

Emissions are rising across the G20, again – warns a report

Despite net zero commitments and updated NDCs, the G20's climate action is leaving the world far from meeting the 1.5°C global warming limit

After a short period of decline, due to the COVID-19 pandemic, greenhouse gas emissions (GHG) are rebounding across the G20, with Argentina, China, India and Indonesia projected to exceed their 2019 emissions levels. This is one of the key findings of the Climate Transparency Report – the world's most comprehensive annual stocktake and comparison of G20 climate action.

In 2020, energy-related CO₂ emissions plunged by 6% across the G20. In 2021, however, they are projected to rebound by 4%. "Rebounding emissions across the G20, the group responsible for 75% of global GHG emissions, shows that deep and fast cuts in emissions are now urgently needed to achieve net zero announcements," says Gahee Han from the South Korean organisation Solutions For Our Climate, one of the lead authors of the report.

The report also notes some positive developments, such as the growth of solar and wind power among G20 members, with new records of installed capacities in 2020. The share of renewables in energy supply is projected to grow from 10% in 2020 to 12% in 2021. And in the power sector (energy used to make electricity and heat), renewables increased by 20% between 2015 and 2020, and are projected to become nearly 30% of the G20's power mix in 2021. At the same time, though, experts note that apart from the UK, G20 members have neither short- nor long-term strategies in place for achieving 100% renewables in the power sector by 2050.

In spite of these positive changes, dependence on fossil fuels is not going down. On the contrary, the consumption of coal is projected to rise by nearly 5% in 2021, while the consumption of gas has increased by 12% across the G20 from 2015-2020. The report finds that the growth in coal is mainly concentrated in China – the largest global producer and consumer of coal – followed by the US and India.

At the same time, recent announcements signal that most G20 governments are aware of the need for a transition to low-carbon economies. Net zero targets should be reached by latest 2050 to limit global warming to 1.5°C, something that according to the Climate Transparency Report, has been acknowledged by the majority of G20 governments. By August 2021, 14 G20 members had already committed to net zero targets covering almost 61% of global GHG emissions.

As stated in the Paris Agreement, each Party is expected to submit a Nationally Determined Contribution – a climate plan that lays out targets, policies and measures that each government aims to implement. By September 2021, 13 G20 members (including France, Germany and Italy under the EU's NDC) had officially submitted NDC updates, with six setting more ambitious 2030 targets. Yet, even if fully implemented, current targets assessed by April 2021 would still lead to warming of 2.4°C by the end of the century, experts caution. "G20 governments need to come to the table with more ambitious national emission reductions targets. The numbers in this report confirm we can't move the dial without them – they know it, we know it – the ball is firmly in their court ahead of COP26," says Kim Coetzee from Climate Analytics, who coordinated the overall analysis.

Key selected figures from the report:

- Due to governments' responses to the COVID-19 pandemic, **energy-related CO₂ emissions declined by 6% in 2020**. However, in 2021, CO₂ emissions are projected to **rebound by 4%** across the G20, with Argentina, China, India and Indonesia projected to exceed their 2019 emissions levels.

- The G20's share of **renewables increased** from 9% in 2019 to 10% in 2020 in Total Primary Energy Supply (TPES), and this trend is projected to continue, **rising to 12% in 2021**.
- Between 2015 and 2020, **the share of renewables** in the G20's **power mix increased by 20%**, reaching 28.6% of the G20's power generation in 2020 and is projected to reach 29.5% in 2021.
- From 2015 to 2020, the **carbon intensity of the energy sector** has **decreased by 4%** across the G20.
- **Coal consumption** is projected to **rise by almost 5% in 2021**, with this growth driven by China (accounting for 61% of the growth), the USA (18%) and India (17%).
- The **USA** (4.9 tCO₂/capita) and **Australia** (4.1 tCO₂/capita) have **the highest building emissions** per capita in the G20 (average is 1.4 tCO₂/capita), reflecting the high share of fossil fuels, especially natural gas and oil, used for heat generation.
- **Between 1999 and 2018** there have been nearly **500,000 fatalities** and close to **USD 3.5 trillion** of economic costs due to climate impacts worldwide, with China, India, Japan, Germany, and the USA being hit particularly hard in 2018.
- Across the G20, the current average market share of **electric vehicles (EVs)** in new car sales remains low at **3.2%** (excluding the EU), with Germany, France, and the UK having the highest shares of EVs.
- Between 2018 and 2019, G20 members provided **USD 50.7 billion/year of public finance for fossil fuels**. The highest providers of public finance were Japan (USD 10.3 billion/year), China (just over USD 8 billion/year), and South Korea (just under USD 8 billion/year).

Most G20 members also missed opportunities related to leverage COVID-19 recovery packages to promote climate mitigation goals. Only USD 300 billion of the total USD 1.8 trillion in recovery spending went to the much-heralded “green” recovery whilst fossil fuels continue to be subsidised. “It is extremely disappointing that a decade has passed since the commitment to rationalise and phase out inefficient fossil fuel subsidies was made, but G20 members are still pumping billions of US dollars into dirty fuels, which are causing climate change,” says Enrique Maurtua Konstantinidis from Fundación Ambiente y Recursos Naturales (FARN) in Argentina. In 2019, G20 members, excluding Saudi Arabia, provided at least USD 152 billion in subsidies for the production and consumption of coal, oil, and gas.

Effective carbon pricing schemes could encourage the transition to a low-carbon economy, according to the authors of the report. However, only 13 G20 members have in place some form of explicit national carbon pricing scheme. Brazil, Indonesia, Russia and Turkey are currently considering introducing such a scheme.

The Climate Transparency Report was developed by 16 research organisations and NGOs from 14 G20 members and compares the adaptation, mitigation, and finance related efforts of the G20; analyses recent policy developments; and identifies climate opportunities that G20 governments can seize. This is the 7th edition of the annual review of G20 climate action.

About Climate Transparency:

Climate Transparency is a global partnership of 16 think tanks and NGOs that brings together experts from the majority of G20 countries. Our mission is to encourage ambitious climate action in the G20 countries: we inform policy makers and stimulate national debate.

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“At the G20 Summit, G20 governments need to show their climate leadership and raise climate ambition to rapidly reduce emissions. Committing to coal phase-out will be the right and highly awaited step.”

<p>Prof. Dr. Peter Eigen, Co-Chair of Climate Transparency</p> <p><u>Contact information:</u> +49 172 305 9009 peigen@transparency.org</p> <p>German, English</p>	<p>“Combined G20 2030 targets presented in NDCs would lead to 2.4°C warming by the end of century. It is a clear signal that G20 governments must do more and urgently submit more ambitious near-term targets.”</p>
<p>Dr. Kim Coetzee, Climate Policy Analyst, Climate Analytics</p> <p><u>Contact information:</u> +27 82 89 85 059 kim.coetzee@climateanalytics.org</p> <p>English</p>	<p>“G20 governments need to come to the table with more ambitious national emission reductions targets. The numbers in this report confirm we can’t move the dial without them – they know it, we know it – the ball is firmly in their court ahead of COP26.”</p>
<p>Gahee Han, Research Associate, Solutions for Our Climate</p> <p><u>Contact information:</u> +82-10-4216-6336 gahee.han@forourclimate.org</p> <p>Korean, English</p>	<p>“Rebounding emissions across the G20, the group responsible for 75% of global GHG emissions, shows that deep and fast cuts in emissions are now urgently needed to achieve net zero announcements.”</p>
<p>Ipek Gençsü, Research Fellow, ODI</p> <p><u>Contact information:</u> +44 77 66 352 364 i.gencsu@odi.org.uk</p> <p>English, Turkish</p>	<p>“The political will is finally emerging to integrate climate action into financial decision-making, through central banks and public finance institutions. But the pace of change is too slow. Governments must immediately end the high levels of finance still being provided for fossil fuels. Developed countries must deliver on their commitment for adequate and high-quality climate finance.”</p>
<p>Pascal Charriau, CEO, Enerdata</p> <p><u>Contact information:</u> +33 4 76 41 43 72 pascal.charriau@enerdata.net</p> <p>French, English, Czech and Spanish</p>	<p>“What makes the Climate Transparency Report so special is that it covers adaptation, mitigation and finance, and uses the most recent data presented in a concise and visually attractive way – perfect for decision-makers with limited time.”</p>
<p>Argentina:</p> <p>Enrique Maurtua Konstantinidis, Fundación Ambiente y Recursos Naturales (FARN)</p> <p><u>Contact information:</u> +54 911 4070 0397 prensa@farn.org.ar</p> <p>Spanish, English</p>	<p>“It is extremely disappointing that a decade has passed since the commitment to rationalise and phase out inefficient fossil fuel subsidies was made, but G20 members are still pumping billions of US dollars into dirty fuels, which are causing climate change.”</p>
<p>Australia:</p> <p>Bill Hare, Climate Analytics</p> <p><u>Contact information:</u> +61 468 372 179 bill.hare@climateanalytics.org</p>	<p>“Australia has the G20’s highest per capita emissions – nearly three times the average – and yet the government has no credible climate policies, and no plan that doesn’t involve replacing fossil fuels with fossil fuels. The Prime Minister needs to adopt a stronger 2030 target that actually speaks to his country’s</p>

<p>English</p>	<p>incredible capability to grow its clean energy sector, and dump his gas expansion plans.”</p>
<p>Brazil:</p> <p>William Wills, CentroClima/COPPE/UFRJ</p> <p><u>Contact information:</u> +55 21 998719827 climatetransparency@lima.coppe.ufrj.br</p> <p>Portuguese, English</p>	<p>“Between 2015-2020, Brazil lost around 830 kha of the Amazon forest area per year, with a 44% increase in deforestation rates since 2018. Preservation of the Amazon is key to serve as a natural sink and to improve adaptive capacity in the face of climatic variability.”</p>
<p>Canada:</p> <p>Caroline Lee, Canadian Institute for Climate Choices</p> <p><u>Contact information:</u> +1 306-999-4328 dmitchell@climatechoices.ca</p> <p>English</p>	<p>“Canada has made recent progress on climate policy, but is not yet on-track for a 1.5°C world. The watershed moment has arrived: our targets are now legally binding, the technology needed to meet our 2030 target is available and affordable, and there’s a political consensus that we need to act. Now it’s time for Canada to deliver.”</p>
<p>China:</p> <p>Dr. Jiang Kejun, Beijing University</p> <p><u>Contact information:</u> +86 138 0119 9951 kjiang2015@163.com</p> <p>Chinese, English</p>	<p>“China is making great efforts to promote energy transition by developing non-fossil-fuel energy, and control coal use, and recently showed its ambition when announcing the end of financing overseas coal-fired power projects. In order to support the transition, China is strictly controlling energy intensive projects with fossil fuel use.”</p>
<p>Germany:</p> <p>Jan Burck, Germanwatch</p> <p><u>Contact information:</u> +49 177 888 9286, burck@germanwatch.org</p> <p>German, English</p>	<p>“Purely thanks to COVID-19 lockdowns, Germany reached its emissions goal in 2020. Bringing forward the coal phase-out from 2038 to 2030 should be a high priority of the new German government.”</p>
<p>India:</p> <p>Abhishek Kaushik, The Energy and Resources Institute (TERI)</p> <p><u>Contact information:</u> +91 11 246 82 100 abhishek.kaushik@teri.res.in</p> <p>Hindi, English</p>	<p>“India is the only developing country among the G20 countries with sufficient policies and actions to achieve its NDC goals by 2030. The country made significant progress in terms of its voluntary mitigation targets. It is aiming to deliver 450 GW of installed renewable capacity and has recently launched the National Hydrogen Mission to promote clean energy transition. However, there is a strong need of mobilizing international support (including climate finance) for resilient and inclusive growth in the country.”</p>

<p>Indonesia:</p> <p>Fabby Tumiwa, Institute for Essential Service Reform (IESR)</p> <p><u>Contact information:</u> +62 811 949 759 fabby@iesr.or.id</p> <p>Bahasa, English</p>	<p>“Indonesia’s power mix is already dominated by coal (63%), and the government plans to further expand its coal capacities. Instead, the country should use its high renewables potential.”</p>
<p>Japan:</p> <p>Dr. Kentaro Tamura, Institute for Global Environmental Strategies (IGES)</p> <p><u>Contact information:</u> +81 46 855 3812 tamura@iges.or.jp</p> <p>Japanese, English</p>	<p>“Fossil fuels make up 87% of Japan’s energy mix in 2021, more than it was before 2011. Japan needs to speed up its fossil fuel phase-out, as the share of fossil fuels globally needs to fall to 67% of global total primary energy by 2030 and to 33% by 2050 to keep global warming at 1.5°C.”</p>
<p>Mexico:</p> <p>Jorge Villarreal, Iniciativa Climática de México (ICM)</p> <p><u>Contact information:</u> +521 (55) 34557805 jorge.villarreal@iniciativaclimatica.org</p> <p>Spanish, English</p>	<p>“It is extremely disappointing that current energy policies hinder private renewable energy investment. No significant renewable power capacity was added in 2020, and there are no plans to increase capacity until 2027.”</p>
<p>South Africa:</p> <p>Bryce McCall, Energy Systems Research Group, University of Cape Town</p> <p><u>Contact information:</u> bryce.mccall@uct.ac.za</p> <p>English</p>	<p>“A just transition is extremely important for South Africa, which has the most coal-dependent economy in the G20. The country has high levels of poverty and unemployment, and has explicitly recognised a just transition as a priority in national policies and in its draft updated NDC.”</p>

Spokespersons quotes:

Christiana Figueres, Co-founder of Global Optimism and former Executive Secretary of the UNFCCC (2010-2016)

“Incrementalism was yesterday’s choice, it cannot be today’s. The damages coming at us from the climate crisis are accelerating exponentially. People are suffering the dire consequences and they want things to change. It’s time for G20 governments to get up to speed and deliver the green transition we need.”

Lewis Pugh, Endurance swimmer and UN Patron of the Oceans

“Emissions are rising again, and for a stable and safe future we need ambitious climate action now, especially from the G20. The Climate Transparency Report tells us where we are and what has to be done.”

Franziska Brandtner, Member of the German Bundestag, the European Policy spokeswoman

“Germany together with other G20 is responsible for 80% of global emissions. As the Climate Transparency Report rightly points out, these countries must urgently phase-out coal, expand renewables and halt fossil fuel subsidies to save us from more natural disasters.”

Sanjay Vashist, Director, CAN South Asia

“Asia can and should do better in rolling out renewables and converting the climate crisis into an opportunity for green and inclusive development. Announcements to reduce coal finance are a good first step. But they need to be followed by a plan to completely phase out coal, ensuring a just transition. The Climate Transparency Report will tell you how ambitious the climate policies of G20 countries are and where your country must do better to ensure a liveable planet.”

Laurence Tubiana, CEO, European Climate Foundation

“G20 countries are really late. Late with 2030 climate targets, fossil fuel phase-out plans and climate finance packages. The Climate Transparency Report reveals that the G20 needs to move mountains to ensure that we can still walk the narrow 1.5°C path. Luckily, it’s not impossible. Tasks are clearly defined. All we need are leaders of the world’s largest emitters stepping up and delivering their outstanding duties.”

Francisco Manzanares, Environmental Activist

“The present and future of the next generations and all humanity are at stake. The G20 countries are not doing enough to prevent the extinction of life on our planet. Young people and children expect decision-makers to take science seriously and listen to experts like Climate Transparency.”