

# Climate Policy Factbook: COP27 Edition

## 3 priority areas for climate action

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November 1, 2022

# Key messages

This year's UN climate summit in Sharm el-Sheikh will focus largely on realizing the many pledges and targets announced at COP26 in 2021. At least part of the answer would be for nations to phase out fossil-fuel subsidies and supports, price carbon emissions and implement mandatory climate-risk disclosure for investors. This report evaluates the Group-of-20 countries' progress in these three key areas where governments could act to make tangible progress toward achieving the Paris climate goals. This third edition of the Climate Policy Factbook includes updates, new data and an improved methodology.

- G-20 governments and state-owned institutions provided some \$693 billion in support for coal, natural gas, oil and fossil-fuel power in 2021, based on provisional estimates. This was the highest total since 2014, driven by increased aid in the form of retail energy price subsidies, tax breaks and budgetary transfers. In all, coal specifically attracted \$20 billion of government support in 2021.
- Fossil-fuel support in 2020 may have been slightly lower, at \$598 billion, because reduced energy use due to the pandemic allowed governments to spend less. But even this sum had the potential to fund 833 gigawatts (GW) of new solar PV power plants across the G-20 – nearly six times the actual volume of solar capacity built in those countries 2021.
- Some G-20 nations have made progress on phasing out coal-fired power generation. But of the six that signed pledges to do so at COP26, five actually boosted their reliance on coal 2021. In any case, the vague language and exceptions in such pledges often give governments plenty of wiggle room.
- Quite a few G-20 countries have made progress implementing or improving programs that put a price on carbon. This has included new taxes or markets at the national or subnational level (Canada, Indonesia, Russia, the US), higher tax rates (South Africa), scheme reforms (Australia) and roadmaps (India). Europe and Canada remain the G-20 leaders by price level, emissions coverage and concessions for participants.
- Policymakers globally now increasingly voice concerns over the risks climate change poses to financial stability. However, the approach of the vast majority of G-20 governments has been to encourage financial institutions to undertake climate-risk analysis by publishing voluntary guidance and to launch pilot groups, not to regulate. Such a light-touch approach can allow financial institutions to delay action.
- In the G-20 only the UK and the three EU member states have mandated specific nationwide climate-risk regulations for investors. The biggest change in 2022 has come in the US with new draft rules. Even if these regulations are finalized, their long-term stability is uncertain due to anticipated lawsuits and a possible future administration change.

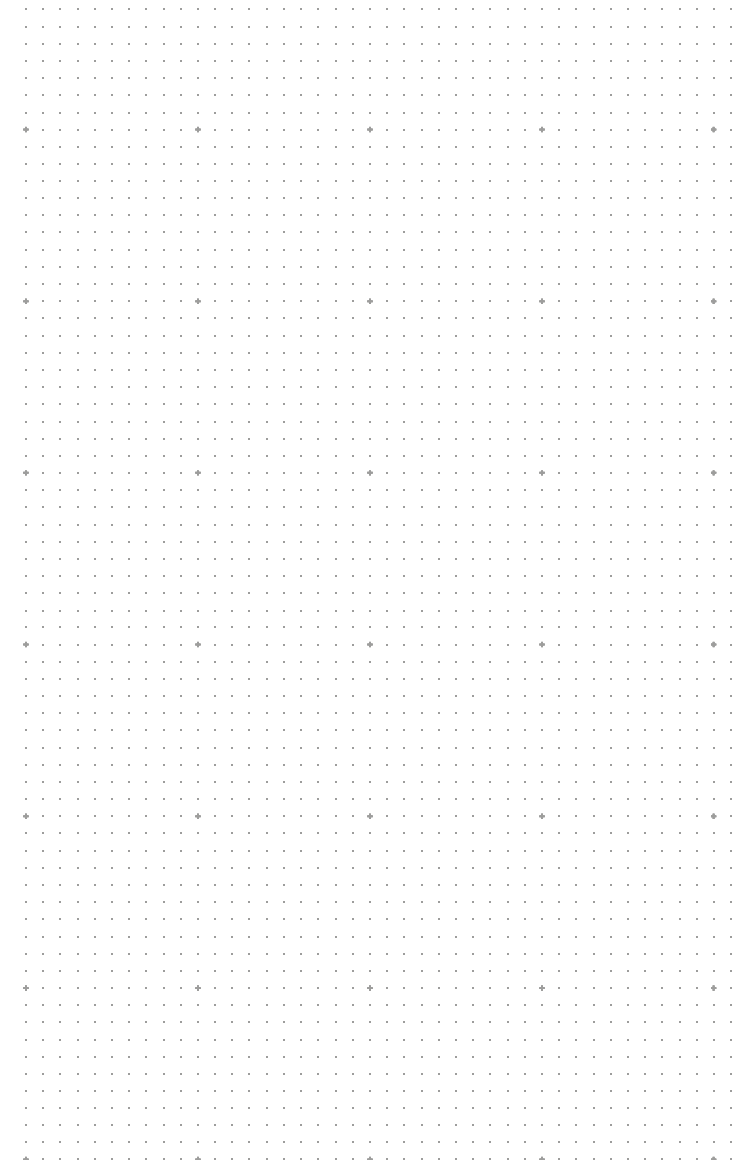
## G-20 progress on three priority areas

G-20 country	UNFCCC Annex I party?	Fossil-fuel support 	Carbon pricing 	Climate-risk disclosure 
Argentina	x	Yellow	Yellow	Red
Australia	✓	Red	Yellow	Red
Brazil	x	Yellow	Red	Yellow
Canada	✓	Yellow	Green	Red
China	x	Yellow	Yellow	Red
France	✓	Yellow	Green	Green
Germany	✓	Green	Green	Green
India	x	Yellow	Red	Red
Indonesia	x	Red	Yellow	Red
Italy	✓	Green	Green	Green
Japan	✓	Yellow	Yellow	Yellow
Mexico	x	Green	Yellow	Yellow
Russia	✓	Red	Yellow	Red
Saudi Arabia	x	Yellow	Red	Red
South Africa	x	Yellow	Green	Yellow
South Korea	x	Red	Yellow	Yellow
Turkey	✓	Yellow	Red	Red
UK	✓	Green	Green	Green
US	✓	Green	Yellow	Yellow

Source: BloombergNEF.  
Note: [Click here for definitions](#)

 Right direction  Mixed  Wrong direction/insufficient progress

# Fossil-fuel support



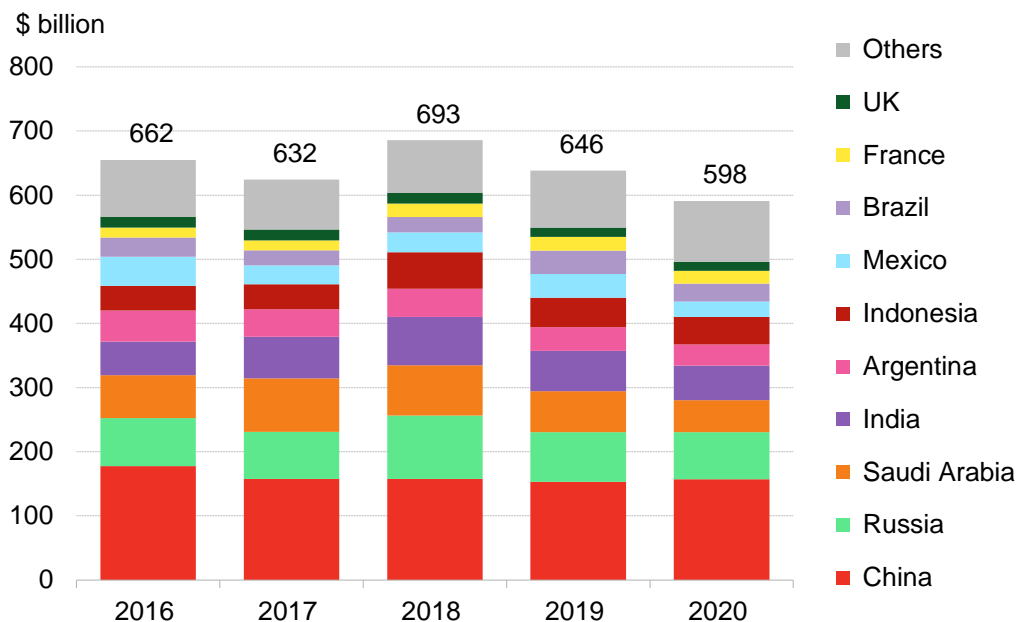
# Fossil-fuel support

2016-20

The G-20 governments provided almost \$600 billion in support for coal, gas, oil and fossil-fueled power in 2020. While in aggregate this marked a 10% decline from 2016, it masks variation across countries: at one extreme, Canada more than doubled support over this period. At the other, Argentina, Mexico, Saudi Arabia and Turkey each achieved a reduction of over 30%.

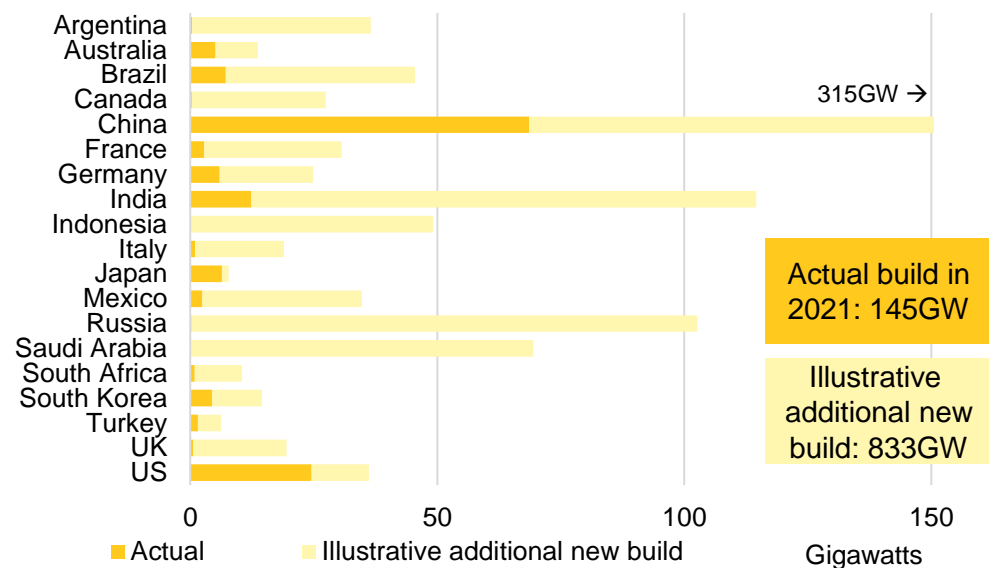
- In total, the G-20 allocated \$3.2 trillion in fossil-fuel support over 2016-20. This quite substantial sum distorted prices, encouraged potentially wasteful use and production of fossil fuels, and resulted in investment into long-lived, emission-intensive equipment and infrastructure. Even consumer-targeted subsidies disproportionately benefit wealthier consumers. Phasing out this support entirely has the potential to accelerate the climate transition and achieve the goals of the Paris treaty. This figure and the totals shown below are probably under-counts, given the limited transparency governments tend to provide in this area.
- In contrast, global public and private investment in green technologies like renewables and electric vehicles (EVs) totaled \$612 billion in 2020, based on BNEF data. Indeed, the \$598 billion of fossil support that year could have funded 833GW of new solar PV power plants based on estimated capital costs for each G-20 country. That would be nearly six times the actual PV capacity built in 2021 (145GW) across the G-20. In total, these nations had a total of 795GW of PV installed at year-end 2021.

## Fossil-fuel support by G-20 countries



Source: OECD, International Energy Agency, Oil Change International, Overseas Development Institute, BNEF. Note: Includes budget transfers, tax expenditure, public finance, investment by state-owned enterprises (SOE) and consumer-price support. Data for all years have been updated and therefore may differ from previous editions of the Factbook

## 2021 solar build and theoretical other build had government fossil-fuel support gone instead to PV



Source: BloombergNEF. Note: 'Illustrative additional new build' = estimated solar PV (without tracking) capacity using BNEF assumptions on current capital costs. Saudi Arabia is based on UAE costs and Russia based on Germany.

# Fossil-fuel support

## Targets, types and 2021

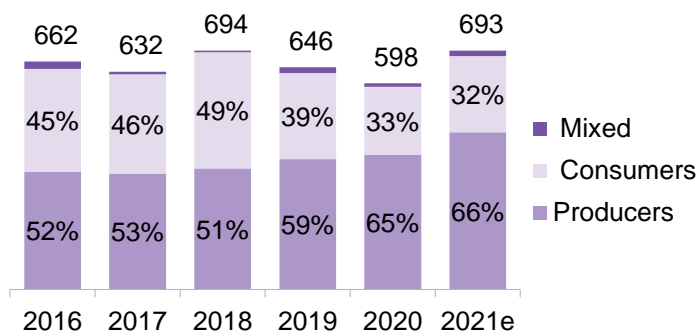
Covid-19 lockdowns cut energy consumption and allowed governments to spend less on keeping consumer energy bills in check. This decrease was partly offset by new subsidies to shore up fossil-fuel producers during the pandemic. As a result, government fossil-fuel support in 2020 slipped 7% from 2019. While 2021 estimates are provisional, they suggest fossil support spending surged 16%. This spike was not simply due to economic recovery and higher energy use as 2021's total was 5% higher than 2016, a year in which energy use was approximately level. ([Read methodology.](#)) Reporting delays and lack of transparency suggest that 2021 spending was actually somewhat higher.

- Developed and developing nations vary in the volume and form of fossil-fuel support they provide. Among the G-20, OECD (wealthier) nations accounted for a quarter of the 2020 total and delivered more support via public finance institutions (30% in 2020) and as tax breaks (40%). Nearly 60% of the aid from non-OECD countries comprised investment by state-owned enterprises and 21% as subsidies to reduce prices for consumers.
- Examining how G-20 nations provided support, the 16% 2020-21 jump was primarily due to a 29% jump in tax breaks, budgetary transfers and retail energy subsidies. Post-pandemic economic recovery in much of the world meant higher energy use, leading to a 13% rise in total fossil-fuel support to consumers. But it was fossil-fuel producers and utilities that benefited most, with a 16% boost in government support in 2021. As a result, these companies have increased their share of fossil-fuel support from 52% in 2016 to 66% in 2021, despite government climate commitments and proliferation of cost-competitive clean technologies.
- The share of G-20 fossil-fuel support allocated to coal is slowly shrinking – from 4.1% in 2016, to 3.8% in 2020 and 2.9% in 2021. The fuel accounted for a bigger share in 2020 for Germany, Indonesia, Japan, South Africa, South Korea, Turkey and the US. In all, coal specifically attracted \$20 billion of government support in 2021. This is surprising given that much of the effort to phase out fossil-fuel support has focused on coal.
- The oil and gas sector has maintained a relatively stable share of support in recent years but in absolute volumes, it rose 16% in 2021 to \$574 billion. In contrast, global public and private investment in renewables totaled \$411 billion that year. Russia's invasion of Ukraine and consequent energy crisis has prompted some G-20 countries to alter their position on natural gas: marking a significant change in rhetoric, the Group-of-Seven countries – Canada, France, Germany, Italy, Japan, the UK and the US – agreed at their 2022 summit that public support for natural gas can be “appropriate as a temporary response”. Indeed, liquefied natural gas is central to the European members' strategy to pivot away from Russian gas, requiring investment in infrastructure. Meanwhile, Japan plans to set up an Asia-wide LNG market..

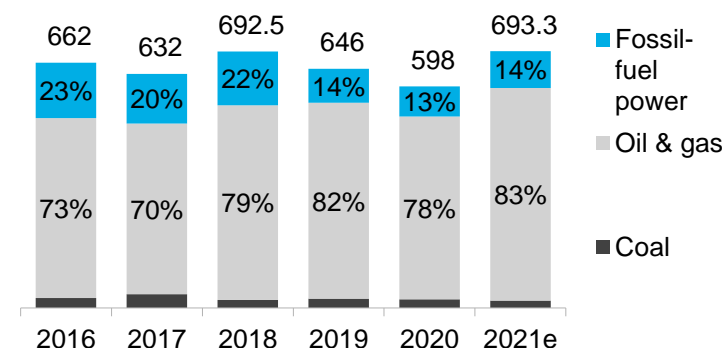
### Fossil-fuel support by G-20 countries

Source: OECD, International Energy Agency, Oil Change International, Overseas Development Institute, BNEF.  
 Note: Includes budget transfers, tax expenditure, public finance, investment by state-owned enterprises and consumer-price support. 2021 data is provisional only. See [the appendix](#) for methodology.

By target  
\$ billion



By fuel  
\$ billion



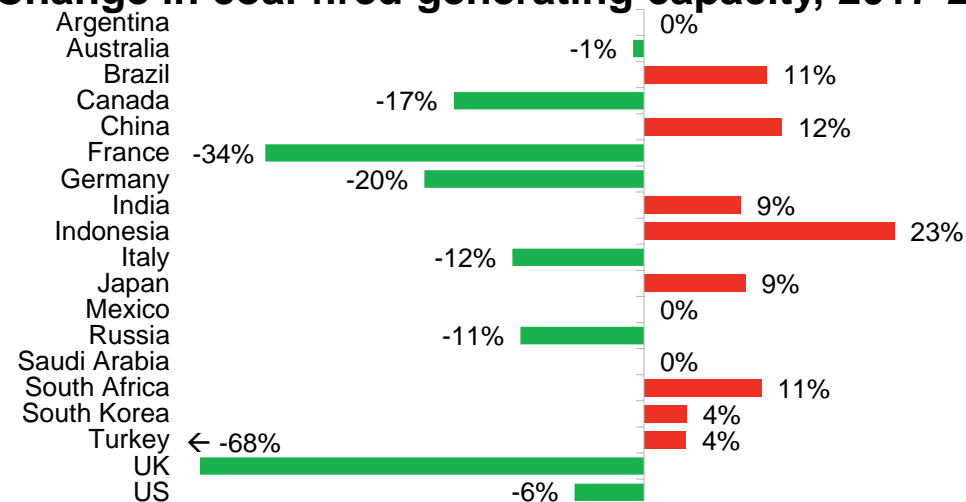
# Fossil-fuel support

## Coal power

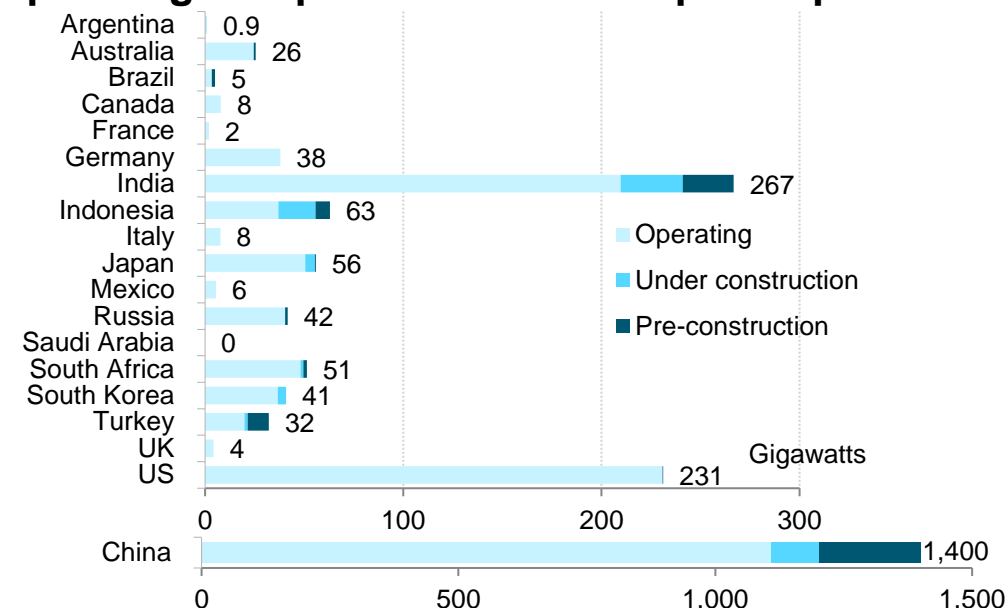
Coal-fired power generation across the G-20 countries jumped 9% in 2021 from the year prior. Higher electricity demand due to economic recovery, reduction in hydropower caused by droughts and higher natural gas prices all contributed to the rise. Over the longer term, some G-20 countries have made progress in phasing out domestic use of coal power and have no more capacity in the pipeline.

- It will be crucial for countries to phase out coal-fired electricity if they want to realize the goals of the Paris compact: CO2 emissions from coal combustion were responsible for over 0.3 degrees Celsius of the 1 degrees of global warming to date, according to the [International Energy Agency](#). Coal-fired power accounted for 30% of global CO2 emissions.
- The last year has seen governments make more commitments to move away from coal: at COP26, over 40 countries (including six G-20 members) pledged to scrap the fossil fuel by the 2040s at the latest. At the 2022 summit, the G-7 confirmed that in their view they had ended support for “unabated international thermal coal power generation” and reiterated their commitment to end “inefficient fossil fuel subsidies”.
- It is hard to see how any support for new unabated fossil-fuel projects could be, as per the G-7 statement, “implemented in a manner consistent with its climate objectives” or aligned with the Paris Agreement. In addition, the use of ill-defined language and caveats such as “limited circumstances” and “inefficient” subsidies give governments wiggle room to interpret such pledges as they wish.
- Indeed, half of the countries that signed the COP26 pledge recorded growth in coal generation in 2021. This included five of the G-20 signatories (France, Germany, Italy, South Korea and the UK). Another coal generation spike could occur in 2022 as some European countries (including Germany and Italy) seek short-term solutions to compensate for droughts, reduced gas supply from Russia and high gas prices.
- China will play a central role in the fuel's fate due to its enormous fleet of operating and planned coal-fired power plants. It accounts for 61% of the coal-generating capacity in the global pipeline. A step in the right direction came in 2021 when President Xi Jinping said China would stop building overseas plants. More than 70% of such projects globally today rely on funding from China, according to the International Institute of Green Finance.

## Change in coal-fired generating capacity, 2017-21



## Operating and planned coal-fired power plants



Source: BloombergNEF, Global Energy Monitor (July 2021).

# Fossil-fuel support

## Assessment

Only five of the G-20 countries have taken concrete steps to scrap fossil-fuel support and eliminate coal-fired power generation, based on BNEF analysis. This is one fewer than was counted last year's edition of this Factbook. More nations have made headway in one area but lagged behind in another.

- China may have accounted for the largest share (26%) of G-20 fossil-fuel support in 2020. But it is well below other G-20 members on a per-capita basis – at \$111 in 2020 compared with, for example, Saudi Arabia (\$1,433), Argentina (\$734) and Canada (\$512). It also scaled back this support by 12% over 2016-20, though boosted coal-fired capacity and has plenty in the pipeline. It is therefore now defined as 'mixed progress' at right, alongside Turkey for the same reason. The opposite is the case for Canada, which more than doubled fossil-fuel support over 2016-20. This increase and consequent high per-capita total outweighed its progress on moving away from coal power.
- In 2009, G-20 nations committed to "phase out and rationalize over the medium term inefficient fossil fuel subsidies" – a pledge reiterated at their 2021 summit in Rome. But exceptions were not defined and the generally vague wording potentially left the door open to more efficient but still emission-intensive technologies.
- Seeking to speed the phase-out process, G-20 governments developed a framework for voluntary peer reviews of fossil-fuel subsidies. China and the US were the first to undertake such reviews of each other's fossil-fuel support, with the results published in 2016. Argentina and Canada, and France and India, are in the process of undertaking peer reviews. The reviews are likely to have varying degrees of success. Each government may choose its own definition of "inefficient fossil-fuel subsidies" and decide whether to act on the results.
- Increasing the transparency of fossil-fuel subsidy programs was a key topic for discussion at the first meeting of the World Trade Organization's (WTO) Fossil Fuel Subsidy Reform initiative, held in October 2022. Launched in December 2021, the forum aims to phase out fossil-fuel subsidies that encourage wasteful consumption. France, Germany, Italy and the UK are the only G-20 countries to sign up so far.

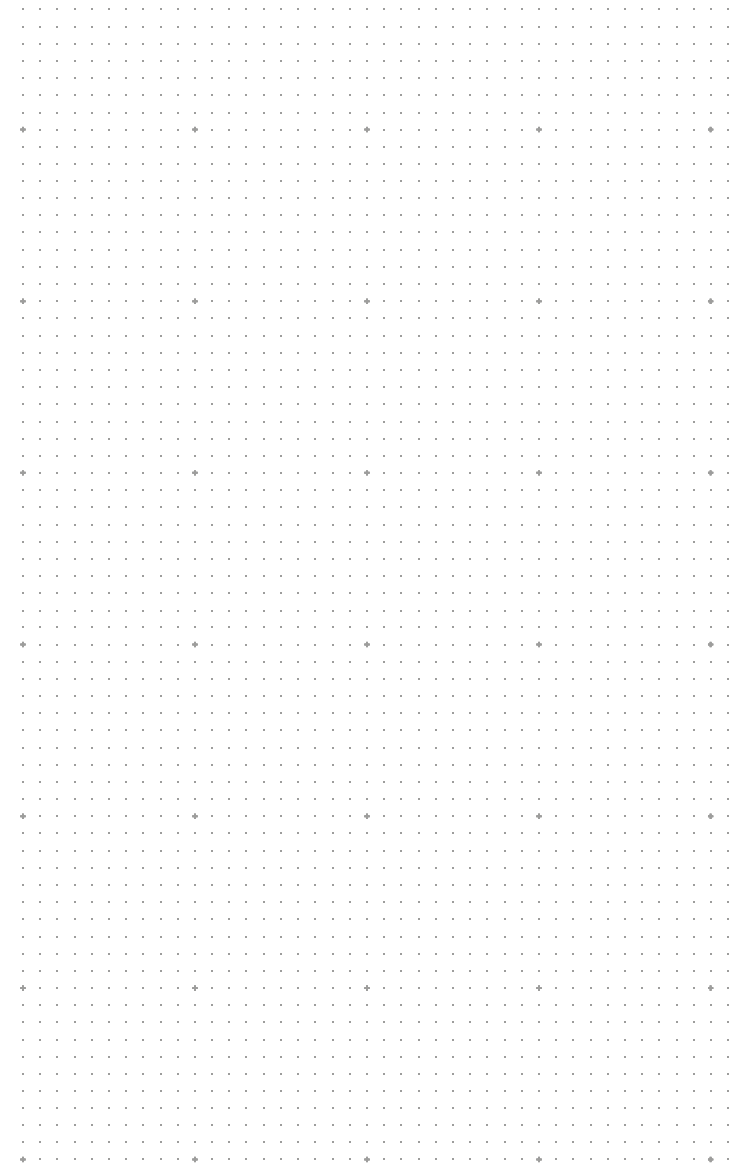
## Progress phasing out fossil-fuel support

	Fossil fuel support		Change in total (2016-20)	Per capita (2020)	Coal-fired power	
	COP 26	COP 27			Change in capacity (2017-21)	Change in capacity if pipeline is built
Argentina	Yellow	Yellow	↓31%	\$734	0.0%	35.6%
Australia	Red	Red	↑4%	\$289	↓1.0%	4.1%
Brazil	Yellow	Yellow	↓6%	\$132	↑11.1%	48.2%
Canada	Green	Yellow	↑177%	\$512	↓17.1%	0.0%
China	Red	Yellow	↓12%	\$111	↑12.4%	26.2%
France	Green	Yellow	↑26%	\$297	↓34.2%	0.0%
Germany	Green	Green	↓3%	\$164	↓19.8%	0.0%
India	Yellow	Yellow	↑2%	\$39	↑8.7%	27.2%
Indonesia	Red	Red	↑11%	\$157	↑22.6%	70.1%
Italy	Green	Green	↓13%	\$218	↓11.8%	0.0%
Japan	Yellow	Yellow	↓7%	\$115	↑9.1%	10.5%
Mexico	Yellow	Green	↓47%	\$185	0.0%	0.0%
Russia	Red	Red	↓2%	\$512	↓11.1%	2.9%
Saudi Arabia	Yellow	Yellow	↓25%	\$1,433	0.0%	0.0%
South Africa	Yellow	Yellow	↓37%	\$116	↑10.6%	6.8%
South Korea	Red	Red	↑1%	\$246	↑3.8%	11.4%
Turkey	Red	Yellow	↓45%	\$40	↑3.8%	61.3%
UK	Green	Green	↓17%	\$206	↓68.4%	0.0%
US	Green	Green	↑57%	\$34	↓6.2%	0.1%

Source: BloombergNEF.  
Note: [Click here for definitions](#)

■ Right direction
 ■ Mixed
 ■ Wrong direction/insufficient progress

# Carbon pricing





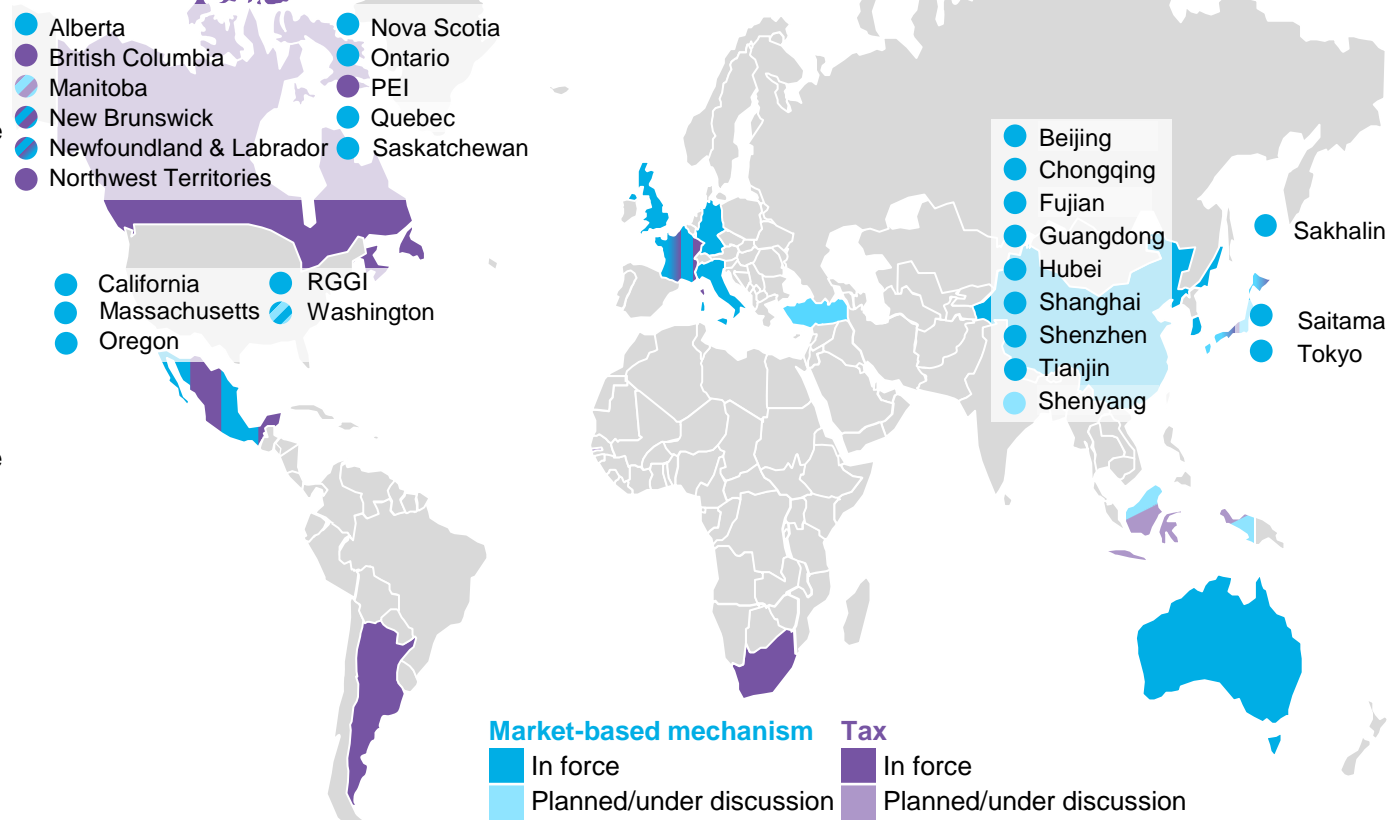
# Carbon pricing

## Overview

Countries and regions use carbon pricing to achieve climate commitments by forcing polluters to cover the societal costs associated with their greenhouse-gas emissions. Of the approximately 60 such programs in place globally, the most common are carbon taxes and emission-trading schemes. The former can assure specific CO2 prices while the latter can set specific emissions reduction levels.

- A tax does not guarantee a particular decrease in emissions, but does provide certainty about price per unit of emissions. This can be crucial to ensure that the carbon price does alter behavior and it can enable taxpayers to plan investment. An emission-trading scheme (with an absolute cap) can achieve specific emissions reduction goal and can send a clear long-term signal to investors. But the price is set by market forces, meaning uncertainty for scheme participants.
- Argentina, Japan and South Africa, for example, have opted for a carbon tax, which requires companies and individuals to pay a fixed price per unit of emissions. It may be applied to the supply, retail, import or use of fossil fuels, and the tax rate may vary by fuel or sector.
- An emissions-trading or 'cap and trade' scheme like the EU's places an upper limit, or cap, on the amount of available emission permits. Permit prices are determined by the allowance supply-demand balance, in the absence of measures such as price floors.
- Carbon pricing is best used as part of a policy suite because it may not provide sufficient incentive for technological innovation required to reach a net-zero world. Other support may also be needed to promote a just energy transition and ensure required infrastructure is built.
- Governments with carbon-price ambitions need to take steps to bolster public acceptance. Important factors are measures to ensure fairness, the policy name (eg, 'fee' or 'contribution' over 'tax'), and how revenue is spent. In some carbon-pricing programs (such as in British Columbia), revenue is used to support especially affected and/or low-income households and companies.

### Carbon markets and taxes in the G-20



Source: Governments, BloombergNEF. Note: PEI = Prince Edward Island. RGGI = Regional Greenhouse Gas Initiative

# Carbon pricing

## Assessment

In total, 12 G-20 countries have implemented a nationwide carbon price. This includes Indonesia, which has passed legislation to introduce a CO2 tax although it is only due to start in 2025. But most of these policies are not effective at driving decarbonization due to low prices and generous concessions to companies. For this analysis, each country was assessed based on share of emissions covered by a carbon tax or market, price level and, for markets, share of free allocation to participants.

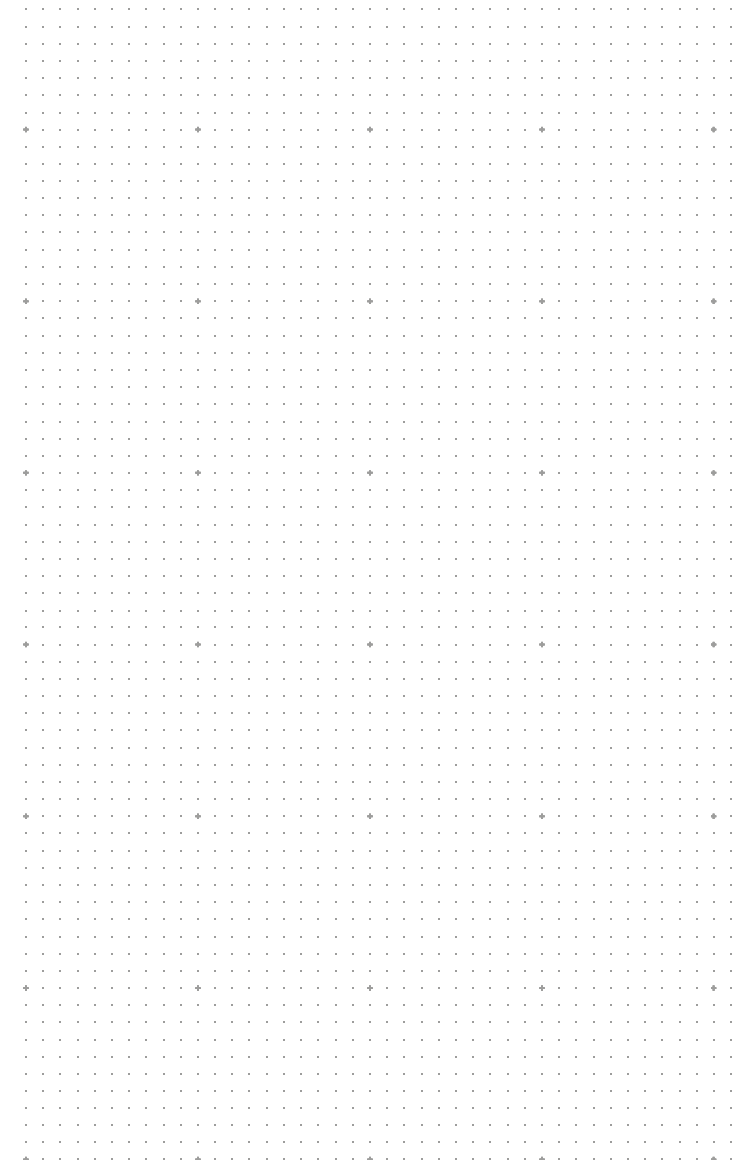
- A national carbon price does not appear on the cards for the near future in the US or Russia. But a rising number of subnational policies have come into force in the last year: Oregon began its emission-trading scheme and Pennsylvania joined the Regional Greenhouse Gas Initiative. This assessment takes account of state-level or regional carbon policies. If a nation has more than one program, an average was calculated weighted by each scheme's emissions.
- Europe and Canada remain G-20 leaders for robust carbon policies. In particular, prices are close to or far above the level needed to limit global warming to 2 degrees C above pre-industrial levels by the end of the century. The [World Bank](#) estimates this range to be \$40-80 per metric ton by 2020 and \$50-100 by 2030.
- South Africa is also now moving in the right direction, after the government announced in February 2022 that the national CO2 tax would be increased to \$30 per metric ton by 2030 and \$120 beyond 2050. However, it also extended the current rules on tax-free allowances for another three years, enabling some companies to reduce their exposure.
- Russia has now implemented its first pilot carbon-trading scheme, in the eastern region of Sakhalin. The program covers less than 1% of national emissions and so the country is classified as 'mixed progress'. Other countries, including China and South Korea, are in this category because their emission-trading schemes need improvement in terms of market design. Some taxes may cover a sizeable share of national emissions but are too low to spur change – for example, Argentina and Japan.
- Four G-20 nations have no carbon-pricing scheme and are deemed to be "moving in the wrong direction". There is light on the horizon for some, however: the Indian government has unveiled a three-phase framework for implementing first a voluntary and then a mandatory carbon market.

## Progress on carbon-pricing policies

	COP 26	COP 27	Emissions covered	Average price (per metric ton)	Free allocation (markets only)
Argentina	Yellow	Yellow	20%	\$6	–
Australia	Yellow	Yellow	50%	\$14	46%
Brazil	Red	Red	0%	–	–
Canada	Green	Green	78%	\$36	–
China	Yellow	Yellow	44%	\$8	98%
France	Green	Green	80%	\$60	41%
Germany	Green	Green	85%	\$48	22%
India	Red	Red	0%	–	–
Indonesia	Yellow	Yellow	<i>Tax scheduled to begin in 2025</i>		
Italy	Green	Green	39%	\$67	41%
Japan	Yellow	Yellow	68%	\$3	–
Mexico	Yellow	Yellow	40%	\$2	–
Russia	Red	Yellow	0.6%	–	–
Saudi Arabia	Red	Red	0%	–	–
South Africa	Yellow	Green	80%	\$8	–
South Korea	Yellow	Yellow	73%	\$18	90%
Turkey	Red	Red	0%	–	–
UK	Green	Green	28%	\$83	37%
US	Yellow	Yellow	8%	\$6	37%

Source: BloombergNEF. ■ Right direction ■ Mixed ■ Wrong direction/insufficient progress  
 Note: [Click here for definitions](#)

# Climate-risk disclosure



# Climate-risk disclosure

## Overview

Policymakers are more loudly than ever voicing concern that climate change poses major risks to financial stability. A raft of working groups and pilot projects have been launched, guidance documents issued and discussions held on what is needed to build financial institutions' capacity to assess and mitigate these risks. However, most nations have not fully implemented regulations to mandate sufficient action.

- At its 2021 summit, the G-7 backed "moving towards" mandatory climate-risk disclosure, but so far only the EU and the UK have put such regulations in place on investors. Meanwhile, G-20 countries like India, Indonesia, the US and South Korea are considering whether to integrate environmental, social and governance (ESG) factors into risk-management processes or have published draft regulations to mandate climate-risk disclosures.
- More broadly, the Task Force on Climate-related Financial Disclosures (TCFD) has built the most widely used climate-risk disclosure framework, with 2,906 corporate, financial and government supporters worldwide. More regulators are discussing whether to mandate its use. But only the UK and Brazil have scheduled the start of mandatory TCFD reporting for listed companies or banks. In addition, the EU and Japan have taken this step but only in certain cases.
- Central banks must also support climate-risk disclosure, notably by including such risks in routine 'stress-tests' of financial institutions' health. These tests force organizations to show how they would perform under multiple climate scenarios. So far, most have been run as pilot exercises to build financial institutions' capacities in assessing and mitigating these risks. The methodologies used are also in development and can be tested and improved through these initiatives. The results from climate risk stress-tests could ultimately compel banks and insurance companies to keep higher capital reserves.

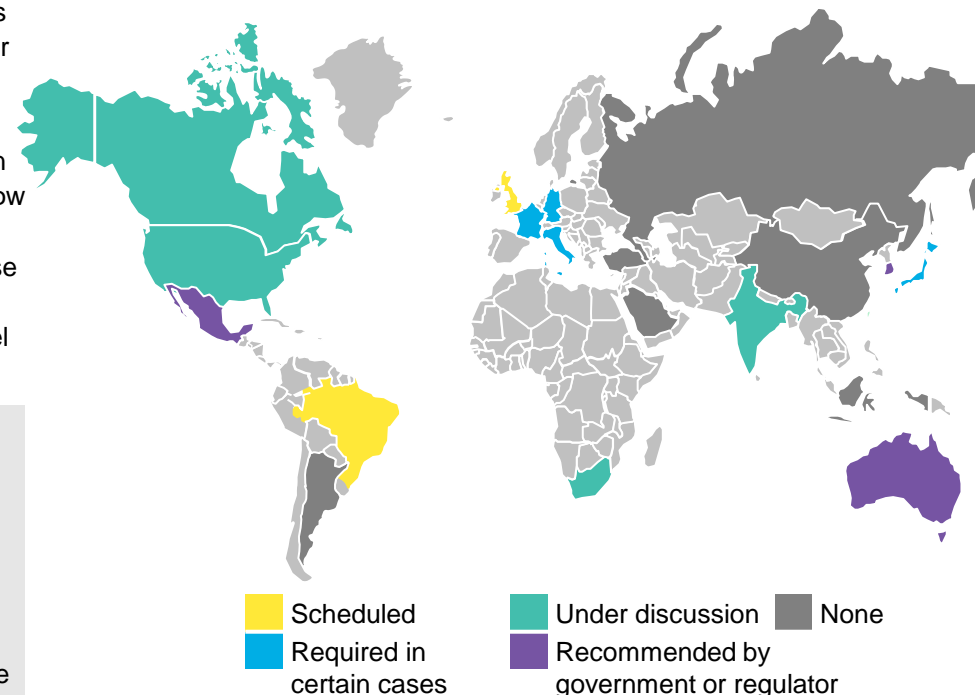
### Why care about climate risk disclosure?

Climate risk encompasses both the physical and transition risks linked to climate change. With weather events becoming more frequent and extreme, companies and investors increasingly realize the physical effects of climate change. In addition, with governments taking more climate action, companies and investors face growing transition risk in the form of new policies and litigation due to inaction. Governments are starting to introduce policies to ensure the right data is collected and published for financial players to assess accurately those climate risks. The ultimate goal is for financial institutions to price the impact of climate change into their investment or lending activities.

## By the numbers

G-20 members scheduled to begin mandatory TCFD disclosure (for banks and/or companies)	2
G-20 members with central bank climate risk stress-testing completed or scheduled for the near future	10
G-20 members with environmental taxonomies in force	8

## Mandatory TCFD reporting for financial market participants, G-20 countries



Source: BloombergNEF

# Climate risk disclosure

## Assessment

This report classifies the G-20 countries based on whether they have passed laws or written regulations to mandate specific, nationwide climate-risk disclosure for investors (asset managers and pension funds). To date, the UK and three EU member states are the only G-20 nations to have done so. While they are not perfect, they are deemed to be ‘moving in the right direction’ under this study’s methodology. Since last year’s edition of the Factbook, quite a few G-20 countries have pledged to assess and mitigate the climate-risk exposure of their financial systems, but only the US has proposed a regulation that is undergoing the approval process.

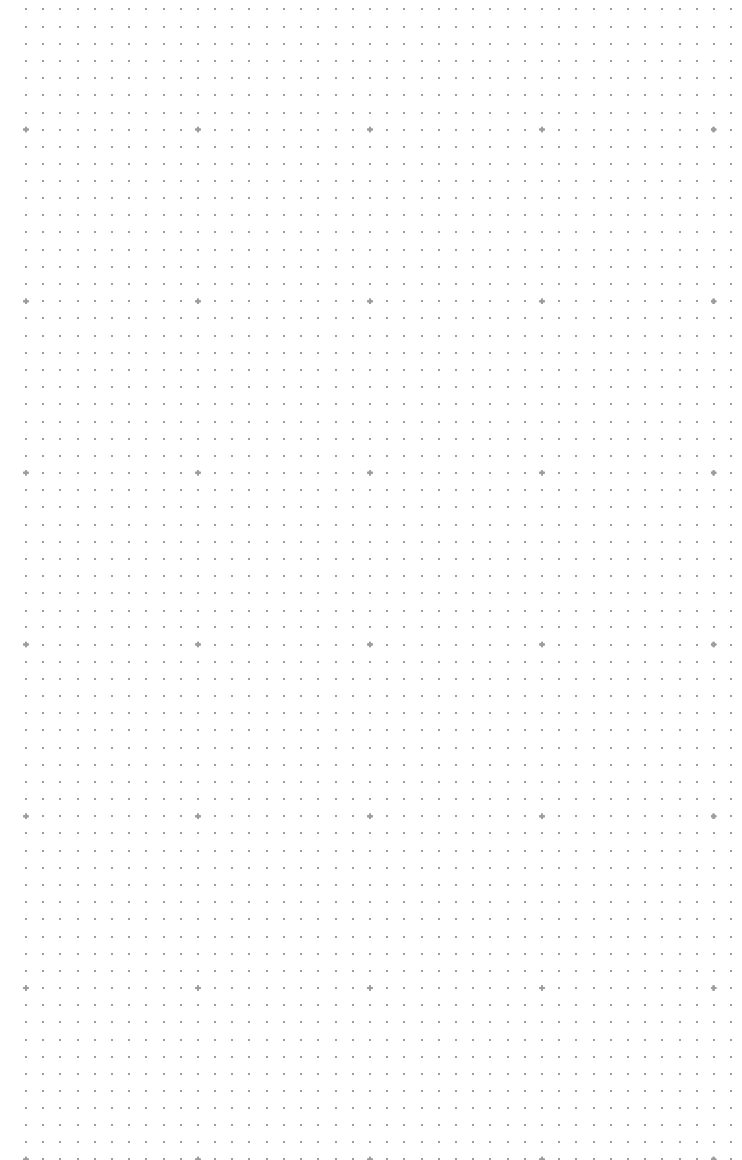
- Countries with the ‘mixed progress’ rating have either issued specific proposals for climate-risk disclosures – like the EU – or have implemented mandatory, nationwide, generic environmental disclosure policies for investors – like Japan and Mexico, for example. Nine of the G-20 countries have not even taken these steps, despite the change of rhetoric.
- A raft of working groups have been set up and announcements made since the last edition of this Factbook. Countries like [Canada](#), [Turkey](#) or [South Korea](#) have released official policy roadmaps to advance their sustainable finance regulatory frameworks, and in some cases, they have specifically focused on climate-related risk regulations. To promote climate-risk analysis by financial institutions, most countries favor the publication of voluntary guidance over the development of mandatory regulations. These may help improve financial market participants’ capabilities without being too disruptive for current market practices. But this type of voluntary approach also allows institutions to delay action.
- Climate-risk policies can have a forward-looking dimension, such as when governments or central banks conduct stress-tests to assess future impacts of climate change on the profitability of a company or stability of a financial institution. They can also assess the effects of environmental changes and climate policies on the current performance of companies and financial products.
- Central banks also have a role to play. Since the last report, many central banks and regulators have launched pilot climate-risk stress-tests, for financial players to gain experience in assessing climate-related risks and raise awareness about potential losses from inaction. This is the case for [China](#), [Australia](#), [Canada](#) and [Japan](#), for instance. It also allows the regulators of these countries to fine-tune the methodologies of their climate risk stress-tests, sometimes relying on international initiatives like the [Network for Greening the Financial System](#) which gathers central banks working on that topic.
- More countries are also working or have passed some generic environmental disclosure rules and green taxonomies, such as [Australia](#), South Korea and [Indonesia](#). Environmental taxonomies help identify which activities should be financed first to support the low-carbon transition of economies. Despite being voluntary in most countries, taxonomies bring more transparency and can help standardize company reporting, which informs the analysis by financial institutions.

## Progress on climate-risk disclosure policies



Source: BloombergNEF. Note: Rated based on implementation of mandatory, specific nationwide climate-risk disclosure for investors (asset managers and pension funds). [Click here for definitions](#)

# Methodology and assumptions



# Methodology and assumptions




## Fossil-fuel support

- For fossil-fuel support, each of the 19 individual country members of the G-20 were scored based on the four metrics in the table below (each weighted equally).
- The first two metrics cover direct support for the production and consumption of coal, natural gas and oil, together with fossil-fuel-fired electricity by the national governments or state-owned organizations. For the US, Australia and Canada, support provided by state-level governments was also included. For full methodology, please consult the data source in the gray box below.
- The change in fossil-fuel support relates to the 2016-20 period and the total per capita is for 2020 because national-level data for 2021 is not yet available. The 2021 estimate on [this slide](#) is provisional only and based on data from the OECD, IEA and Oil Change International. As data on investment by state-owned enterprises was only available up to 2019, the estimate for 2020-21 was calculated by extrapolating the 2015-19 trend.
- In general, these figures are likely to be an underestimate because countries and states vary in the transparency of their reporting. For example, no data was published on public finance for fossil fuels by Turkey's government-owned banks and export credit agencies. Public finance was attributed to the country where the institution is headquartered, not the location of the project/initiative. Regarding investment by state-owned enterprises, where aggregate estimates at the project level differed substantially from project-level reporting, we used the former, as was the case for Export Development Canada, for example.

## Scores

Points allocated	Change in total fossil-fuel support, 2016-20	Per-capita fossil-fuel support, 2019	Change in coal-power capacity, 2017-21	Coal-power pipeline relative to existing coal capacity	
				Annex I*	Non-Annex I
6	Reduction of 20% or more	Under \$150	Reduction of -20% or more	0%	0%
4	Reduction of 1-19%	\$150-299	Reduction of -1% to -19%	–	1-10%
2	Increase of 1-19%	\$300-499	Increase of 1-19%	–	11-20%
0	Increase of 20% or over	Over \$500	Increase of 20% or over	Over 0%	Over 20%

## Rating

Ranking	Total score
	12-16
	8-10
	2-6

Source: BloombergNEF. Note: \*Annex I parties were given a score of zero if they had any coal-fired capacity in the pipeline.

## Data sources

Type	Data source
<b>Direct budget transfers and tax breaks, 2015-21</b>	<a href="#">OECD Inventory of Support Measures for Fossil Fuels</a>
<b>Support to consumer energy prices, 2015-21</b>	<a href="#">IEA Energy Subsidies Database</a>
<b>Support from public finance institutions, 2015-21</b>	<a href="#">Oil Change International's 'Shift the Subsidies' Database</a>
<b>Investment by state-owned enterprises, 2015-19</b>	<a href="#">Overseas Development Institute, International Institute for Sustainable Development and OCI</a>
<b>Coal-power capacity and pipeline</b>	BloombergNEF, <a href="#">Global Energy Monitor</a> (July 2022)



# Methodology and assumptions

## Carbon pricing

- To rank the countries, only international, national or state/province-level carbon-pricing policies were included.
- The share of emissions covered takes into account any overlapping schemes.
- The pricing data was for September-October 2022 or the latest available. France and Germany have the EU ETS and a national carbon price in place, while the US has multiple state- or province-level policies. In such cases, the price was a weighted average based on the emissions of each pricing scheme.
- For Canada, we used the backstop federal standard.

## Climate-risk disclosure




- To rate the countries, we only took account of whether they have passed into law or otherwise implemented mandatory, nationwide, specific climate-risk disclosure regulations for investors (asset managers and pension funds).
- A country designated as green has regulations that specifically compel investors to assess and mitigate the climate risks that may impact their performance.
- A yellow country has generic environmental disclosure regulations for investors, which we believe are the first step before legislating or writing regulations on specific climate-risk related assessment and management.
- Policy data source: UN Principles for Responsible Investment (PRI) regulation database, governments, financial regulators, media reports.

### Scores




Points allocated	Share of emissions covered	Latest price	Share of free allocation (markets only)
6	Over 66%	Over \$30	0%
4	34-66%	\$15-29	1-33%
2	1-33%	\$10-14	34-66%
0	0%	Under \$10	Over 66%

Source: BloombergNEF.

### Rating

Ranking	Total score
	7-12
	1-6
	0

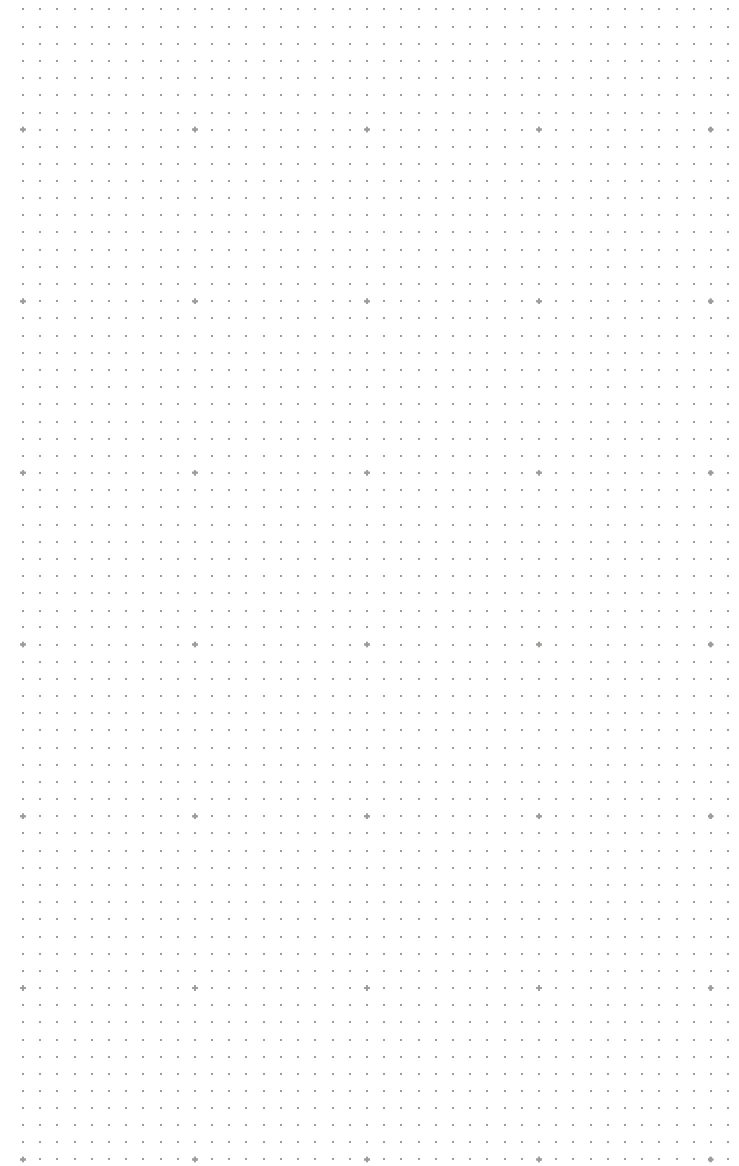
### Scores and rating

Ranking	Points allocated	Metric
	6	Specific climate-risk regulations in place
	3	Only generic environmental disclosure rules
	0	No climate-risk or generic environmental disclosure rules

Source: BloombergNEF.



# Country snapshots



# Argentina

Non-Annex I party

Argentina has taken steps toward decarbonizing its power system: clean energy (as defined by the government) met 13.1% of power demand in 2021 compared with the 16% target. But the government will need to introduce more support if it is to reach net-zero emissions by 2050, as planned. It has few policies for electric vehicles (EVs), for example, and sales are therefore minimal. Instead, the government is focused on promoting oil and gas exploration. Argentina has the fourth-largest shale oil and second-largest shale gas reserves.

- Argentina decreased government support for fossil fuel usage for a third consecutive year in 2020, achieving a further 10% reduction. Most of the decline came from scaling back subsidies received by consumers.
- Oil and gas producers and utilities retain the lion's share of support, due to investment from state-owned enterprises YPF and Integracion Energetica Argentina. As a result, even with recent cuts, Argentina provides more fossil-fuel support on a per-capita basis (\$734 in 2020) than any G-20 country except Saudi Arabia.
- These figures are likely an underestimate due to lack of transparency around support provided to state-owned enterprises, and funding provided by export credit agencies.
- Argentina and Canada have said that the Covid-19 pandemic has delayed their mutual fossil fuel subsidy peer review, announced in 2018. While there is no official deadline, previous reviews have taken 12-18 months.
- Argentina has had a carbon tax on liquid fuels and coal since 2018, but its impact is limited. This is mainly because of the low rate, with an average of 727.95 pesos per metric ton. Using current exchange rates, that would be equivalent to \$5.81 per metric ton. But without the currency devaluation seen in recent years, the dollar value would be much higher.
- Argentina lacks policy on climate-risk disclosure, with no TCFD reporting requirements and no local TCFD supporters. It also imposes no mandatory rules regarding climate risk and does not participate in the NGFS initiative. So far, only companies with over 300 employees must produce annual sustainability reports.

## Fossil-fuel support

Total (2016-20)

Share spent on coal (2020)

Share targeted at producers & utilities (2020)

COP26 COP27

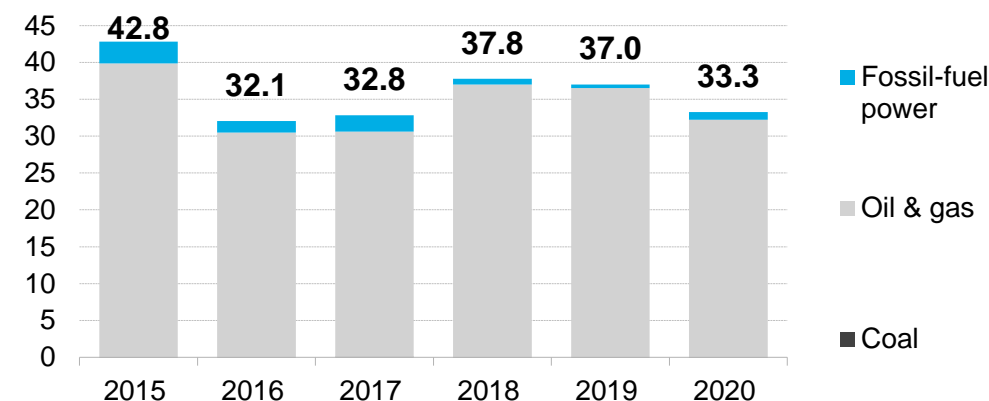


\$205 billion

0.1%

79%

## Fossil-fuel support (\$ billion)



Source: OECD, IEA, Oil Change International, ODI, IISD, BloombergNEF.

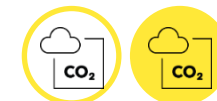
## Carbon pricing

Carbon-pricing policy

National emissions covered by carbon price

Latest available carbon price (Sept-Oct 2022)

\* Average of diesel, gasoline and coal.



✓

20%

\$6/metric ton\*

## Climate-risk disclosure

Investor climate-risk policy (used for ranking)

Mandatory TCFD policy

Corporate, financial and government TCFD supporters

Central bank climate-risk stress-testing

Environmental taxonomy



x

x

4 (↑3)

x

x

# Australia

Annex I party

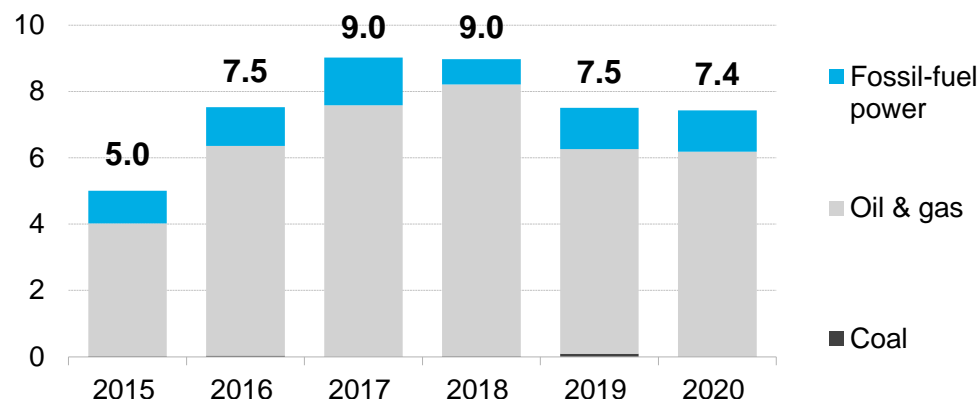
The chances of bold climate action by Australia's federal government have improved significantly in the last year, after the Australian Labor Party took power for the first time in 10 years in May 2022. The new administration has already passed legislation for a net-zero target by 2050, along with a 43% emissions reduction on 2005 levels by 2030 target (up from a 26-28% reduction). Federal and state-level policy makers are seeking to incentivize low-carbon power, transport and industry. But unlike other Annex I parties, Australia is unlikely to sign up to ambitious pledges to phase out coal-fired power.

- The government has yet to take serious action to reduce fossil-fuel support, which rose 4% over 2016-20. Most of this comes in the form of tax breaks, thanks to capex deductions for mining and petroleum operations, fuel-tax credits and reduced fuel-excise rates. In total, the country lost out on nearly US \$6 billion in foregone taxes in 2020 alone.
- The Labor government has proposed overhauling the Safeguard Mechanism - a 'baseline and credit system' under which industrial and power companies must surrender offsets if they exceed government-set emissions levels.
- Labor aims to gradually reduce emissions covered by the policy, thereby tightening these baselines, and reward companies with credits if their absolute emissions fall below these thresholds. These units could be sold to the market or banked for future compliance purposes.
- Australia has taken some steps to promote climate-risk disclosure, with limited success. TCFD reporting is not mandatory, but the country has already a large base of supporters which could be leveraged.
- Two drivers could spur more action: the Australian Securities and Investment Commission has encouraged TCFD reporting as the preferred market standard; and the Australian Prudential Regulation Authority is increasing scrutiny of climate-risk management. It also published guidance on managing the financial risks of climate change at the end of 2021 and results of its voluntary pilot [climate vulnerability assessment](#) for banks in 2022. The government is also working with industry to develop a green [taxonomy](#). However, since no investor climate-risk policy has been proposed or legislated, Australia has made insufficient progress to change its rating.

## Fossil-fuel support

Total (2016-20)	\$38 billion
Share spent on coal (2020)	0.1%
Share targeted at producers & utilities (2020)	32%

### Fossil-fuel support (\$ billion)



Source: OECD, IEA, Oil Change International, ODI, IISD, BloombergNEF.

## Carbon pricing

Carbon-pricing policy	✓
National emissions covered by carbon price	50%
Latest available carbon price (Sept-Oct 2022)	\$19/metric ton

## Climate-risk disclosure

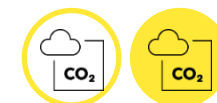
Investor climate-risk policy ( <i>used for ranking</i> )	* Recommended only
Mandatory TCFD policy	* Recommended only
Corporate, financial and government TCFD supporters	159 (↑37)
Central bank climate-risk stress-testing	Voluntary pilot run
Environmental taxonomy	Under discussion

COP26 COP27



\$38 billion  
0.1%  
32%

Fossil-fuel power  
Oil & gas  
Coal



✓  
50%  
\$19/metric ton



\* Recommended only  
\* Recommended only  
159 (↑37)  
Voluntary pilot run  
Under discussion

# Brazil

Non-Annex I party

Luiz Inacio “Lula” da Silva won Brazil’s presidential election in the runoff on October 30, 2022, beating incumbent Jair Bolsonaro. But the full implications are not yet known. Lula will probably seek to overhaul the country’s climate policy, including its emission targets. However, an unexpectedly strong performance by conservative candidates for Congress suggest he may face a tough road implementing his agenda. Brazil would need more policy support outside the power sector to meet its 2050 net-zero target.

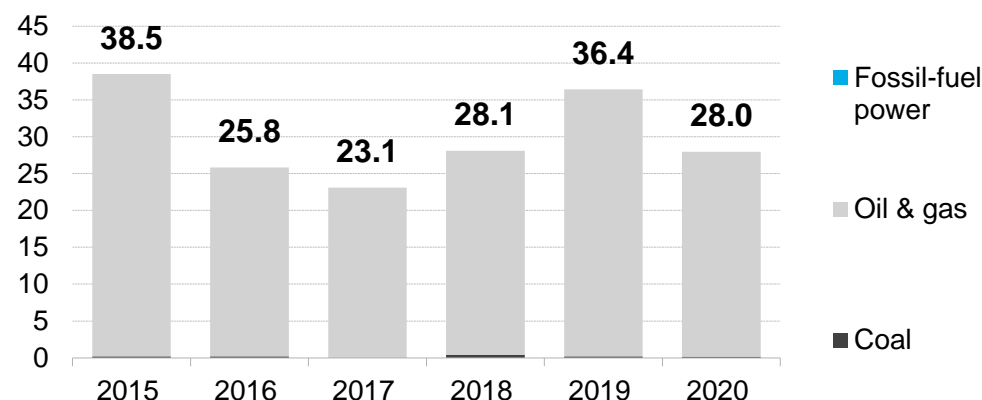
- Despite backing climate action, Lula may not significantly reduce fossil-fuel support. Instead, he will want to ensure national oil company Petrobras does not get fully privatized and could push for expansion of its upstream and downstream activities. This could lead to an increase in investment by state-owned enterprises, which accounted for most fossil-fuel support in 2020.
- Coal has played a minor role in Brazil’s power system. But the country saw the second-biggest increase in coal-fired generating capacity 2017-21 of all the G-20 nations. And if the plants in the pipeline come online, they would increase the size of its current fleet by almost half.
- Brazil has no national carbon price in place as yet.
- At the end of 2021 the Brazilian central bank issued TCFD-aligned disclosure rules for regulated institutions. There is relatively little backing among companies for TCFD reporting, as shown by the low number of local supporters of the initiative. Such rules could help with the standardization of climate-risk reporting by banking institutions.
- Brazil’s central bank has required financial institutions to maintain processes to manage environmental risks since 2014. It is also part of the Network of Central Banks and Supervisors for Greening the Financial System and is discussing how to integrate climate-risk stress-testing. In September 2021, the central bank announced new rules making it mandatory for banks to incorporate climate change-related risks in their stress-tests in 2022.
- Despite the BCB's advancements, none of these rules addresses investor climate-risk policy. As result, Brazil remains categorized in the yellow bucket.

## Fossil-fuel support

Total (2016-20)	\$142 billion
Share spent on coal (2020)	0.6%
Share targeted at producers & utilities (2020)	85%



## Fossil-fuel support (\$ billion)



Source: OECD, IEA, Oil Change International, ODI, IISD, BloombergNEF.

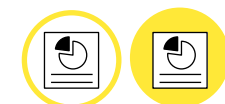
## Carbon pricing

Carbon-pricing policy	*
National emissions covered by carbon price	0%
Latest available carbon price (Sept-Oct 2022)	n/a



## Climate-risk disclosure

Investor climate-risk policy ( <i>used for ranking</i> )	* Generic ESG reporting for funds
Mandatory TCFD policy	✓ For financial institutions only
Corporate, financial and government TCFD supporters	51 (↑13)
Central bank climate-risk stress-testing	✓ Scheduled
Environmental taxonomy	*



# Canada

Annex I  
party

The last year has seen federal and province-level policy makers improve support for clean power, low-carbon fuels and carbon capture and storage. But more will be needed to meet the national 2050 net-zero target.

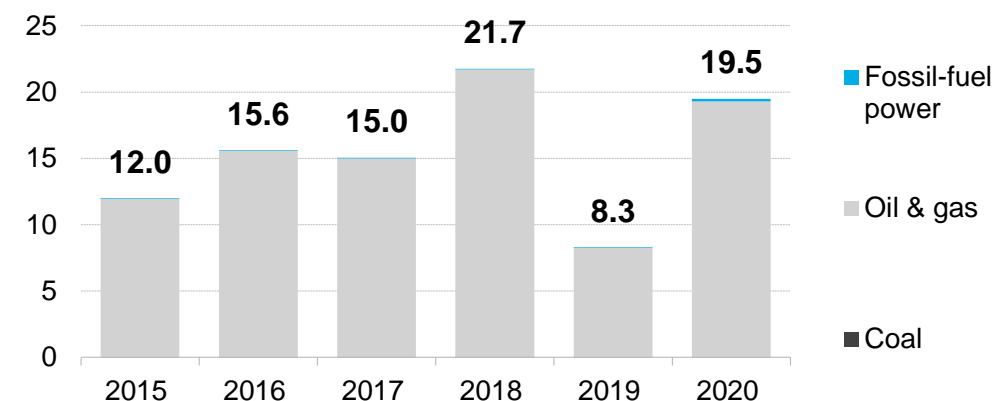
- In the previous edition of this Factbook, Canada was categorized as moving ‘in the right direction’ in the public support it offers to fossil fuels. This was largely because Canada's reliance on coal-fired power fell 17% 2016-20. While it did not close any capacity in 2021, it intends to phase out coal entirely by 2030.
- In this edition of the Factbook, Canada has been downgraded to ‘mixed progress’ on fossil fuel supports, reflecting the significant room it has for improvement. The level of support shot up by 135% in 2020 as the federal government provided generous aid to mitigate impacts of the pandemic. Energy consumers received an 11% increase in support, but that paled in comparison with the 137% growth oil, gas utility companies reaped. As a result, among OECD countries in the G-20, Canada in had the highest per-capita total support for fossil-fuel use (\$513) in 2020.
- Canada introduced a federal carbon price in 2019, which reached C\$50 (\$36) per metric ton in 2022. It is due to hit C\$170 (\$123) by 2030. Provinces and territories must have a system that meets the federal standard or a ‘federal backstop’ kicks in.
- A government audit found that the federal system has a disproportionate impact on Indigenous communities and small businesses but heavy emitters benefit from concessions. In addition, there are not enough controls to ensure that the province-level policies are on par with the federal benchmark.
- In May 2022, the Office of the Superintendent of Financial Institutions (OSFI) released a [draft guideline](#) for a federal regulation mandating financial institutions to assess and manage climate-related risks. The government also announced new climate-risk related policies in the 2022 [budget](#).
- In January 2022 the Canadian central bank and OSFI published the [results](#) of their pilot climate-risk stress-test. The exercise highlighted the need to build financial institutions' capabilities for conducting these analyses and both regulators have committed to help supporting this.

## Fossil-fuel support

Total (2016-20)	\$54 billion
Share spent on coal (2020)	0.1%
Share targeted at producers & utilities (2020)	87%



### Fossil-fuel support (\$ billion)



Source: OECD, IEA, Oil Change International, ODI, IISD, BloombergNEF.

## Carbon pricing

Carbon-pricing policy	✓
National emissions covered by carbon price	78%
Latest available carbon price (Sept-Oct 2022)	\$36/metric ton



## Climate-risk disclosure

Investor climate-risk policy (used for ranking)	Under discussion
Mandatory TCFD policy	Under discussion
Corporate, financial and government TCFD supporters	139 (↑35)
Central bank climate-risk stress-testing	Pilot one run in 2022
Environmental taxonomy	✗



# China

Non-Annex I party

China is focused on implementing policies to achieve its targets for peak carbon emissions by 2030 and carbon neutrality before 2060. These will be challenging to meet as the government seeks to balance the goals with economic development, and roll out the newer technologies that will be required. Given all this, China is unlikely to announce a new 2030 emissions target soon, despite calls from other governments.

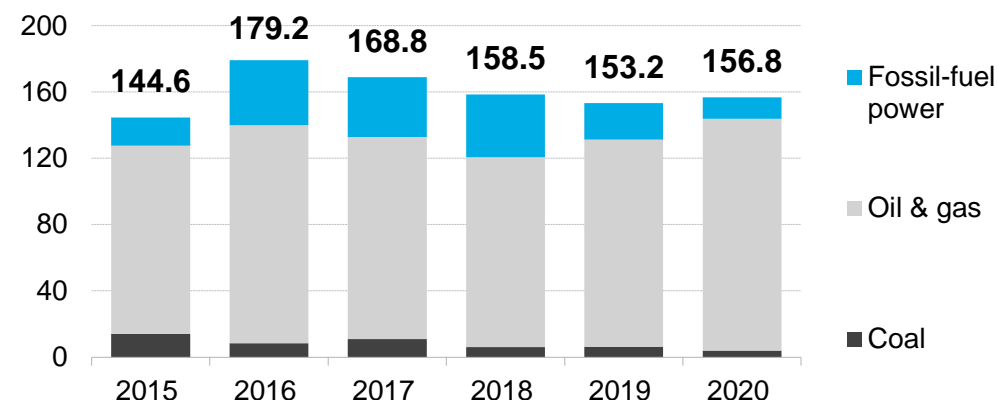
- China is classified as making ‘mixed progress’ on fossil-fuel support in this Factbook. It provides by far the most aid out of the G-20 nations – double runner-up Russia’s total in 2020. But its support has generally trended downward over the past five years. It also provided the fourth lowest amount of support on a per-capita basis.
- The results of its peer review of fossil-fuel subsidies with the US were announced in 2016. Since then, the government has scaled back subsidies on consumer energy prices though this has been outweighed by rising investment from state-owned enterprises.
- China scores poorly on coal power, having grown its fleet 12% from 2017-21. The current pipeline of planned projects would expand capacity another 25%.
- China’s national carbon market kicked off in 2021 but remains in its infancy. Reforms would be required for the program to play a central role in helping the country realize its climate goals. The average trading price was around 43 yuan per ton (\$6.30/ton) in 2021. However, trading volumes are very low. Cases of data falsification support the need to improve carbon data quality, before it incorporate more industries.
- China has no policy support encouraging or enforcing TCFD reporting and very low support among companies. Investors are also not required to report on climate risk. In June 2021, the People’s Bank of China (PBOC) governor said the bank will introduce “mandatory disclosure of climate-related information”, without outlining a timeframe. No significant progress has been reported so far.
- PBOC launched an experimental climate risk stress-test on 23 banks at the end of 2021. It highlighted the need for financial institutions to establish climate-risk management frameworks and incorporate climate risk into corporate strategies and preference management.

## Fossil-fuel support

Total (2016-20)	\$809 billion
Share spent on coal (2020)	2%
Share targeted at producers & utilities (2020)	68%



## Fossil-fuel support (\$ billion)



Source: OECD, IEA, Oil Change International, ODI, IISD, BloombergNEF.

## Carbon pricing

Carbon-pricing policy	✓
National emissions covered by carbon price	44%
Latest available carbon price (Sept-Oct 2022)	\$8/metric ton



## Climate-risk disclosure

Investor climate-risk policy (used for ranking)	✗
Mandatory TCFD policy	✗
Corporate, financial and government TCFD supporters	50 (↑25)
Central bank climate-risk stress-testing	✓ Pilot results published in 2022
Environmental taxonomy	✓





# France

Annex I party

France has the strongest set of low-carbon policies out of the G-20 countries, except for Germany, based on BNEF's report published April 2022 ([web](#) | [terminal](#)). Some of its most ambitious policies have been implemented at EU level. But it also has introduced national incentives for clean hydrogen, electric vehicles and renewables.

- France has taken clear steps to phase out coal-fired power: such capacity dropped a third over 2017-21 and the country has no new coal projects in development. But France's lack of progress in cutting fossil-fuel supports has resulted in a downgrade to 'mixed progress' from last year. Fossil-fuel aid expanded 26% 2016-20, giving France a per-capita total of \$297 in 2020 compared with \$164 by Germany and \$218 by Italy.
- France also provides an unusually high share of fossil-fuel support specifically to the power sector (60% in 2020). This mainly comes in the form of investment from state-owned enterprises.
- France is a participant in the EU ETS – the bloc's flagship climate policy – which is on track to a record 136 euros (\$127) per metric ton carbon price in 2030 due to policy reforms. Prices have averaged 85 euros (\$83) in the last year. In addition, EU lawmakers are considering a carbon border tariff, which would apply to power and certain industrial sectors.
- France also has a national carbon tax covering 35% of emissions. This tax was originally scheduled to increase to 86 euros (\$101) per metric ton in 2022, but has been frozen at 44.60 euros (\$52.4) since 2019.
- As France is an EU member state, climate-risk assessment is mandatory under the bloc's taxonomy and the Sustainable Finance Disclosure Regulation (SFDR). TCFD is one of the recommended reporting frameworks. The EU's sustainable finance disclosure regime is also founded up on the concept of dual materiality, meaning what matters is both climate-related risks impacting a company's financial value and a company's negative impacts on the climate.
- The EU is developing its [Corporate Sustainability Reporting Directive](#) (CSRD) which should lead to more climate-risk disclosure from companies. The French central bank [ran](#) a climate-risk stress-test in 2020 and the European Central Bank [published](#) results of its own analysis in 2022.

## Fossil-fuel support

Total (2016-20)

Share spent on coal (2020)

Share targeted at producers & utilities (2020)

COP26 COP27

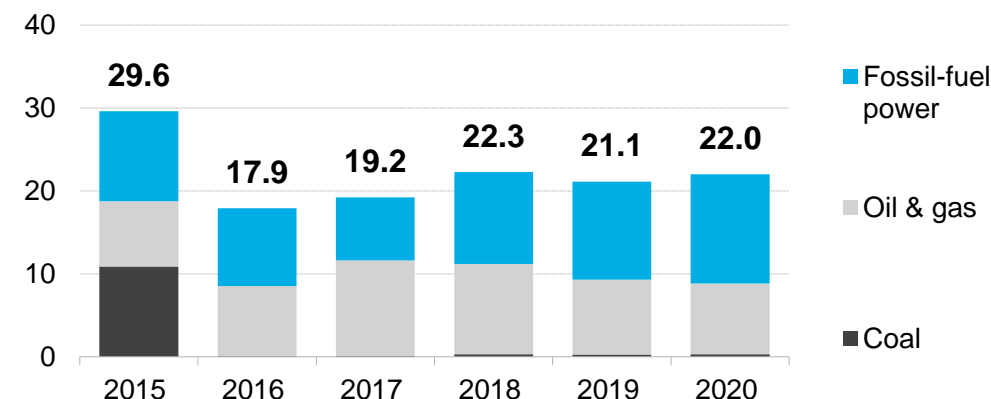


\$94 billion

1%

64%

## Fossil-fuel support (\$ billion)



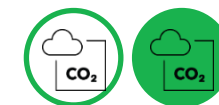
Source: OECD, IEA, Oil Change International, ODI, IISD, BloombergNEF.

## Carbon pricing

Carbon-pricing policy

National emissions covered by carbon price

Latest available carbon price (Sept-Oct 2022)



✓

80%

\$60/metric ton

## Climate-risk disclosure

Investor climate-risk policy (*used for ranking*)

Mandatory TCFD policy

Corporate, financial and government TCFD supporters

Central bank climate-risk stress-testing

Environmental taxonomy



✓

✓ In certain cases

131(↑16)

✓ - national ✓ - EU

✓

# Germany

Annex I  
party

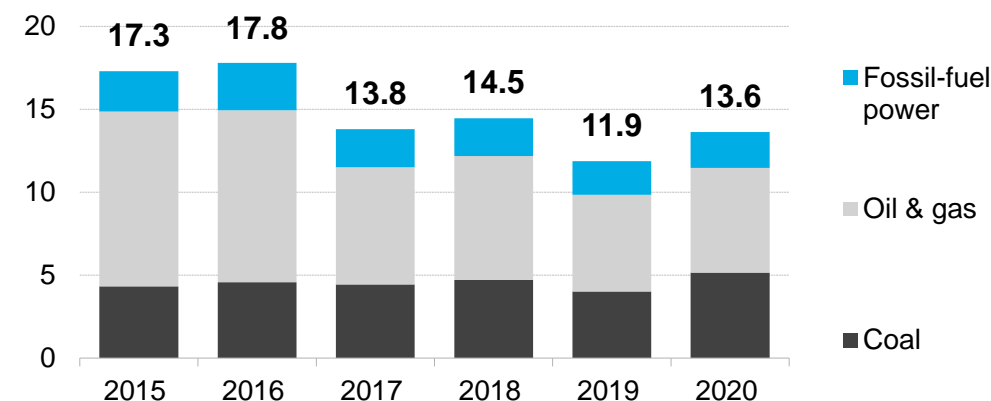
Unlike other EU member states, Germany aims to reach net-zero emissions by 2045, after lawmakers agreed in June 2021 to bring forward the deadline by five years. The government has already implemented the strongest set of low-carbon policies among the G-20, based on BNEF's April 2022 report ([web](#) | [terminal](#)).

- Germany saw a slight uptick in fossil-fuel support in 2020, mostly via budgetary transfers for coal, oil and gas producers and utilities during the pandemic. However, support has been gradually declining and its per-capita total (\$61 in 2020) is lower than its neighbors. Effective renewables incentives and carbon pricing helped it cut coal-fired generating capacity by a fifth over 2017-21. For these reasons, it is still classified as 'moving in the right direction'
- This could change by the time of COP28, however, after Parliament agreed in July 2022 to restart coal-power plants to replace Russian gas. This is likely to slow efforts to move away from coal in the near term. But it is unlikely to jeopardize the country's exit plan, with its relatively unambitious deadline (2038). Indeed, its biggest power producer, RWE, said on October 4 that it would accelerate its coal phase-out by eight years to 2030.
- In addition to participating in the EU ETS, Germany has its own emission-trading scheme covering heat and transport. The carbon price is fixed until 2025 and is meant to increase by 5 euros (\$5) per year. But the government said in September 2022 that it would keep the levy at the current rate (30 euros) for a year due to the energy crisis.
- Climate-risk assessment is mandatory in Germany through the EU Taxonomy and the Sustainable Finance Disclosure Regulation with TCFD as the recommended reporting framework. The EU's sustainable finance disclosure regime is also founded up on the concept of dual materiality, meaning what matters is both climate-related risks impacting a company's financial value and a company's negative impacts on the climate.
- Germany is far behind France when it comes to TCFD supporters, which may be due to the public [endorsement](#) of TCFD from the French government. But this could change as the EU finalizes its [Corporate Sustainability Reporting Directive](#), which would spur more climate-risk disclosure from companies. As an EU member state, Germany took part in the European Central Bank's climate-risk stress-test, and the results were [published](#) in 2022.

## Fossil-fuel support

Total (2016-20)	\$61 billion
Share spent on coal (2020)	38%
Share targeted at producers & utilities (2020)	46%

## Fossil-fuel support (\$ billion)



Source: OECD, IEA, Oil Change International, ODI, IISD, BloombergNEF.

## Carbon pricing

Carbon-pricing policy	✓
National emissions covered by carbon price	85%
Latest available carbon price (Sept-Oct 2022)	\$48/metric ton

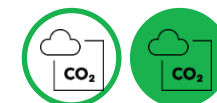
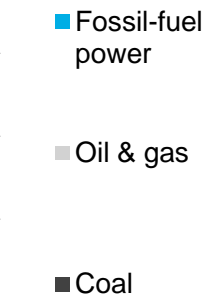
## Climate-risk disclosure

Investor climate-risk policy ( <i>used for ranking</i> )	✓
Mandatory TCFD policy	✓ In certain cases
Corporate, financial and government TCFD supporters	61 (↑12)
Central bank climate-risk stress-testing	✓ EU level
Environmental taxonomy	✓

COP26 COP27



COP26	COP27
\$61 billion	38%
38%	46%



✓
85%
\$48/metric ton



✓
✓ In certain cases
61 (↑12)
✓ EU level
✓



# India

Non-Annex I party

Announced in August 2022, India's new climate plan would appear at first blush to mark a major rise in ambition. It aims to cut emissions per unit of GDP 45% relative to 2005 levels by 2030, up from the previous goal of 33-35%. However, should the country's economy grow at the rate expected this decade, India's emissions could jump 84% from 2019 levels in absolute terms and the country would still hit its goal. Beyond 2030, India aims to reach net zero by 2070.

- India has achieved mixed progress in reducing supports for fossil fuels. Support for these sectors rose only 4% 2016-20 and India has the second-lowest total on a per-capita basis, at \$39. Subsidies on consumer prices and investment by state-owned enterprises account for 85%.
- India is a world leader in holding reverse auctions for clean-power delivery contracts. This is not only due to the world-leading volume of capacity procured but to innovative designs to ensure sufficient flexible capacity is built alongside rising wind and solar generation.
- However, coal remains a central part of the government's plan to meet rapidly growing electricity demand. India's coal-power fleet expanded 9% 2017-21 and India is second only to China in volume of new plants planned.
- India is taking steps toward carbon pricing by using its existing credit programs for energy efficiency and renewables. The first two phases will focus on building demand and then supply in the proposed voluntary carbon market. The third will see the start of a mandatory cap-and-trade scheme.
- The government has yet to release details on how the framework will be enacted nor said whether these new policies will link to international carbon programs such as the Article 6 mechanisms.
- In July 2022 the Reserve Bank of India (RBI) proposed in a discussion paper to require climate-risk disclosure, for banks and investors that it supervises. The Bank recommends that the TCFD framework is used for reporting.
- In addition, the Bank said that it was evaluating if stress-testing and climate scenario analysis can be used to identify and assess vulnerabilities in the regulated entities. These are all important steps that could lead to a more robust regulatory framework in India.

## Fossil-fuel support

Total (2016-20)

Share spent on coal (2020)

Share targeted at producers & utilities (2020)

COP26 COP27

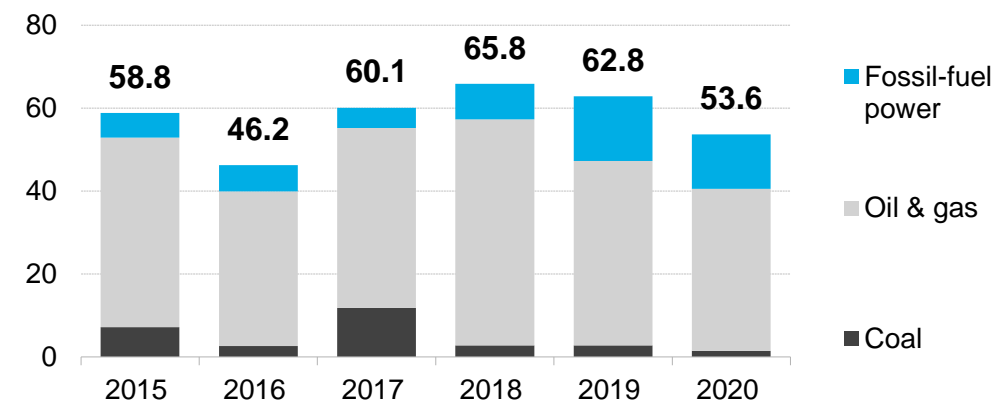


\$310 billion

3%

43%

## Fossil-fuel support (\$ billion)



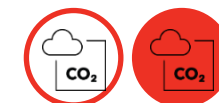
Source: OECD, IEA, Oil Change International, ODI, IISD, BloombergNEF.

## Carbon pricing

Carbon-pricing policy

National emissions covered by carbon price

Latest available carbon price (Sept-Oct 2022)



\*

0%

n/a

## Climate-risk disclosure

Investor climate-risk policy (used for ranking)

Mandatory TCFD policy

Corporate, financial and government TCFD supporters

Central bank climate-risk stress-testing

Environmental taxonomy



Under discussion

Under discussion

69 (↑20)

Under discussion

\*

# Indonesia

Non-Annex I party

Submitted in September 2022, Indonesia's new climate plan represents slightly more ambition than its previous pledge. Its new 2030 target seeks a 32% emissions cut relative to the government's business-as-usual scenario, up from 29% previously. This could rise to 43% if Indonesia receives financial and technical support from rich nations, up from 41% previously.

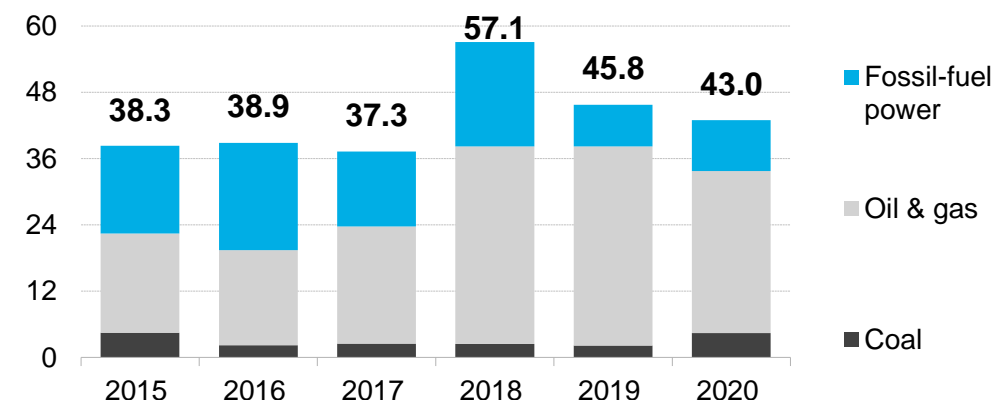
- Indonesia has undertaken major energy-subsidy reforms. In 3Q 2022, for example, the government raised fuel prices to mitigate rising subsidy costs. "State funds must be prioritized for people in need," President Joko Widodo said, adding that over 70% of fuel subsidies is used by wealthier car owners.
- Still, the government provides considerable fossil-fuel support, which rose 11% 2016-20. This increase has been largely driven by subsidized retail energy prices. State-owned enterprises play important roles in the energy sector, and investment by such players comprised 45% of total fossil-fuel support in 2020.
- Indonesia has kicked off official discussions on how to move away from coal power and made progress on its Energy Transition Mechanism. This platform should enable projects to shut coal-power plants and build renewables to access a mix of sovereign, multilateral and private investors.
- But a phase-out appears a long way off: its coal-power fleet expanded 23% in the last five years and its plans for new coal build would increase its total generating capacity by 70% -- more than any other G-20 country.
- A presidential decree on carbon pricing was issued in 2021 and a carbon tax and trading are set to begin in 2025, according to Coordinating Minister for Economic Affairs Airlangga Hartarto in a speech in October 2022. In the meantime, a voluntary carbon mechanism has been launched among state-owned enterprises.
- With only 13 TCFD supporters, Indonesia has no policy or other incentive pushing investors to publish in alignment with this framework. The Financial Services Authority, OJK, announced in its roadmap that it is considering whether to mandate the integration of ESG aspects into risk management from financial institutions. The aim is to increase resilience and mitigate environmental and social risks that may affect the financial industry. Indonesia also launched its environmental taxonomy in January 2022, but it is only used as a voluntary framework for now.

## Fossil-fuel support

Total (2016-20)	\$223 billion
Share spent on coal (2020)	10%
Share targeted at producers & utilities (2020)	59%



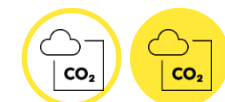
## Fossil-fuel support (\$ billion)



Source: OECD, IEA, Oil Change International, ODI, IISD, BloombergNEF.

## Carbon pricing

Carbon-pricing policy	* Scheduled to begin in 2025
National emissions covered by carbon price	0%
Latest available carbon price (Sept-Oct 2022)	n/a



## Climate-risk disclosure

Investor climate-risk policy (used for ranking)	Under discussion
Mandatory TCFD policy	*
Corporate, financial and government TCFD supporters	13 (↑5)
Central bank climate-risk stress-testing	*
Environmental taxonomy	✓ but only voluntary



# Italy

Annex I party

Italy is covered by the EU's binding targets to cut greenhouse-gas emissions by at least 55% by 2030 below 1990 levels and to reach net zero by 2050. It has also implemented some of the most ambitious and effective decarbonization policies, especially in the power and transport sectors. But more support will be required, in particular to tackle buildings and industry.

- Italy saw the biggest drop in fossil-fuel support out of the EU members of the G-20 – 13% over 2016-20. Nearly two-thirds of its 2020 total was in the form of tax breaks (mostly for consumers). These also accounted for most of the measures identified in Italy's peer review with Indonesia.
- The country has begun to decarbonize the power system and cut coal-fired generating capacity 12% over 2017-21. It has no new coal-fired power plants planned. For these reasons, it is still classified as 'moving in the right direction' on fossil fuels.
- However, its shift away from coal could be delayed as the fossil fuel's economics have significantly improved due to surging natural gas prices. Its current exit plan has a 2025 deadline.
- As a participant in the EU ETS, Italy has seen carbon prices average 78.89 euros (\$84.85) over the last year – up from 44.75 euros (\$53.38) in the preceding 12 months. Unlike France and Germany, Italy has no separate carbon pricing scheme of its own.
- Climate-risk assessment is required in Italy through the EU Taxonomy and the Sustainable Finance Disclosure Regulation and TCFD is the recommended framework. However, Italy has very few TCFD supporters, which would make it more difficult to implement a mandatory TCFD policy. The [Corporate Sustainability Reporting Directive \(CSRD\)](#), currently under development, should lead to more climate-risk disclosure from companies, potentially using the TCFD framework.
- Italy's central bank is part of the NGFS initiative and as a member of the EU, it took part in the European Central Bank's climate-risk stress-test. The results were [published](#) in 2022.

## Fossil-fuel support

Total (2016-20)

Share spent on coal (2020)

Share targeted at producers & utilities (2020)

COP26 COP27

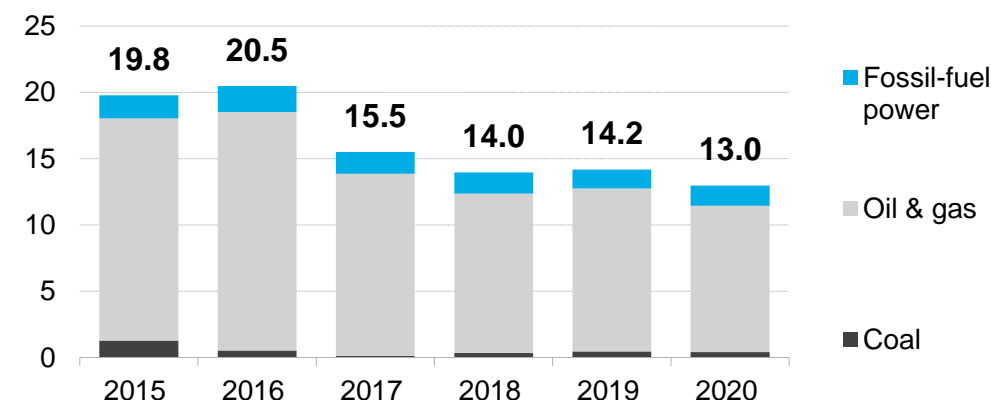


\$67 billion

3%

21%

## Fossil-fuel support (\$ billion)



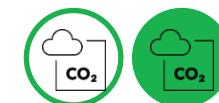
Source: OECD, IEA, Oil Change International, ODI, IISD, BloombergNEF.

## Carbon pricing

Carbon-pricing policy

National emissions covered by carbon price

Latest available carbon price (Sept-Oct 2022)



39%

\$68/metric ton

## Climate-risk disclosure

Investor climate-risk policy (used for ranking)

Mandatory TCFD policy

Corporate, financial and government TCFD supporters

Central bank climate-risk stress-testing

Environmental taxonomy



✓ In certain cases

29 (↑10)

✓ - EU level



# Japan

Annex I party

Japan will need to implement more domestic policies to meet both its 2030 goal of cutting emissions 46% vs. 2013 levels and its 2050 net-zero goal. While the government has offered more help to promote low-carbon fuels and decarbonize industry, its mandates applying to other areas of the economy have been insufficiently ambitious.

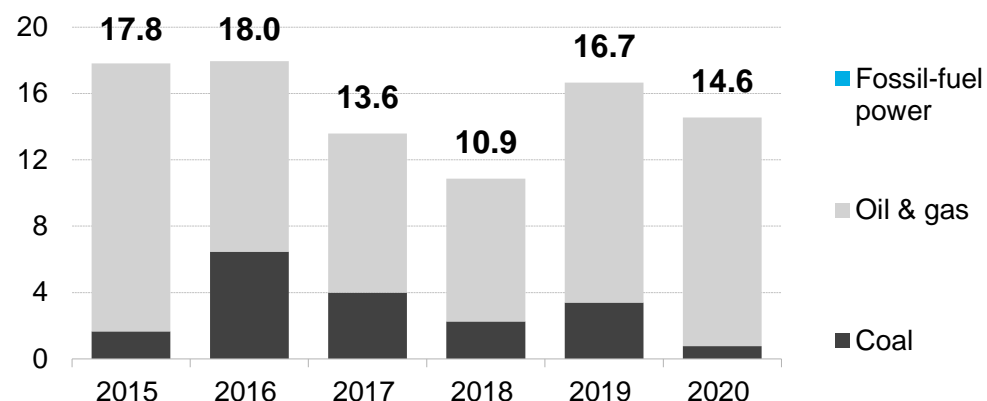
- Japan presents a mixed picture on providing public support to fossil-fuel use. It cut such help 7% 2016-20 and has a relatively low per-capita total (\$115 in 2020) compared with other OECD members. However, its public financial institutions continue to offer considerable support to fossil-fuel producers – both domestically and abroad.
- In 2020, the government said that, in principle, its institutions would not finance overseas coal-power plants in countries lacking decarbonization policies. However, this pledge came with exceptions similar to those included in the pledge all the G-7 nations later made. Japan is also one of the few Annex I parties in the G-20 with plans to add domestic coal-fired capacity.
- The government has yet to announce any increases to Japan's carbon tax, set at 289 yen (\$2) per metric ton. Introduced in 2012, it covers just over two-thirds of national emissions; but the low price means it has little effect. Focus has instead turned to supporting voluntary measures. In September, Japan launched a pilot program for its first carbon offset trading platform on the Tokyo Stock Exchange
- Japan has by far the highest number of TCFD supporters, and this could be due to the support showed by financial regulators. As of April 2022, companies listed on the 'Prime' Japanese market should enhance the quality and quantity of disclosure based on the TCFD recommendations or an equivalent framework.
- The Bank of Japan and the financial regulator published the results of the pilot climate-risk stress-test in August 2022. The aim was not to assess the quantitative impacts of climate change on the financial system and institutions. Instead, it analyzed the current methodologies used in the market and availability of data. The results show significant variation across financial institutions in calculating their climate-risk exposures.

## Fossil-fuel support

Total (2016-20)	\$68 billion
Share spent on coal (2020)	5%
Share targeted at producers & utilities (2020)	89%



## Fossil-fuel support (\$ billion)



Source: OECD, IEA, Oil Change International, ODI, IISD, BloombergNEF.

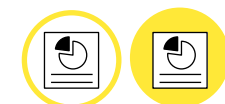
## Carbon pricing

Carbon-pricing policy	✓
National emissions covered by carbon price	68%
Latest available carbon price (Sept-Oct 2022)	\$3/metric ton



## Climate-risk disclosure

Investor climate-risk policy (used for ranking)	× Generic ESG reporting
Mandatory TCFD policy	✓ In certain cases
Corporate, financial and government TCFD supporters	1,062 (↑57)
Central bank climate-risk stress-testing	✓ results published in August 2022
Environmental taxonomy	×



# Mexico

Non-Annex I party

Mexico has not updated its NDC in nearly two years and even the latest draft includes a 2030 emissions target first announced in 2015. It has not pledged to reach net zero. Instead, President Andrés Manuel López Obrador's (AMLO) government has taken steps to impede decarbonization. These include efforts to reverse parts of the 2013-14 energy reform and the cancellation of the renewable auction program.

- Mexico made some progress in cutting fossil-fuel support over 2016-20. However, the lag in data means that this conceals the fact that the government has returned to extensively subsidizing fossil fuels under AMLO as prices have risen since 2021. This trend shows no sign of slowing down, given that AMLO is due to remain in office until 2024.
- AMLO has also prioritized development of state-owned oil and power companies in the name of “energy sovereignty”. As a result, investment by state-owned enterprises – notably Pemex – accounts for a sizeable slice (43% in 2020) of total fossil-fuel support.
- Using domestic resources, Mexico relies on oil and gas, rather than coal, for power. These technologies accounted for an aggregate 70% of electricity generation in 2021.
- Mexico’s emission-trading scheme is in its one-year ‘transition phase’, having begun as a pilot in 2020. It is due to be operational in 2023 and covers power and industry. At around \$2 per metric ton, the country’s carbon tax has little effect in terms of driving decarbonization.
- Mexico has a low number of TCFD supporters but in December 2021, the government launched a new working group to promote the use of the framework. Since 2020 the central bank has advocated the implementation of more regulation to enforce the disclosure of climate risks borne by financial institutions. However no significant progress has been reported.
- In 2021, as part of a conventional financial risk-management survey, financial institutions were asked about the actions to manage climate risks. About 57% of the surveyed institutions confirmed that they had analyzed their exposure to climate-related risks (compared with 36% in 2019), and 18% planned to do so during the next 12 months.

## Fossil-fuel support

Total (2016-20)

Share spent on coal (2020)

Share targeted at producers & utilities (2020)

COP26 COP27

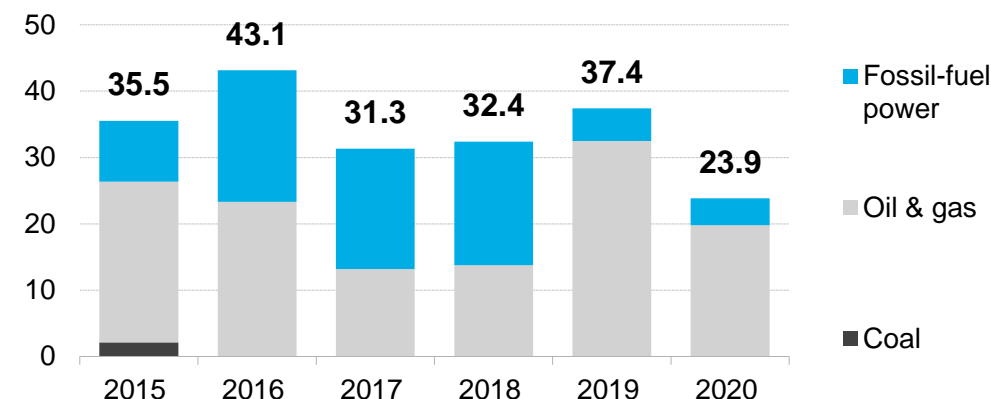


\$167 billion

0%

66%

## Fossil-fuel support (\$ billion)



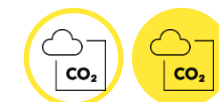
Source: OECD, IEA, Oil Change International, ODI, IISD, BloombergNEF.

## Carbon pricing

Carbon-pricing policy

National emissions covered by carbon price

Latest available carbon price (Sept-Oct 2022)



40%

\$2/metric ton

## Climate-risk disclosure

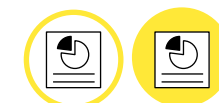
Investor climate-risk policy (*used for ranking*)

Mandatory TCFD policy

Corporate, financial and government TCFD supporters

Central bank climate-risk stress-testing

Environmental taxonomy



\* Generic ESG reporting for pension funds

\* Recommended only

38 (↑15)



\* Under discussion



# Russia

Annex I party

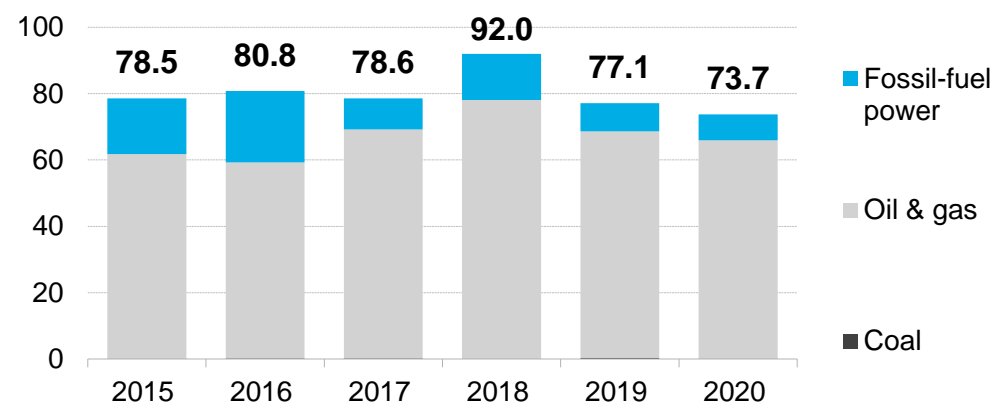
Russia last submitted an NDC in 2020 but retained its 2030 emissions target from an earlier plan, including the undefined condition: “taking into account the maximum possible absorptive capacity of forests and other ecosystems and subject to the sustainable and balance social-economic development of the Russian Federation”. President Vladimir Putin said in October 2021 that the country would seek to become carbon-neutral by 2060. The government will need to implement significantly more concrete policy support to achieve this pledge.

- Among the G-20, Russia provided the second-largest sum of fossil-fuel support in 2020 and the third highest on a per-capita basis. As it is a leading fossil-fuel producer, it is less than a surprise that almost 80% of support benefits producers and utilities. This is mainly thanks to investment by state-owned enterprises and tax breaks.
- With a history of relying on oil and gas for energy consumption, the government allocated little support to coal. It also reduced coal-fired generating capacity by 11% over 2017-21. However, it appears to have no plans for a phase-out.
- Russia does not have a national carbon price. But the pilot emission-trading scheme in Sakhalin began in September 2022, as part of the eastern region’s efforts to be carbon neutral by 2025. The introduction of the EU’s carbon border adjustment tax could accelerate Russia’s plans for emission trading.
- In November 2021, the Russian central bank issued the strategy for its sustainable finance working groups and one pillar focused on the integration of ESG factors in financial regulations to adapt to climate and social risks. Support for climate-risk disclosure is still weak in Russia, as illustrated by the country’s lack of TCFD supporters. Such initiatives could incentivize market participants to report using the framework.
- The country issued a non-binding green taxonomy in November last year. In late 2021, the central bank also announced that it was planning to run some climate risk stress-tests to evaluate the impact of the climate transition on Russia’s economy. It also aims to develop approaches that will allow banks to analyze climate risks when granting loans. The ongoing Ukraine war seems likely to delay some of these initiatives.

## Fossil-fuel support

Total (2016-20)	\$398 billion
Share spent on coal (2020)	0.1%
Share targeted at producers & utilities (2020)	79%

### Fossil-fuel support (\$ billion)



Source: OECD, IEA, Oil Change International, ODI, IISD, BloombergNEF.

## Carbon pricing

Carbon-pricing policy	State-level only
National emissions covered by carbon price	0.6%
Latest available carbon price (Sept-Oct 2022)	n/a

## Climate-risk disclosure

Investor climate-risk policy (used for ranking)	x
Mandatory TCFD policy	x
Corporate, financial and government TCFD supporters	11 (↑7)
Central bank climate-risk stress-testing	Under discussion
Environmental taxonomy	✓ but only voluntary

COP26 COP27



\$398 billion
0.1%
79%



State-level only
0.6%
n/a



# Saudi Arabia

Non-Annex I party

Saudi Arabia's updated NDC target is to reduce and avoid greenhouse-gas emissions by 278 million metric tons per year by 2030 compared to 2019 levels. It also pledged in October 2021 to reach net-zero emissions by 2060. The target does not necessarily mean that it will have to reduce oil output since it only applies to territorial emissions. Nonetheless, it will need more policy support to realize even these commitments. A stop-start approach to reverse auctions for clean power delivery contracts has stunted deployment. The Kingdom aims to generate half its energy from renewables by 2030, from less than 0.5% today, according to the 'Saudi Green Initiative' announced in March 2021. The strategy is part of the 'Vision 2030' plan to diversify Saudi's oil-reliant economy.

- Saudi Arabia has seen a slowdown in its efforts to reduce fossil-fuel support, although it did achieve a 25% decrease over 2016-20. The government undertook reforms in 2016 and 2018 to increase retail fuel and electricity prices, although they remained well below international standards.
- Nonetheless, it still provides by far the highest amount of fossil-fuel support per capita – at \$1,433 in 2020. This was double the sum for the runner-up, Argentina. Nearly 60% of the Kingdom's support in 2020 was via investment by state-owned enterprises.
- Saudi Arabia has no plans to introduce a domestic carbon tax or emissions-trading scheme. But its sovereign wealth fund, the Public Investment Fund, and stock exchange business, Saudi Tadawul Group founded a voluntary carbon market firm in October 2022.
- The newly created Regional Voluntary Carbon Market Company will offer guidance on offset purchasing to local companies and the Public Investment Fund hosted its first carbon credit auction in October 2022, distributing 1.4 million units to 15 regional and domestic companies.
- The 'Vision 2030' strategy, issued in 2016, aimed to promote environmental protection and launched the Public Investment Fund, which is meant to reduce Saudi Arabia's dependence on oil revenues.
- The Kingdom has no TCFD supporters or climate-risk policies.

## Fossil-fuel support

Total (2016-20)

Share spent on coal (2020)

Share targeted at producers & utilities (2020)

COP26 COP27

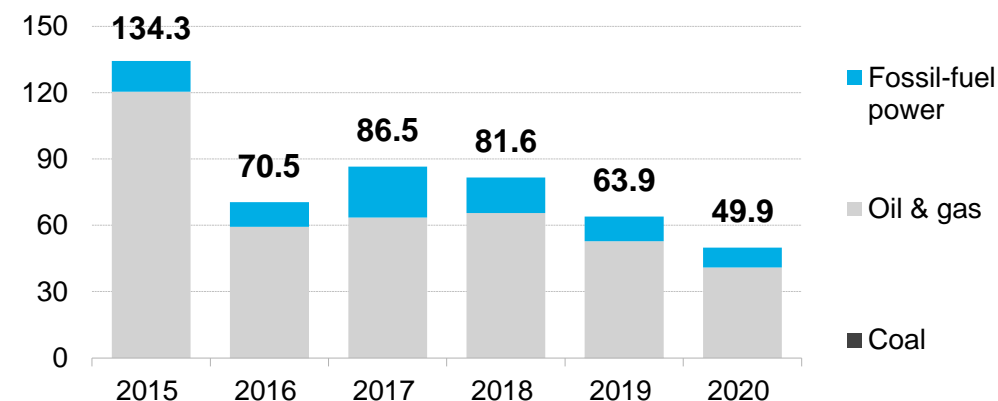


\$342 billion

0%

66%

## Fossil-fuel support (\$ billion)



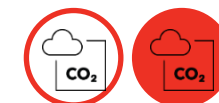
Source: OECD, IEA, Oil Change International, ODI, IISD, BloombergNEF.

## Carbon pricing

Carbon-pricing policy

National emissions covered by carbon price

Latest available carbon price (Sept-Oct 2022)



x

0%

n/a

## Climate-risk disclosure

Investor climate-risk policy (used for ranking)

Mandatory TCFD policy

Corporate, financial and government TCFD supporters

Central bank climate-risk stress-testing

Environmental taxonomy



x

x

0

x

x

# South Africa

Non-Annex I party

South Africa's latest NDC would see emissions fall 25% below 2019 levels by 2030. While this would not be in line with 1.5 degrees, it would be the third-most ambitious G-20 target of the non-Annex I parties. The new NDC also includes a net-zero target for 2050.

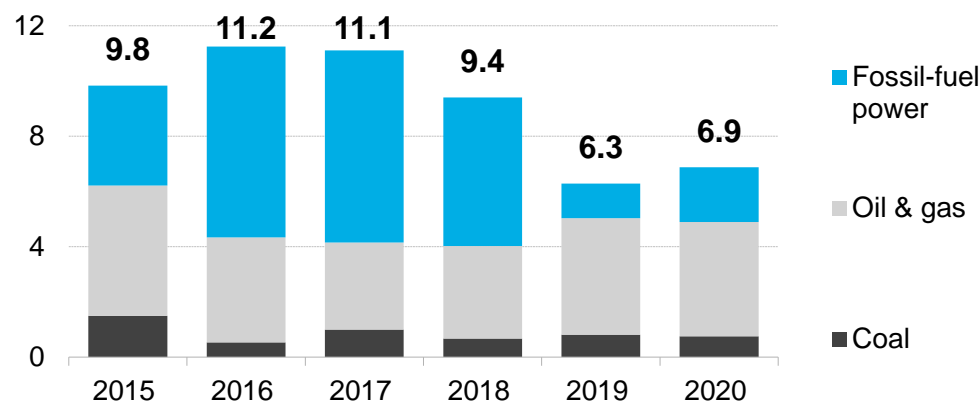
- South Africa is making mixed progress on fossil-fuel support, having achieved the second-largest decrease (37%) over 2016-20. This was mainly driven by reduced consumer energy price subsidies, although this was partly offset by growth in budget transfers and public finance. Its per-capita total in 2020 was also relatively low, at \$116.
- However, a lack of transparency on government funding means the South Africa data in this report is an underestimate. For example, it does not include the value of government bailouts, which totalled over \$12 billion in recent years, to state-owned utility, Eskom.
- The country also remains highly reliant on coal for power, accounting for 85% of 2021 generation. Its pipeline of projects, if built, would mark a 7% increase on current coal-fired generating capacity. This is relatively modest compared with other non-Annex I parties such as China (26%) and India (27%).
- South Africa's carbon tax rose to 144 rand (\$8) per metric ton in January 2022 – up from 127 rand (\$7). The rate is due to reach \$20 by 2025, \$30 by 2030 and \$120 beyond 2050. However, the government has opted to retain the system of generous concessions for three more years to the end of 2025. These enable companies to reduce their exposure to 5-40% of their emissions, depending on the sector. In addition, it means that the carbon tax will still not apply to Eskom – the country's biggest emitter – as well as other carbon-intensive sectors like agriculture and land use.
- The South African Reserve Bank plans to issue specific regulatory guidance in 2023 on how it expects its institutions to integrate climate risks into their risk-management, governance and reporting processes in accordance with its internal roadmap. This regulatory guidance will be aligned with emerging international best practice.
- The country also published its environmental taxonomy in March 2022, and it aims to develop a formal regulatory instrument by the end of 2023.

## Fossil-fuel support

Total (2016-20)	\$45 billion
Share spent on coal (2020)	11%
Share targeted at producers & utilities (2020)	37%



## Fossil-fuel support (\$ billion)



Source: OECD, IEA, Oil Change International, ODI, IISD, BloombergNEF.

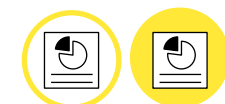
## Carbon pricing

Carbon-pricing policy	✓
National emissions covered by carbon price	80%
Latest available carbon price (Sept-Oct 2022)	\$8/metric ton



## Climate-risk disclosure

Investor climate-risk policy ( <i>used for ranking</i> )	* Generic ESG report for pension funds
Mandatory TCFD policy	Under discussion
Corporate, financial and government TCFD supporters	32 (↑12)
Central bank climate-risk stress-testing	Under discussion
Environmental taxonomy	✓





# South Korea

Non-Annex I party

South Korea elected a new president in March 2022 but Yoon Suk-yeol is not expected to announce a bolder 2030 emissions target in the foreseeable future. Nonetheless, its current goal would mean the biggest decrease on 2019 levels out of the non-Annex I parties in the G-20. Current policy programs are showing signs of effectiveness in terms of promoting electric vehicles, energy efficiency in buildings and deployment of energy storage.

- However, the government continues to provide substantial support to fossil fuels, with a 1% increase over 2016-20. Most (90%) of this aid goes to oil and gas producers and utilities.
- In particular, public financial institutions continue to provide significant support to producers and utilities. In 2017, Moon pledged to end state-backed financing of domestic coal projects and in April 2021, he announced a ban on financing coal-fired power plants abroad. However, South Korea has the biggest pipeline of projects relative to its existing coal-power fleet out of the OECD members in the G-20.
- The Korean Emissions Trading Scheme is a key component of the government's strategy to achieve its climate targets. However, the program requires reform if it is to drive decarbonization. Most permits are allocated for free (90% over 2021-25) and if a company emits more than its free allowances, it can borrow from the following year's quota.
- During his election campaign, President Suk-yeol pledged to curb free allocation but no policy has materialized as yet. Meanwhile the government is considering reform options for boosting market liquidity and price stability.
- In May 2021, South Korea's Financial Services Commission, along with 13 other institutions, officially declared their support for the TCFD.
- The financial regulator is considering whether to publish and promote guidelines on the management of climate risks in the financial sector. The authorities are due to conduct a pilot climate-risk stress-test in the financial sector during the second half of 2022. South Korea also published its environmental taxonomy in December 2021, but the framework is not legally binding,

## Fossil-fuel support

Total (2016-20)

Share spent on coal (2020)

Share targeted at producers & utilities (2020)

COP26 COP27

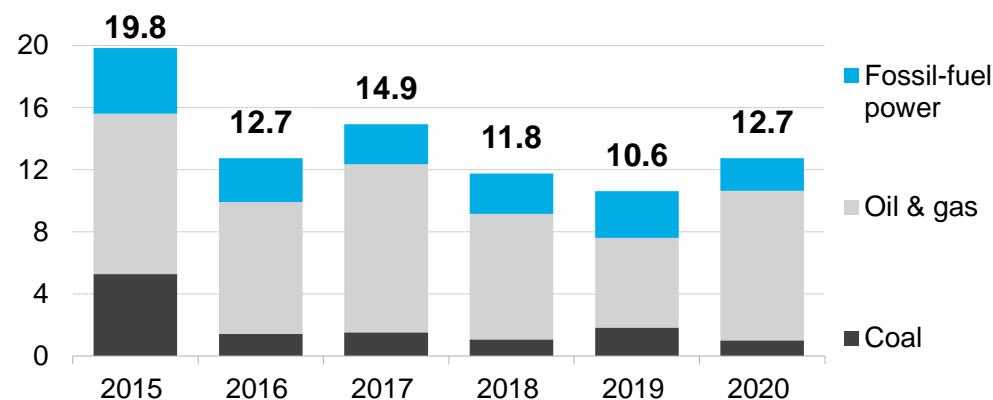


\$60 billion

8%

90%

## Fossil-fuel support (\$ billion)



Source: OECD, IEA, Oil Change International, ODI, IISD, BloombergNEF.

## Carbon pricing

Carbon-pricing policy

National emissions covered by carbon price

Latest available carbon price (Sept-Oct 2022)



73%

\$18/metric ton

## Climate-risk disclosure

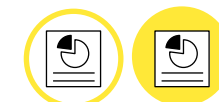
Investor climate-risk policy (used for ranking)

Mandatory TCFD policy

Corporate, financial and government TCFD supporters

Central bank climate-risk stress-testing

Environmental taxonomy



\* Generic ESG reporting for national pension fund

Only recommended

127 (↑55)

Pilot announced for H2 2022

Yes but only voluntary

# Turkey

Annex I party

Turkey ratified the Paris Agreement in October 2021 and submitted its first NDC. But if it achieves its target, greenhouse-gas emissions in 2030 would be double 2019 levels. The government has put in place little support for low-carbon technologies and has sought to exploit domestic fossil-fuel resources (mostly coal) in pursuit of greater energy independence through improved security of supply.

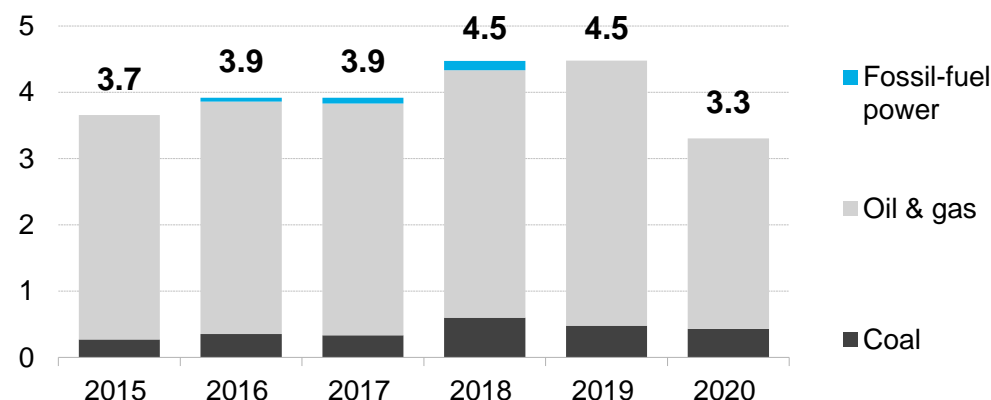
- Turkey reduced fossil-fuel support 45% over 2016-20 – the second-biggest reduction, after Mexico. As a result, it has the third-lowest amount per capita (\$40 in 2020). Most aid comes in the form of tax breaks for consumers.
- Turkey remains committed to reducing its reliance on imported coal by using domestic coal resources. It aims to reach 30GW of coal-fired power capacity by 2023, up from 20GW in 2021. Its current pipeline would be enough to achieve this target and expand existing coal-fired generating capacity by 61%. For these reasons, it is now classified as 'mixed progress'.
- Turkey has a CO<sub>2</sub> monitoring, reporting and verification system and an emission-trading scheme in development. One driver is to mitigate the impact of the EU's proposed carbon import tariff, as Turkey is a major supplier of industrial materials to the bloc. In 2019, it accounted for 35% of cement and 11% of steel imported by the EU.
- Turkey established its green action plan in 2021, listing all the measures the country aims to implement to promote sustainable finance. This includes the publication of its own taxonomy, which may be aligned with the EU policy, and mechanisms to incentivize sustainable finance. The regulators have yet to announce new regulations targeting climate-risk management specifically.

## Fossil-fuel support

Total (2016-20)	\$27 billion
Share spent on coal (2020)	13%
Share targeted at producers & utilities (2020)	14%



## Fossil-fuel support (\$ billion)



Source: OECD, IEA, Oil Change International, ODI, IISD, BloombergNEF.

## Carbon pricing

Carbon-pricing policy	* Under discussion
National emissions covered by carbon price	0%
Latest available carbon price (Sept-Oct 2022)	n/a



## Climate-risk disclosure

Investor climate-risk policy (used for ranking)	*
Mandatory TCFD policy	*
Corporate, financial and government TCFD supporters	22 (↑11)
Central bank climate-risk stress-testing	*
Environmental taxonomy	Under discussion



# UK

Annex I  
party

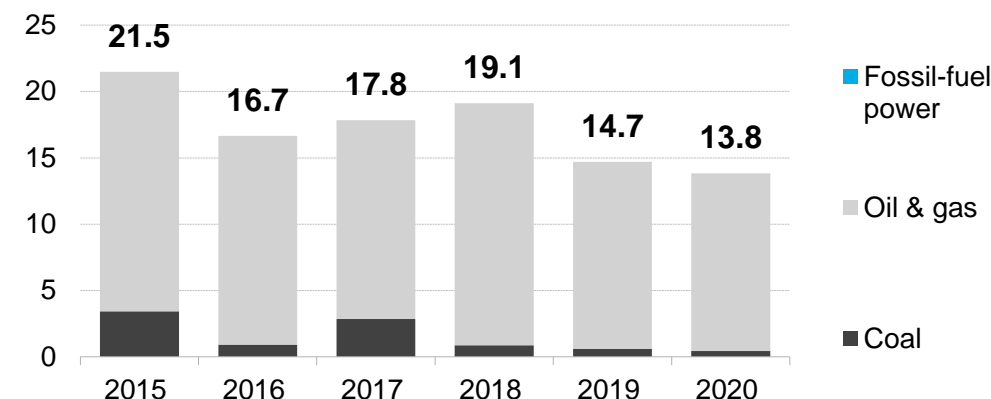
The UK's 2030 target would see emissions fall 44% below 2019 levels – in line with a 1.5-degree target. The government has begun to implement concrete policy support to meet this pledge as well as the legally binding net-zero goal for 2050. While the volume of this support rivals that of the EU member states, the UK falls down on policy predictability due to its history of sudden changes and reductions. Former Prime Minister Liz Truss commissioned in September 2022 an independent net-zero review meant to ensure that the UK reaches this goal “in a way that is pro-business and pro-growth”.

- The UK has been a leader in promoting the phase-out of fossil-fuel power generation. It further reduced coal-fired generating capacity by 6% over 2017-21 and its last coal-fired power plant is due to close in 2024.
- The government has also cut fossil-fuel support 17% over 2016-20. Aid for coal fell by a third in 2020 alone. Oil and gas tax breaks account for the remaining fossil-fuel support. The Conservative party leadership has been open to considering further oil and gas licensing rounds in the North Sea, among other measures to tackle the gas supply crisis.
- Since 2021, the UK has had its own cap-and-trade scheme, though it retains similarities with the EU ETS. The current phase runs until 2030, with reviews scheduled for 2023 and 2028. UK carbon permits have averaged \$98 per metric ton over the last year.
- The UK also has one of the most advanced climate-risk and sustainable finance strategies among the G-20 countries. In November 2020 it announced that all publicly listed UK companies will have to comply with TCFD requirements by 2023, and that TCFD-aligned disclosure will be mandatory across the financial and non-financial sectors by 2025. Pension funds have had to report on the risks of climate change to their investments since October 2021.
- The UK is developing a Sustainable Disclosure Regulation, which would mandate climate-risk reporting by all asset managers. The government is also working on a green taxonomy, and the working group responsible for its development delivered its recommendations in October 2022.
- The Bank of England undertook its first climate-risk stress-test in June 2021 and published the results in May 2022.

## Fossil-fuel support

Total (2016-20)	\$78 billion
Share spent on coal (2020)	3%
Share targeted at producers & utilities (2020)	32%

### Fossil-fuel support (\$ billion)



Source: OECD, IEA, Oil Change International, ODI, IISD, BloombergNEF.

## Carbon pricing

Carbon-pricing policy	✓
National emissions covered by carbon price	28%
Latest available carbon price (Sept-Oct 2022)	\$83/metric ton

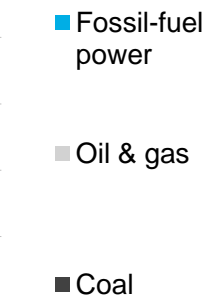
## Climate-risk disclosure

Investor climate-risk policy ( <i>used for ranking</i> )	✓
Mandatory TCFD policy	✓ Scheduled
Corporate, financial and government TCFD supporters	472 (↑88)
Central bank climate-risk stress-testing	✓
Environmental taxonomy	* In progress

COP26 COP27



Total (2016-20)	\$78 billion
Share spent on coal (2020)	3%
Share targeted at producers & utilities (2020)	32%



Carbon-pricing policy	✓
National emissions covered by carbon price	28%
Latest available carbon price (Sept-Oct 2022)	\$83/metric ton



Investor climate-risk policy ( <i>used for ranking</i> )	✓
Mandatory TCFD policy	✓ Scheduled
Corporate, financial and government TCFD supporters	472 (↑88)
Central bank climate-risk stress-testing	✓
Environmental taxonomy	* In progress

# US

Annex I party

The US has seen a significant improvement in climate policy in the last year: Most recently, the Inflation Reduction Act, passed in August, could provide at least \$369 billion to energy transition technologies, mostly in the form of new or enhanced tax credit schemes. This comes after the Infrastructure Investment and Jobs Act passed in 4Q 2021 allocated billions for clean technologies. These policies will put the US far closer to the Biden administration goal of halving economy-wide CO2 emissions by 2030 (versus 2005).

- The country performs well on fossil-fuel support, with the lowest per-capita total (\$34 in 2020) out of the G-20. The aid it does provide is mainly targeted at the oil and gas sector in the form of tax breaks. Its coal-power plant fleet shrank 6% over 2017-21 and while it has not announced a formal phase-out, it appears to have little capacity in the pipeline.
- The US has no federal carbon-pricing policies, but states have implemented their own programs. Oregon's carbon market began in January 2022 and Washington state's program is due to start in 2023. Pennsylvania joined the Regional Greenhouse Gas Initiative, which covers 12 Northeast and Mid-Atlantic states. Its impact is limited as it only applies to power plants and prices remain relatively low, at \$15 per metric ton compared with \$27 in California.
- The US has a very large pool of TCFD supporters even though the federal government only started to recommend the framework for climate-risk disclosure in April 2021. The climate-related disclosure rules proposed in 2022 by the Securities and Exchange Commission are partly based on the TCFD framework ([link](#) and [link](#)). If implemented, these policies would require ESG disclosure by companies and investors, enabling the US to keep pace with other major economies in terms of climate-risk disclosure policy. However, even if they are finalized, they face an uncertain future due to the anticipated wave of lawsuits and a potential new administration in 2025. There is also a lack of movement at state level. Even California, which tends to be at the vanguard of climate policy, failed to pass the first corporate greenhouse-gas disclosure [bill](#) in the country, after more than a year in the making. The US government has yet to announce that it is developing an environmental taxonomy or implementing climate-risk stress-testing for financial institutions.

## Fossil-fuel support

Total (2016-20)

Share spent on coal (2020)

Share targeted at producers & utilities (2020)

COP26 COP27

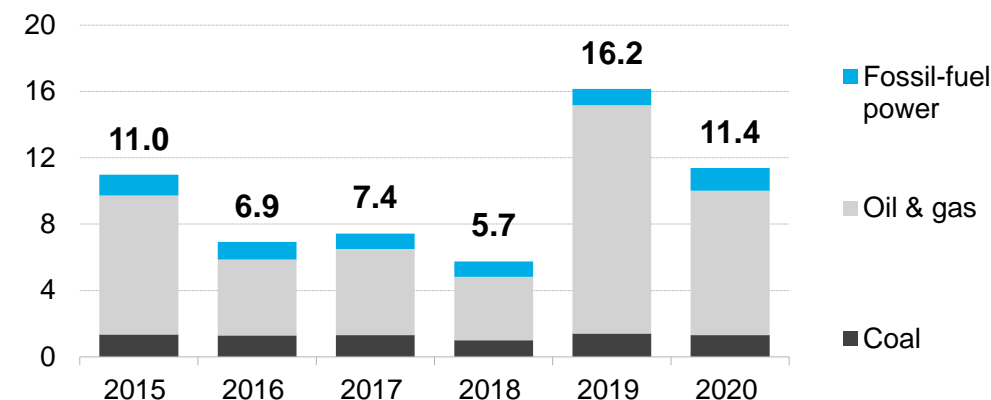


\$50 billion

11%

44%

## Fossil-fuel support (\$ billion)



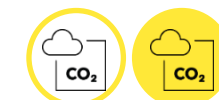
Source: OECD, IEA, Oil Change International, ODI, IISD, BloombergNEF.

## Carbon pricing

Carbon-pricing policy

National emissions covered by carbon price

Latest available carbon price (Sept-Oct 2022)



State-level only

8%

\$9/metric ton

## Climate-risk disclosure

Investor climate-risk policy (used for ranking)

Mandatory TCFD policy

Corporate, financial and government TCFD supporters

Central bank climate-risk stress-testing

Environmental taxonomy



Under discussion

Under discussion

436 (↑98)

\*

\*

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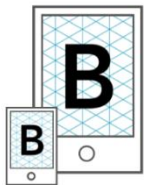
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