

# The Production Gap Executive Summary

## Key Findings

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To follow a 1.5°C-consistent pathway, the world will need to decrease fossil fuel production by roughly 6% per year between 2020 and 2030.

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Countries are instead planning and projecting an average annual increase of 2%, which by 2030 would result in more than double the production consistent with the 1.5°C limit.

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Pre-COVID plans and post-COVID stimulus measures point to a continuation of the growing global fossil fuel production gap, locking in severe climate disruption.

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To date, governments have committed far more COVID-19 funds to fossil fuels than to clean energy. Policymakers must reverse this trend to meet climate goals.

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Countries with lower dependence and higher financial and institutional capacity can undertake a just and equitable transition from fossil fuel production most rapidly, while those with higher dependence and lower capacity will require greater international support.

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Policymakers can support a managed, just, and equitable wind-down of fossil fuel production through six areas of action.

# Executive Summary

To limit warming to 1.5°C or well below 2°C, as required by the 2015 Paris Agreement, the world needs to wind down fossil fuel production. Instead, governments continue to plan to produce coal, oil, and gas far in excess of the levels consistent with the Paris Agreement temperature limits.

This report highlights the discrepancy between countries' planned fossil fuel production levels and the global levels necessary to limit warming to 1.5°C or 2°C. This gap is large, with countries aiming to produce 120% more fossil fuels by 2030 than would be consistent with limiting global warming to 1.5°C.

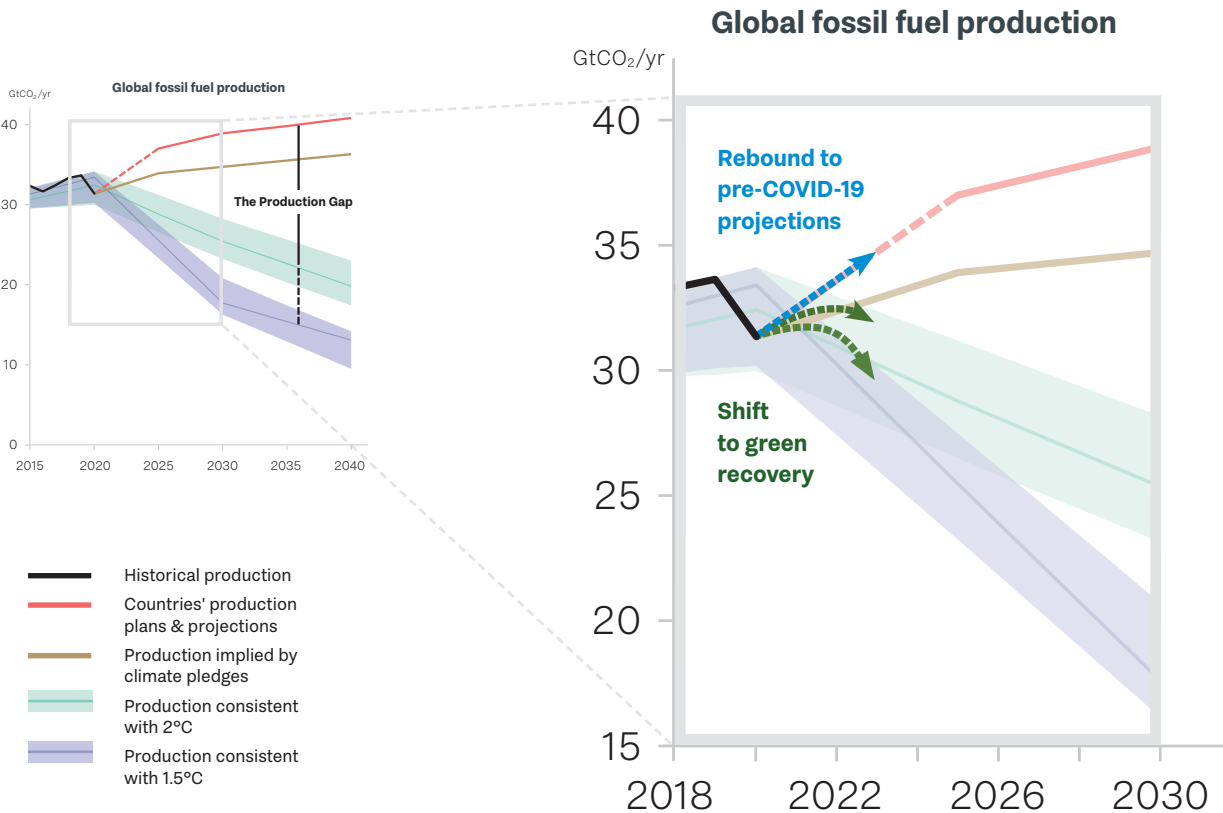
The COVID-19 pandemic and associated response measures have introduced new uncertainties to the production gap. While global fossil fuel production will decline sharply this year, government stimulus and recovery

measures will shape our climate future: they could prompt a return to pre-COVID production trajectories that lock in severe climate disruption, or they could set the stage for a managed wind-down of fossil fuels as part of a "build back better" effort.

This special issue of the Production Gap Report looks at how conditions have changed since last year, what this means for the production gap, and how governments can set the stage for a long-term, just, and equitable transition away from fossil fuels.

**Figure ES.1**

The fossil fuel production gap — the difference between national production plans and low-carbon (1.5°C and 2°C) pathways, as expressed in fossil fuel carbon dioxide (CO<sub>2</sub>) emissions — will continue to widen if countries return to their pre-COVID plans and projections for expanded fossil fuel production. Alternatively, strong green recovery efforts could put future fossil fuel production on a pathway much closer to Paris Agreement limits.



*The report's main findings are as follows.*

**To follow a 1.5°C-consistent pathway, the world will need to decrease fossil fuel production by roughly 6% per year between 2020 and 2030. Countries are instead planning and projecting an average annual increase of 2%, which by 2030 would result in more than double the production consistent with the 1.5°C limit (Figure ES.1).**

Between 2020 and 2030, global coal, oil, and gas production would have to decline annually by 11%, 4%, and 3%, respectively, to be consistent with a 1.5°C pathway. But government plans and projections indicate an average 2% annual increase for each fuel (Figure ES.2).

This translates to a production gap similar to 2019, with countries aiming to produce 120% and 50% more fossil fuels by 2030 than would be consistent with limiting global warming to 1.5°C or 2°C, respectively.

However, the future of the production gap is subject to large uncertainties, as the COVID-19 pandemic and its ramifications on fossil fuel supply and demand continue to unfold.

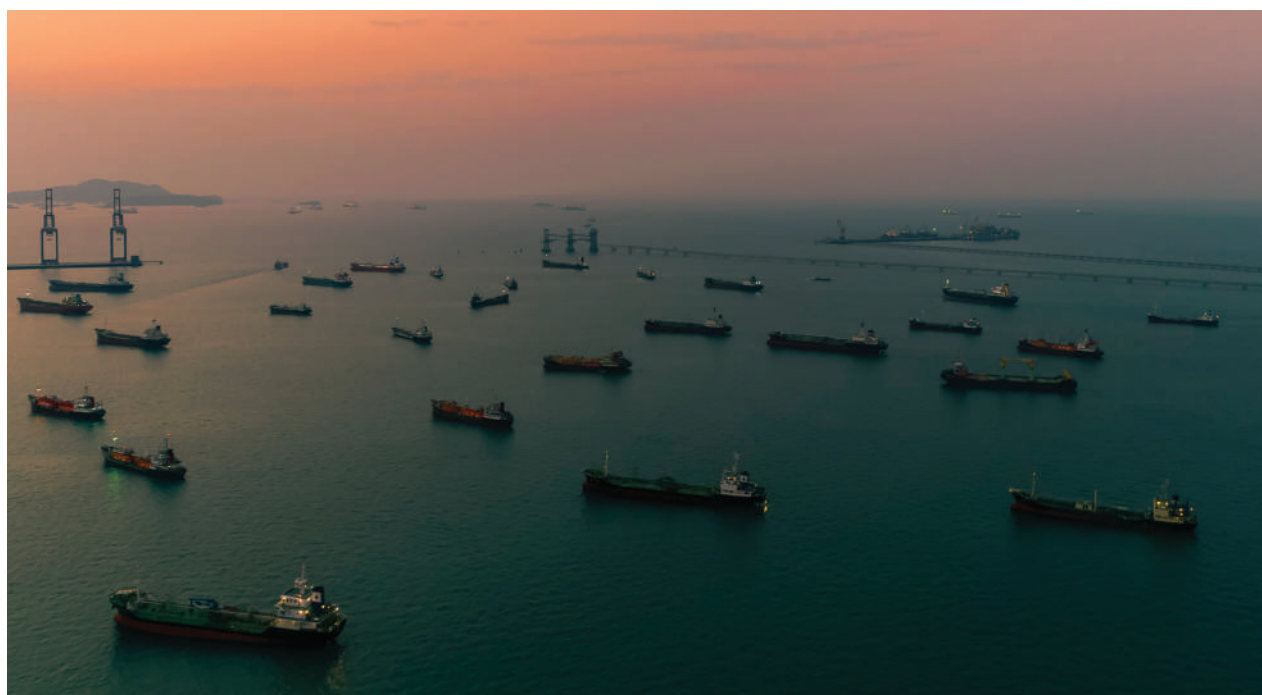
**The COVID-19 pandemic — and the “lockdown” measures to halt its spread — have led to short-term drops in coal, oil, and gas production in 2020. But pre-COVID plans and post-COVID stimulus measures point to a continuation of the growing global fossil fuel production gap, locking in severe climate disruption.**

Preliminary estimates suggest that global fossil fuel production could decline by 7% in 2020; more specifically, coal, oil, and gas supply could decrease by 8%, 7%, and 3%, respectively, in 2020 relative to 2019, primarily as a result of the COVID-19 pandemic and lockdown measures.

But countries are still planning to produce far more fossil fuels by 2030 than consistent with limiting warming to 1.5°C or 2°C. Of the eight governments that served as a basis for the 2019 production gap estimate (accounting for 60% of the global fossil fuel supply), seven have since updated their production plans and projections. Nearly all these updates occurred prior to the COVID-19 outbreak — and together, they pointed to a continuation of the very wide production gap.

In addition, before the COVID-19 outbreak, several countries not included in the gap analysis released or updated plans that point to intentions for major growth in oil production. For the 2020–2030 period, Mexico foresaw 50% growth, Brazil and the United Arab Emirates each planned for a 70% increase, and Argentina aimed for a 130% increase in oil production.

The 2021 Production Gap Report will include a more thorough analysis of the gap. But so far, all indications are that, overall, governments are planning to expand fossil fuel production at a time when climate goals require that they wind it down. If governments continue to direct COVID-19 recovery packages and stimulus funds to fossil fuels, these plans could become reality.



Alternatively, governments could use the momentum to plan a “green” recovery with a deliberate and managed wind-down of fossil fuel production — one driven by climate concerns, new economic and employment opportunities, and environmental and public health co-benefits. They could take the opportunity to begin a low-carbon transition, where fossil fuel production winds down in a sustainable and equitable way.

**To date, governments have committed far more COVID-19 funds to fossil fuels than to clean energy. Policymakers must reverse this trend to meet climate goals.**

As of November 2020, G20 governments had committed USD 233 billion to activities that support fossil fuel production and consumption (e.g. for airlines, car manufacturers, and fossil-based power consumers), as compared with USD 146 billion to renewable energy, energy efficiency, and low-carbon alternatives such as cycling and pedestrian systems (Figure ES.3).

Of the support going to fossil fuels, USD 23 billion is support specific to fossil fuel production. Some of this is directed towards environmentally beneficial activities; Canada, for example, committed USD 1.8 billion towards

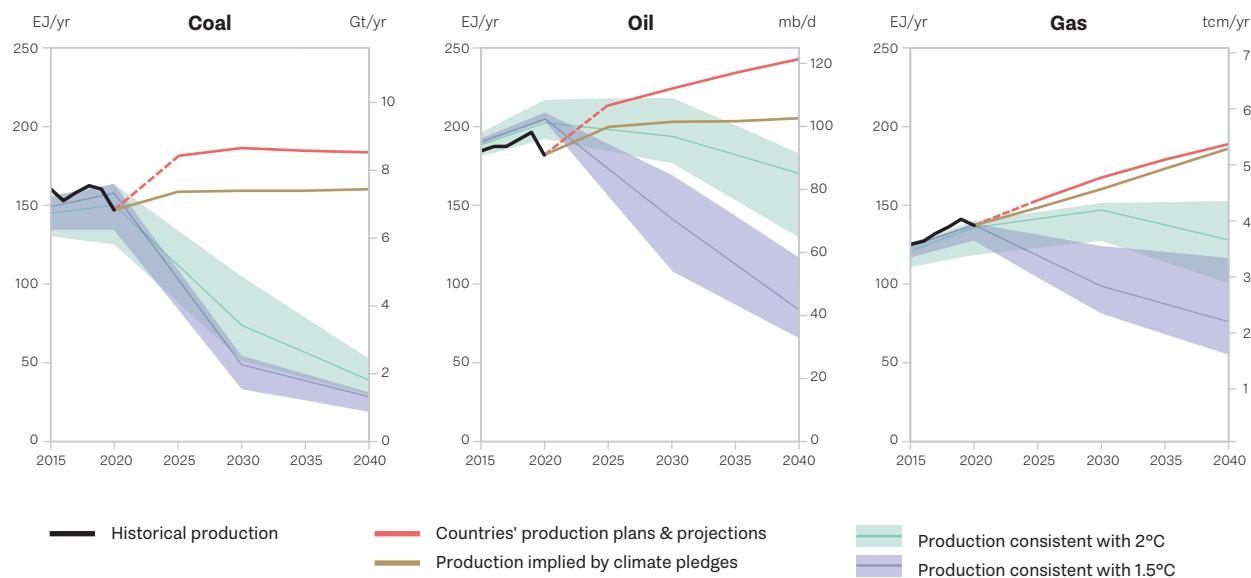
methane emission reduction and the clean-up of orphaned and abandoned oil and gas wells.

However, the vast majority of this fossil fuel production support has lacked any social, economic, or environmental conditions. Unconditional support to production includes tax cuts on fossil fuel exports in Argentina, equity and loan guarantees for the Keystone XL pipeline in Canada, a rebate on coal extraction revenue due to the government in India, a temporary tax relief package for the oil and gas industry in Norway, and reductions in oil and gas royalty rates and the weakening of environmental regulations in the United States.

In general, government responses to the COVID-19 crisis have tended to intensify patterns that existed prior to the pandemic: jurisdictions that already heavily subsidized the production of fossil fuels have increased this support, while those with stronger commitments to a transition to clean energy are now using stimulus and recovery packages to accelerate this shift. Unfortunately, most of the world’s major producing countries are in the former category; this needs to change, if the world is to meet climate goals.

**Figure ES.2**

Coal, oil, and gas production experienced short-term dips in 2020 amid COVID-19 restrictions. If countries rebound to the production indicated in their plans and projections, the production gap — shown here in energy and physical units — will grow most quickly for coal, but also rapidly for oil and gas.





**The COVID-19 pandemic has provided a reminder of the importance of ensuring that a transition away from fossil fuels is just and equitable. Countries that are less dependent on fossil fuel production and have higher financial and institutional capacity can transition most rapidly, while those with higher dependence and lower capacity will require greater international support.**

The COVID-19 pandemic — and the associated disruption — provides a strong rationale for countries to cooperate to wind down fossil fuel production in a coordinated way that avoids and minimizes social costs and helps create market stability. Developing countries have borne the brunt of the fossil fuel industry’s fragility during the pandemic, with lost oil revenue, for example, driving a 25% cut in government spending in Nigeria,

significantly reducing Iraq’s social benefits, and severely affecting Ecuador’s public sector.

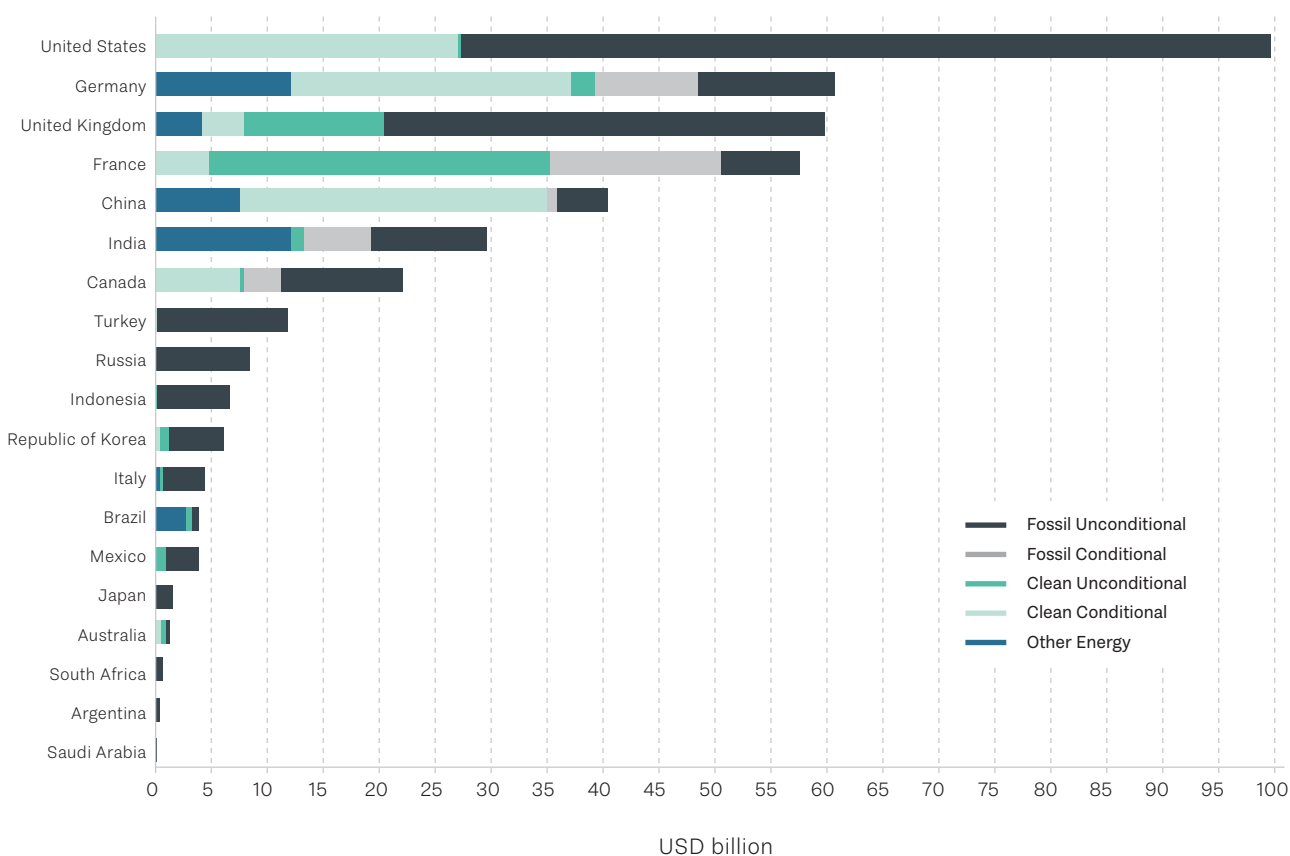
But a just and equitable transition away from fossil fuels offers the potential for alternative high-quality jobs, improvements in public health, a re-envisioning of urban areas, and a refocusing of economic systems on human well-being and equitably shared prosperity. This requires recognizing that countries’ transitional challenges differ widely, depending on their level of dependence on fossil fuel production and their capacity to support a transition.

Countries with limited capacity will need financial, technological, and capacity-building support from higher-capacity ones.

### Figure ES.3

COVID-19 recovery efforts in G20 countries have committed more public funds to fossil fuels than to clean energy, as of 11 November 2020, with significant differences by country (Energy Policy Tracker 2020).

## Public money commitments to fossil fuels, and clean and other energy, in recovery packages



**Policymakers can support a managed, just, and equitable wind-down of fossil fuel production through six areas of action: sustainable stimulus and recovery packages, increased support for just and equitable transitions, reduced support for fossil fuels, restrictions on production, improved transparency, and global cooperation.**

Six main areas of action for governments could help ensure a managed, just, and equitable transition away from fossil fuels that “builds back better” from the COVID-19 pandemic:

- 1. Ensure COVID-19 recovery packages and economic stimulus funds support a sustainable recovery and avoid further carbon lock-in.** Many countries have begun to make investments in areas such as renewable energy, energy efficiency, green hydrogen, and improved pedestrian infrastructure. But if this is accompanied by significant support for high-carbon industries, COVID-19 recovery measures still risk locking in high-carbon energy systems and development pathways for decades into the future. Governments that choose to invest in high-carbon industries to boost economies and safeguard livelihoods in the short term — perhaps because they see few near-term alternatives — can nonetheless introduce conditions to that investment to promote long-term alignment with climate goals.
- 2. Provide local and international support to fossil-fuel-dependent communities and economies for diversification and just, equitable transitions.** Each country and region faces unique challenges in a transition away from fossil fuels, depending on their dependence on production and their capacity to transition. Inclusive planning is essential, as is financial, technical, and capacity-building support for communities with limited financial and institutional capacity.
- 3. Reduce existing government support for fossil fuels.** Many long-standing forms of government support to fossil fuels — including consumer subsidies, producer subsidies, and public finance investment — stand in the way of a sustainable recovery to COVID-19 and need to be ended.

- 4. Introduce restrictions on fossil fuel production activities and infrastructure.** Restricting new fossil fuel production activities and infrastructure can avoid locking in levels of fossil fuel production higher than those consistent with climate goals. It can also reduce the risk of stranded assets and communities.

- 5. Enhance transparency of current and future fossil fuel production levels.** A key barrier to aligning energy and climate plans is the lack of clarity on levels of fossil fuel production and planned or expected growth. To improve transparency, countries could ensure that relevant production data are more readily and publicly accessible. They can also provide information on how their fossil fuel production plans align with climate goals, and on their support to the production of fossil fuels. Governments can also take steps to disclose their level of exposure to fossil fuel asset stranding and associated systemic risk, and to require companies within their jurisdiction to do so.

- 6. Mobilize and support a coordinated global response.** Policies to transition away from fossil fuels will be most effective if supported by countries collectively, as this will send consistent, directional signals to energy producers, consumers, and investors. International cooperation, both through established channels and in new forums, can support a just and equitable wind-down of fossil fuels. The Paris Agreement’s global stocktake, nationally determined contributions (NDCs), and long-term low greenhouse gas emission development strategies (LEDS) offer opportunities to facilitate a transition away from fossil fuel production through the UN climate change process. International financial institutions can help shift financial support away from fossil fuel production while scaling up support for low-carbon energy.

A digital copy of the full report is available at: <http://productiongap.org/2020report>