instruments to enable the retirement of coal power generation and commit to providing finance and diplomatic support to dedicated initiatives and instruments.

In delivering this three-pronged agenda the G7 would strengthen their collective weight and individual influence in advancing the global transition from coal to clean energy. It would directly support real world emissions reductions in pursuit of the Paris Agreement and provide high level leadership in support of the UK's COP26 objectives.

The G7 Environment and Climate Ministerial will take place on 20-21 May, ahead of the Leaders' summit in Cornwall on 11-13 June.



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G7 COAL SCORECARD ANALYSES 2015-19

2015 was a momentous year for climate action, with the successful negotiation of the Paris Agreement providing a framework for global cooperation. But even ahead of Paris, 2015 also saw the first signals that climate diplomacy was moving into a new phase. The transformation of the real economy would be the focus, with coal coming to the fore.

On 8th June 2015, G7 members agreed that the decarbonisation of the global economy should be completed by the end of this century. They said this requires deep cuts in CO₂ emissions; and that it must include a transformation of their own energy sectors by 2050. This G7 leadership statement helped prepare the way for the negotiation of the Paris Agreement in December 2015.

The Paris Agreement and the 2015 G7 communiqué do not mention explicitly any particular fossil fuel, but the implication was already increasingly clear. There is no future for unabated¹ coal power generation in a world that is acting to avoid dangerous climate change. Due to its carbon intensity and recent rapid growth, coal is the fossil fuel that needs to depart the global economy first and fastest. Indeed, repeated analyses point to the need for all OECD countries to have completed a coal phase out by 2030 if emissions reductions are to be on track.²

E3G developed the G7 coal scorecard format in 2015 to provide a framework for tracking how G7 countries are meeting the challenge of phasing out coal use for electricity generation. Our scorecard reports drew on detailed analyses of each G7 member that we had undertaken for Oxfam.³

Following the initial launch of the scorecard in 2015, each subsequent edition has featured a deep dive analysis:

- > November 2015: **Benchmarking coal phase out actions**
- > May 2016: **Updated scorecard and paper on Japan G7 Presidency**
- > April 2017: **The Coal Phase Out Transition – Italy's Leadership Opportunity**



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- > May 2017: **Rhetoric Vs. Reality in the USA**
 - > September 2018: **Decision time for coal in Germany**
 - > August 2019: **Coal Finance Heads for the Exit**

The scorecard was not published during 2020, reflecting the absence of a G7 summit due to the impact of Covid-19 and the diplomatic difficulties of the US G7 presidency year.



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STRONG CURRENTS: G7 COAL TRANSITION DATA TRENDS

Since 2015, E3G has tracked data trends and policy developments across the G7, building a picture of G7 progress on coal phase-out. We set out here the key data trends from our 2021 G7 Coal Scorecard report.

Note: the **online version** of this article includes interactive data visualisations that explore coal capacity and electricity generation trends over the past decade.

Our analysis combines publicly available data of operating and proposed coal power plants. This includes Global Energy Monitor's **Global Coal Plant Tracker** (aggregated from plant- to country-level); electricity generation data provided by **Ember**; and E3G analysis of political commitments and policy developments.

We assess progress towards coal phase out by calculating the rate of retirements of the operating power plant fleet, starting from a 2010 baseline. We similarly incorporate forecasts of planned coal retirements to 2030, by when OECD countries should be coal-free to give the world a reasonable chance of keeping warming below 1.5°C.

Coal exit continues across the G7, Japan lags behind

Since our first assessment of G7 progress in 2015, there has been an acceleration of progress across two trends. Firstly, new coal construction slowed and stopped everywhere except Japan. Secondly, existing coal power plants have closed, through retirement decisions and government phase out commitments.

As Figure 1 shows, the pipeline of new projects shrank year on year, while the number of power plants heading to retirement grew. The acceleration of coal plant retirements is now the dominant trend.

As of May 2021, the total operating capacity of G7 countries is almost 350GW, down 19GW since January 2020. Since 2010, G7 countries have retired around 174GW of coal power plants, with a further 138GW further scheduled to retire by 2030.



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Figure 1. G7 Coal Landscape. Data sources: Global Energy Monitor, Sierra Club, Japan Beyond Coal, and E3G. Accurate as of 1 May 2021.

As highlighted in Figure 2, 59% of G7 coal capacity has either retired since 2010, or is scheduled to retire by 2030, showing rapid progress over the past decade. Much of this progress has taken place in the UK, France, Italy and Canada, which are all on track to be coal free by 2030 at the latest.

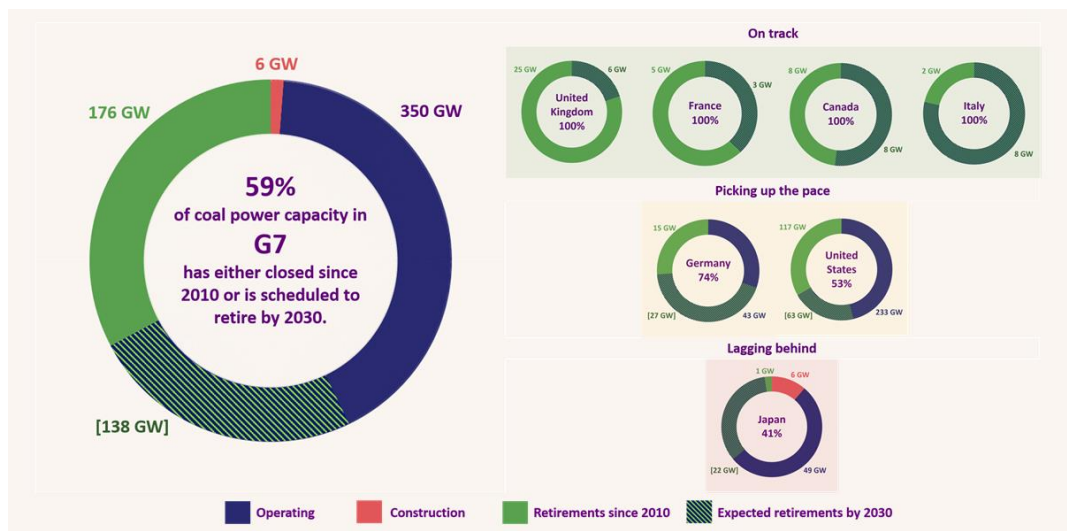


Figure 2. G7 coal capacity status by country. Data sources: Global Energy Monitor, Sierra Club, Japan Beyond Coal, and E3G. Accurate as of 1 May 2021.



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Germany and the USA pick up the pace, Japan drags its feet

74% of Germany's operating fleet has now closed or is scheduled to close by 2030. Its recently updated law should push this to 100%, as we explore in **this analysis**. Germany's coal exit will certainly accelerate faster than its current Paris-unaligned 2038 coal phase out date.

Retirements in the US have accelerated over the past decade, despite Trump's pro-coal rhetoric, with 117GW closing since 2010. As of May 2021, 63GW of the currently operating 233GW are confirmed to close by 2030, putting the USA 53% of the way to coal phase out. Closing remaining coal power generation by 2030 is the essential first step to achieving the Biden Administration's 2035 carbon neutral electricity system goal, as **confirmed by multiple studies**.

In 2020 Japan announced its intention to retire most of the older, less efficient coal generation units by 2030, but this would still leave over 30GW of coal operating. Japan's slow progress sees it needing to come up with a plan to accelerate the retirement of 60% of its coal capacity over the next decade.

The end of new coal is now in sight

Following the entry into operation of the controversial **1.1GW Datteln 4 unit in Germany** in May 2020, Japan is now the only G7 country still pursuing new coal-fired power projects. It has 6GW of new plants currently under construction, but these are now the last. In April 2021 the final two projects in Japan's project development pipeline were cancelled, meaning that no new coal plants are under development across the entire G7.

The past decade has seen the collapse of the new project pipeline across the G7. 79GW of proposed projects were cancelled, while some of the youngest coal plants in Germany are **already deciding to retire**. Japan will shortly catch up with its G7 peers in finding that pursuing new coal was a costly error.

Renewables and gas displacing coal-fired power generation

2020 also saw the share of electricity generated from burning coal continue to fall. COVID-19 lockdowns hit coal hard as demand fell and the share of renewables grew. However, the shrinking coal share of electricity is a longer-running trend, reflective of the declining role of coal. In fact, the coal share has



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declined every year since 2013 across all the G7 countries except Japan. Of the G7, the UK has seen the most dramatic fall, from 40% of electricity in 2012, to less than 2% in January 2021.

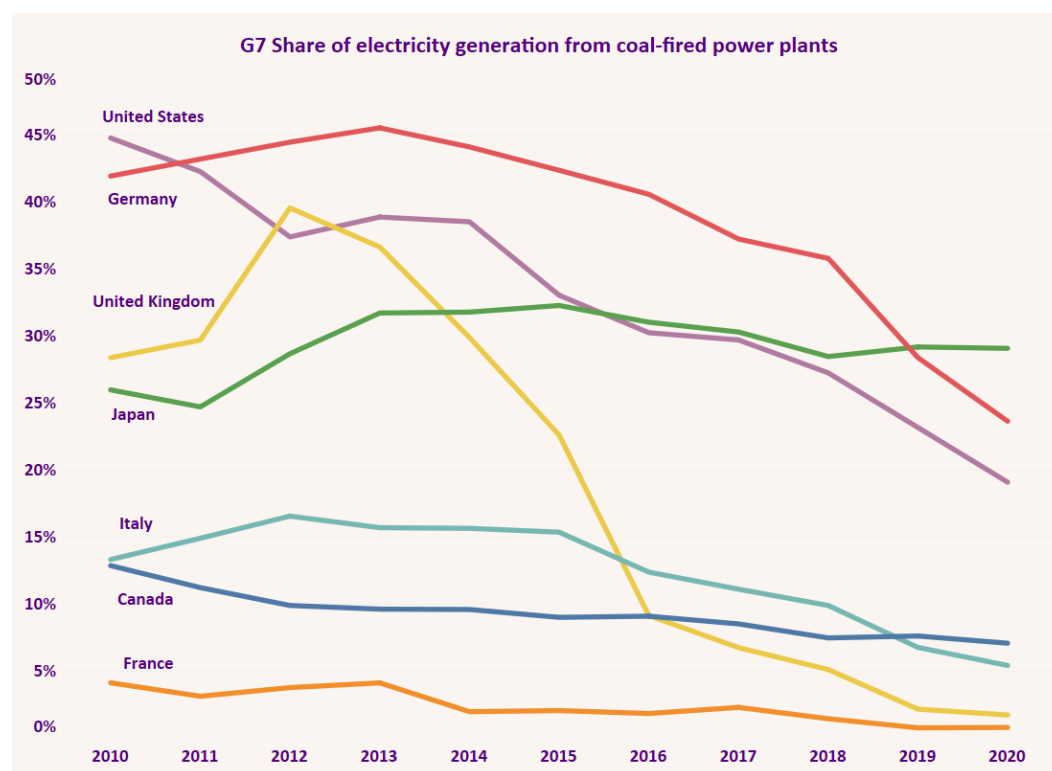


Figure 3: G7 share of electricity generation. Source: Ember, January 2021

This reduction in the prominence of coal in electricity generation is the result of two major trends. First, coal power stations are being utilised at historically low rates. For example, in the US the average capacity factor is only 32%. This has a direct impact on their economic viability, which in turns leads to stronger incentives for closure.

Second, both renewable energy and gas capacity have grown rapidly over the past five years, creating competition for coal. Ember's Global Energy Review 2021 shows that renewable energy generation grew by 1559 TWh between 2015 and 2019, with the US alone accounting for 204 TWh. Unfortunately, gas use in the power system has also grown rapidly over this period, with an increase of around 12% across the G7.



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SURFING THE WAVES: G7 PROGRESS TOWARDS COAL PHASEOUT

For the first time in six editions, E3G's annual review of G7 progress finds that performance has improved in all countries. The underlying data trends and direction of government policy actions are positive, providing a platform for both further acceleration of national coal phase-out efforts and G7 cooperation.

Note: the **online version** of this article includes an interactive version of the scorecard graphic, showing the year-on-year changes to performance and country ranking. The 2021 scorecard includes commentary explaining notable changes to our assessment or highlights of country performance.

Methodology

E3G's G7 coal scorecard assesses country performance across three categories of action:

1. Is there a risk of new coal power plants being constructed?
2. Are existing coal power plants being retired?
3. Do country actions have a positive international impact?

The first two domestic issues are analysed in respect to market drivers and government policies. The international impact of each country is then assessed by considering how private sector investments and government finance impact on coal power plants abroad. In 2018 we added a third sub-category of Diplomatic Leadership, recognising real world developments in this space.

There are significant differences between the G7 countries in respect to the scale and relative importance of coal-fired electricity generation. This reflects the overall size of each economy and historical investment trends. The G7 coal scorecard tracks country performance across the three categories of action outlined above to enable meaningful comparisons of market dynamics and



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government policies irrespective of the significant differences in the scale of coal use in each country.

Five years: 2015-2019

In 2015 and 2016, the United States topped the scorecard ranking as Obama Administration policies aligned with market trends to support the USA's transition away from coal. The UK became the first G7 country to commit to a coal phase out, subsequently followed by the coal-heavy Province of Alberta in Canada. Germany was a poor performer across the board, but Japan was bottom-ranked in every category.

In the 2017 edition, the US had begun to slip down the rankings as the Trump administration pushed pro-coal rhetoric and sought to undo Obama-era policies (leading to many drawn-out legal battles). Restrictions on coal finance from both public sources by the French government and the private sector by leading French banks saw France top the scorecard instead.

2018 saw the introduction of a new category to track International Diplomatic influence, recognising that Canada and the UK had created the Powering Past Coal Alliance as a progressive coalition offering a collective counterweight to the pro-coal policies of Trump Administration and Japan.

By 2019 the US had sunk to equal 5th place with Germany, which was on the rise thanks to the conclusion of its Coal Commission and introduction of its domestic coal phase out law. Canada and UK topped the scorecard as their domestic policies and retirement trends moved forward, while Japan once again propped up the table, with very little change in performance.

2021 Progress

The top of the 2021 G7 scorecard (Figure 4, below) sees **Canada, UK and France** continue in the leading positions. Each has made further progress since our last report in 2019 on domestic policy and restricting coal finance.

Domestic policy:

- > In Canada, Alberta's coal phase-out will be completed in 2023, 7 years ahead of schedule.
- > The UK has moved its coal phase-out end date to 2024, but is still yet to legislate. As just one coal power plant will remain operational beyond 2021 there is a possibility that changes to the capacity market might suffice.

- > France legislated for its 2022 coal phase out in November 2019, putting its last four power plants on a pathway to closure.

Coal Finance:

- > In Canada, private sector financial actors are beginning to restrict coal finance, including Caisse de dépôt et placement du Québec and Desjardins Group joining the Powering Past Coal Alliance.
- > In 2020, the UK restricted all public finance for coal from export credits and development assistance. It subsequently extended this approach to all fossil fuels in early 2021.
- > France has been the driving force behind the creation of the Export Finance for Future coalition (E3F) which includes the aim of ending trade and export support directed to unabated coal power.



Figure 4. 2021 E3G G7 coal scorecard

Germany and the **USA** both move up the scorecard ranking, each making improvements in multiple categories. See the respective sections below for further details of latest developments.



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In the context of G7 international influence, it is notable that Germany is now incorporating coal phase-out and Just Transition themes into its climate diplomacy and bilateral relations, including with **China**. Germany's international leadership impact will further increase as it revises its coal phase-out date from 2038 towards 2030.

Across the Atlantic, President Biden's election resulted in an immediate improvement to US scorecard performance as the previous pro-coal rhetoric and policy vandalism of the Trump era fell away. At home, the Biden Administration has set out its intention to **decarbonise the US power sector by 2035**, taking initial actions to **provide Just Transition finance** for workers and coal communities.

Internationally, the US had a busy April 2021, announcing **restrictions on overseas fossil fuel financing**, including coal finance through the US's export credit agencies. And ahead of President Biden's Leaders' summit, Secretary of State Blinken **stated** that the US will use its diplomatic network to challenge countries that are still pursuing new coal investments.

This is a welcome statement of intent, but to secure influence the US will need to connect and communicate its domestic progress and cooperate with G7 peers and other progressive governments. As we discuss in our analysis of the US, it is not enough for the new administration to be 'Not Trump'. The world has moved on over the past five years and action on coal is now a collective effort.

Italy saw some further improvements in its coal transition, but has slipped down the rankings as Germany and the USA took positive steps:

- > Major utility company Enel is accelerating its coal phase-out plans, closing plants in Chile and Spain as well as Italy.
- > Italy has not yet confirmed an end to export credit finance for coal and is not yet a member of the E3F coalition. It should join with its G7 peers in announcing an end to public finance for coal.

Finally, **Japan** remains in last place in the scorecard rankings, as it made improvements in four categories but started from a very low baseline of performance. Notable highlights include:

- > The last two coal plants in Japan's development pipeline were cancelled in April 2021. However, 6GW of capacity remains under construction.



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- > In 2020, the Japanese government announced that it would close the majority of the country's less efficient coal plants by 2030. These initial closures will need to be extended to put Japan on a pathway to 46-50% emissions reductions by 2030.
 - > In 2020, Japan announced a presumption against provision of international coal finance, but with notable exceptions related to high-efficiency projects and recipient country conditions, as well as uncertainty regarding projects under consideration. Japan should join with South Korea and other G7 members to end all public finance for coal, and commit to working together through the OECD ECA review.
 - > Despite Japan's steps towards ending coal finance, it has yet to clearly articulate an end to support **to coal in its bilateral relations**.

As in previous years, the category of private finance support to international coal projects remained the weakest across all countries, despite positive progress being made. This presents a prime target for collective G7 regulatory action in 2022.



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2021 RECOMMENDATIONS: THREE TASKS FOR G7 LEADERS

The G7 aspires to take a leading role in shaping the multilateral agenda and setting norms for government action and international cooperation. As a result of the COVID-19 pandemic, 2021 sees the UK hold the Presidency of both the G7 and the delayed COP26. After four years of diplomatic disruption during the Trump Presidency, there is no better moment for the G7 to restate its climate leadership through enabling the global transition from coal to clean energy.

For the first time, our 2021 scorecard assessment has found that all G7 countries have improved their performance over the past year. As of May 2021, 59% of G7 coal capacity has either closed already since 2010 or is scheduled to close by 2030. Collectively, the G7 is home to 68% of coal capacity across OECD and EU, making G7 action an essential element of the broader coal phase out effort. The challenge now is for the G7 to work together to complete its own coal phase out over the coming decade and use this as a platform for international influence.

To deliver on this potential, we identify **three priority tasks** for G7 collective agreement and delivery. These should be incorporated into formal G7 agreements, either at the Climate and Environment Ministerial on May 20-21, or at the Leaders' Summit in Carbis Bay on June 11-13.

1. Acknowledge that power sector transformation requires both coal exit and clean energy additions

The G7 should explicitly recognise for the first time that its members will aim to phase out coal power generation by 2030 and encourage all other OECD countries to do likewise.

In 2015 the G7 recognised the need for transformation of their energy sectors. In 2016 Japan held the Presidency and declined to take further steps forward. By



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2017 the Trump Administration effectively blocked any meaningful collective G7 discussion of climate and coal. Now, in 2021, the G7 can make up for lost time, agreeing language that acknowledges that coal power generation will exit the stage as new clean generation is introduced over the coming decade.

As our analysis highlights, this power sector transformation is already well underway. A 2030 phase out is a stretch goal that can be readily reached through effective investment in both Germany and the USA. Japan is the sole G7 country that has been dragging its feet and is now lagging behind its peers. It should seize this moment to challenge the incumbent interests that are clinging to coal and recognise the need for accelerated action.

If Japan seeks to block G7 recognition of the need to move away from coal, then the G6 members should consider moving ahead without it. The benefits of consensus should not become a barrier to catalytic action on the international stage.

2. Confirm an end to international coal finance

The G7 should commit to ending all international public finance for coal power generation and associated facilities, including through working together to strengthen the OECD export credit regime.

South Korea committed to ending international coal finance at the Leaders Climate Summit on 22 April. This leaves Japan and China as the last major source of public finance for coal. As we explore further in our analysis, Japan has just two projects left in the funding pipeline, but is loath to give up its support for 'efficient' coal plants at home and abroad.

Germany and Italy need to draw a line under the last remnants of coal finance from their export credit agencies. The new Biden Administration has signalled its intent to restrict finance for fossil fuels, including export credits. And the UK has already moved beyond coal to also restrict finance for oil and gas. The debate is clearly moving on, and so should the G7.

As a group, the G7 can also agree a shared position towards the impending review of the OECD's 'Coal-fired sector understanding' for export credits, turbo-charging global efforts to restrict export credit finance for coal.



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3. Enable the retirement of coal power generation

G7 members should recognise the growing need for financial instruments to enable the retirement of coal power generation and commit to providing finance and diplomatic support to dedicated initiatives and instruments.

There is increasing recognition that it is now not enough to simply end the construction of new coal power plants. To meet climate goals, there is also a need for dedicated coal retirement instruments and regional transition schemes, especially for coal-intensive economies.

G7 members can signal that these kinds of approach are both necessary and available, through providing financial support to new initiatives and instruments such as the World Bank Climate Investment Fund **Accelerating Coal Transition** facility; the **ADB energy policy** review; and South Africa's **Just Energy Transition** (JET) efforts.

In delivering this three-pronged agenda, the G7 would strengthen their collective weight and individual influence in advancing the global transition from coal to clean energy. They would directly support real world emissions reductions in pursuit of the Paris Agreement and provide high level leadership in support of the UK's COP26 objectives.

Box 1: Can G7 leaders support a catalytic deal for South Africa's energy sector?

South Africa has the most coal-intensive economy of all G20 countries. It has an ageing fleet of coal power plants owned by highly-indebted national utility company Eskom. Eskom's transition from coal to clean energy is thereby deeply entangled with South Africa's broader macro-economic (in)stability. Resolving the current economic and energy crisis in South Africa will require significant international financial support, along with domestic political will.

President Ramaphosa will join the forthcoming G7 Leaders' Summit as a guest, providing an ideal opportunity for G7 leaders to demonstrate their support for a country that is grappling with the real world challenges of transitioning from dirty coal to clean energy while providing a Just Transition for its workers and communities. In his **State of the Nation**



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address in February, President Ramaphosa highlighted Eskom's in principle commitment to Net Zero, and articulated the need for international support.

Through working together, G7 leaders can provide catalytic political and financial support to South Africa to enable a 'Just Energy Transition' for its utility company ESKOM. G7 members can provide the political impetus that will chart a course for subsequent similar deals in other geographies. South Africa's challenging coal transition circumstances are reflected in a number of other countries, including Indonesia, Viet Nam, India. Progress made by the G7 towards supporting South Africa could set positive precedents for transitioning some of the world's other big coal users.

Country recommendations

We also identify priority actions for four G7 members that would support these shared objectives:

Germany will need to incorporate an accelerated coal phase-out date of 2030 into its revised sectoral policies following the increase of its climate targets, as well as to confirm an end to all international finance for coal including associated infrastructure.

Italy still needs to confirm an end to export credit support for coal power generation and better incorporate coal-to-clean transition dynamics into its G20 presidency, including acknowledging the risks of coal-to-gas lock in.

Japan should fully end international coal finance, including for the last two projects in the funding pipeline. It needs to develop new scenarios for domestic coal phase out by ~2030.

USA will need to explicitly align its domestic policy efforts and international diplomacy intentions. Rather than acting alone, it can cooperate with fellow leaders through joining the Powering Past Coal Alliance



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PICKING-UP THE PACE: GERMANY'S COAL EXIT IS GETTING CLOSER TO 2030

The recent landmark ruling by the German Supreme Court has shaken up climate politics and energy planning. Germany's much-criticised 2038 coal phase-out plan was already under pressure from market forces, but a more rapid exit for coal has now become inevitable.

The court ruled that the German Climate Change Act lacks details about emissions cuts after 2030, placing an unfair burden on future generations. Unexpectedly, the government quickly proposed an updated climate law, with increased goals of 65% emissions cuts by 2030 (up from 55%) and a new target of 88% by 2040. It also surpassed international partners by committing to climate neutrality by 2045 (rather than the previous 2050). The new law was adopted in cabinet on May 12 and is expected to be ratified in the parliament before the summer break.

While the updated climate targets improve the climate record of the current government, specific measures will now need to follow that turn commitments into action. The climate law sets out the governance architecture including legally binding emissions reductions targets for individual sectors, while the measures delivering emissions cuts are defined in separate legislation. Most of these are expected to be agreed by the next government after federal elections in September, and they are set to feature prominently in the election campaign. These measures will need to put Germany on track for additional emissions reductions. **Analysis** suggests that at least 69% emissions cuts by 2030 are needed to align with the 1.5°C warming goal of the Paris Agreement.

The climate law update makes a coal phase-out by 2030 inevitable. As it stands, the proposal expects the largest additional emissions cuts to come from the energy sector in order to reach the 2030 goal. Germany's current 2038 coal exit date and phase out pathway will both need tightening. It is yet unclear whether the coal exit law will be changed, or whether the impact of an increased CO2 price under the EU's emissions trading system will be sufficient. But it is clear



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that Germany can join international peers at June's G7 summit to support 2030 as the coal exit date for G7 and OECD countries.

International partners expect Germany to show more climate leadership. At the Biden summit in April, Chancellor Merkel said that Germany had heard UN Secretary General Guterres' **call** for 2030 phase-out. At the G7 summit she will be able to confirm that Germany will meet this goal. This long-overdue move will allow the current government to leave on a high note of climate progress before federal elections in September.

There is also strong domestic support for moving the phase-out date forward. The EU's new 2030 climate target leaves almost **no room for coal** in the EU by 2030. The planned revision of the EU's emissions trading system is likely to push coal out of the market with a possible price of **€130 per ton CO2** in 2030. This has even led members of the current government to declare that the coal exit is likely to come earlier. The Green party is advocating for a 2030 coal exit and currently **leading the polls**, surpassing the ruling Conservatives. Former members of the Coal Commission, instrumental in reaching a deal on exiting coal, published a **statement** urging for an earlier coal exit based on the court ruling.

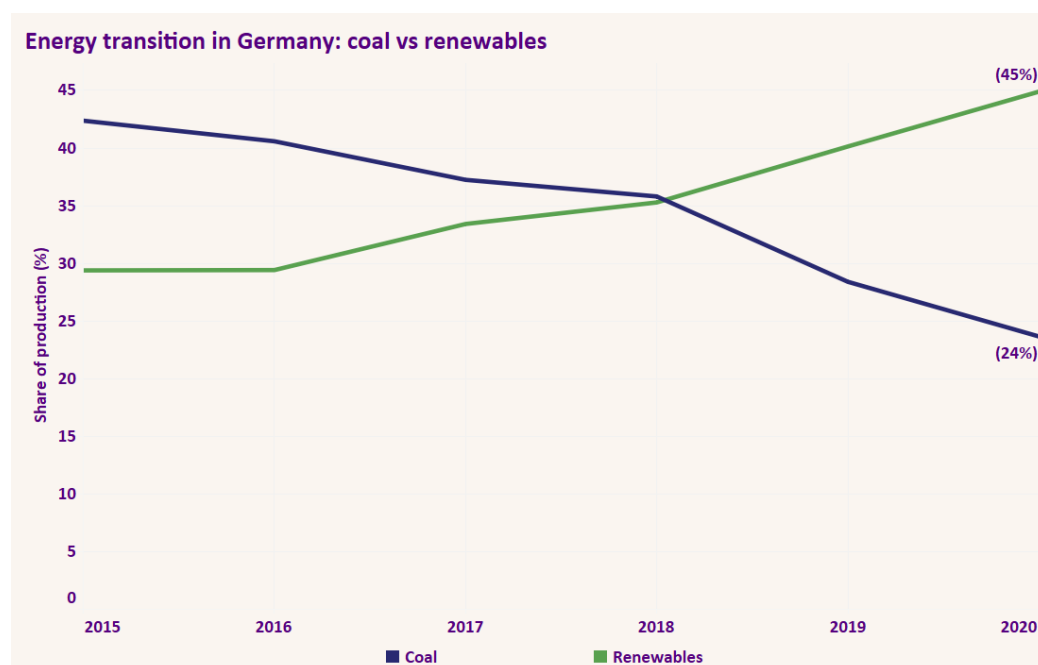


Figure 5. Comparative shares of coal and renewable energy in German electricity generation. Data source: Ember, January 2021.



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The negative balance sheets of both Germany’s **old lignite plants** and **hard coal fleet** provide the economic argument for winding down the industry. They may also require the government to reduce the €4.35 billion compensation package for lignite operators. The European Commission has launched an **in-depth assessment** into whether the compensations are proportionate given the grim economic outlook of the plants. This is the ideal moment for the German government to accelerate the coal exit and secure a better value deal. It already has in place the governance structure and funding tools necessary to support coal regions in their transition away from coal – even if the coal phase-out comes earlier.

Across the Atlantic, US President Biden is aiming for a “carbon-pollution free” power sector by 2035, which studies suggest will mean phasing out coal by 2030. With the EU’s revamp of climate and energy legislation, ‘Fit for 55’, a clean power sector in the 2030s is becoming the **new normal** on both sides of the Atlantic. It is therefore in Germany’s own interest to stay on top of the race for clean power by picking up the pace of its coal exit (see Figure 5). As the former ‘Energiewende’ pioneer, Germany was the country that championed renewables and made them cheap and accessible for all. Why should it not reap the benefits by taking the brake off its transition to an energy system powered by 100% renewables? A 2030 coal exit date is a critical step to putting Germany back on track.



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ANCHORS AWEIGH: USA REJOINS THE COAL TRANSITION MAINSTREAM

On his first day in office, President Biden signed an Executive Order to rejoin the Paris Agreement. By the end of his first week, the new Administration had issued a comprehensive plan on **Tackling the Climate Crisis at Home and Abroad**, committing to cooperation with the G7 and other partners.

This was a full 180-degree turn from the actions of the Trump Presidency. It marked the start of an effort to rectify damage done to America's international standing and reboot its domestic policies on climate and energy. It was also a necessary response to the realities of the coal sector.

Despite proclaiming that 'Trump digs coal' and promising to put miners back to work, the reality of the previous four years was the continued structural decline of coal power generation in the US. As Figure 6 shows below, coal plant retirements accelerated in comparison to both of President Obama's terms in office. In parallel, electricity generation from coal fell from 30% in 2016 to 19% in 2020. Meanwhile, coal miners were left without **healthcare and pensions** as **mining companies** misspent funds and entered **bankruptcy proceedings**. Communities continued to suffer the **health impacts of air pollution and environmental injustice**. All while environmental protections were removed and the Clean Power Plan abandoned.

For all the noise and political rhetoric, coal is still on its way down and out. There are zero new coal power plants under development in the USA. By our calculations, 53% of US coal capacity has either closed already since 2010 or is scheduled to close by 2030. This includes at least 63GW of capacity that already has a closure date.

A further 170GW of currently operating capacity is yet to confirm when it will retire. A continuation of recent closure rates and market trends would make a 2030 coal exit an achievable goal. Recent **analysis from RMI** finds that 79% of the US coal fleet is currently uneconomic compared to new renewables and storage, meaning the entire coal fleet could be replaced at a net savings of \$9



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billion. Similarly, **multiple modelling exercises** find that unabated coal power generation would indeed be offline around the end of this decade, aligned with the **Biden Administration’s goal of a carbon pollution-free electricity sector no later than 2035**.

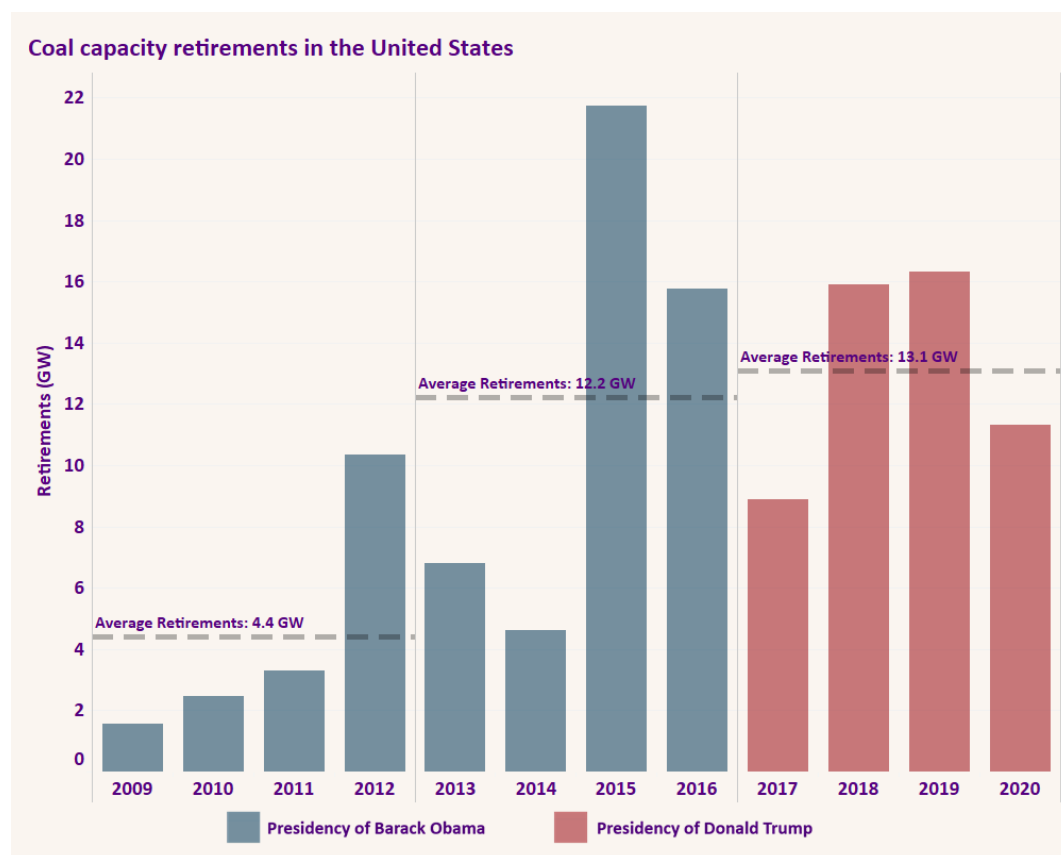


Figure 6. Comparing US coal capacity and retirements under Obama and Trump administrations. Data source: Global Energy Monitor, Jan 2021.

In recognition of this accelerating transition, the Biden Administration has immediately prioritised the provision of **finance for workers and coal communities** to enable a Just Transition. In parallel, key coal-state Senator and Chairman of the Senate Committee on Energy and Natural Resources Joe Manchin has co-sponsored two bills to rehabilitate lands damaged by abandoned mines and help diversify coal community economies. Senator Manchin also serves on the IEA’s **Global Commission on People-Centred Clean Energy Transitions**.

Communicating and cooperating internationally

When it comes to coal, it will not be enough for the new administration to be ‘Not Trump’. The US will need to find ways of communicating that its transition



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from coal to clean energy is underway at home, while seeking to minimise the risk of renewed accusations of a non-existent ‘war on coal’. But, unavoidably, it will need to show that it has a robust power sector decarbonisation pathway for the coming decade.

Without this, it will be unable to show how it will deliver on its renewed commitment to the Paris Agreement and its **NDC target of 50-52% emissions reductions by 2030**. Nor will it have a credible foundation for its international diplomacy. This is recognised by Special Envoy John Kerry, who **highlighted** at the Ministerial on Climate Action that “Our words must be backed up by near-term action, including the transition away from unabated coal.”

The new United States government has openly set out that it will encourage other countries to accelerate their own coal-to-clean transitions. Speaking ahead of President Biden’s Leaders’ summit, Secretary of State Antony Blinken **stated** that the US will use its diplomatic network to challenge countries that are still relying on coal or pursuing new coal investments. The US also **announced restrictions on overseas fossil fuel financing**, including coal finance through the US’s export credit agencies.

Positively for the United States, the world has moved on over the past five years and action on coal is now a recognised priority for diplomatic outreach. In 2017 Canada and the UK created the **Powering Past Coal Alliance (PPCA)**, thereby providing a collective counterweight to the pro-coal efforts of the Trump Administration. And in early 2021 the EU explicitly declared that it would **pursue global coal phase out through its foreign policy**. This transatlantic team approach to diplomatic engagement is already delivering results: South Korea used the US-hosted Leaders’ summit to **announce its own restrictions on coal finance**, following concerted diplomatic engagement from progressive governments. The US can cement a critical mass of diplomatic influence by further developing its practical cooperation with the EU and PPCA.

Indeed, on his own visit to Seoul, Special Envoy Kerry was explicit about the need for action on coal both at home and abroad, most notably from China, **stating** “it is imperative to reduce coal, globally, everywhere. In the United States, we are addressing our own. We have some remaining coal mines and coal plants. We have phased many out.” And noting “if we do not move in this decade, we cannot achieve the 1.5, let alone 2050 net zero. So, it is imperative to address the question of reducing coal dependency everywhere.”



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With the UK Presidency looking for COP26 to “**consign coal to history**”, all eyes will be on how the USA will support the global coal transition. The G7 is the ideal venue for the Biden Administration to communicate its own coal-to-clean pathway and cooperate with partners.



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TIME AND TIDE WAIT FOR NO-ONE: JAPAN'S COAL PROGRESS

In all five previous editions of E3G's G7 coal scorecard, one conclusion was persistently negative: Japan was consistently the worst performer in every category. Japan was isolated from its peers as the sole G7 country that continued to build new coal power plants at home and provide finance for their construction abroad.

Now, in May 2021, we see signs that the changing international and domestic context could encourage Japan to rethink its attachment to coal. It remains bottom of our scorecard assessment, but has improved its performance in four categories. If Japan joins its G7 peers in supporting a positive common position on coal it can take a giant leap forward in pursuit of its new climate commitments.

From climate commitments to action on coal

Japan has shown promising signs of change in its climate policies since last year. In October 2020, Prime Minister Suga announced Japan would aim for carbon neutrality by 2050. At April's Leaders Climate Summit, Japan followed up with a strengthened mid-term target of 46-50% emission reductions by 2030 compared to 2013 levels, up from a previous 26%. The pledge is still pending formalisation into Japan's official NDC contribution.

But Japan is now faced with the delivery challenge that its G7 peers have already grasped. Realising this new 2030 climate commitment requires a step change in the power sector, the key source of Japan's emissions. Some of the country's power companies have already drawn their conclusions. In April, Japan saw the **cancellation of the last two projects in its planning pipeline**, meaning no new coal plants are planned in Japan (or anywhere else in the G7). However, Japan's utility companies still have 6GW of new coal power under construction, a set of ready-made stranded assets that should be abandoned or converted before it is too late.

It is not enough for Japan to move away from plans for new coal. It must now also come to terms with the need to start planning its phase out of coal power generation to meet the 2030 timeframe expected of all OECD countries.



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Japan's path ahead hinges on its national energy strategy review. This is currently underway with a first draft expected in the very near future. Until recently, signs from the administration raised concerns as to whether the revised energy policy will adequately support Japan's climate targets. Approximately **40% of power in 2030** is predicted to be sourced from coal and LNG. A recent government sub-committee's proposal (**in Japanese**) shows the administration is considering new efficiency target levels for the existing coal fleet. This is prompting utilities to choose between closing their least efficient units, co-firing biomass or other fuels with coal, or technical improvements to reach 43% efficiency standard by 2030. This could drive up costs and weaken the plants' competitiveness against alternatives, helping to fill a gap left by the absence of effective carbon pricing.

However, it appears that elements of the government and bureaucracy are still attached to Japan's 'efficient' coal technology paradigm, which ignores lifetime emissions and allows coal plants to operate beyond 2030.

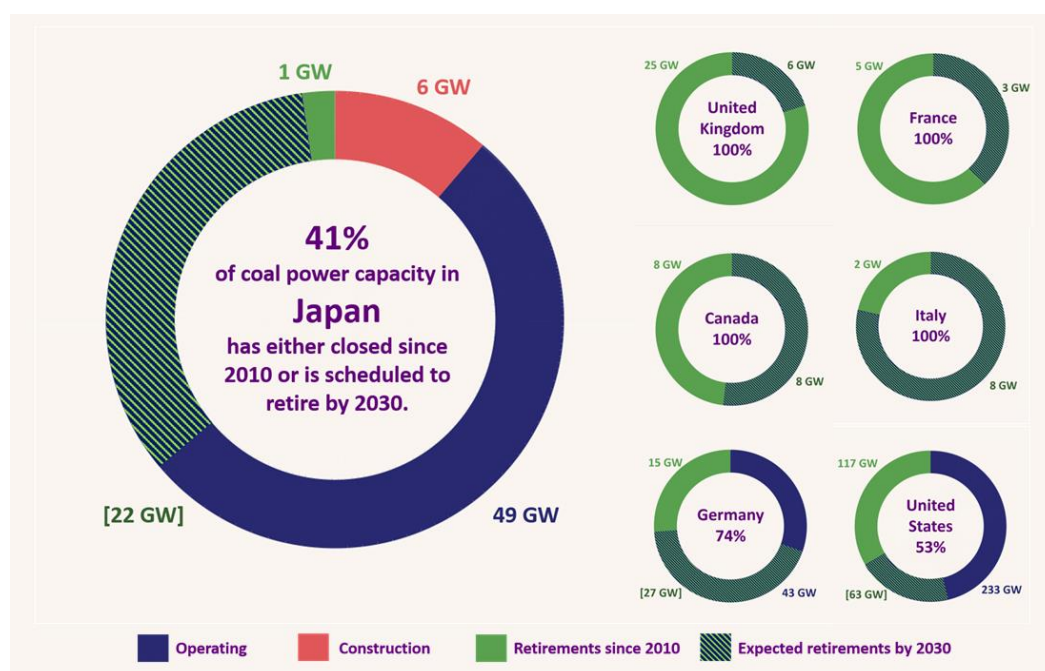


Figure 7. Japan's coal landscape relative to other G7 members. Data sources: Global Energy Monitor, Japan Beyond Coal, Sierra Club, and E3G, accurate as of 1 May 2021.

To align with G7 peers, Japan could accelerate and expand last year's policy announcement to phase out less efficient coal units by 2030, expected to result in approximately 100 units closing. The energy strategy review should build on this and develop scenarios that lead to Japan phasing out its entire coal fleet by



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2030. Figure 1 highlights that Japan has only seen approximately 1GW of capacity close since 2010 and that its current plans would only see 41% retired by 2030.

Helpfully, a push for accelerated decarbonisation is growing in Japan's **progressive business community** and at subnational level too. Kyoto has recently **joined the Powering Past Coal Alliance**, and is **advocating** for utility company Kansai Electric to shift to a carbon emission-free power supply system as soon as possible. Similarly, Tokyo has set a notable target to **use 50% renewably generated electricity** by 2030.

Japan needs to end its international coal finance

More is also expected from Japan in terms of its international contribution to decarbonisation. Though Japan made a commitment in 2020 to restrict public overseas coal finance in principle, it left open the opportunity to support 'high-efficiency' projects based on host country circumstances. Currently, Japan still is believed to be considering support for two coal power projects, Indramayu in Indonesia and Matarbari 2 in Bangladesh.

Japan is now under pressure to join with the rest of the G7 in announcing an end to public finance for coal. Four recent developments could help push it in the right direction:

1. **Peer pressure from near neighbours.** The recent announcement that **South Korea will end coal finance** leaves Japan and China as the last major countries left publicly supporting coal. China has already **indicated** it will not support further coal power projects in Bangladesh.
2. **Private sector progress.** Japan's major financial institutions and trading houses have continued to set increasingly strong restrictions on further participation in new coal power projects or expansion of existing power plants. In May 2021, **SMBC** joined Japan's other megabanks by ending a previous exemption that allowed financing of 'efficient' ultra-supercritical coal plants. The government should take the opportunity to show leadership by extending the public financing restriction to all new coal plants, regardless of technological fine print.
3. **Regional rethink.** The Asian Development Bank's **new draft energy policy** rules out further finance to coal power and heat. Moreover, it commits to support its member countries to "*achieve a planned and rapid phase-out of coal in the Asia and Pacific region*". Japan is ADB's biggest shareholder and a



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major influence. Aligning with this regional approach would provide a coordinated tack away from coal.

4. **Major power influence.** The **US-Japan Climate Partnership**, agreed during PM Suga's recent bilateral with President Biden, includes the following commitment. *"Japan and the United States will align official international financing with the global achievement of net zero greenhouse gas emissions no later than 2050 and deep emission reductions in the 2020s, and will work to promote the flow of public and private capital toward climate-aligned investments and away from high-carbon investments"*.

All these developments make the time ripe for Japan to commit to end overseas coal finance.

Speaking at the Leaders Climate Summit this April, Prime Minister Suga **emphasised** Japan "is determined to take the lead in solving the challenge of climate change for the whole of humankind". To deliver on that promise, Japan should stop searching for loopholes and recognise that the coal era is coming to an end. It should seize the 2021 moment to finally join with its G7 counterparts in delivering this step change.



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Endnotes

¹ 'Unabated' coal refers to coal-fired electricity generation without the application of carbon capture and storage technology to directly 'abate' (reduce) CO₂ emissions.

² For example, analysis by Climate Analytics finds that EU and OECD countries should phase out coal by 2030 in order to deliver emissions reductions compatible with the commitments made in the Paris Agreement. See **Implications of the Paris Agreement for Coal Use in the Power Sector**. Recent analyses from IPCC and IEA highlight the need for rapid reductions in coal generation in the decade to 2030, with the timeframe for global phase out now ~2040 rather than ~2050.

³ Our G7 Scorecard analysis draws on E3G reviews of each of the G7 countries' domestic performance on coal undertaken during 2015 and incorporates additional data and assessments of countries' international impact. Detailed reviews of G7 countries were first undertaken in advance of the 2015 G7 summit, as an analytical input to Oxfam's report '**Let them eat coal**'. Versions of these papers are available on the E3G website.