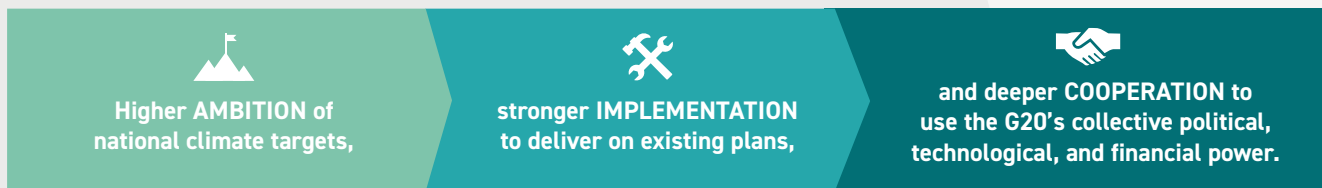


G20 ACCELERATION CALL

TIME IS RUNNING OUT

FOR OIL AND GAS

The Secretary-General of the United Nations, António Guterres, has called on the G20 to super-charge efforts to achieve the Climate Solidarity Pact through an Acceleration Agenda. For the G20, this entails that **“all big emitters make extra efforts to cut emissions, and wealthier countries mobilise financial and technical resources to support emerging economies in a common effort to keep 1.5°C alive.”** Three steps are key to accelerate climate action in the G20:



With the Acceleration Agenda, Secretary-General António Guterres urged governments to commit to reaching net-zero as close as possible to 2040 and emerging economies as close as possible to 2050. Specifically, he called for a number of actions to:



At the G20 Summit in New Delhi in September 2023, countries did not make progress on committing to phase out fossil fuels. In the run-up to the COP28 held in Dubai, United Arab Emirates, the words of Secretary-General António Guterres should be recalled: **“The world must phase out fossil fuels in a just and equitable way – moving to leave oil, coal and gas in the ground where they belong – and massively boosting renewable investment in a just transition.”**

This Acceleration Call takes stock of this transformation that is required of G20 members and identifies urgent recommendations for each country.

This Call by the Climate Transparency partnership demands the acceleration of climate action by G20 members in support of the Acceleration Agenda of the UN Secretary-General.



STOCKTAKE

G20 MEMBERS HAVE A GREAT RESPONSIBILITY, YET THEIR OVERALL AMBITION IS TOO LOW

G20 members account for around 85% of global GDP, 75% of international trade, and two-thirds of the world's population, and are responsible for around three-quarters of global emissions. The USA is estimated to be responsible for 25% of the global historical emissions, followed by the EU (22%), China (13%), Russia (6%), Japan (4%), and India (3%). Therefore, the G20 members carry the highest responsibility for climate action. And they should live up to it!

ALL G20 COUNTRIES SHOULD SIGNIFICANTLY RAISE THE AMBITION OF THEIR NDCs

NDCs ARE NOT 1.5°C COMPATIBLE

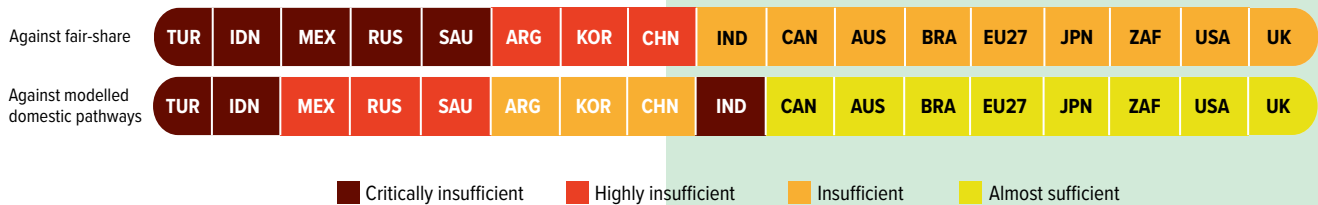
Nationally Determined Contributions (NDCs) contain country specific plans to realise the Paris Agreement. Collectively, however, the ambition is not high enough to stay below 1.5°C.



Find more at [Climate Action Tracker](#).

This fair-share assessment takes into account a country's domestic emission reductions and any emissions it supports abroad through the use of market mechanisms or other ways of support.

NDC target ratings



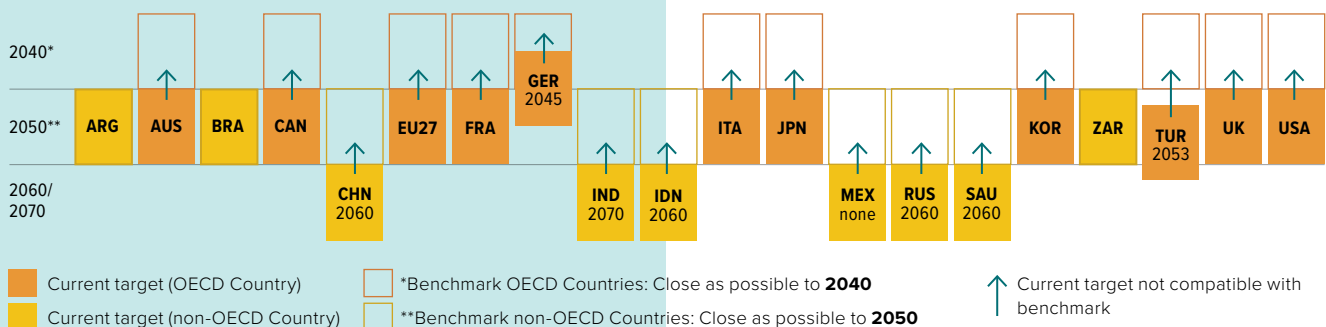
MID-CENTURY NET ZERO TARGETS OF G20 MEMBERS ARE NOT SUFFICIENT TO KEEP 1.5°C ALIVE

Net zero targets are key for long-term planning. Most members of the G20 have set net zero targets for 2050 or thereafter, which is much later than that called for by the UN Secretary-General.



Find out about the status of countries' Long-Term Targets at [Climate Watch](#).

G20 net zero targets



STOCKTAKE

THE G20 CONSUME AND PRODUCE THE LION'S SHARE OF GLOBAL OIL



G20 members consume almost three-quarters of the world's total oil. The USA alone uses 21% of global oil, China another 15%. At the same time, G20 members produce almost two-thirds of global oil output. Production and consumption rates are not sustainable if we want to keep global temperature rises below 1.5°C.

THE PHASE DOWN OF FOSSIL FUELS IS INEVITABLE

Sultan Al Jaber, COP28 President

TEN G20 COUNTRIES ACCOUNT FOR TWO-THIRDS OF GLOBAL OIL CONSUMPTION

Global domestic consumption of oil products grew by 3.5% in 2022 and is reaching record highs. It is expected to expand to 102.2 million barrels per day in 2023, with China accounting for over 70% of growth.

Currently, the USA and China use the most oil of all G20 members. Saudi Arabia has, by far, the highest oil consumption per capita among the G20, followed by Canada, the USA and South Korea, all three with a relatively similar levels of consumption. Introducing and implementing ambitious policies aiming at reducing consumption of oil in these countries would have the biggest impact on the global oil market and the search for alternatives.



For more information, see: [IEA Oil Market Report - August 2023](#), [Our World in Data](#).

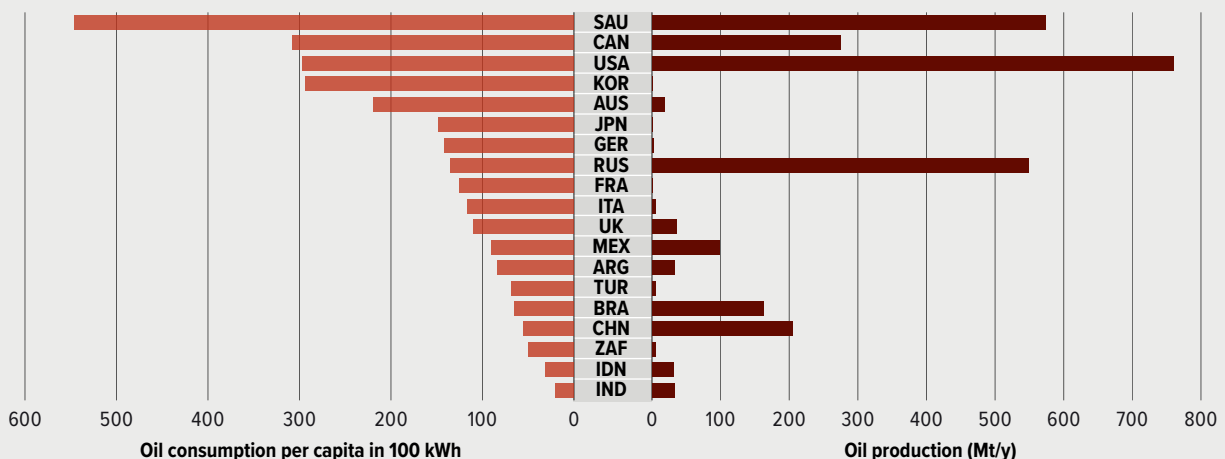
OIL PRODUCTION CONTINUES TO GROW

Oil production in the G20 has increased in recent years: up by nearly 5% in 2021, and almost 2% in 2022. The USA, Saudi Arabia and Russia are the top global producers. Together with Canada and China, these G20 members are responsible for over half of global oil production. In Saudi Arabia, production grew by 16% and in the USA by over 6%. In Russia, despite sanctions and a decrease of over 30% in exports to the EU, the output rose by 2%.



Find out more, visit: [World Energy Outlook](#) by Enerdata and [World Energy Review](#) by Energy Institute.

Oil consumption and production of the G20 in 2022



STOCKTAKE

THE G20 DOMINATE THE GLOBAL PRODUCTION AND CONSUMPTION OF GAS



G20 members use almost three-quarters of the world's total fossil gas production, with the USA, Russia and China as the highest consumers. The same countries are also the main global producers of gas. In total, G20 members produce almost two-thirds of global fossil gas, and have increased production by 4.8% in 2021, and another 1.4% in 2022.

GLOBAL DEMAND FOR OIL, NATURAL GAS AND COAL IS LIKELY TO PEAK BY 2030

Fatih Birol, Executive Director IEA

GAS DEMAND COULD PEAK BEFORE 2030

Saudi Arabia, Canada, Russia, the USA and Australia had the highest per capita gas consumption among G20 members in 2022. Some G20 members have increased their gas consumption in 2022, most notably the USA (+5.5%), Saudi Arabia (+4.7%), and Canada (+4.4%). Globally, natural gas consumption declined by 1.4%, for the first time since 2009. This has been driven, in part, by high gas prices world-wide, following the 2022 energy crisis, as well as increased deployment of renewable energy technologies, which are starting to outmatch gas for producing electricity – a trend that is likely to accelerate.



For more information, check: [IEA World Energy Outlook](https://www.iea.org/publications/freemove/default.aspx?product=oil&media=77777), [gasoutlook.com](https://www.eia.gov/gasoutlook.com), [Financial Times](https://www.ft.com).

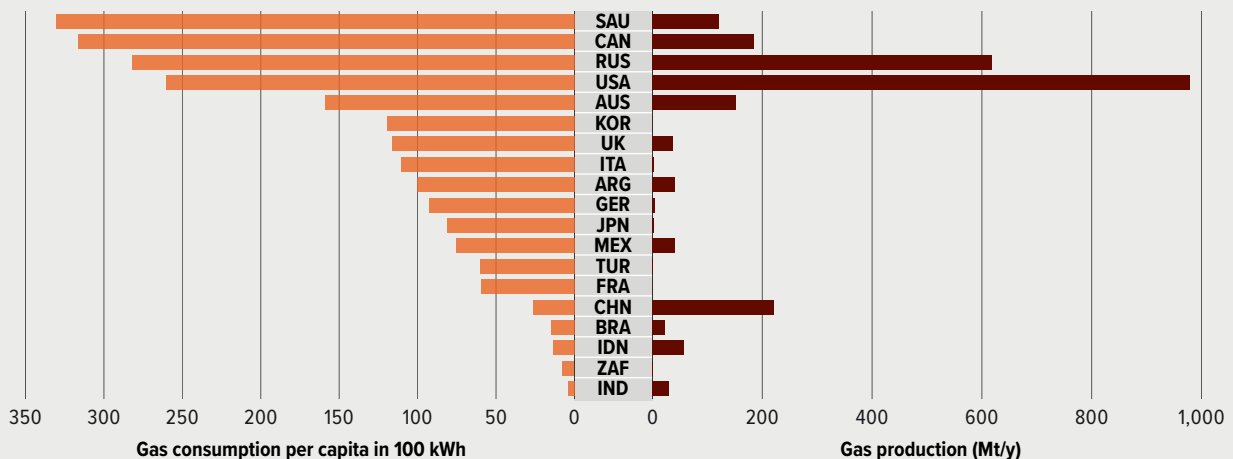
GAS PRODUCTION IN THE G20 IS STILL RISING

Among the five main global gas producers, four are G20 members: the USA, Russia, China, and Canada. In 2022, global gas production remained stable. This, however, was mostly the result of a lower level of Russia's production, which was offset by an increase observed in North America, the Middle East, China and Australia. The biggest increase in gas production has been observed in Australia (+7.3%), Canada (+7.3%), China (+6%), and the USA (+4.3%). The biggest decrease of gas production took place in Russia (-12%) as export to European countries declined in the aftermath of the Russian invasion of Ukraine.



Visit [Enerdata's website](https://www.enerdata.net) for more information.

Gas consumption and production of the G20 in 2022



STILL TOO MUCH FINANCIAL SUPPORT FOR OIL & GAS...

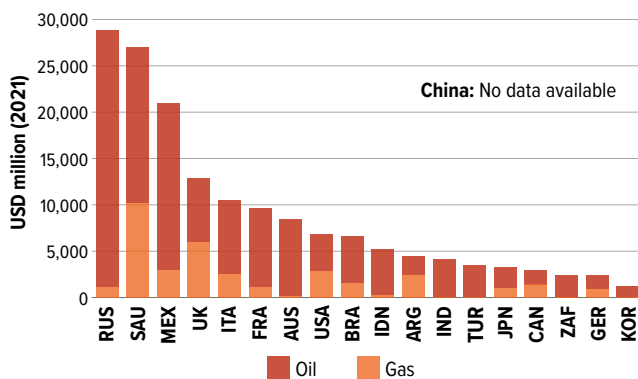
According to the International Institute for Sustainable Development, in 2022 the G20 members spent USD 1.4 trillion in financial support to fossil fuels, with almost a third driving investments in new fossil fuel production. This was more than double the amount G20 members spent on fossil fuel investments in 2019. Shifting these trillions towards renewable energy expansion, instead, is key to boosting their competitiveness and making investments in oil and gas less profitable.

G20 COUNTRIES SHOULD SHIFT SUBSIDIES FROM FOSSIL FUELS TO A JUST ENERGY TRANSITION

UNSG Acceleration Agenda

SUBSIDIES FOR OIL AND GAS REACHED NEW HIGHS IN 2022

Subsidies for oil and gas (2021)



Subsidies for fossil fuels encourage levels of production and consumption that are incompatible with climate goals. They render renewables less competitive than they would otherwise be, thus providing a disincentive to invest in the technologies required to meet net-zero. In the G20, subsidies reached USD 1 trillion in 2022, over four times the amount provided in 2021. This was largely due to a dramatic expansion in consumer support in response to peaking fossil fuel prices.



Read more in the [2023 Fanning the Flames Report](#) by IISD and the [Fossil Fuel Subsidy Tracker](#).

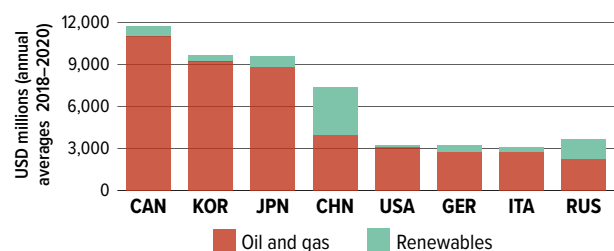
INTERNATIONAL PUBLIC FINANCE FOR CLEAN ENERGY STILL FAR BEHIND FINANCE FOR OIL AND GAS

In recent years, OECD countries of the G20 have continued to issue significant international public finance for oil and gas. The amounts exceed those for renewables by far.



For more, see the [Oil Change International Public Finance for Energy Database](#).

International public finance for oil and gas compared to renewable energy from G20 members (> USD 2 billion)



PRICING CARBON MAKES LOW-EMISSION ALTERNATIVES MORE COMPETITIVE AND CAN HELP FINANCE THE TRANSITION

Pricing carbon sets important financial incentives to guide the transition away from oil and gas. Carbon taxes, Emission Trading Systems (ETS) and other market-based mechanisms discourage production and consumption and make low-carbon alternatives more competitive. Revenues from pricing carbon can be used to finance the transition and provide support for the poorest and the most vulnerable. In recent years, carbon prices have increased across G20 economies, covering half of all CO₂ emissions from energy use, but with great divergence between countries.



Find out more in the OECD report [Carbon Pricing in Times of COVID-19: What Has Changed in G20 Economies?](#) and in the [Climate Transparency Report 2022](#).

...AND EVEN WORSE: FURTHER EXPANSION IS PLANNED

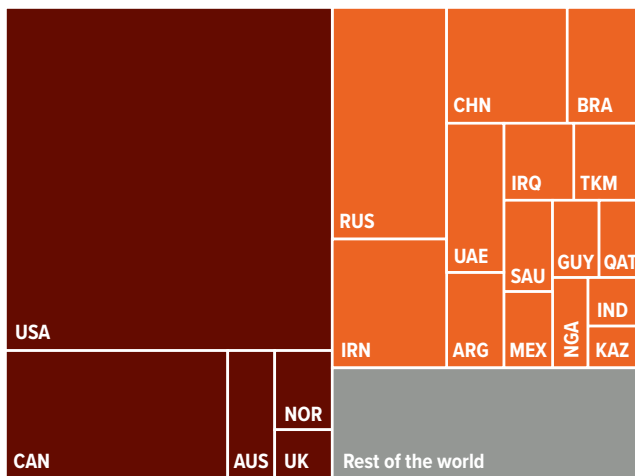
Instead of transitioning away from oil and gas, the exploration and development of new oil and gas fields continues unhindered, and there are no officially-communicated plans or strategies from the G20 outlining an end to exploration in the near- or mid-term. As long as there is a market, the drilling continues.

**G20 SHOULD STOP ANY
EXPANSION OF EXISTING
OIL AND GAS RESERVES**

UNSG Acceleration Agenda

A FEW COUNTRIES ARE RESPONSIBLE FOR THE MAJOR SHARE OF GLOBAL OIL AND GAS EXPANSION

Proportional responsibility for planned oil and gas expansion by country



Oil Change International analysis of data from Rystad Energy (July 2023)

The USA accounts for more than one-third of planned global oil and gas expansion through 2050, followed by Canada and Russia. Five countries with the highest economic phase-out potential – among them four G20 members – will be responsible for over half of all the planned expansions.

These countries have the greatest economic means (high incomes, diversified economies) to rapidly phase out production. These countries must not only stop expansion immediately, but also move first and fastest to phase out their production and pay their fair share to fund a just global energy transition.



Find out more in the **2023 Planet Wreckers Report** by Oil Change International.

OIL AND GAS REDUCTION PLANS ARE NOT INCLUDED IN THE MAJORITY OF LONG-TERM STRATEGIES

Only very few members of the G20 have formulated fossil fuel phase-out commitments in their Long-Term Strategies (LTS), and almost none of them mention an end to oil and gas exploration. Only France explicitly refers to a ban on oil and gas exploration since 2018 and banning existing concessions by 2040, but only on its own territory. Australia even commits to exploring gas beyond 2050 through its LTS. If the G20 are to achieve net-zero emissions by mid-century, much stronger commitments to reducing exploration and the use of oil and gas are needed.



Read more: Assessment of the G20 Members' **Long-Term Strategies** by NewClimate Institute and CEEW.

STOCKTAKE

THE G20 NEED TO TURN THEIR ENERGY MIX AROUND

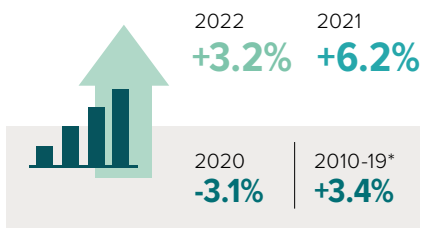
Almost half of the G20's current energy consumption stems from oil and gas. Due to insufficient share of renewables in the energy mix and a failure to decouple emissions from GDP growth through energy efficiency and energy saving, energy-related CO₂ emissions continue to rise.

THE WORLD MUST PHASE OUT FOSSIL FUELS IN A JUST AND EQUITABLE WAY

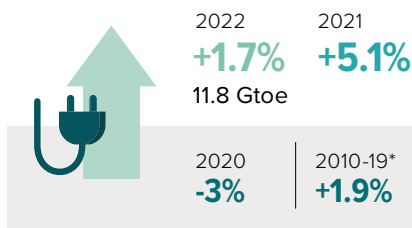
António Guterres, United Nations Secretary-General

G20 ENERGY CONSUMPTION IS RISING, MAKING THE DECOUPLING OF EMISSIONS FROM ECONOMIC GROWTH CHALLENGING

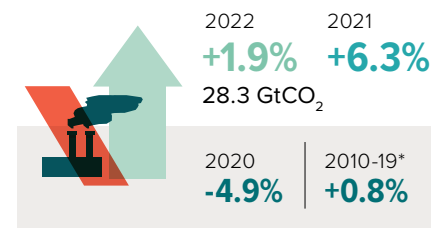
ECONOMIC GROWTH



ENERGY CONSUMPTION



CO₂ EMISSIONS



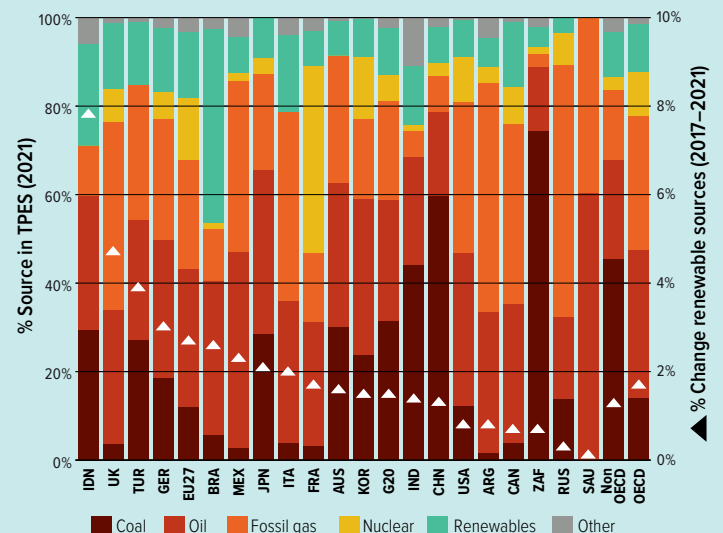
*%/year

Read more in the [Enerdata Global Energy Trends 2023 report](#).

ALMOST 50% OF G20 ENERGY COMES FROM OIL AND GAS

The average share of oil and fossil gas in the G20's Total Primary Energy Supply (TPES) was 49% in 2022. Saudi Arabia almost solely relies on oil and gas. South Africa, with only 18%, has the lowest level of oil and gas in their energy mix among all G20 members. While the share of renewable energy in the G20's primary energy supply is growing, it needs to accelerate significantly for a net-zero emissions scenario by mid-century. According to the International Monetary Fund (IMF), aligning infrastructure with net-zero emissions requires additional public investments in the range of 0.5-4.5% of GDP cumulatively over the next decade, with most estimates clustered around 2% of GDP.

Energy mix in G20 members



Read more on the development of the G20's energy mix in the [2022 Climate Transparency Report](#) and on scenarios towards net-zero, including the role of oil and gas in these scenarios, in the [IEA Net-Zero Roadmap Report](#).

ELECTRICITY WILL BE THE NEW OIL AND GAS

Net-zero emissions by mid-century will require a rapid transition towards low-emission solutions. In particular, the power sector needs to switch from fossil-based to renewable energy sources more rapidly to avoid significant commercial risks from stranded assets. Other key sectors such as transport and buildings are also starting to transition away from oil and gas towards electrification across the G20.

RENEWABLES WILL BE THE WORLD'S TOP ELECTRICITY SOURCE WITHIN 3 YEARS

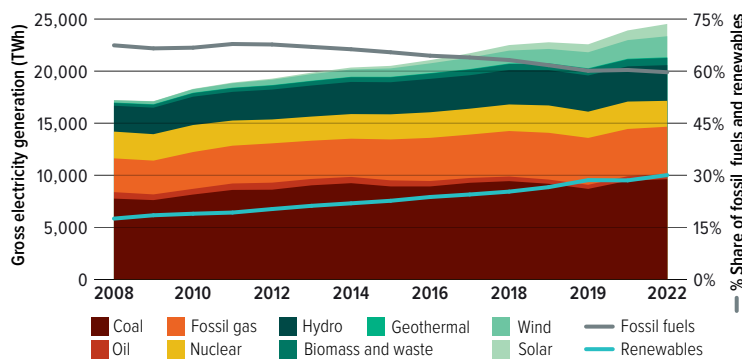
Jennifer Morgan, Federal Foreign Office of Germany

RENEWABLES WILL REPLACE OIL AND GAS IN MANY SECTORS

The IEA estimates that annual global investments in clean energy will have to ramp up from USD 1.8 trillion in 2023 to around USD 4.5 trillion in 2030.

The power sector is key to decarbonising all other downstream sectoral activities. The transition towards renewable electricity has already started in many sectors. It now needs massive investments, especially in emerging markets.

Electricity generation mix



Read more in the [2022 Climate Transparency Report](#)

THE ENERGY INTENSITY OF BUILDINGS MUST DECREASE

The built environment is indispensable to human living and is one of the key sectors to decarbonise. Oil and especially gas are used for heating and cooling, as well for cooking. In 2021, direct emissions from the buildings sector accounted for 8% of the energy-related CO₂ emissions in the G20.

Increased electrification in conjunction with renewable energy will drive down emissions from buildings energy use. Energy efficiency should be improved through the use of building envelope improvements. Electric heat pumps play a key role, being three to five times more efficient than fossil gas boilers and furnaces. Due to increasing gas prices and more stringent emissions requirements, sales of heat pumps globally grew by 11% in 2022 and by almost 40% in Europe.

For more information, visit: [IEA website](#) and [Decarbonising Buildings in Cities and Regions](#) by the OECD.

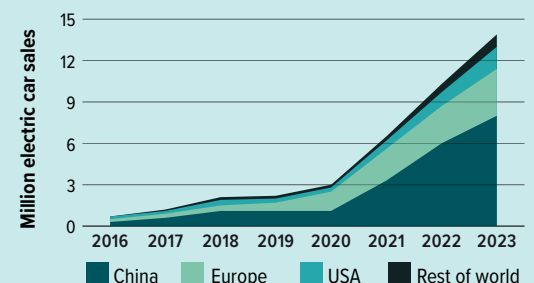
THE TRANSPORT SECTOR IS MOVING AWAY FROM OIL

Transport emissions are driven by oil consumption. The G20 transport sector currently accounts for more than half of global oil demand. With around 5.8 billion tonnes of CO₂ emissions from fuel combustion, G20 members are also responsible for almost 70% of global transport emissions, mostly in the OECD countries of the G20.

Yet, electrification is taking off. With 8.4 million vehicles, the EV fleet in G20 members was already eight times as large in 2020 as in 2015, and continues to grow. In China, the new sales of EVs hit a record of about 6 million vehicles in one year in 2022.

Find out more in the 2023 Report by [Agora Verkehrswende](#) and the [IEA Global EV Outlook 2023](#)

Electric car sales



Source: IEA data and statistics, last updated 26 April 2023

CARBON DIOXIDE REMOVAL: SECOND-BEST TO AVOIDANCE

In addition to deep emissions reductions, Carbon Dioxide Removal (CDR) technologies and practices will likely be necessary in order to limit global warming to 1.5°C. A spectrum of approaches exists to remove carbon dioxide from the atmosphere, but most are costly, and many technologies are still unproven at scale.

Find out more on Carbon Dioxide Removal options and caveats here: [IPCC Factsheet on CDR](#).

THE MOMENT FOR A JOINT EFFORT BY ALL G20 MEMBERS IS NOW

Achieving net-zero emissions by mid-century will require commitment by all – no country can solve the climate crisis alone. Led by the principle of common but differentiated responsibilities and respective capabilities, the G20 have many opportunities to cooperate politically, scientifically and economically on reducing the need to use oil and gas in order to keep the 1.5°C limit within reach.

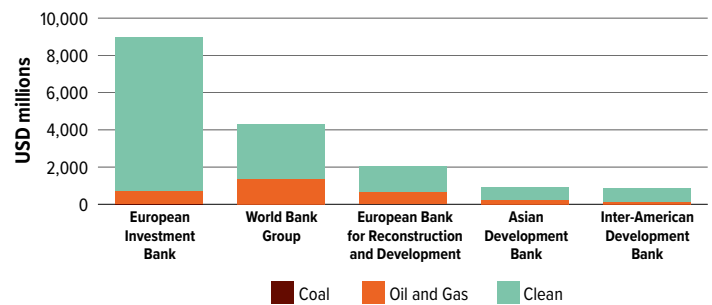
G20 COOPERATION IS ESSENTIAL IN DETERMINING THE COURSE THE WORLD TAKES

G20 New Delhi Leaders' Declaration

MULTILATERAL DEVELOPMENT BANKS PROVIDE SIGNIFICANT AMOUNTS IN SUPPORT FOR CLEAN ENERGY – BUT STILL TOO MUCH FOR FOSSIL FUELS

In 2021, 39 countries and public finance institutions signed the Statement on International Public Support for the Clean Energy Transition, a commitment to end new direct public support for the international unabated fossil fuel energy sector, including gas. Currently, however, gas development still receives significant amounts from MDBs. If the signatory countries take their commitment seriously, they will need to exercise their voting rights on the boards of MDBs to end these finance flows.

Known MDB energy finance, annual average (2019-2021)



Read more on G20 and MDB international energy finance by [Oil Change International](#).

COOPERATION ON DEVELOPING MARKETS FOR GREEN HYDROGEN IS EVOLVING

According to the IRENA, hydrogen will be needed to decarbonise end uses where other options are less mature or more costly, such as heavy industry, long-haul transport, and seasonal energy storage. All G20 members except Indonesia have formulated hydrogen strategies, not all focussing on hydrogen from renewables. Yet, global production, trade and demand is at an early stage. Some see green hydrogen as an opportunity for oil and gas companies to reinvent themselves in a post-fossil era.

G20 COUNTRIES SHOULD LEAD IN REDUCING METHANE EMISSIONS

Around 30% of the rise in global temperature is due to releasing methane into the atmosphere. Major sources of methane emissions include oil and fossil gas operations and fracking.

The Global Methane Pledge was launched at COP26 in Glasgow. Signatories commit to cooperate on collectively reducing methane emissions by at least 30% below 2020 levels by 2030. Fifteen G20 members have signed the Pledge (except China, India, Russia, South Africa, and Turkey).

Find out more in [Ecologic's Policy Brief](#) and in the [NewClimate Institute report on the role of green hydrogen](#).

Read more on the [Global Methane Pledge](#) and the 2023 IEA Report on [Emissions from Oil and Gas Operations in Net Zero Transitions](#).

PARTNERSHIPS TO MOVE BEYOND OIL AND GAS

Join the [Beyond Oil and Gas Alliance](#) and the [Fossil Fuel Non-Proliferation Treaty](#).

Costa Rica and Denmark launched the Beyond Oil and Gas Alliance at COP26 in Glasgow, aiming for a managed phase-out of oil and gas production, and raising the visibility of the topic in the international process. So far, the initiative has 17 national and subnational members and "friends", among them France and Italy, but no major oil or gas producers.

The Fossil Fuel Non-Proliferation Treaty Initiative is another strong transnational call by scientists and civil society that has been taken up by a number of Pacific states, transnational and faith organisations as well as individual elected officials, also from a number of G20 members. Most prominently, the European Parliament included a call for such a treaty in its formal COP27 resolution.

RECOMMENDATIONS

WHAT EACH G20 MEMBER SHOULD DO TO ACCELERATE A NET-ZERO TRANSITION

These recommendations show what concrete steps should be taken by G20 members, in line with their common but differentiated responsibilities and respective capabilities, in the areas of:



AMBITION



IMPLEMENTATION



COOPERATION



ARGENTINA



Argentina must **stop financing and developing fossil fuels projects and infrastructure**

Even though Argentina has committed to not exceed greenhouse gas (GHG) emissions of 349 MtCO₂e by 2030 and to achieve carbon neutrality by 2050, economic subsidies for energy have been increasing since 2017. In 2021, according to data from the Open Budget, supply subsidies to fossil fuel companies reached USD 1,175 million, representing an increase of 82% in comparison with 2020.

Considering the negative impacts of the different activities and processes involved in fossil fuel exploration and extraction, Argentina must stop financing and developing fossil fuels projects and its infrastructure, especially in Vaca Muerta. At the same time, Argentina must boost and deploy renewable energy projects through electricity system expansion.



Argentina needs to **elaborate and implement sectoral plans**

To achieve the international commitments, it is fundamental to involve the main sectors of the Argentinian economy, such as the energy and AFOLU sectors, which are responsible for 90% GHG emissions according to the last GHG National Inventory (2018).

In this sense, Argentina needs to elaborate and implement sectoral plans according to its commitments, while balancing communities' needs and the environmental, social, economic, and political implications. Referring to the energy sector, and in order to deploy renewable energies, Argentina should redirect fossil fuel supply subsidies to renewable energy projects and infrastructure, increase distributed generation capacity, and ensure provincial adherence to Law 27424 (Promotion of Distributed Generation of Renewable Energy).



Argentina needs to **expand renewables with international support**

Argentina needs international financial support to expand renewable energies and associated infrastructure, instead of supporting and financing extractive projects and infrastructure. However, financial support should not set conditionalities in fiscal, social, and environmental policies. In addition, Argentina needs technical and technological cooperation to develop national production and strengthen local economies for a just energy transition.



AUSTRALIA



Australia must **phase out its oil and gas production and consumption**

Oil and gas account for 64% of Australia's energy consumption and 20% of its power generation (2021/22). While fossil gas made up 18% of the power mix, 84% of domestic production went to LNG plants. The planned expansion of LNG production will further embed Australia's position as the world's largest LNG exporter. LNG plant expansions, new fracking projects, and offshore gas fields like Scarborough, Browse, and Barossa are incompatible with global efforts towards decarbonisation.



Australia needs to transition away from LNG exports and gas-fired power generation

Australia should phase out fossil gas exports by setting more ambitious environmental standards, restricting the use of false solutions such as offsets and CCS, and cutting support to the industry. Subsidies over the forward estimates are projected to reach USD 37 billion. Alongside this should be plans to phase out gas-fired power generation. Although Australia must phase out gas from its power system by 2035 to align with a 1.5°C compatible pathway, it has not set an exit year, and multiple states are planning to expand their gas capacities.



Australia should contribute to **fostering its trade partners' transition**

Thanks to its vast resources, Australia could contribute to its trade partners' climate transition by transitioning away from exporting fossil fuels and towards producing inputs for a carbon-free future. It needs to stop exploring distractions that allow continued fossil gas – and coal – extraction at the expense of its neighbours, such as the integration of international offsets in its domestic framework and plans to allow storage of CO₂ beyond its borders.



BRAZIL



Brazil must define precise goals to further **reduce its reliance on oil and gas**

Brazil already has almost 50% renewables in its energy matrix and 90% in power generation. In order to avoid a lock-in of the remaining fossil share, Brazil must define precise goals to further reduce its reliance on oil and gas. Brazil should amplify its efforts in renewable electricity generation, upgrade infrastructure, and meticulously craft a long-term strategy for net-zero emissions. An emphasis on biofuels in vehicle fuels can further bolster Brazil's green transition. The low carbon footprint of Brazil's energy grid provides a significant opportunity for green reindustrialisation.



Brazil must enhance its electric vehicle infrastructure, and **prioritise low-carbon fuels**

To accelerate its green transition, Brazil must enhance its electric vehicle (EV) infrastructure, prioritise low-carbon fuels, and steer clear of fossil fuel commitments. Drawing inspiration from the rapid transport electrification in fellow G20 nations, Brazil should intensify its drive away from oil-based transportation. Initiatives should encompass incentives for EV adoption, extensive development of EV charging stations, and fervent promotion of alternative low-carbon fuels, including biofuels and green hydrogen. Concurrently, Brazil must eschew investments that risk fossil fuel lock-ins, which can hinder progression towards renewables.



Brazil should lead cooperative G20 initiatives towards net-zero

Brazil ought to be a proactive participant in G20 collaborative initiatives, harness its bioenergy prowess, and advocate for united green endeavours. Endowed with an abundance of resources and expertise in bioenergy, Brazil can make a marked impact on the G20's renewable energy discourse. By forging partnerships, Brazil can embark on joint research and developmental projects with EV manufacturers, potentially drawing them into the country and accelerating technology adoption. Furthermore, Brazil should lead collaborative efforts in establishing standardised lexicons and trading parameters for green hydrogen and other renewable energies, fostering a collective commitment to a sustainable future.



CANADA



Canada must **phase out its oil and gas production, consumption, and expansion** through strict strategies and policies

The oil and gas sector is Canada's highest emitting sector and one of the only sectors in Canada where emissions have grown since 2005. Some large-scale oil and gas companies have broken away from previous commitments to invest in reducing emissions, and have moved forward with projects that will speed up the development of oil at lower costs. Canada must implement stricter strategies and policies on oil and gas emissions with no gaps that would allow further funding or expansion of the sector. This strategy must include phasing out oil and gas production and expansion to align with the global effort towards decarbonisation while protecting important and diverse Canadian nature.



Canada must create a long-term strategy for a just transition that includes the equal opinions and knowledge of Indigenous Peoples and communities

Canada must implement a long-term strategy that stably and adequately positions communities and employees that rely heavily on the oil and gas sector in preparation for the transition to low-carbon energy. The strategy must ensure the voices, knowledge, and leadership of Indigenous Peoples and communities are equally included and valued. The strategy must also include the enhancement of innovation and research of low-carbon energy options that are low-cost and accessible to all communities in Canada. Canada must also acknowledge the damage the oil and gas sector has directly and indirectly caused to communities around Canada as well as what it has contributed to global emissions.



Canada must **lead by example** as a giant oil producer to assist other countries in the transition away from oil and gas

Due to its vast resources and historical involvement in the oil and gas sector, Canada has the opportunity and responsibility to lead by example and assist other countries in a just transition. Recently, Canada has announced the elimination of subsidies to produce fossil fuels in Canada and, as long as strict policies and guidelines are in place, this action could show other countries that it is possible for giant oil producers to reduce oil and gas subsidies. Canada must use finances and enhance its innovation and research of low-carbon energy options that are low-cost and accessible to support other countries and domestic communities. Canada must respect climate commitments to collectively reach goals with regards to the oil and gas sector and acknowledge its shortcomings as a country.



CHINA



China needs to **keep its strong pace in vehicular electrification and green hydrogen production**

China is leading the world for EV penetration and green hydrogen development. From January to September 2023, the sale of new energy vehicles (EVs and HPVs) reached more than 6.8 million, and it is expected to be more than 9 million in 2023. Another significant marker of progress is the development of renewable-energy-based hydrogen production to replace fossil-fuel-based petro-chemical products. Nearly 200 kt green hydrogen was in production by September 2023, and it is expected to be more than 1 mt by 2025.



China needs to transfer its electrification knowledge to the building sector

In order to speed up the process to control gas and oil consumption, China may need to develop concrete development targets and plans to accelerate the electrification process in buildings.

Such a regime will also require the planning and development of infrastructure facilities to support the electrification in buildings. In the meantime, rapid development of ultra-low-energy-use technologies is crucial for electrification in buildings, and needs strong support from the Chinese government.



China should cooperate with other G20 members to hasten the decarbonisation of the building sector

There are not many best practice examples for far-reaching building electrification across the world. More collaborative work is needed to learn from case studies.



EUROPEAN UNION



The EU should move beyond its current ambition for emissions reductions (55%) and aim for at least **65% emissions reductions by 2030**

The EU is expected to overachieve its current 55% emissions reduction target for 2030 with current legislation enabling at least a 57% reduction, as announced by the EU's former Climate Chief. A fair share of emissions reductions would necessitate a stronger reduction, by at least 65%.

The EU must urgently address this and introduce a stronger reduction target of at least 65% in its next NDC. The Commission should aim to phase out fossil gas by 2035 at the latest and fossil oil by 2040 at the latest. Specific legislative pieces like the Energy Performance of Buildings Directive (EPBD) show that the phase-down is already in motion and higher ambition is within reach.



The European Union must **stop fossil infrastructure expansion, including for LNG**

The EU decided to include new gas-fired and nuclear plants in its taxonomy to be recognised as a transitional energy source. Labelling gas as "green" was a move in the wrong direction, and the EU should revise its taxonomy to reverse this and exclude gas.



The EU must convey to international partners that fossil gas is past its peak

The recent increase in LNG imports in Europe is sending the wrong signals to international partners. Existing contractual relationships should ensure that strong methane regulations are applied in fossil gas imports.

The EU and all of its Member States should join international initiatives aimed at phasing out oil and gas, such as Beyond Oil and Gas Alliance (BOGA) or the Fossil Fuel Non-Proliferation Treaty.



FRANCE



France needs to confirm its 2030 climate target

France is currently in the process of revising its 2030 GHG reduction target in accordance with the EU "Fit-for-55" strategy. The national target should reach at least 55% net emissions reductions between 1990 and 2030, in conjunction with the objective of achieving climate neutrality by 2050. In line with this ambition, the targets for the deployment of renewable energy (currently: reaching a 33% share in final energy consumption by 2030 compared to 19.3% in 2021) should also be increased.



France needs to **accelerate the deployment of renewable energies in all sectors**

France has been lagging behind its national renewable energy target for 2020, mostly in the heating sector. Achieving decarbonisation targets for 2030 requires a strong focus on electrification in all sectors (mostly transport, buildings, and industry), based on an acceleration of deployment of renewables in the power sector. Some of it can be achieved with the simplification of administrative procedures and measures aimed at increasing local acceptance.



France should play a leading role in strengthening the international coalition to phase out fossil fuels

Based on existing commitments and its national strategy, France should be a frontrunner in international cooperation to phase out all fossil fuels. France is a core member of the Beyond Oil and Gas Alliance. It needs to harness its international bargaining power to bring the Alliance forward, and to achieve an international oil and gas phase-out target.



GERMANY



Germany must align ambition in the transport and buildings sectors with the national climate target

Germany has a national target for climate neutrality by 2045. Sectoral policies and short-term policies urgently need to be adjusted to align with the national target. Especially in the transport and buildings sector, ambition is critically insufficient. The respective ministries are failing to comply with the German Climate Law, which requires them to develop an emergency plan if they miss their sectoral targets.



Germany has to implement concrete sectoral policies that are socially just, and stop excessive investment in LNG terminals

The German buildings sector needs a concrete transformation plan for phasing out of fossil fuel heating systems and phasing in climate-friendly solutions such as heat pumps. A recently passed law bans the use of fossil-fuel-run heating systems entirely from 2045, which is insufficient for the country to reach its climate targets in the buildings sector. In the transport sector, the country should abolish car tax deductions, increase investment in public transport, further continue with expanding rail networks, and cancel construction plans of highways. The investments in LNG terminals to counteract potential gas shortages are excessive and have the potential to lock in the use of fossil gas for a disproportionate amount of time.



Germany should harness its influential position in international financial institutions to end subsidies for oil and gas

In the Glasgow Statement, Germany pledged to end international public finance for unabated oil, gas and coal and, instead, support clean energy projects. Unfortunately, Germany and other signatory countries are breaking their promises. Germany should not only stay true to its own promises, but also use its influence in international financial institutions like the IMF and the World Bank (WB) to end subsidies for fossil fuel projects if they truly want to advance global climate action. The WB pours billions into oil and gas projects around the world. Germany, among others, has the power to stop this.



INDIA



India must moderate growth in demand for oil and gas

India will see continued growth in energy demand over the coming decades across sectors. While reducing energy intensity of GDP has been aggressively pursued, it is important that sectors relying on oil and gas go through the transition to reduce further growth in demand for oil and gas. This will have to go beyond promoting fuel efficiency and focus more on creating an eco-system for alternative technological systems.



India must synergise renewable energy acceleration with sectoral strategies

Aligning multiple sectoral objectives with the promotion of renewable energy will maximise effective utilisation of limited public finance. Strategies focusing on greening of transport and cooking services, irrigation systems, energy security for MSMEs, etc., must also prioritise the integration of renewable energy, channelling sectoral priorities and investments to exploit synergies. The promotion of the circular economy in sectors such as the plastic value chain and focusing on reducing the need for virgin plastic can also play an important role.



India needs concessional access to technology and finance for enabling eco-system

Primary consumption of oil and gas in India is in the transport sector. Electrification of transport services is a meaningful strategy for moving away from oil and gas, but is contingent upon decarbonisation of the power sector along with commercialisation of alternatives like hydrogen-based motor vehicles. These transitions require access to advanced technology along with upfront investments. Partnerships through different mechanisms (multilateral, bilateral) and with different actors (financial institutions, philanthropic organisations) along with technology providers will help to facilitate adequate technological and financial flows to India.



INDONESIA



Indonesia should **phase out fossil fuels completely by 2050**

Indonesia's Announced Pledge Scenario (APS) to the IEA is still not ambitious enough to be consistent with the Paris Agreement. It shows a reduction in fossil fuel use from 68% today to 25% in 2060. However, emissions grow in the APS, doubling over the next 30 years. Fossil fuels should be completely phased out by 2050 to drive green growth in the country and achieve net-zero emissions.



Indonesia needs to **phase out fossil fuel subsidies and develop its carbon pricing strategy**

Indonesia still relies on oil and gas for 50.5% of its energy mix. It benefits greatly from government subsidies, especially for fossil fuels. From January to October 2022, total fossil fuel subsidies reached IDR 404.32 trillion, with most of it going to fuel and electricity compensation, which accounted for 66% of total subsidies. In order to gradually remove oil and gas subsidies, the government needs to improve its carbon pricing strategy. The strategy will also support the achievement of the country's decarbonisation target.



Indonesia should **develop its green hydrogen roadmap immediately**

The development of hydrogen, particularly green hydrogen, is still in its early stages. The government's most immediate goal is to develop 328 MW of green hydrogen production capacity by 2030. The development strategy should be followed by policies in favour of lower renewable energy prices, which will reduce the cost of producing green hydrogen. The expected price for renewable energy is USD 3-12/kg, which is USD 2/kg less in the region with the best resources.



ITALY



Italy must **decarbonise its power system by 2035**

To set its national targets in line with international pledges Italy should first aim at decarbonising its power system by 2035, as the effective decarbonisation of electricity is the main enabler of decarbonisation in other sectors of the economy. However, Italy is now delaying until 2028 its previous commitment to phase out coal for power production in 2025. Furthermore, 2030 national planning for climate and energy should be significantly more ambitious, especially in the transport and building sectors as those show hardly any substantial trend of reduction.



Italy must **reinforce its governance structure for the climate**

A clear framework aimed at setting climate high on the political agenda is missing. Such a framework would help at mainstreaming climate change within all relevant legislation and planning, including public spending, and would be essential for the policies and measures to become effective and deliver concrete results. Such a framework should rely on the proactive and factual participation of all the levels of the government (from central to local and vice versa) as well as all relevant stakeholders and citizens in order to effectively implement policies.



Italy should **promote dialogue on energy and climate**

Italy can play a proactive role promoting dialogue between the global North and the global South by capitalising on its Presidency of the G7, drawing upon its renewed foreign policy strategy based on a non-predatory approach, and relying on mutually beneficial partnerships with Africa, which could possibly be broadened to the Global South. This approach would put in practice the messages that emerged from the Africa Climate Summit held in Nairobi. To be a credible actor on the international scene, while holding the G7 Presidency, Italy should push for relevant developments in the domain of international climate finance and seriously commit to end new direct public support for international unabated fossil fuel projects.



JAPAN



Japan needs to **set ambitious electrification targets** for the industry, transportation, commercial, and residential sectors

In the name of energy security, the Japanese government is providing public support for Japanese companies' overseas development and exploration of oil and gas fields. The electrification targets can significantly reduce oil and gas consumption in the targeted sectors, which can, in turn, alleviate energy security concerns and phase out public support for overseas oil and gas projects.



Japan must implement existing electrification policies and measures

Japan must implement various policies and measures for accelerating electrification. These include subsidy schemes; requirements to make new commercial and residential buildings "electrification ready" (i.e., those buildings will be equipped with piping, wiring, installation space, etc. to enable at least ex post electrification); and, capacity building and re-skilling programmes to enable, for example, combustion equipment and related services workers to be involved in heat pumps and electric furnaces.



Japan must **initiate international cooperation for electrification** in the industry, transportation, commercial, and residential sectors

Such cooperation can include exchange of best policy practices for removing electrification barriers and promoting electrification in the targeted sectors, or providing capacity building and re-skilling programmes to enable, for example, combustion equipment and related services workers to be involved in heat pumps and electric furnaces operation.



MEXICO



Mexico must significantly **increase investment in technology** innovation to prevent methane leaks

The oil and gas sector accounts for 39.5 MtCO₂e, out of which 16.9 MtCO₂e are methane emissions. Mexico must improve efficiency to prevent methane leaks in hydrocarbon facilities and redirect investment towards technology innovation. Also, PEMEX, the state-productive enterprise must detail its plans for its recently announced "Roadmap towards sustainability".



Mexico needs to **decarbonise the transport and electricity sectors and reflect on the transition of PEMEX towards sustainability**

In the short term, Mexico must implement a decarbonisation pathway for the transport and electricity sectors. These sectors are the most reliant on oil and gas and responsible for the largest share of domestic GHG emissions. Moreover, the government must take measures to prevent environmental and health risks in the hydrocarbon processing facilities and reduce methane emissions. In the long term, it is necessary to have an inclusive and transparent discussion to rethink the role of PEMEX, as a low-carbon fuel investor.



Mexico should **explore new sources of finance** and international cooperation mechanisms

The Pemex Business Plan 2023-2027 recognises the need for energy transition; however, new sources of finance and international cooperation must be explored and agreed upon to ensure the implementation of a long-term national strategy for low-emission development in Mexico. The strategy must also enhance innovation and research to make the use of low-carbon technologies, such as green hydrogen and ammonia, more accessible and models for carbon management and sustainable fuel production more cost-effective.



RUSSIA



Russia should realise its huge renewables potential

As Europe and other parts of the world accelerate their energy transition, Russia should use its huge potential for renewables to replace fossil fuels for domestic needs and exports, improving at the same time the health of its citizens and the state of natural ecosystems. It should also follow the lead of its eastern region, Sakhalin, which is implementing a carbon pricing scheme as part of its 2025 net-zero emissions target.



Russia needs a clear roadmap towards its 2060 net-zero goal

In the 2021 “Strategy of socio-economic development of the Russian Federation with low greenhouse gas emissions by 2050”, Russia confirmed its NDC target for GHG emissions reductions by up to 70% below 1990 levels, by 2030. In the same document, the country committed to reaching net-zero GHG emissions no later than 2060. Now, Russia needs to rapidly develop and implement necessary policies and plans to reach this goal.



Russia should refrain from fundamental opposition to international fossil phase-out commitments

Russia risks further isolation if it does not prove to be a more cooperative partner in climate policies on the international stage. The country should sign the Methane Pledge, launched at COP26 in 2021 in Glasgow. Russia should also abstain from opposing the plan to phase out fossil fuel at COP28, should it really aim to do so.



SAUDI ARABIA



Saudi Arabia should strengthen its 2030 renewable energy target and commit to green hydrogen production

According to its NDC and in line with Vision 2030 (2016), Saudi Arabia plans to get 50% of its electricity from renewable energy sources, which would mean 58.7 GW online by 2030. But the country’s ambition has already been higher – in 2015, top Saudi energy officials announced that their country would “soon become a top solar energy exporter”. With its massive solar potential, the country can continue to play a major role in global energy markets, including green hydrogen. With that, the country can diversify its economic basis in light of the coming oil peak.



Saudi Arabia must implement the full pipeline of renewable energy projects currently in planning

Saudi Arabia currently only has 1.5 GW of installed renewable energy capacity, less than a fiftieth of what the country needs by 2030 to meet its own target. The project pipeline is massive though, and in August 2023 there are already plans for approximately 19.3 GW of solar and wind projects, almost half of which are already under construction. Saudi Arabia has the technical and economic capacity to achieve this goal, but it needs to stay committed if this is to become a reality.



Saudi Arabia should ramp up cooperation with other G20 countries for innovative renewable energy solutions

Saudi Arabia recently signed Memoranda of Understanding with universities in Japan and South Korea to cooperate in the field of renewable energy usage for water desalination, a core challenge in many countries as water shortages will be exacerbated by climate change. These MoUs serve as invitations to enhance scientific cooperation in research fields of growing importance, including renewable energy technologies, water security, and hydroponics.



SOUTH AFRICA



South Africa should **reduce its reliance on imported oil** and national coal-based liquid fuels by electrifying transport and revamping its rail network to enable freight and passenger modal shifts

Scaling up commercial, public and private EVs can reduce transport carbon emissions (currently 14%) and upstream coal-to-liquids emissions (13%) while improving urban air quality, but electricity supply shortages and tax regulations hinder transition. Plans to increase oil and gas extraction and new gas-to-power plants need to carefully consider stranded asset risks, costs and flexibility of contracts, and compatibility with South Africa's NDC and LTS ambitions.



South Africa needs to **enable the smooth and just transition** of its automotive manufacturing industry

This can capture the benefits and avoid the risks of shifts to EV demand in major export markets and enable domestic scale up of electrified transport. South Africa can also reform regulatory barriers to immediate uptake of EVs and implement electrification of public transport vehicles and publicly-run rail.

South Africa should be wary of committing to inflexible gas-to-power contracts that are not aligned with evidence on power system flexibility needs and must not commit to high annual utilisation of new capacity.



In line with the Just Energy Transition Investment Plan (JET IP), South Africa and its international partners need to advance and implement a package to support the transition of the transport and automotive sectors

Careful planning to support workers in the existing value chain is needed, from manufacturing to mechanics and forecourt attendants. Similarly, developing plans for the phase-out of coal-to-liquids and its replacement with alternate options (e.g. green hydrogen and derived products for chemical and exports) will be a critical element of South Africa's transition, but relies on trade and other support from international partners.



SOUTH KOREA



South Korea must **phase out gas power** by 2035

South Korea must phase out gas power, which accounts for about 30% of South Korea's power generation, by 2035 in order to meet the 1.5°C scenario. South Korea must end its public financial support to new unabated and abated overseas upstream oil and gas projects, overseas gas terminals, and oil and gas power projects by 2025, which has been approximately 13 times larger than that provided to overseas coal in the past. Above all, it should immediately end its financing of oil and gas vessels. South Korean shipyards have constructed approximately 70% of the LNG carriers ordered in 2022, a significant portion of which was ordered by Qatar gas-related companies, virtually serving as the maritime gas pipeline of the world.



South Korea must **end its financial commitments for gas exploration** abroad

South Korean public financial institutions, such as the Export-Import Bank of Korea (KEXIM) or Korea Trade Insurance Corporation, should end their financial support for the Barossa gas project in Northern Territory, Australia, and refrain from increasing its financial support for gas projects in Mozambique. The South Korean government should reduce or eliminate the capacity of planned new gas power projects in the upcoming 11th Power Plan.



South Korea needs to join international initiatives to end finance for fossil fuels

South Korea, along with Japan and China, should join the Glasgow commitment on international finance for fossil fuels. The OECD should introduce a regulatory scheme restricting export credit financing for oil and gas projects, just like it introduced a sectoral understanding on coal power export credit financing in 2015.



TURKEY



Turkey must stop its new policy of becoming a gas hub for Europe and new fossil fuel investments

Turkey currently hosts several international oil and gas pipelines that carry fossil fuels from Russia, Azerbaijan, Iran and Iraq to Turkey and European countries. Following Russia's occupation of Ukraine, the Turkish and Russian governments have repeatedly stated their intention to turn Turkey into a gas hub for Europe. This plan will lock Turkey into a fossil fuel economy and carbon trap for years to come.

Turkey is also trying to increase its gas and oil exploration in the Black Sea and south-east Turkey. Although these investments aim to reduce Turkey's fossil fuel imports and reduce its current account deficit, any new fossil fuel development will reinforce a fossil-fuel-based economy and hinder the development of renewable energy. Turkey must avert this new investment in fossil fuel exploration and transport and abandon its ambitions to become a fossil fuel power.



Turkey must end fossil fuel subsidies and support renewable energy projects

Turkey has heavily subsidised gas prices and supports new oil and gas investments. According to a study based on data from the 2000s, Turkey provides state support for coal, oil and gas equivalent to 0.2% of its GDP. Following the entry into force of the Electricity Market Capacity Mechanism in 2018, Turkey increased capacity payments to existing coal and gas power plants. In 2022, 44 power plants were subsidised at USD 200 million.

Turkey needs to stop subsidising fossil fuel power plants and shift state support to new renewable energy investments. Turkey also needs to put a fair price on carbon to accelerate the transition from fossil fuels to renewables.



Turkey must sign the Methane Pledge

Turkey is one of the few G20 countries that has not signed the Methane Pledge. Turkey must sign the pledge and develop policies and international cooperation to reduce methane emissions from pipelines and coal mines.



UNITED KINGDOM



The UK must accelerate decarbonisation plans to ensure it meets its 2030 NDC goals

The UK has committed to reducing emissions by 68% between 1990 and 2030, but the Climate Change Committee (CCC) finds that because 17% of the required emissions cuts are covered by insufficient plans, the UK is unlikely to meet its NDC. In fact, the government has recently approved new licensing rounds for oil and gas in the North Sea, including in the controversial Rosebank field.



The UK should follow the detailed strategy proposed by the CCC to decarbonise the power sector

This means the government should take a lead role in redesigning the overall power system; reforming planning processes and grid-level connections to enable the necessary capacity to be built in time, and to be consistent with climate-resilient targets; and urgently reforming incentives for the necessary investments. At the same time, the government should revoke its approval of the licensing round for new oil and gas and restate its ambition for climate leadership.



The UK government must reverse the backsliding on its climate (finance) commitments

It is unacceptable that the UK will likely miss its GBP 11.6 billion by 2026 climate finance commitments: to reach them would now require double the current annual climate finance budget for the next three years. The UK has also given additional allowances to polluting industries, resulting in a 40% discount of the UK ETS compared to the EU ETS. The Prime Minister has not only confirmed the new licences for oil and gas, but also intends to "max out" UK reserves in the North Sea. And in a recent announcement, he delayed the phase-out dates for fossil-fuel-powered boilers and cars to 2035. This damages the UK's credibility as a climate leader, makes UK calls for global emissions reductions hypocritical, and undermines its peer countries in the G20.



USA



The USA must deliver on its commitments leading up to net-zero in 2050

The USA under the Biden administration has committed to reducing economy-wide GHG emissions by 50-52% by 2030 with respect to 2005 (37% compared to 1990). As part of that pledge, the power sector is to be carbon-free by 2035, which implies zeroing out natural gas, currently 40% of the USA's power generation. Furthermore, the USA has a net-zero emissions target set for 2050, which will mean phasing out oil in the transportation sector.



The USA needs to continue and **accelerate renewable energy electrification** and smooth the way for increased manufacturing and uptake of EVs

Continued ramping up of renewable energy in the power sector and electrification of transportation and building space conditioning will lead to a strong decrease in demand. As both a major producer and consumer of oil and gas, the USA has the responsibility to implement plans to shift away from fossil fuel supply. In spite of the mid-century net-zero NDC pledge, the USA EIA projects roughly constant production of oil and natural gas through 2050.



The USA must work towards national integration of renewable energy and ensure training and a just transition for displaced workers and geographies impacted by the energy transition

Key cooperation initiatives are needed domestically. There are three functionally separate electricity grids in the USA, and efforts should be made to enable transmission between the West, East and Texas to ease movement of electricity from areas with different strengths in renewable resources. Also important for the transition will be ensuring acceptance and planning for a just transition for workers in impacted industries, such as fossil-fuel extraction and automobile manufacturing. This includes support for those in historically neglected communities as proposed through the Justice40 Initiative.

"My message to the oil and gas companies is very simple. There's only one reason that we're in this crisis and it is principally the way we provide our energy."

John Kerry, United States Special Presidential Envoy for Climate



Climate Transparency is a global partnership with a shared mission to stimulate a “race to the top” in climate action in G20 members through enhanced transparency.



For Country Profiles for all G20 members, please see the Climate Transparency Report 2022 on www.climate-transparency.org



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