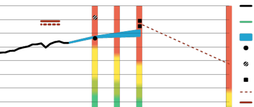
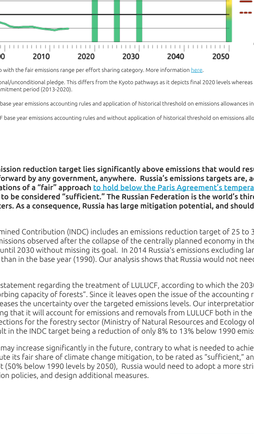
Russian Federation

Page last updated: 3rd November 2016

Rating





Note: Hover over the coloured bars for a pop-up with the fair emissions range per effort sharing category. More information here.

* Emissions level in 2020 resulting from conditional/unconditional pledge. This differs from the Kyoto pathways as it depicts final 2020 levels whereas the Kyoto emissions allowances consider the average level of emissions over the second commitment period (2013-2020).

** Incl. LULUCF credits and debits, incl. LULUCF base year emissions accounting rules and application of historical threshold on emissions allowances in 2020 under the Doha decision.

***Excl. LULUCF credits and debits, excl. LULUCF base year emissions accounting rules and without application of historical threshold on emissions allowances in 2020 under the Doha decision.

Assessment

Russia's INDC greenhouse gas emission reduction target lies significantly above emissions that would result from current policies. This target is one of the weakest put forward by any government, anywhere. Russia's emissions targets are, according to our analysis, "inadequate" under all interpretations of a "fair" approach to hold below the Paris Agreement's temperature limit and Russia would need to substantially strengthen them to be considered "sufficient." The Russian Federation is the world's third largest emitter, and one of the most important fossil fuel producers. As a consequence, Russia has large mitigation potential, and should play a major role in international climate policy.

Russia's Intended Nationally Determined Contribution (INDC) includes an emissions reduction target of 25 to 30% below 1990 levels by 2030. However, the significant drop in emissions observed after the collapse of the centrally planned economy in the early 1990s means that Russia can de facto increase its emissions until 2030 without missing its goal. In 2014 Russia's emissions excluding land-use, land-use change and forestry (LULUCF) were 30% lower than in the base year (1990). Our analysis shows that Russia would not need to implement a single new policy to achieve its current target.

Of particular concern is the INDC's statement regarding the treatment of LULUCF, according to which the 2030 target is subject to "the maximum possible account of absorbing capacity of forests". Since it leaves open the issue of the accounting rules that will be used for the LULUCF sector, this statement increases the uncertainty over the targeted emissions levels. Our interpretation of the statement is that Russia will use a net–net approach, meaning that it will account for emissions and removals from LULUCF both in the base year and in the commitment year. Using the latest national projections for the forestry sector (Ministry of Natural Resources and Ecology of the Russian Federation, 2015), we estimate this approach will result in the INDC target being a reduction of only 8% to 13% below 1990 emissions levels (excluding LULUCF).

This means that Russia's emissions may increase significantly in the future, contrary to what is needed to achieve the Paris Agreement's long-term temperature goal. To contribute its fair share of climate change mitigation, to be rated as "sufficient," and to be on track to meet its national long-term emissions target (50% below 1990 levels by 2050), Russia would need to adopt a more stringent 2030 target, improve the implementation of current mitigation policies, and design additional measures.

Pledges and targets

Paris Agreement targets

On 31 March 2015, the Russian Federation submitted its 2030 Intended Nationally Determined Contribution (INDC), proposing to reduce emissions 25% to 30% below 1990 levels by 2030 (UNFCCC, 2015). The Russian government officially signed the Paris Agreement (PA) on April 22, 2016. The ratification of the agreement and thus the submission of the definitive Nationally Determined Contribution (NDC) are still pending.

Our best estimate of the target emissions levels that Russia's INDC entails are 3.3 to 3.5 $GtCO_2e$ in 2030 (8–13% below 1990 levels, excluding LULUCF). These levels were calculated using the most recent projected emissions for the LULUCF sector in 2030 (Ministry of Natural Resources and Ecology of the Russian Federation, 2015). Our main assumption for this calculation is that Russia will use a net–net approach to account for the LULUCF sector, which would allow for much higher emissions in the target year compared to if the target excluded LULUCF emissions. This assumption arises from the INDC statement, according to which the 2030 target "is subject to the maximum possible accounting of the absorbing capacity of forests" (UNFCCC, 2015), which adds considerable uncertainty to the 2030 target emissions levels. Greater transparency around the accounting rules for the LULUCF sector in the NDC submission would enable us to calculate a more precise estimate of the emissions level (excluding LULUCF) in 2030 required for Russia to achieve its INDC target.

Kyoto Protocol (KP)	
Member of KP CP1 (2008–2012)	Yes
Member of KP CP2 (2013–2020)	No
KP CP1 target (below base year)	0% below 1990
Copenhagen pledge	
2020 target	15-25% below 1990 by 2020
Conditions	a) Appropriate accounting of the potential of Russia's forestry sector b) The undertaking by all major emitters of legally binding obligations to reduce emissions
Paris Agreement target	
Ratified	No
2030 target	25-30% below 1990 by 2030
Coverage	Economy-wide, incl. LULUCF
LULUCF	Target is subject to "the maximum possible account of absorbing capacity of forests"
Long term goal(s)	
Long-term goal(s)	50% below 1990 by 2050

2020 Pledges

In the Copenhagen Accord from 2009, the Russian Federation pledged to limit emissions by 15–25% below 1990 levels by 2020 (Russian Federation Government, 2010). This implies an emissions level of 2.8 to 3.6 $GtCO_2e$ in 2020. In comparison to 2014 this represents a 7–35% increase in emissions.

In September 2013, the Russian Federation adopted Decree No. 752 On Reducing Greenhouse Gas Emissions, which set a target of reducing emissions by 2020 to 75% of 1990 levels. This target was reaffirmed in Decree No. 504-p in April 2014 (Russian Federation, 2014a) and is in line with the lower end of the Copenhagen Pledge's range, which we have rated as "inadequate".

Due to lack of clarity regarding the inclusion of the LULUCF sector in the 2020 target, in our assessment we show estimates of the resulting 2020 target emissions levels—both excluding, and including—LULUCF accounting. For the estimate including LULUCF accounting we assume a net-net approach. Under this scenario, the 2020 target emissions level would reach 3.6 $GtCO_2e$, which is 35% above 2014 non-LULUCF emissions.

Long Term Goal

For the long-term goal, former president Medvedev announced, at the L'Aquila G8 Summit in 2009, a pledge to cut Russia's GHG emissions by at least 50% below 1990 levels by 2050 (Yale Center for Environmental Law, 2011). To date, no official national document has confirmed the Russian Federation's intention to continue pursuing this long-term target. Given the lack of further clarification regarding this target, we assume the percentage reduction is based on emissions excluding LULUCF.

Fair share

We rate Russia's 2020, 2030 and long-term emissions targets as "inadequate" under all interpretations of a "fair" approach to hold warming below 2°C. This means the commitments are not in line with holding warming below2°C, let alone with let alone with the Paris Agreement's stronger 1.5°C limit, unless other countries make much deeper reductions and comparably greater effort. In order to be rated "sufficient," Russia must substantially strengthen its mitigation targets.

It must be noted that if additional information on the LULUCF sector accounting rules is provided in the NDC, our 2030 target emissions level estimates could change. Nonetheless, given the large discrepancy between our estimated 2030 target, and the emissions level required for a "medium" rating, it is very unlikely that this would change the "inadequate" rating. To reach a "sufficient" rating the reduction target would also need to be enhanced.

Current policy projections

After the collapse of the Soviet Union in the 1990s, emissions in Russia dropped substantially, reaching a historic low of around 2.3 $GtCO_2e$ (excluding LULUCF) in 1998, which is equivalent to 40% below 1990 levels. The LULUCF sector went from being an emissions source in the early 1990s to an emissions sink of more than 500 $MtCO_2e$ currently. This resulted in net emissions reaching a historic low in 2002 of 1.9 $GtCO_2e$: 52% below 1990 levels (excluding LULUCF). Since then, emissions have increased steadily and are expected to continue growing until at least 2030. In addition, the reported historical emissions levels for 1990 have been adjusted upwards in each of the annual updates of the national inventory, which has resulted in the target emissions level increasing with every inventory update.

Since Russia's emissions targets use 1990 as reference, they allow national emissions to continue an upward trend while continuing to meet its international commitments. According to our latest estimates, currently implemented policies will lead to emissions of 2.8–2.9 $GtCO_2e$ in 2020 and 2.9–3.1 $GtCO_2e$ in 2030 (both excluding LULUCF). This represents a decrease in emissions from 1990 levels of 23–24% in 2020 and 17–23% in 2030. If LULUCF emissions are taken into account as indicated in the INDC, net emissions would be 42–44% below 1990 levels in 2020 and 34–39% lower in 2030, allowing Russia to reach its national targets without additional efforts.

Our current policy projections include the Russian Federation's main pieces of climate-related legislation,, namely the 2009 Climate Doctrine, the Energy Strategy for 2030, the Decree on Measures to Stimulate the Reduction of Air Pollution from Associated Gas Flaring Products, the 2013 Presidential Decree on reduction of GHG emissions, and the 2014 Decree on the Action Plan for 2020, which have a clear focus on energy production and demand. These documents define the main national mitigation targets, which include a 2.5% share of renewables in the power sector for 2020 (excluding electricity from large-scale hydropower), and a target utilisation rate of 95% for associated petroleum gas by 2012.[1]

Since it enacted the Climate Doctrine in 2009, Russia has focused on improving energy efficiency and passed a number of laws to try to achieve a 40% reduction in energy intensity by 2020, compared to 2007 levels. Some of the measures in place to achieve this target include a State Programme on Energy Efficiency and Savings, efficiency requirements for buildings and structures, a labelling program for electrical products, mandatory energy audits, among others (see full list here).

To reflect the most recent development in national climate policy, we only included the 2.5% renewables national target for 2020 in our policy projection since, despite the fact that the original 4.5% renewable electricity production target for 2020 was never amended, the most recent government documents refer only to the less ambitious target. This target is in line with the capacity-based targets of adding 3,600 MW of wind power, 1,520 MW of solar power and 751 MW of small scale hydro power over the period 2014–2020 outlined in Resolution No. 861 (Russian Federation, 2013b) and referred to in Decree No. 449 on the Mechanism for the Promotion of Renewable Energy on the Wholesale Electricity and Capacity Market (Russian Federation, 2013a).

The Russian government has also outlined different programmes and measures to achieve its national mitigation targets, which include increasing the share of alternatives fuels and hybrid vehicles in the transport sector, strengthening current energy efficiency measures and regulations, and accelerating the electricity mix transformation, among other policies (Ministry of Natural Resources and Ecology of the Russian Federation, 2015). However, since their implementation is lagging (Korppoo & Kokorin, 2015), we have not included those additional planned policies in our current policy projections.

The upper limit of our projections range is based on the most recent World Energy Outlook projections, and the lower limit based on the 'with-measures' scenario from Russia's Second Biennial Report to the UNFCCC (Ministry of Natural Resources and Ecology of the Russian Federation, 2015), (see detailed description in assumptions section). Regardless of the projection used, emissions from all sectors are expected to continue growing until at least 2030. However, the pace of this growth is expected to be slower than that observed in the first decade of the century, mainly due to slower economic growth and implementation of mitigation measures mostly related to energy efficiency, and the development of nuclear and renewable sources of energy. Similarly, the LULUCF sink is expected to decline in the coming decades because the absorption capacity of forests will progressively be reduced due to forest aging (Ministry of Natural Resources and Ecology of the Russian Federation, 2015), along with other factors.

In conclusion, with currently implemented policies and without any additional effort, the Russian Federation can easily achieve its international emissions targets, which lack ambition and are based on particularly high emissions in the reference year. However, for Russia to be on track to meet its national long-term target, emissions would need to peak and start declining at much higher rates of reduction post-2030. This means that the government will need to improve the implementation rate of current mitigation policies, and design additional policies to reduce GHG emissions and improve its high carbon-intensity. As a consequence, a strengthened 2030 target would not only be more credible from an international perspective (Korppoo & Kokorin, 2015), but would also facilitate the achievement of the national long-term emissions target.

Footnotes

[1] Since this target has not been met, additional incentives for compliance were added since 2012, being the most recent a payment system (with a multiplying factor) for exceeding the Associated Petroleum Gas flaring limit that came into force in 2015 (Ministry of Natural Resources and Ecology of the Russian Federation, 2015).

Assumptions

Pledge

Targets for all years are calculated using national inventory submissions (CRF, 2016). For 2050 we assume that LULUCF emissions are excluded from the pledge while for 2030 they are included. For 2020, we calculate the estimated targets for emissions both including—and excluding—the LULUCF emissions sector.

To quantify the pledges including LULUCF sector accounting, we use sectoral emission projections from the Second Biennial Report to the UNFCCC (Ministry of Natural Resources and Ecology of the Russian Federation, 2015). We also calculate the national accounting quantities for afforestation, reforestation and deforestation using the current LULUCF Kyoto rules. For forest management we use 1990 as reference level.

Current policy projections

Historical emissions levels are taken from the inventory data submitted to the UNFCCC until the last available year—2014 (CRF, 2016). The upper limit of current trend projections is based on the World Energy Outlook 2015 Current Policy scenario projections for CO_2 from fuel combustion until 2030 (IEA, 2015), the US EPA non-CO_2 (US EPA, 2012) emission projections until 2030 and extrapolation of the historic trend for other CO_2 emissions. We also quantify the flaring limit and renewable electricity generation targets. Mitigation from limiting flaring is calculated using historic flaring data from NOAA(2011), historic oil production data from (IEA, 2014) and projections for oil production of the BP energy outlook (BP, 2014).

The lower limit of current trend projections is based on the "with measures" scenario of the Second Biennial Report of the Russian Federation (Ministry of Natural Resources and Ecology of the Russian Federation, 2015) and was estimated applying emissions' projected growth rates to historic emissions data, for harmonization purposes.

Sources

BP (2014). *BP Energy Outlook 2035.*

CRF (2016). UNFCCC AWG-KP Submissions 2016. Common Reporting Format.

IEA (2014). Energy Balances. International Energy Agency. Paris.

IEA (2015). World Energy Outlook 2015. International Energy Agency. Paris.

Korppoo, A., & Kokorin, A. (2015). Russia's 2020 GHG emissions target: Emission trends and implementation.

Ministry of Natural Resources and Ecology of the Russian Federation. (2015). Second Biennial Report Russian Federation.

NOAA (2011). Global Flaring Estimates.

Russian Federation (2010). Pledge of the Russian Federation to the Copenhagen Accord. Compiled in: Compilation of economy-wide emission reduction targets to be implemented by Parties included in Annex I to the Convention, UNFCCC (2011).

Russian Federation (2013a). Resolution No. 861.

Russian Federation (2013b). Decree No. 449.

Russian Federation (2014a). Sixth National Communication of the Russian Federation.

Russian Federation (2014d). Decree No. 504-p.

Shamina, M., Anderson, K., & Bows-Larkin, A. (2013). Climate change regional review: Russia. WIREs Climate Change.

UNFCCC (2012). Report of the in-depth review of the fifth national communication of the Russian Federation.

UNFCCC (2015). Russian Submission INDC.

UNFCCC. (2015a). Adoption of the Paris Agreement. Draft decision CP.21

USEPA (2012). Global Mitigation of Non-CO2 Greenhouse Gases. Washington, D.C., USA.

Yale Center for Environmental Law (2011). Climate Policy & Emissions Data Sheet: Russia

Find us on facebook

ECOFYS A Navigant Company

CLIMATE ANALYTICS

NEW CLIMATE INSTITUTE

Copyright 2018 Climate Action Tracker Partners | Disclaimer