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PER CAPITA GREENHOUSE GAS (GHG) EMISSIONS ABOVE G20 AVERAGE

Russia's economy is the most energy intensive in the G20 and is trending in the wrong direction. Emissions are projected to rise beyond 2030, and there is no plan for emissions to fall below current levels before 2050 even in Russia's "optimistic" scenario in its draft long-term climate strategy.

GHG emissions (incl. land use) per capita (tCO₂e/capita)¹



Data for 2017. Sources: CAT, 2019; Gütschow et al., 2019; UN Department of Economic and Social Affairs Population Division, 2020

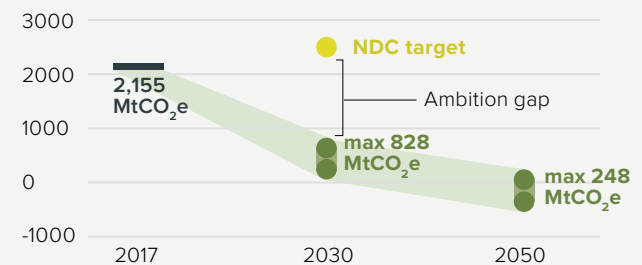
NOT ON TRACK FOR A 1.5°C WORLD



Russia's fair-share compatible range is below 828 MtCO₂e by 2030 and below 248 MtCO₂e by 2050. Under Russia's 2030 NDC target, emissions would only be limited to 2,423-2,578 MtCO₂e. 1.5°C

'fair-share' compatibility can be achieved via strong domestic emissions reductions, supplemented with contributions to global emissions reduction efforts. All figures exclude land use emissions and are based on pre-COVID-19 projections.

Russia 1.5°C 'fair-share' pathway (MtCO₂e/year)^{1&2}



Source: Climate Action Tracker, 2020

KEY OPPORTUNITIES FOR ENHANCING CLIMATE AMBITION



TARGET DEEPER EMISSIONS REDUCTIONS

Russia should aim for net-zero emissions by 2050, in line with what is required to limit warming to 1.5°C. While Russia's long-term climate strategy remains in its current draft

form, there is an opportunity to increase the level of ambition to target deeper emissions reductions and more stringent sectoral targets.



TARGET 3% RENOVATION RATE PER ANNUM

A renovation rate target of 3% per annum should be implemented as soon as possible, while new buildings should be near zero energy. The recently

released draft plan on increasing the energy efficiency of the Russian economy should quantify more ambitious targets for the building sector.



INVEST MORE IN RENEWABLE SECTOR

Russia's current 2024 target of a 4.5% share of non-hydro renewables in the power sector is far too low. A target beyond 2024 needs to be put in place to

ensure a ramping up of investment in the sector and a replacement of coal-fired generation.

RECENT DEVELOPMENTS



A newly released draft energy efficiency plan sets a target of reducing total energy intensity of GDP by 20% below 2017 levels by 2030.



In March 2020, Russia proposed a slight update to its NDC to cut emissions to 33% below 1990 levels (incl. land use). However, this is still above the expected emissions levels in 2030 under current policies, meaning it is **not an actual increase in ambition**.



In late 2019, Russia announced it was gutting its draft climate law, **removing binding emissions targets and penalties** for companies that do not comply, as well as funding to support emissions-reducing projects.

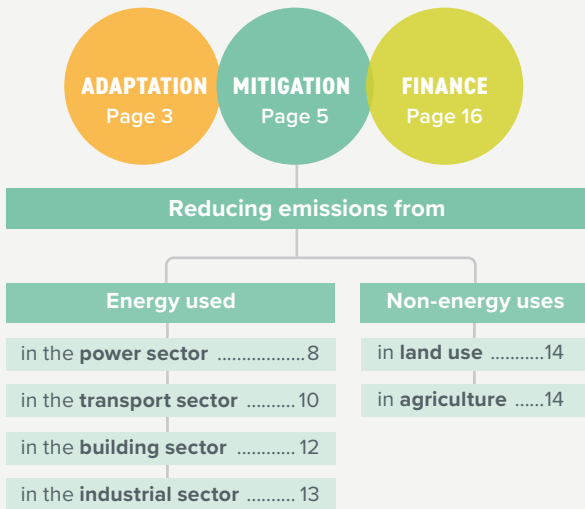
CORONAVIRUS RECOVERY

Despite 60% of Russians expressing their desire for COVID-19-related economic recovery measures to deal with climate change, the USD 73bn recovery package announced in June does not do so. Instead it primarily focuses on tax holidays for small and medium-sized businesses and higher social payments for families and medical workers. At the time of writing (July 2020), no measures had been announced that improve on Russia's current suite of climate-related policies.

References: Ipsos, 2020; Moscow Times, 2020

CONTENTS

We unpack Russia's progress and highlight key opportunities to enhance climate action across:



LEGEND

Trends show developments over the past five years for which data are available. The thumbs indicate assessment from a climate protection perspective.



Decarbonisation Ratings⁴ assess a country's performance compared to other G20 countries. A high score reflects a relatively good effort from a climate protection perspective but is not necessarily 1.5°C compatible.



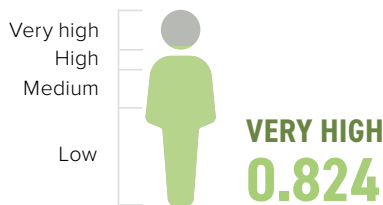
Policy Ratings⁵ evaluate a selection of policies that are essential pre-conditions for the longer-term transformation required to meet the 1.5°C limit.



SOCIO-ECONOMIC CONTEXT

Human Development Index

The Human Development Index reflects life expectancy, level of education, and per capita income. Russia was ranked 49th out of 189 countries in 2018.

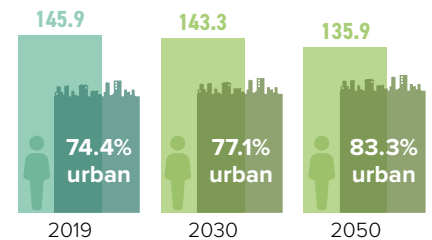


Data for 2018. Source: UNDP, 2019

Population & urbanisation projections

(in millions)

Russia's population is expected to decrease by about 7% by 2050, and become more urbanised.



Sources: The World Bank, 2019; United Nations, 2018

Gross Domestic Product (GDP) per capita

(PPP constant 2015 international \$)



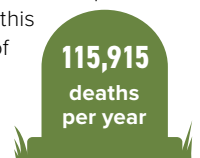
Data for 2019. Source: The World Bank, 2020

Death rate attributable to air pollution

Ambient air pollution attributable death rate per 1,000 population per year, age standardised



Over 115,000 people die in Russia every year as a result of outdoor air pollution, due to stroke, heart disease, lung cancer and chronic respiratory diseases. Compared to total population, this is in the middle of the G20 range.



Data for 2016. Source: WHO, 2018

JUST TRANSITION



Russia's economy is heavily reliant on fossil fuels, with the energy sector constituting between 20-23% of GDP, 25-26% of consolidated budget revenues and 55-60% of export revenues in recent years. Despite projections of a minimal increase in future global coal demand and the need to rapidly transition away from all fossil fuels to meet the Paris Agreement long-term temperature goal, there is little sign of the Russian government seeking to reduce its economic reliance on

them. Rather, the government's focus is on sustaining Russia's position in global energy markets, finding emerging Asian markets and seeking greater domestic opportunities to sustain production growth. This leaves Russia and its many **energy sector workers vulnerable to the impacts of any significant reduction in global demand for fossil fuels over the next two decades that would result from the level of climate action necessary to limit warming to 1.5°C.**

References: Climate Investment Funds, 2020; ERI RAS and Moscow School of Management SKOLKOVO, 2019; International Trade Union Confederation, 2009; Mitrova and Yermakov, 2019

1. ADAPTATION

ADDRESSING AND REDUCING VULNERABILITY TO CLIMATE CHANGE



Increase the ability to adapt to the adverse effects of climate change and foster climate resilience and low-GHG development.



Russia is vulnerable to climate change and **adaptation actions are needed.**



On average, 126 fatalities and almost USD 2bn in losses occur yearly due to extreme weather events.



With global warming, society and its supporting sectors are increasingly exposed to severe impacts such as droughts and reduction in crop duration in the agricultural sector.

ADAPTATION NEEDS

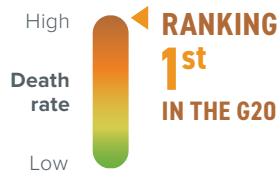
Climate Risk Index

Impacts of extreme weather events in terms of fatalities and economic losses that occurred. All numbers are averages (1999-2018).

Annual weather-related fatalities



2.03
PER 100,000
INHABITANTS



Source: Based on Germanwatch, 2019

Annual average losses (USD mn PPP)



0.05
PER UNIT
GDP (%)



Source: Based on Germanwatch, 2019

Exposure to future impacts at 1.5°C, 2°C and 3°C

Impact ranking scale:

- ! Very low
- ! Low
- ! Medium
- ! High
- ! Very high

		1.5°C	2°C	3°C
WATER	% of area with increase in water scarcity	!	!	!
	% of time in drought conditions	!	!	!
HEAT AND HEALTH	Heatwave frequency	!	!	!
	Days above 35°C	!	!	!
AGRICULTURE	Maize	Reduction in crop duration	!	!
		Hot spell frequency	!	!
		Reduction in rainfall	!	!
	Wheat	Reduction in crop duration	!	!
		Hot spell frequency	!	!
		Reduction in rainfall	!	!

Source: Water, Heat and Health: own research. Agriculture: Arnell et al., 2019.

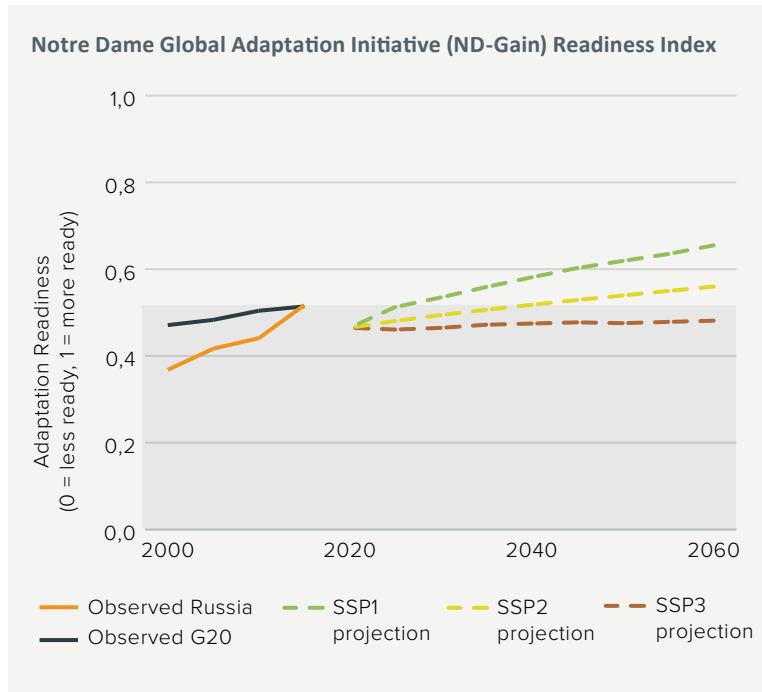
Note: These indicators are national scale results, weighted by area and based on global data sets. They are designed to allow comparison between regions and countries and therefore entail simplifications. They do not reflect local impacts within the country. Please see technical note for further information.

CORONAVIRUS RECOVERY

Despite the recent release of Russia's short-term climate adaptation plan to 2022, which reiterated the severe current and future impacts Russia is facing from a rapidly changing climate, there has been no attempt to direct funding or policy in response to the COVID-19 economic crisis to address these impacts.

Adaptation readiness

The figure shows 2000-2015 observed data from the ND-GAIN Index overlaid with projected Shared Socioeconomic Pathways (SSPs) from 2015-2060.



Russia scored just above the G20 average in 2015 in terms of adaptation readiness. Adaptation challenges still exist, but the country is well positioned to adapt if it puts in place measures compatible with SSP1. Other measures, as represented by SSP2 and SSP3, undermine its readiness to adapt in the long term.

The readiness component of the Index created by the Notre Dame Global Adaptation Initiative (ND-GAIN) encompasses social economic and governance indicators to assess a country's readiness to deploy private and public investments in aid of adaptation. The index ranges from 0 (low readiness) to 1 (high readiness).

The overlaid SSPs are qualitative and quantitative representations of a range of possible futures. The three scenarios shown here in dotted lines are qualitatively described as a *sustainable development-compatible scenario (SSP1)*, a *middle-of-the-road (SSP2)* and a *'Regional Rivalry' (SSP3)* scenario. The shaded area delineates the G20 average in 2015 for easy reference.

Source: Andrijevic et al., 2020

ADAPTATION POLICIES

National Adaptation Strategies

In late December 2019 the Russian government approved a national plan (Order No. 3183-r) of 29 broad measures that encompass institutional, organisational and methodological measures aimed at shaping government approaches to adaptation to climate change. Government ministries and agencies are to devise sector-specific adaptation plans by the end of September 2021, which would be incorporated into a 2023-2025 plan of action by late 2022.

References: Ministry of Economic Development, 2020; The Moscow Times, 2020; WWF Russia, 2020

Document name	Publication year	Fields of action (sectors)												M&E process	
		Agriculture	Biodiversity	Coastal areas and fishing	Education and research	Energy and industry	Finance and insurance	Forestry	Health	Infrastructure	Tourism	Transport	Urbanism		Water
National Adaptation Plan for Climate Change	2020														n/a

Nationally Determined Contribution (NDC): Adaptation



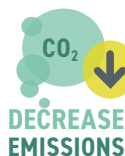
2. MITIGATION

REDUCING EMISSIONS TO LIMIT GLOBAL TEMPERATURE INCREASE



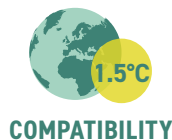
Hold the increase in the global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit to 1.5°C, recognising that this would significantly reduce the risks and impacts of climate change.

EMISSIONS OVERVIEW



The government's currently implemented climate target for 2030 (-25 to -30% below 1990 levels incl. land use) is **not in line with a 1.5°C 'fair-share' compatible pathway.**

Source: Climate Action Tracker, 2020

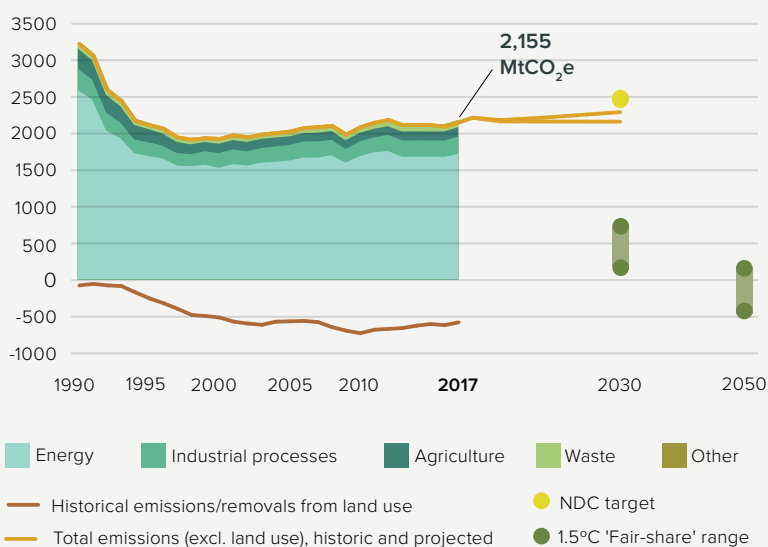


In 2030, global CO₂ emissions need to be 45% below 2010 levels and reach net-zero by 2050. **Global energy-related CO₂ emissions must be cut by 40%** below 2010 levels by 2030 and reach net-zero by 2060.

Source: Rogelj et al., 2018

GHG emissions across sectors and CAT 1.5°C 'fair-share' range (MtCO₂e/year)

Total GHG emissions across sectors (MtCO₂e/year)



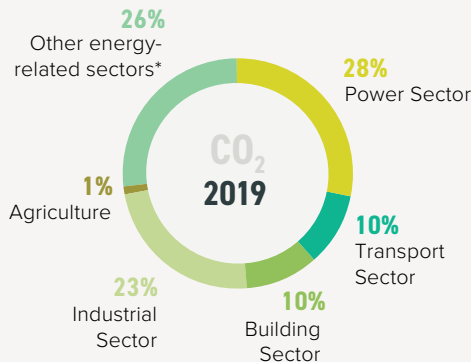
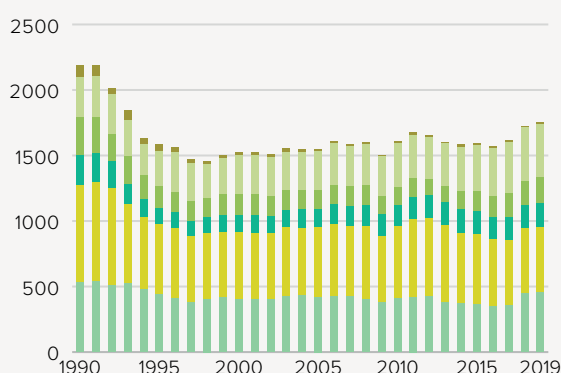
Sources: Gütschow et al., 2019; Climate Action Tracker, 2020

Russia's emissions (excl. land use) dropped by 41% between 1990 and 1998, but increased by 15% between 1998 and 2017. A methodological change implemented by Russia in 2019 – relating to how emissions from oil and gas extraction are calculated – led to a significant downward revision in Russia's historical emissions, but this did not reflect any real-world decrease in emissions.

On the contrary, **Russia's emissions continue to rise and are expected to continue rising until 2030.** In March, Russia unveiled its proposed update to its 2030 emissions reduction target (27% below 1990 levels excl. land use), which allows emissions to continue rising until then. While this target is marginally higher than the previous one, it does not represent an increase in ambition, as emissions are projected to remain below this level under current policies. **Much greater emissions reductions will be required to become 1.5°C 'fair-share' compatible.**

Energy-related CO₂ emissions by sector

Annual CO₂ emissions from fuel combustion (MtCO₂/year)



The largest driver of overall GHG emissions are CO₂ emissions from fossil fuel combustion. In Russia, these emissions fell between 1990 and 1998 due to economic transformation, but have risen since, particularly again since 2016, reaching their highest levels since 1993 in 2019.

Source: Enerdata, 2020

* 'Other energy-related sectors' covers energy-related CO₂ emissions from extracting and processing fossil fuels. Due to rounding, some graphs may sum to slightly above or below 100%.

CORONAVIRUS RECOVERY

The recently released energy efficiency action plan contains a range of specific actions that could be fast-tracked to contribute to the economic recovery from the COVID-19-related slowdown like, for example, the renovation of existing buildings. So far, however, there have been no specific climate-related measures announced in the government's economic recovery package.

Reference: Russian Federation, 2020a

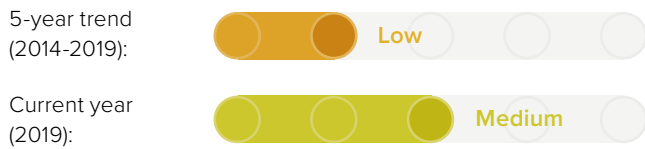
Carbon Intensity of the Energy Sector

Tonnes of CO₂ per unit of total primary energy supply (tCO₂/TJ)



Source: Enerdata, 2020

Decarbonisation rating: carbon intensity of the energy sector compared to other G20 countries



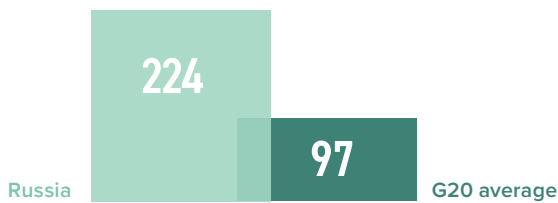
Carbon intensity shows how much CO₂ is emitted per unit of energy supply.

In Russia, carbon intensity remains at the same level of 53.77 tCO₂/TJ as it was five years ago, though lower than the G20 average.

Source: own evaluation

Energy supply per capita

(GJ/capita)



Sources: Enerdata, 2020; The World Bank, 2019b

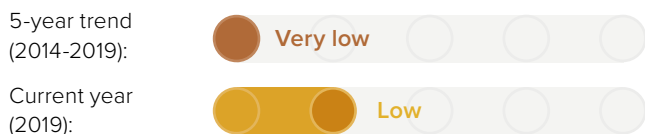
TPES per capita (GJ/capita): 5-year trend (2014-2019)



The level of energy use per capita is closely-related to economic development, climatic conditions and the price of energy.

Energy use per capita in Russia, at 224 GJ/capita, is well above the G20 average, and is also increasing at a far higher rate (12.2% between 2014-2019) than the G20 average (1.9% between 2014-2019).

Decarbonisation rating: energy supply per capita compared to other G20 countries



Source: own evaluation

Energy intensity of the economy

(TJ/PPP USD2015 millions)



Source: Enerdata, 2020

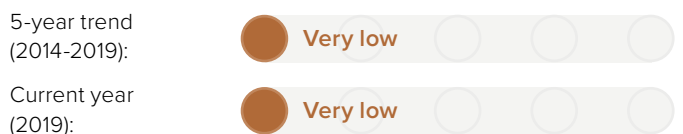
Energy intensity of the economy: 5-year trend (2014-2019)



This indicator quantifies how much energy is used for each unit of GDP, which is closely related to the level of industrialisation, efficiency, climatic conditions and geography.

Russia currently has **the most energy intensive economy in the G20**. Contrary to the G20 trend, for which the average energy intensity has been declining over the last five years (-11.6%), the Russian economy is becoming even more energy intensive.

Decarbonisation rating: energy intensity compared to other G20 countries



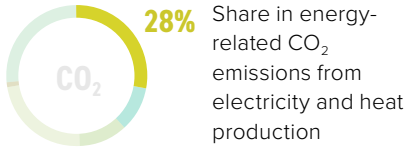
Source: own evaluation



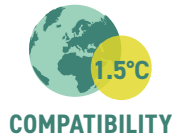
POWER SECTOR

Emissions from energy used to make electricity and heat

Coal and natural gas dominate Russia's power generation, at 17% and 46% respectively. There are no plans to phase out coal, and consumption has remained steady in recent years, which is not compatible with a 1.5°C 'fair-share' pathway.



Source: Enerdata, 2020



Coal and decarbonisation

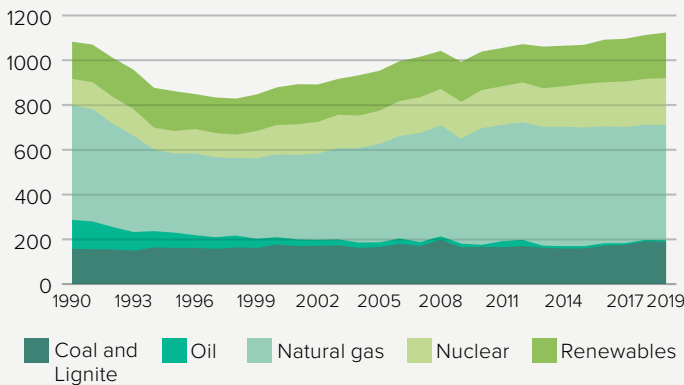
Worldwide, **coal use for power generation needs to peak by 2020** and, between 2030 and 2040, all the regions of the world need to phase out coal-fired power generation. **Electricity generation has to be decarbonised before 2050**, with renewable energy the most promising alternative.

Sources: Climate Analytics, 2016; Climate Analytics, 2019; Rogelj et al., 2018

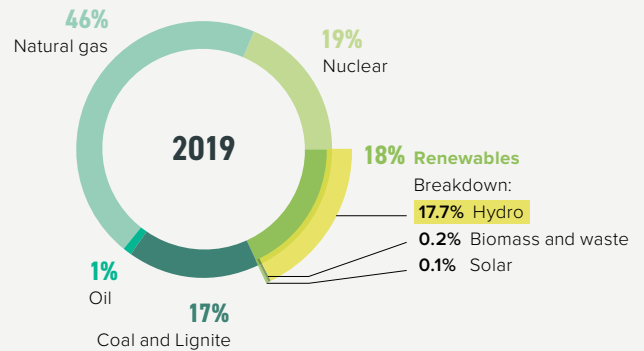
STATUS OF DECARBONISATION

Electricity mix

Gross power generation (TWh)



Source: Enerdata, 2020

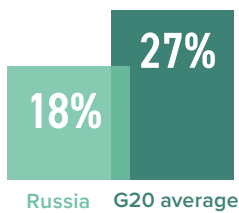


Due to rounding, some graphs may sum to slightly above or below 100%.

While renewables account for 18% of Russia's total electricity generation, this is almost exclusively from hydropower, which generates substantial environmental and social impacts. An increase in hydropower generation also primarily accounts for the rise in the share of renewables over the last five years (+12%). Coal-fired generation has remained stable over this period.

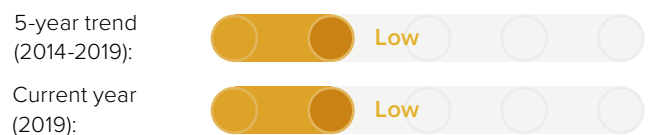
Share of renewables in power generation

(incl. large hydro)



Source: Enerdata, 2020

Decarbonisation rating: share of renewables compared to other G20 countries



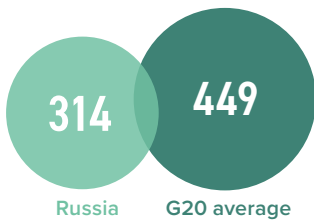
Source: own evaluation

Share of renewables in power generation: 5-year trend (2014-2019)



Emissions intensity of the power sector

Country vs G20 average (gCO₂/kWh)



Source: Enerdata, 2020

Emissions intensity: 5-year trend (2014-2019)



For each kilowatt hour of electricity, 314 gCO₂ are emitted in Russia. This is below the G20 average but is still high and reflects the relatively low share of coal in the fuel mix. The emissions intensity of the Russian power sector has fallen 9% over the last five years, primarily due to higher output from nuclear and hydro power plants. This is roughly in line with the trend of the G20 average.

Decarbonisation rating: emissions intensity compared to other G20 countries



Source: own evaluation

POLICY ASSESSMENT

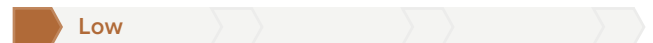
Renewable energy in the power sector



The increase in the share of renewables (primarily hydropower) over the last five years in Russia masks the fact that annual generation from renewables in absolute terms barely moved between 1990 and 2015. The recent uptick is attributed almost entirely to increased hydropower generation. Despite running RE tenders since 2013, Russia's 2020 target of a 2.5% non-hydro renewables share in the electricity sector will not be met, in part due to restrictive local content provisions. **The 2024 target of a 4.5% non-hydro renewables share also appears unlikely to be met** on the current trajectory. Support quotas were approved in late 2019 for projects between 2025-2035, but without a renewable energy target in place beyond 2024, non-hydro renewables are unlikely to play a significant role in the Russian power sector.

Source: own evaluation

Coal phase-out in the power sector



Russia has no strategy for phasing out coal in the power sector and, on the contrary, is targeting an increased role for coal to 2035. The recently adopted Energy Strategy 2035 targets domestic coal consumption, anticipating a rise to 196 million tonnes in 2035, a 12% increase on current levels. Total domestic production is targeted to double from now until 2035, while the forecast share of global coal exports is 25% from the current 11%.

Source: own evaluation

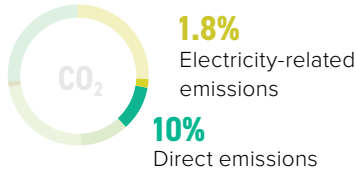


TRANSPORT SECTOR

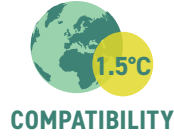
Emissions from energy used to transport people and goods

In Russia, per capita transport emissions are only slightly higher than the G20 average, but are declining more quickly than most G20 countries. However, the **transport sector is still dominated by fossil fuels**, and passenger and freight transport must be decarbonised to stay within a 1.5°C limit.

Share in energy-related CO₂ emissions from transport sector



Source: Enerdata, 2020



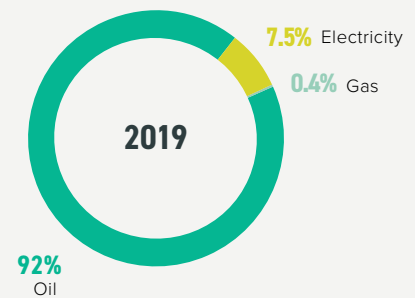
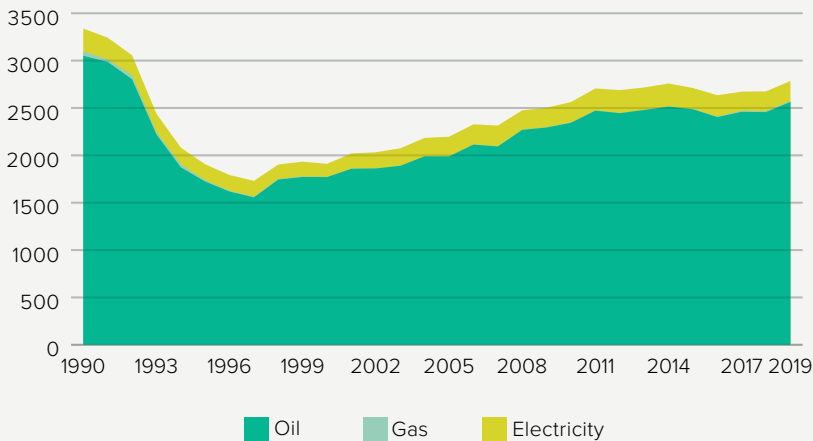
The share of low-carbon fuels in the transport fuel mix must increase to about 60% by 2050.

Source: Rogelj et al., 2018

STATUS OF DECARBONISATION

Transport energy mix

Final energy consumption of transport by source (PJ/year)



Source: Enerdata, 2020

Due to rounding, some graphs may sum to slightly above or below 100%.

Electricity and gas made up just under 8% of the energy mix in transport in 2019, a decrease of 1 percentage point from 2018. Neither biofuels nor coal are used for transport.

Transport emissions per capita

excl. aviation (tCO₂/capita)



Data for 2018. Sources: Enerdata, 2020; The World Bank, 2019b

Decarbonisation rating: transport emissions compared to other G20 countries



Source: own evaluation

Transport emissions: 5-year trend (2013-2018)



Aviation emissions per capita⁶

(tCO₂/capita)



Data for 2017. Source: Enerdata, 2020

Aviation emissions: 5-year trend (2012-2017)



Decarbonisation rating: aviation emissions compared to other G20 countries



Source: own evaluation

Motorisation rate

233 VEHICLES PER 1,000 INHABITANTS (2009)

Source: Vieweg et al., 2018

Market share of electric vehicles in new car sales (%)

No data available

Source: IEA, 2019

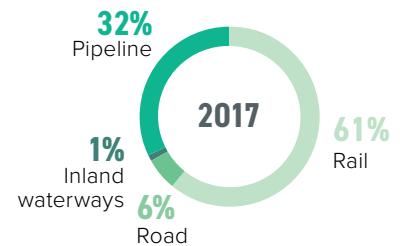
Passenger transport

(modal split in % of passenger-km)

No data available

Freight transport

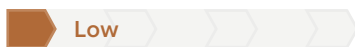
(modal split in % of tonne-km)



Data for 2017. Source: Vieweg et al., 2018

POLICY ASSESSMENT

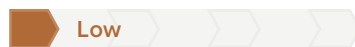
Phase out fossil fuel cars



Russia has no plan to phase out fossil fuel cars. Euro V emissions standards have applied to all light-duty vehicle (LDV) sales and registrations since January 2016, but these standards do not reduce CO₂ emissions. By exempting electric vehicle components from custom duties, Russia is attempting to stimulate domestic manufacturing. However, despite EV sales increasing 145% in 2019, they remain a very small share of overall passenger vehicle sales (<0.1%).

Source: own evaluation

Phase out fossil fuel heavy-duty vehicles



Russia currently has no target to decarbonise its fleet of heavy-duty vehicles. Like LDVs, HDVs have been subject to the Euro V fuel standard since 2016, but as with LDVs, this was implemented when stricter Euro VI standards were already in place in the EU. In addition, these standards do not reduce CO₂ emissions. Moscow has a low emissions zone in place, restricting the entry from more polluting HDVs, but this is related to toxic non-CO₂ emissions such as NOx gases and particulate matter.

Source: own evaluation

Modal shift in (ground) transport



Russia's 2030 Transport Strategy adopted in 2014 remains a key document relating to the encouragement of modal shift; however, this is only one of many aims of the strategy. Some of the aims of the strategy that relate to modal shift include an expansion of public transport infrastructure, high-speed passenger rail, and the development of inland waterway transport (Russian Federation, 2014). Russian Railway's long-term investment programme to 2025 was approved in 2019, and also targets high-speed passenger rail, as well as improving the freight network to increase capacity. The existing Strategy for Development of Rail Transport 2030 adopted in 2008, targets a minimum of 16,000 km of new routes and a 33% increase in passenger numbers by 2030 (Russian Railways, 2008).

Source: own evaluation

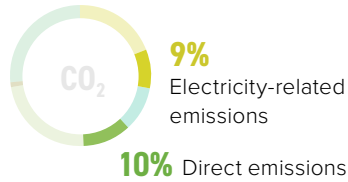


BUILDING SECTOR

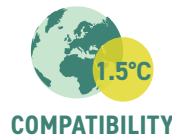
Emissions from energy used to build, heat and cool buildings

Russia's building emissions – counting heating, cooking but also electricity use – make up roughly 14% of total CO₂ emissions. Per capita, **building-related emissions are considerably higher than the G20 average**, while the targeted energy efficiency improvement for buildings outlined in Russia's long-term climate strategy are unambitious.

Building emissions occur directly (burning fuels for heating, cooking, etc) and indirectly (grid-electricity for air conditioning, appliances, etc.)



Source: Enerdata, 2020



Global emissions from buildings need to be halved by 2030, and be 80-85% below 2010 levels by 2050, mostly through increased efficiency, reduced energy demand and electrification in conjunction with complete decarbonisation of the power sector.

Source: Rogelj et al., 2018

STATUS OF DECARBONISATION

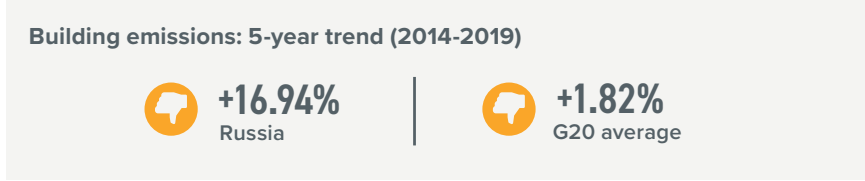
Building emissions per capita

(incl. indirect emissions) (tCO₂/capita)



Building-related emissions per capita in Russia are well above the G20 average. In contrast to the relatively stable G20 average, Russia's per capita building-related emissions have increased by 17% (2014-2019).

Source: Enerdata, 2020



Decarbonisation rating: building emissions compared to other G20 countries



Source: own evaluation

POLICY ASSESSMENT

Near zero energy new buildings



Russia has no strategy for near zero energy buildings. Legislation requiring improved energy efficiency of new residential and commercial buildings was passed in 2009, while an update in 2017 outlining more stringent improvements was only advisory, not mandatory. Some mandatory technical requirements exist for administrative and public buildings relating to automatic regulation of heat energy consumption and automatic lighting controls; however, the likely impact of these regulations is unclear.

Source: own evaluation

Renovation of existing buildings

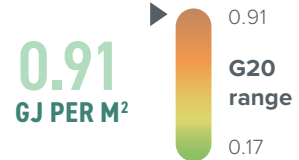


Russia's draft 2020 Energy Efficiency Action Plan includes a target for ensuring all capital upgrades to housing results in a minimum C-rating for energy efficiency from 2022; however, the plan does not include a specific renovation rate, a critical shortfall. A 2017 decree that targets the reduction of energy consumption in non-residential buildings contradicts a more ambitious earlier decree (Order 1550/pr) from 2003, and is therefore expected to lead to smaller reductions in energy consumption.

Source: own evaluation

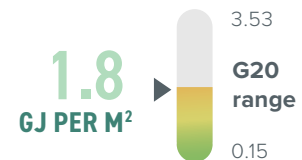
Residential buildings

Energy use per m²



Commercial and public buildings

Energy use per m²



Building emissions are largely driven by how much energy is used in heating, cooling, lighting, household appliances, etc. **Russia has the highest energy use per m² for residential buildings in the G20** and is in the middle of the range for commercial and public buildings.

Different data year for each country
Source: Castro-Alvarez et al., 2018



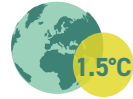
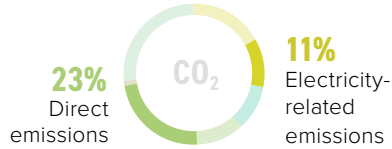
INDUSTRY SECTOR

Emissions from energy in the industrial sector

Industry-related emissions make up more than a quarter of CO₂ emissions in Russia and continue to rise. Russia has one of the most emissions-intensive industry sectors in the G20.

Share in energy-related CO₂ emissions from industrial sector

Source: Enerdata, 2020



COMPATIBILITY

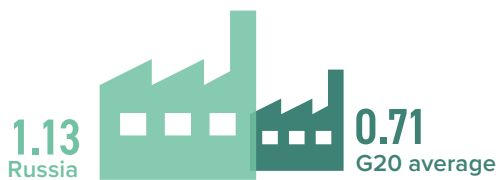
Industrial emissions need to be reduced by 65-90% from 2010 levels by 2050.

Source: Rogelj et al., 2018

STATUS OF DECARBONISATION

Industry emissions intensity⁷

(tCO₂e/USD2015 GVA)

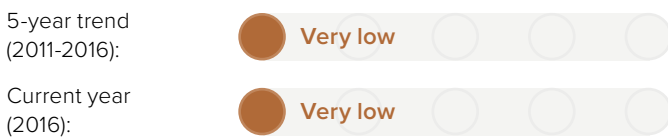


Data for 2016. Sources: Gütschow et al., 2019; Enerdata, 2020

Industry emissions: 5-year trend (2011-2016)



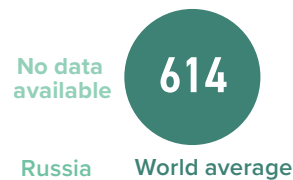
Decarbonisation rating: emissions intensity of industry compared to other G20 countries



Source: own evaluation

Carbon intensity of cement production⁸

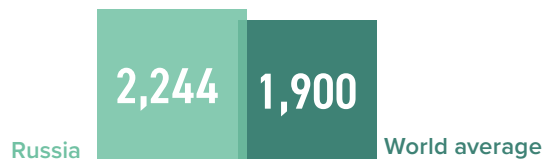
(kgCO₂/tonne product)



Data for 2016. Sources: CAT Decarbonisation Data Portal, 2020; Climate Action Tracker, 2019

Carbon intensity of steel production⁸

(kgCO₂/tonne product)



Steel production and steelmaking are significant GHG emission sources, and challenging to decarbonise. Russia's steel industry is more carbon-intensive than the global average

Data for 2016. Sources: World Steel Association, 2018; CAT Decarbonisation Data Portal, 2020

POLICY ASSESSMENT

Energy Efficiency

No data available



LAND USE SECTOR

Emissions from changes in the use of the land



In order to stay within the 1.5°C limit, Russia needs to make the land use and forest sector a net sink of emissions, e.g. by halting current clear-cutting in many areas, stopping prescribed burning as part of forest management, and by creating new forests.

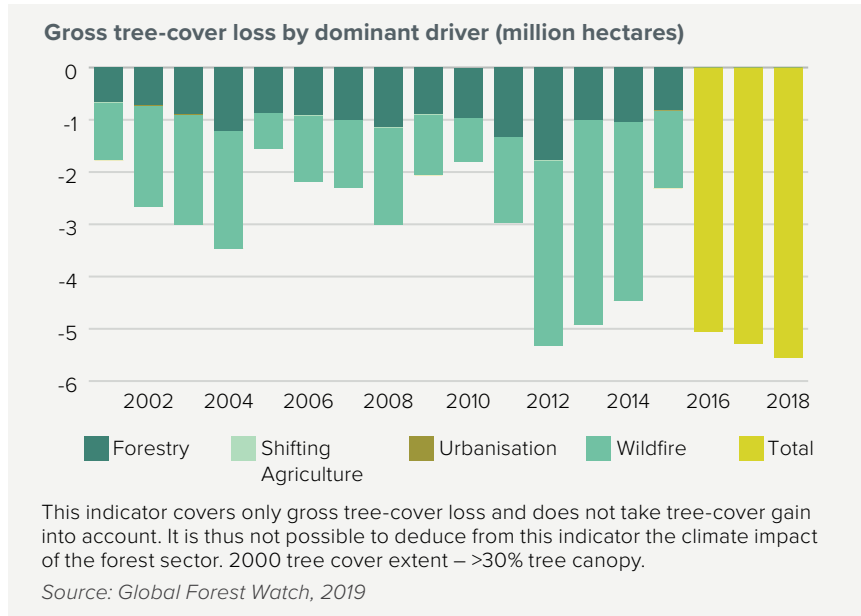


COMPATIBILITY

Global deforestation needs to be halted and changed to net CO₂ removals by around 2030.

Source: Rogelj et al., 2018

Global tree-cover loss



From 2001 to 2018, Russia lost 604 Mha of tree cover, equivalent to a 7.9% decrease since 2000. This does not take tree-cover gain into account. Wildfires and the forestry industry are the main causes of forest loss.

POLICY ASSESSMENT

Target for net-zero deforestation



Russia currently has no long-term strategy for reducing deforestation to zero, although despite significant deforestation, forestry has been a large net sink for CO₂ emissions for many years. Wildfires are increasingly a threat to Russia's vast forests as the Arctic warms faster than the rest of the planet, while forest management still includes burnings. Significant clear-cutting continues to occur in Russia's forests and, to avoid a projected decline in the current forestry net emissions sink to zero, primary forests must be protected from these practices.

Reference: own evaluation, based on Kokorin and Korppoo, 2017



AGRICULTURE SECTOR

Emissions from agriculture



Russia's agricultural emissions are mainly from digestive processes in animals, livestock manure and the use of synthetic fertilisers. A 1.5°C 'fair-share' pathway requires dietary shifts and less fertiliser use.

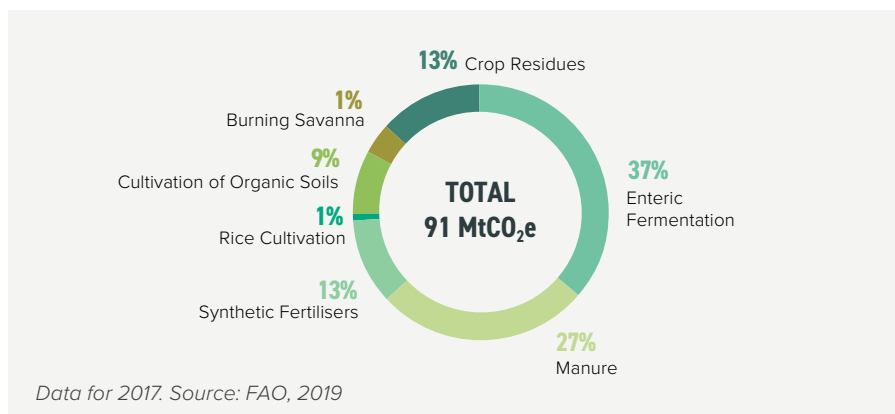


COMPATIBILITY

Methane emissions (mainly enteric fermentation) need to decline by 10% by 2030 and by 35% by 2050 (from 2010 levels). Nitrous oxide emissions (mainly from fertilisers and manure) need to be reduced by 10% by 2030 and by 20% by 2050 (from 2010 levels).

Source: Rogelj et al., 2018

Emissions from agriculture (excluding energy)



In Russia, the largest sources of GHG emissions in the agricultural sector are digestive processes in animals (enteric fermentation), livestock manure and the use of synthetic fertilisers. More efficient use of fertilisers and dietary changes can help reduce emissions.

Due to rounding, some graphs may sum to slightly above or below 100%.

MITIGATION: TARGETS AND AMBITION

The combined mitigation effect of nationally determined contributions (NDC) submitted by September 2020 is not sufficient and will lead to a warming of 2.7°C by the end of the century. This highlights the urgent need for all countries to submit more ambitious targets by 2020, as they agreed in 2015, and to urgently strengthen their climate action to align to the Paris Agreement’s temperature goal.

AMBITION: 2030 TARGETS

Nationally Determined Contribution (NDC): Mitigation

Targets	Actions
NDC: 25-30% below 1990 levels (incl. land use) by 2030	Not mentioned

Climate Action Tracker (CAT) evaluation of NDC and actions

● Critically Insufficient
Highly Insufficient
Insufficient
2°C Compatible
1.5°C Compatible
Role Model

NDCs with this rating fall well outside of a country’s ‘fair-share’ range and are not at all consistent with holding warming to below 2°C, let alone with the Paris Agreement’s stronger 1.5°C limit. If all government NDCs were in this range, warming would exceed 4°C.

*Evaluation as at October 2020, based on country’s NDC.
Source: Climate Action Tracker*

TRANSPARENCY: FACILITATING AMBITION

Countries are expected to communicate their NDCs in a clear and transparent manner in order to ensure accountability and comparability.

The NDC Transparency Check has been developed in response to Paris Agreement decision (1/CP.21) and the Annex to decision 4/CMA.1. While the Annex is only binding from the second NDC onwards, countries are “strongly encouraged” to apply it to updated NDCs, due in 2020.



NDC Transparency Check recommendations

For more visit www.climate-transparency.org/ndc-transparency-check

To ensure clarity, transparency and understanding, it is recommended that Russia provides additional detailed information in the upcoming NDC Update (compared to the existing NDC), including:

- Provide sources, assumptions and methodological approach of business-as-usual (BAU) projections
- Provide enhanced information on NDC planning process and institutional arrangements as well as implementation plans and/or actions (i.e. relevant policies, regulations, projects)
- Provide grounds for claim of fair and ambitious NDC, including an assessment of its progression

AMBITION: LONG-TERM STRATEGIES

Status	Released proposed strategy in March 2020
2050 target	Baseline scenario: 36% below 1990 levels. Intensive scenario: 48% below 1990 levels
Interim steps	Yes: 33% below 1990 levels in 2030
Sectoral targets	No
Net-zero target	No

The Paris Agreement invites countries to communicate mid-century, long-term, and low-GHG emissions development strategies by 2020. Long-term strategies are an essential component of the transition toward net-zero emissions and climate-resilient economies.

3. FINANCE

MAKING FINANCE FLOWS CONSISTENT WITH CLIMATE GOALS



Make finance flows consistent with a pathway towards low-GHG emissions and climate-resilient development.



Russia spent USD 8bn on fossil fuel subsidies in 2017, largely on petroleum. There is no explicit carbon price in Russia, nor any financial policies or regulations for supporting the green transition.



COMPATIBILITY

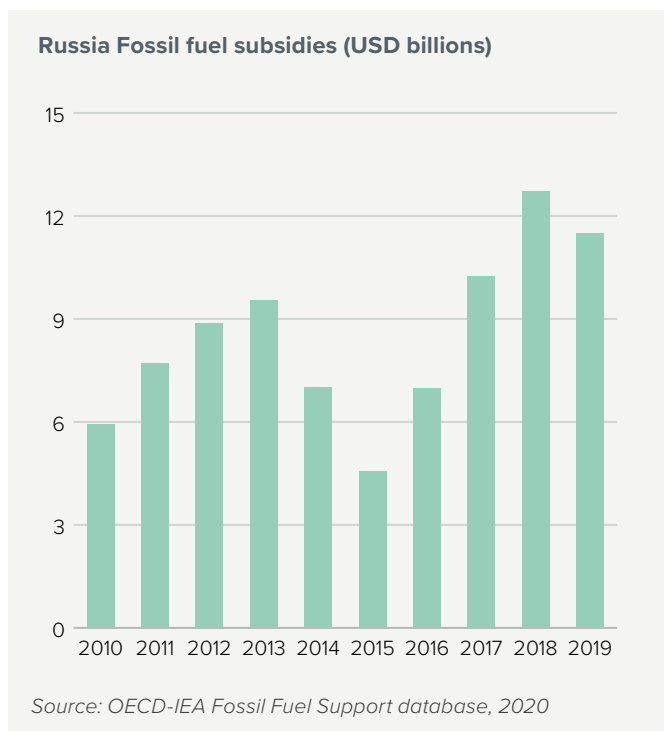
Investment in green energy and infrastructure needs to outweigh fossil fuel investments by 2025.

Source: Rogelj et al., 2018

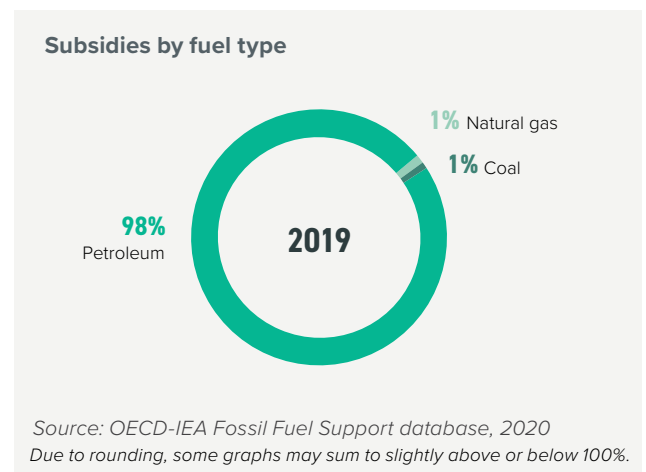
FISCAL POLICY LEVERS

Fiscal policy levers **raise public revenues and direct public resources**. Critically, they can shift investment decisions and consumer behaviour towards low-carbon, climate-resilient activities by reflecting externalities in the price.

Fossil Fuel Subsidies



Fossil Fuel Subsidies by fuel type



In 2019, Russia's fossil fuel subsidies totalled USD 11.5bn (compared to USD 5.9bn in 2010 and fluctuating substantially since then). 96% of the subsidies identified were for the production of fossil fuels, with the remainder for their consumption. The highest amount of quantified subsidies went to petroleum, at USD 11.3bn. The largest subsidy is tax reductions for oil extraction depending on specific properties of subsoil (USD 4.7bn).

Carbon Pricing and Revenue

No data available

Russia does not have a national carbon tax or emissions trading scheme. In 2019, there was some talk about introducing a carbon tax. The framework drafted by the government included different regulatory mechanisms, such as a cap and trade system of emissions permits and tax breaks for companies reducing or capturing their emissions. However, the draft regulation did not go ahead for approval due to widespread protests against it. In Russia, companies do not even have to account for their emissions.

CORONAVIRUS RECOVERY

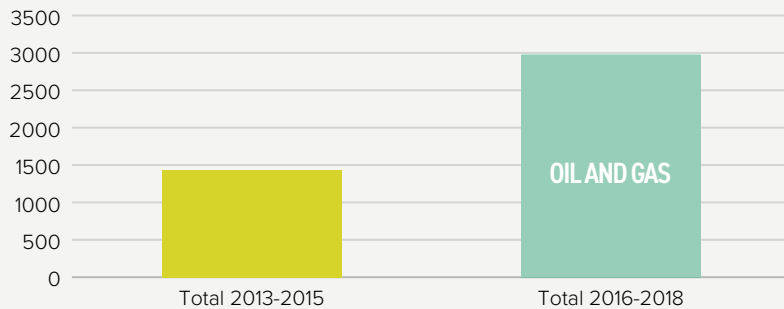
By July 2020 the government had not implemented climate-related financing measures in response to the COVID-19-related economic slowdown. Instead, reports surfaced of the possibility of state-owned fossil fuel companies being permitted to delay the payment of dividends to alleviate their financial burden in the face of low oil and gas prices (Radio Free Europe, 2020). The development of the national green finance system, currently underway, could be fast-tracked to allow financing of climate-related projects in response to the economic effects of the COVID-19 crisis.

PUBLIC FINANCE

Governments steer investments through their public finance institutions, including via development banks both at home and overseas, and green investment banks. Developed G20 countries also have an obligation to provide finance to developing countries, and public sources are a key aspect of these obligations under the UNFCCC.

Public finance for fossil fuels

Public finance provided to fossil fuels (in USD millions)



The database used to estimate public finance for fossil fuels is a bottom-up database based on information that is accessible through various online sources and is, therefore, incomplete.

Source: Oil Change International, 2020

Between 2016 and 2018, Russia provided an average of USD 3bn per year in public finance for the oil and gas sector. This represents a considerable increase if compared to the previous period 2013-2015, when an average of USD 1.4bn per year is estimated to have been directed from public finance institutions to oil and gas projects. The country has no recorded public finance for coal for the period 2016-2018. Russia also has three large government-owned banks that are very active in the energy sector, whose support is not captured in the data adopted for this analysis. Including majority government-owned banks would have more than doubled Russia's fossil fuel finance total, from USD 3.0bn a year between 2016 and 2018 to USD 6.3bn over the same period.

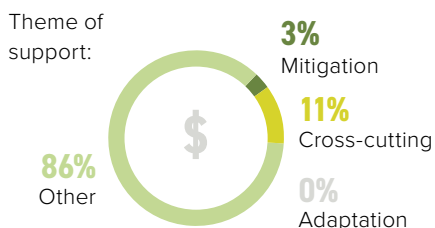
Provision of international public support

(annual average 2017 and 2018)

Climate finance contributions are sourced from Party reporting to the UNFCCC.

Bilateral, regional and other channels

Annual average contribution: **3.63 MN USD**



Multilateral climate finance contributions

No data available

Theme of support:

No data available

Core / General Contributions

Annual average contribution: **3.65 MN USD**

Russia is not listed in Annex II of the UNFCCC and is, therefore, **not formally obliged to provide climate finance**. It is an Annex I country, however, and submits biennial reporting to the UNFCCC. Despite the voluntary nature of contributions, it has provided international public finance to the Global Environment Facility (GEF) Trust Fund and the Green Climate Fund. While Russia may channel international public finance towards climate change via multilateral and other development banks, it has not been included in this report.

FINANCIAL POLICY AND REGULATION

Financial policy and regulation

Through policy and regulation governments can **overcome challenges to mobilising green finance**, including: real and perceived risks, insufficient returns on investment, capacity and information gaps.

Category	Instruments	Objective	Under Discussion/implementation		None identified	
			Mandatory	Voluntary	Under Discussion/implementation	None identified
Green Financial Principles	n/a	This indicates political will and awareness of climate change impacts, showing where there is a general discussion about the need for aligning prudential and climate change objectives in the national financial architecture.				●
Enhanced supervisory review, risk disclosure and market discipline	Climate risk disclosure requirements	Disclose the climate-related risks to which financial institutions are exposed				●
	Climate-related risk assessment and climate stress-test	Evaluate the resilience of the financial sector to climate shocks				●
Enhanced capital and liquidity requirements	Liquidity instruments	Mitigate and prevent market illiquidity and maturity mismatch				●
	Lending limits	Limit the concentration of carbon-intensive exposures				●
		Incentivise low carbon-intensive exposures				●
	Differentiated reserve requirements	Limit misaligned incentives and channel credit to green sectors				●

Although the Russian Federation held an international conference on “Green Financing for Sustainable Development” in May 2017, and the Central Bank of Russia conducted a review of financial market regulation on green bonds, **there is otherwise no evidence of green financial policy or regulation, or formal engagement with initiatives compliant with Task Force on Climate-related Financial Disclosures (TCFD)**. In October 2018, a document “Green Finance: the Agenda for Russia (NGFS)” was released by the working group on responsible financing, and environmental, social and governance (ESG) standards under the Expert Council on the long-term investment market under the Russian Central Bank. It described the current state of trends in green finance in the world and offered an analysis of possible reforms that could be introduced in Russia in order to align the country to low-carbon objectives, including the formation of a green finance market. **The Bank of Russia joined the Network for Greening the Financial System (NGFS) in December 2019.**

Nationally Determined Contribution (NDC): Finance

Conditionality	NDC not conditional on international financial support
Investment needs	Not specified
Actions	Not mentioned
International market mechanisms	No contribution from international credits for the achievement of the target

ENDNOTES

For more detail on the sources and methodologies behind the calculation of the indicators displayed, please download the Technical Note at: www.climate-transparency.org/g20-climate-performance/g20report2020

- 'Land use' emissions is used here to refer to land use, land use change and forestry (LULUCF). The Climate Action Tracker (CAT) derives historical LULUCF emissions from the UNFCCC Common Reporting Format (CRF) reporting tables data converted to the categories from the IPCC 1996 guidelines, in particular separating Agriculture from Land use, land use change and forestry (LULUCF), which under the new IPCC 2006 Guidelines is integrated into Agriculture, Forestry, and Other Land Use (AFOLU).
- The 1.5°C fair share ranges for 2030 and 2050 are drawn from the CAT, which compiles a wide range of perspectives on what is considered fair, including considerations such as responsibility,

capability, and equality. Countries with 1.5°C fair-share ranges reaching below zero, particularly between 2030 and 2050, are expected to achieve such strong reductions by domestic emissions reductions, supplemented by contributions to global emissions reduction efforts via, for example, international finance. On a global scale, negative emissions technologies are expected to play a role from the 2030s onwards, compensating for remaining positive emissions. The CAT's evaluation of NDCs shows the resulting temperature outcomes if all other governments were to put forward emissions reduction commitments with the same relative ambition level.

- In order to maintain comparability across all countries, this report utilises the PRIMAP year of 2017. However, note that Common Reporting Format (CRF) data is available for countries which have recently updated GHG inventories.
- The Decarbonisation Ratings assess the current year and average of the most recent five years

(where available) to take account of the different starting points of different G20 countries.

- The selection of policies rated and the assessment of 1.5°C compatibility are informed by the Paris Agreement, the IPCC's 2018 SR15 and the Climate Action Tracker (2016). The table below displays the criteria used to assess a country's policy performance.
- This indicator adds up emissions from domestic aviation and international aviation bunkers in the respective country. In this Country Profile, however, only a radiative forcing factor of 1 is assumed.
- This indicator includes only direct energy-related emissions and process emissions (Scope 1) but not indirect emissions from electricity.
- This indicator includes emissions from electricity (Scope 2) as well as direct energy-related emissions and process emissions (Scope 1).

On endnote 5.	 Low	 Medium	 High	 Frontrunner
Renewable energy in power sector	No policy to increase the share of renewables	Some policies	Policies and longer-term strategy/target to significantly increase the share of renewables	Short-term policies + long-term strategy for 100% renewables in the power sector by 2050 in place
Coal phase-out in power sector	No target or policy in place for reducing coal	Some policies	Policies + coal phase-out decided	Policies + coal phase-out date before 2030 (OECD and EU28) or 2040 (rest of the world)
Phase out fossil fuel cars	No policy for reducing emissions from light-duty vehicles	Some policies (e.g. energy/emissions performance standards or bonus/malus support)	Policies + national target to phase out fossil fuel light-duty vehicles	Policies + ban on new fossil-based light-duty vehicles by 2035 worldwide
Phase out fossil fuel heavy-duty vehicles	No policy	Some policies (e.g. energy/emissions performance standards or support)	Policies + strategy to reduce absolute emissions from freight transport	Policies + innovation strategy to phase out emissions from freight transport by 2050
Modal shift in (ground) transport	No policies	Some policies (e.g. support programmes to shift to rail or non-motorised transport)	Policies + longer-term strategy	Policies + longer-term strategy consistent with 1.5°C pathway
Near zero energy new buildings	No policies	Some policies (e.g. building codes, standards or fiscal/financial incentives for low-emissions options)	Policies + national strategy for near zero energy new buildings	Policies + national strategy for all new buildings to be near zero energy by 2020 (OECD countries) or 2025 (non-OECD countries)
Energy efficiency in Industry	0-49% average score on the policy-related metrics in the ACEEE's International Energy Efficiency Scorecard	50-79% average score on the policy-related metrics in the ACEEE's International Energy Efficiency Scorecard	80-89% average score on the policy-related metrics in the ACEEE's International Energy Efficiency Scorecard	Over 90% average score on the policy-related metrics in the ACEEE's International Energy Efficiency Scorecard
Retrofitting existing buildings	No policies	Some policies (e.g. building codes, standards or fiscal/financial incentives for low-emissions options)	Policies + retrofitting strategy	Policies + strategy to achieve deep renovation rates of 5% annually (OECD) or 3% (non-OECD) by 2020
Net-zero deforestation	No policy or incentive to reduce deforestation in place	Some policies (e.g. incentives to reduce deforestation or support schemes for afforestation / reforestation in place)	Policies + national target for reaching net-zero deforestation	Policies + national target for reaching zero deforestation by 2020s or for increasing forest coverage

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