

RUSSIA'S CLIMATE CHANGE MEASURES ENTERING A TRANSITIONAL PERIOD

— ANALYSIS IN TERMS OF INCREASE AND DECREASE —

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SUMMARY

- Russia aims to achieve carbon neutrality by 2060 without sacrificing its status as an energy superpower while ensuring social and economic stability.
- To achieve this, on the one hand, the Russian government emphasizes the approach of increasing the production and export of hydrogen and ammonia as well as the amount of GHG absorbed by forests. On the other hand, Russian corporations are taking the approach of decreasing GHG emissions to counter climate change. In either of these approaches, there is considerable room for cooperation between Japan and Russia.
- In the future, legislation for a Carbon Border Adjustment Mechanism (CBAM) will be developed, and public opinion in Russia on climate change risk may increase, which may lead to a shift in the Russian government's climate change measures to a more decarbonization-oriented approach.

On October 13, 2021, President Putin announced the Russian government's goal of achieving carbon neutrality by 2060. Russia's climate change measures are entering a transitional period. This report explains Russia's climate change measures, focusing on the differences in approaches at the national and corporate levels, and provides an outlook for the future.

1. CHANGES IN RUSSIA'S CLIMATE CHANGE POLICY GOALS

1.1 BACKGROUND TO CARBON NEUTRALITY STATEMENT BY RUSSIA

To date, Russia's climate change policy goals have been as follows: (1) a 30% reduction in greenhouse gas (GHG) emissions from 1990 levels by 2030 as set out in a presidential decree on November 4, 2020,¹ and (2) "Over the next 30 years, accumulated net greenhouse gas emissions in Russia must be lower than in the European Union," as stated by President Putin at his annual state-of-the-nation speech in April 2021² (Table 1). Regarding (1), the target of a 30% reduction had already been achieved at the time of the announcement.³ Goal (2) lacked a specific numerical target and has been evaluated as "critically insufficient" because it was not a statement of carbon neutrality.⁴

¹ <http://publication.pravo.gov.ru/Document/View/0001202011040008>

² <http://www.kremlin.ru/events/president/news/65418>

³ According to the greenhouse gas inventory, Russia's GHG emissions in 2019 were 33.5% less than in 1990 (48.66% less when land use is included). https://di.unfccc.int/ghg_profiles/annexOne/RUS/RUS_ghg_profile.pdf

⁴ The environmental NGO Climate Action Tracker rates Russia's climate change policies and national goals as "highly insufficient" and overall climate change measures as "critically insufficient."
<https://climateactiontracker.org/countries/russian-federation/>

Table 1. Russia's main climate change-related policy documents and statements

Name	Date of release	Details
Energy Strategy of the Russian Federation Until 2035	June 2020	<ul style="list-style-type: none"> Assumes an increase in hydrocarbon production (increase by 2035 compared with 2018: coal 110 to 152%; oil 88 to 100%; natural gas 118 to 137%) Exports of hydrogen are projected to be 200,000 tons in 2024 and 2 million tons in 2035
Presidential decree regarding reductions in GHG emissions	November 2020	<ul style="list-style-type: none"> Set greenhouse gas emissions to 70% (30% decrease) from 1990 levels by 2030 to implement the Paris Agreement
President Putin at his annual state-of-the-nation speech	Stated in April 2021	<ul style="list-style-type: none"> "Over the next 30 years, accumulated net greenhouse gas emissions in Russia must be lower than in the European Union"
Russian federal law regarding reductions in GHG emissions	Effective as of July 2021	<ul style="list-style-type: none"> Companies with annual GHG emissions of 150,000 tons or more will be required to report their emissions from January 2023, and companies with emissions of 50,000 tons or more will be required to report their emissions from January 2025.
Concept for the Development of Hydrogen Energy in Russia	Adopted in August 2021	<ul style="list-style-type: none"> 2021 to 2024: Established clusters (Northwest cluster for EU, Eastern cluster for Asia, Arctic cluster) to export up to 200,000 tons by 2024. Conduct test projects. 2025 to 2035: Operate commercial projects accompanying hydrogen exports of 2 million tons in 2035 (12 million tons if possible) 2036 to 2050: Increase annual exports of hydrogen to 15 million tons by 2050 (or 50 million tons if possible). Russia to become one of the largest exporters of hydrogen and related energy resources
Carbon neutrality statement by President Putin	Stated in October 2021	<ul style="list-style-type: none"> "Russia will practically seek after carbon neutrality of its economy. We set a specific orienting point here - not later than 2060."

Source: Prepared by MGSSI from materials of the Presidential Executive Office, the Russian government, and the Russian parliament

Initially, President Putin said that in the global movement towards decarbonization it would not be possible to completely stop the use of hydrocarbons in the coming decades.⁵ In the "Energy Strategy of the Russian Federation Until 2035" announced by the Russian government in August 2020, Russia set the goal of strengthening and maintaining its position in the global energy industry for an expected increase in fossil fuel production. In Russia, a country with a resource-dependent economic structure, it was also recognized that the rapid promotion of decarbonization and the introduction of carbon neutrality would have significant social and economic impacts. For this reason, a presidential decree issued by President Putin on November 4, 2020, which set the goal of a 30% reduction in GHG emissions from 1990 levels by 2030, included a caveat: Any relevant measure must be taken under conditions to ensure steady and balanced socio-economic development of the Russian Federation.

On the other hand, in Russia, where the rate of the rise in average temperature over the past 44 years has been 2.8 times the global average,⁶ disasters have frequently occurred due to climate change. Russia's Audit Chamber has calculated that the cost of climate change could amount to 2 to 3% of Russia's GDP by 2030. In July 2021, the EU announced a Carbon Border Adjustment Mechanism (CBAM) to charge imports from countries with inadequate climate change measures. Russia was said to be the country facing the greatest burden, and CBAM was seen to cause damage far outweighing sanctions against Russia. There was also a growing sense of caution in Russia about the progress of international cooperation and rule-making on climate change measures without Russia playing a role. As a result, it seems that President Putin has finally set out to achieve carbon neutrality by 2060 and has adopted the stance of taking an active approach in climate change measures.

1.2 RUSSIAN UNIQUENESS

Russia's uniqueness lies in its efforts to maintain its status as an energy superpower and secure social and economic stability at the same time as achieving carbon neutrality.

According to media reports, the Ministry of Economic Development of the Russian Federation is currently preparing its "Strategy for Long-term Development of Russia with Low Greenhouse Gas Emissions Until 2050."

⁵ <http://www.kremlin.ru/events/president/news/64296>

⁶ <http://www.kremlin.ru/events/president/news/66327>

The Strategy considers two scenarios: (1) an “inertial scenario” and (2) an “intensive scenario.” In (1) the inertial scenario, the current resource-dependent economic model and power mix are maintained, and GHG net emissions increase by 25% by 2050. In (2) the intensive scenario, by increasing GHG absorption by forest-based ecosystems by 2.2 times, GHG net emissions decrease by 79% by 2050 (down 89% from 1990 levels), and carbon neutrality is achieved by 2060.⁷

In scenario (2), it seems that the emphasis will be on increasing GHG absorption by forests and ecosystems as a way of reducing GHG emissions (which appears to be easy for Russia to do) rather than raising the renewable energy proportion (as in the EU). The details of the measures to achieve carbon neutrality have not been clarified, and it is hoped that this long-term development strategy will be announced.

2. RUSSIA’S APPROACH TO CLIMATE CHANGE

2.1 THE RUSSIAN GOVERNMENT’S INCREASE-BASED APPROACH

The Russian government would appear to be “chasing two rabbits.” On the one hand, it aims to be carbon-neutral, yet at the same time it seeks to maintain its position as an energy superpower and reduce social and economic impact. The Russian government places great emphasis on the “increase” approach in addressing climate change.

First, the Russian government policy is to increase the production and export of natural gas, hydrogen, and ammonia. Demand for these as alternatives to oil and coal is expected to increase as the world decarbonizes. Expectations for hydrogen are particularly high. Exports of hydrogen will grow to 2 million tons by 2035 with the following plans: Gazprom will produce “gray hydrogen” by steam methane reforming and autothermal reforming of natural gas and “blue hydrogen,” which is CO₂-free thanks to carbon dioxide capture and storage technology (CCS). Rosatom will produce “yellow hydrogen” from the electrolysis of water using electricity generated by nuclear power. In particular, blue hydrogen is said to be more cost-effective than “green hydrogen” (which is produced by electrolyzing water using renewable energy). The Russian government is eager to increase exports with price competitiveness as a weapon to maintain its position as an energy superpower.⁸

Second, the Russian government also has plans to increase GHG absorption. CCS, which is essential in the production of blue hydrogen, is a technology that increases the recovery and storage (in other words: the absorption) of CO₂. CCS is a promising technology in Russia, a country that can use depleted oil and gas fields as storage sites and has accumulations of data on geological strata. Carbon capture, utilization, and storage (CCUS) technology, which can inject CO₂ into an operating oil field and thus store it underground while helping to recover crude oil, is a technology that suits Russia well in that it can help achieve both GHG absorption and conventional fossil fuel production.

In addition, as mentioned earlier in the strategy that the Ministry of Economic Development is drafting, the increase in GHG absorption by forests is seen as promising. Measures such as enhancing wildfire preparedness to prevent deforestation and reducing large-scale deforestation are envisioned. On the other hand, Russia is dissatisfied with the fact that only forests that have been subjected to man-made activities such as tree planting and forest management since 1990 are permitted to be included in the absorption calculations. As President Putin remarked, “Russia makes an enormous contribution in the absorption of global emissions—both its own

⁷ <https://www.kommersant.ru/doc/5018693>

⁸ In the “Concept for the Development of Hydrogen Energy in Russia” that the government approved in August 2021, hydrogen exports are expected to begin in Stage 1 (2021 to 2024). The commencement of the wide-ranging commercial use of hydrogen technology in the fields of transportation, power generation and industry in the Russian Federation is slated to begin in Stage 3 (2036 to 2050). Discussions within Russia are overwhelmingly export-driven. At the Eastern Economic Forum held in September 2021 as well, President Putin mentioned the possibility of forming ammonia clusters in the Far East, mainly with an eye to the Japanese and Chinese markets.

<http://static.government.ru/media/files/5JFns1CDAKqYKzZ0mnRADAw2NqcVsexl.pdf>

<http://www.kremlin.ru/events/president/news/66586>

and others'—by means of absorptive capacity of our ecosystems, firstly of forests, which is estimated at 2.5 billion (metric) tons of CO₂ equivalent a year,"⁹ Russia is insisting that these calculations include the natural forest that the country believes is the largest in the world. If this claim by Russia is incorporated into the successor treaty of the Paris Agreement and wins international approval, Russia will presumably be able to achieve carbon neutrality simply by increasing forest absorption while continuing its energy production.

2.2 RUSSIAN CORPORATIONS' DECREASE-BASED APPROACH

On the other hand, in the Russian private sector, various external pressures are accelerating the decarbonization efforts by corporations to reduce GHG emissions. First, as companies face growing demands relating to climate change measures from their shareholders, investors, and financial institutions, Russian corporations are required to proactively formulate and publicize climate change strategies and carbon-neutral targets. Even Russian energy companies, which are often thought to be reluctant to decarbonize, are facing this pressure. Since they need to go offshore to procure funds, it has been pointed out that they are actively involved with decarbonization,¹⁰ and larger companies that raise funds abroad are stepping up their decarbonization efforts.

Second, the EU's Carbon Border Adjustment Mechanism (CBAM) mentioned earlier is also a driving force accelerating decarbonization mainly among exporters of cement, iron/steel, aluminum, fertilizer, and electricity. The Russian Ministry of Economic Development estimates that some \$7.6 billion of exports to the EU will be subject to CBAM. KPMG estimates that the Russian burden will amount to 33.3 billion euros in the period from 2025 to 2030.¹¹ In the face of such outside pressure, Russian steelmaker TMK plans to reduce GHG by 8% by 2023 (compared with 2020) by renewing production facilities. Aluminum giant RUSAL is also promoting decarbonization by producing low-carbon aluminum with hydroelectricity used as the power source. Together with the Russian government that is taking an increase-based approach, these corporations are shaping Russia's climate change policy with a decrease-based approach.

3. OUTLOOK

First, the Russian government, which is taking an increase-based approach, is also aiming to obtain an EU CBAM exemption. This means that Russia may possibly proceed with legislation to achieve a decrease-based approach. President Putin has also said that he will complete emissions trading and the legal development of Russian taxonomy by June 1, 2022.¹² In this context, attention should be paid to the success or failure of Sakhalin's experimental project, which attempts to achieve net-zero GHG emissions by 2025 with a comprehensive approach that combines both "increase" and "decrease" measures. The "increase" measures will be represented by the creation of hydrogen clusters. The "decrease" measures will include the transition from coal-fired power to gas-fired power and the introduction of renewable energy, electric vehicles, and a state-specific emissions trading system. The Russian government officials have said that they hope to gain certification of the system from the EU.¹³

Second, climate change measures are driven by public opinion in Europe and the United States, but led by the government and corporations in Russia. Nevertheless, in Russia as well, public awareness of climate change

⁹ <http://www.kremlin.ru/events/president/news/65425>

According to the greenhouse gas inventory, Russian GHG emissions in 2019 totaled around 1.679 billion tons (not including land use, such as GHG absorption by forests), yet in contrast to this the amount of GHG absorption due to land use was some 575.5 million tons.

¹⁰ The Energy Center of the Moscow School of Management points out as follows: In many respects, these corporations rely on foreign lending, which accounts for 54.6% of the borrowings of major Russian oil and gas companies, so they, just like other global companies, disclose IR information; they have to move forward and focus on climate change strategies and climate change risk response; and they have to focus on climate change strategies and climate change risk responses. Декарбонизация нефтегазовой отрасли: международный опыт и приоритеты России, с.131, Центр энергетике МШУ СКОЛКОВО

¹¹ <https://www.rbc.ru/business/07/07/2020/5f0339a39a79470b2fdb51be>

¹² <http://www.kremlin.ru/events/president/news/66586>

¹³ <https://www.kommersant.ru/doc/4691458>

issues may increase in the long run. Disasters due to climate change are increasing in Russia: an oil spill caused by thawing permafrost in Norilsk in 2020¹⁴ and the worst wildfire in the history of the Sakha Republic in 2021¹⁵. The Russian public's interest in climate change issues is by no means low (see Table 2).¹⁶ Levels of public opinion will rise as climate change risk increases. If this internal pressure of public opinion is factored into the process of government legislation, the Russian government's climate change measures may shift to a more decarbonized approach.

Table 2. Opinion poll: “threats” perceived by Russian citizens

Question: Which of the following global threats facing humanity in the 21st century are the most dangerous? (Multiple choices possible)	
Environmental pollution	48 %
International terrorism	42 %
Armed conflict, wars	37 %
Climate change, global warming	34 %
Human-caused catastrophes and accidents	31 %
Nuclear weapons proliferation and the threat of their use	25 %
Global economic crisis	25 %
Global epidemics, novel diseases	24 %
Hacker attacks, cybercrime, data leaks	18 %
Shortages of food and potable water	16 %
Overpopulation and large-scale migration	15 %
Reduction in energy resources	12 %
Widening rift between developed and developing countries	9 %
Other (“meteor,” “alcoholism and drug addition,” “low wages unemployment,” etc.)	1 %

Note: Poll conducted from December 12 to 18, 2019. Poll surveyed 1,608 Russian citizens aged 18 or older.

Source: Prepared by MGSSI from data from the Levada Center (a Russian independent polling and research organization)

Finally, it is expected that cooperation between Japan and Russia will be strengthened through efforts to counter climate change. At the Eastern Economic Forum held in September 2021, numerous memorandums on climate change were signed between Japan and Russia.¹⁷ The possibility of Japanese and Russian collaboration regarding climate change is high. In the increase-based approach, Japan introduces hydrogen/ammonia production technology to Russia, imports related products, and cooperates with Russia on CCS/CCUS technology. In the decrease-based approach, the introduction of Japan's energy-saving technology in Russia, the renewal of production facilities, and the import of Russian low-carbon products such as carbon-neutral LNG by Japan are promising.

¹⁴ https://www.nipr.ac.jp/aerc/topics/20200701Norilsk_discussion.pdf

¹⁵ <https://www.washingtonpost.com/world/2021/08/11/siberia-fires-russia-climate/>

¹⁶ Experts' opinions are divided on the Russian public's awareness of climate change and the potential for change.

Декарбонизация нефтегазовой отрасли: международный опыт и приоритеты России, с.121

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Stanislav Secieru and Federica Prandin, Melting Ice, Frozen Heart, p.7

https://www.iss.europa.eu/sites/default/files/EUISSFiles/Brief_19_2021_web.pdf

¹⁷ <https://www.jetro.go.jp/biznews/2021/09/a33ca999447d3768.html>