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What's behind Russia's climate policy? Small steps towards an intrinsic interest

Maria Chepurina (Sciences Po)

CLIMATE CHANGE IS A TRADITIONALLY MARGINAL ISSUE

Russia is the world's largest energy exporter, and holds the world's biggest energy reserves. It has been through a turbulent transition away from socialism over the last 20 years. Civil society engagement in defining state policies has been generally low, even if recent post-election protests illustrate a certain "awakening", while business interests, particularly in the energy sector, are highly influential in politics. In this context, it is not surprising that climate change has remained a marginal issue in politics and the society at large.

CLIMATE POLICIES WITHIN THE CURRENT ECONOMIC AGENDA

Nonetheless, today there is increasing interest in climate change at the political level. Some of this can be attributed to the huge international attention that the 2009 Copenhagen summit attracted; Russia was indeed keen to preserve its position of an important global player, and therefore had to engage with the global issue of the hour. However, domestic interest is also increasing in energy efficiency and technological innovation. Energy efficiency is seen as a means to maintain energy exports, while continuing to service domestic demand. This issue of technological innovation, including in green technologies, fits well with the broader political agenda of economic modernization promoted both by Medvedev and Putin.

ONE STEP FORWARD, TWO STEPS BACK?

Nonetheless, today Russia is taking only limited action to reduce its greenhouse gas emissions. The energy efficiency law passed in 2009 is an important first step to tackle the largest and most cost-effective source of emissions reductions. But Russia's track record with implementation is patchy; time will reveal the effectiveness of this measure. Russia is also increasingly implementing emissions reduction projects to sell credits abroad (JI). However, a broader program to incentivize the development and diffusion of low-carbon technologies is lacking. Notwithstanding its declared goals, for now Russia prefers to keep a low-profile in international climate change talks, while its proposed target to 2020 likely requires no additional action to be met.

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☆☆☆

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INTRODUCTION 5

1. A HISTORICAL PERSPECTIVE 6

1.1. The Soviet Era: Climate change confined to science 6

1.2. Perestroika and the Yeltsin years: climate change showing up in the political agenda 6

1.3. The pre-Kyoto era: pro and contra 7

1.4. Copenhagen climate change conference: a low profile attitude 8

2. THE CLIMATE DOCTRINE 9

2.1. Modernization and climate change mitigation 9

2.2. From doctrine to plan of action 10

3. DRIVERS OF CLIMATE POLICIES 10

3.1. Energy efficiency 10

3.2. Energy as an economic and (geo)political leverage 11

3.3. Upgrading and implementing new technologies 12

3.4. International projects 13

CONCLUSION 14

APPENDIX 15

REFERENCES 17

INTRODUCTION

Russia remains one of the most energy- and carbon-intensive economies in the world; it uses 822.7 tons of carbon dioxide equivalents (tCO2e) to create one million USD of GDP1, compared to less than half that (394.9 tCO2/mln USD GDP) for Annex I (developed countries under the Kyoto Protocol).2 With its extremely rich hydrocarbon resources, Russia is both an energy-productive and an energy-dependent country, due to the state budget's strong reliance on the hydrocarbon revenues. Russia is also the fourth largest GHG emitter, after China, the USA and the European Union.3

Starting with President Putin's ratification of the Kyoto Protocol in 2004, the Russian attitude towards the issue of climate mitigation seems to be slowly evolving. Historically, climate skepticism has been strong in the country, with a number of leading researchers arguing that "the climate prognosis provided by the [State climate] doctrine is as utopian as the claims by the Soviet leader Khrushchev that the next generation will live in communism".[4] The skeptical and ironic stance on the issue of some of the most prominent Russian politicians does little to facilitate the task of popular sensibilization. In this vein, Russia's current Prime Minister Vladimir Putin, who will run in the March 2012 presidential election, has been repeatedly cited wondering aloud if the natural dying out of mammoths in 10 000 BC means that the current climate change was also a phenomenon independent of human influence, or, on another occasion, questioning the use of windmills because they "disturb moles".[5]

Today, two types of climate sensibility exist in Russia. According to Russian climate policy experts,[6] a small but highly enthusiastic group of middle-level politicians is strongly lobbying within the generally climate-skeptical political circles for greater climate action. Their task has been slightly facilitated by recent heat waves, with the effects of climate change being increasingly felt in the country. Summer 2010 was the hottest since 1882 in Russia, and had severe ecological, economic and health-related consequences. More than 3,100 Russians drowned at the country's beaches, uncontrollable wildfires in 14 regions of the country destroyed hundreds of villages and wild forest areas, while a devastating drought withered Russian crops (up to 30 million acres), boosting food prices and anxiety in the society. The burning peat bogs on the outskirts of Moscow covered Russia's capital in noxious smoke and toxic fog, almost stopping the capital's functioning and dramatically raising the daily mortality rate.[7]

The second type of climate sensibility is more declarative, image-oriented. Contrary to his predecessor, the current President, Medvedev, has positioned himself among the advocates of climate-sensitive policies. In his political manifesto *Go, Russia!*, the first among the five strategic priorities defined was "efficiency of production,

1. At purchasing power parity.
2. Data from CAIT for 2005. Available from: http://cait.wri.org/
3. Data from CAIT for 2005, excluding emissions from land-use. Available from: http://cait.wri.org/
4. Cited in A. Korppoo, "The Russian Debate on Climate Doctrine: Emerging Issues on the Road to Copenhagen", The Finnish Institute of International Affairs Briefing Paper 33, 5 June 2009, PP. 4
5. R. Oliphant, "Medvedev Says to Cash In on Kyoto", Moscow Times, 28 June 2011: http://www.tmt-index.com/business/article/medvedev-says-to-cash-in-on-kyoto/439596.html#axzz1SdccEi9M, retrieved on 20 July 2011
6. Interviews conducted for this paper.
7. For details refer to " Wildfires in Russia, summer 2010, clip 10775", BBC News: http://www.bbc.co.uk/learningzone/clips/wildfires-in-russia-summer-2010/10775.html

transportation and energy use" which would lead to significant reduction in the GHG emissions.[8] Notwithstanding the ambitious goals set, only tentative small steps have been made so far to implement them, with climate change *per se* still remaining a relatively marginal issue.

This article is aimed at examining the evolution of Russia's domestic perception of and interests in climate change mitigation. It argues that Russian political elite is starting, albeit very slowly, to recognize certain synergies between climate-sensitive policies, particularly in the area of energy efficiency, and the political objective of economic and social modernization.

1. A HISTORICAL PERSPECTIVE

1.1. The Soviet Era: Climate change confined to science

The Soviet era (1922-1991) had two long-lasting and influential legacies in terms of Russian society's attitude towards the environment and environmental issues. These are the implicit ideologies of "industrial romanticism" and a deliberate depoliticisation of climate change.[9]

The Soviet era of "industrial romanticism", best described by the slogan "*Do not wait for nature's favour, but transform it for human benefits*", is very characteristic of the first 50 years of the Soviet Union. Starting in the 1930s with the first of Stalin's massive 5-year modernization projects (*pjatiletki),* Soviet politicians convinced themselves and the population of the unlimited capacity of the Soviet system to change and adjust the environment to its ends. The Arctic was "conquered", river flows reversed, "swamps-to-arable-land" programmes carried out. This vision, although repeatedly undermined by environmental catastrophes such as the Aral Sea, has left a deep trace in the Russian political and social mentality, felt even today.

The Soviet second legacy –deliberate depoliticisation of climate change– was the by-product of the system of state planning, in which only specific agencies and research institutes were assigned particular projects. In the case of climate change, scientific research was grouped around Hydromet (USSR Hydrometeorological Monitoring Services). This limited climate research to a relatively small group of senior researchers, effectively marginalizing those who questioned their conclusions.

The delay in placing the issue of climate change on the national agenda can be in part explained by this group's scepticism towards the issue and their vision of the favourable impacts of climate change. Thus, in 1988, Mikhail Budyko, one of the most renowned climatologists of the 1970s-1980s, published an article assuming favourable impacts of climate change for Soviet Union agriculture.[10] Although the negative effect on permafrost melting was acknowledged, the scientist considered that there was no danger of such major challenges as desertification of central Russian territories or floods.[11] In the following publications, Budyko also claimed that climate change would have a positive net impact on global food production in general, with the average productivity of plants increasing 20 percent by the year 2040.[12]

In addition, these senior researchers did all they could to protect their sphere of influence. If fighting climate change were made part of the national priorities, they would be summoned under one of the stronger ministries, such as the Ministry of Defence or Economy. To avoid it, the issue was depoliticised and framed as a deeply theoretical scientific debate.

Finally, public participation in the debate was also restricted during the whole Soviet period.[13] Discussions of the global environmental issues as well as literature relevant to the subject were mainly limited to scientific publications, designed for specialists working on the subject, rather than at making the general public aware of the phenomenon. This has left a lasting legacy of civic disengagement on the climate change issue.

1.2. Perestroika and the Yeltsin years: climate change showing up in the political agenda

In 1985 Mikhail Gorbachev, elected by the Central Committee as General Secretary of the Communist Party of the Soviet Union, launched an overall *perestroika* programme of the political and economic system of the USSR, which included ecological and energy-efficiency initiatives.

8. D. Medvedev, "Go Russia!", Russia Today, September 2009: http://rt.com/politics/official-word/dmitry-medvedev-program-document/ , retrieved on 20 July 2011
9. V. Sokolov, J. Jager, V. Pisarev et al. "Turning Points: The Management of Global Environmental Risks in the Former Soviet Union", published in Learning to Manage Global Environmental Risks, vol.1, 2001 : MIT Press, PP. 141
10. V. Sokolov, J. Jager, V. Pisarev et al. P.149
11. M. Budyko, Klimat kontsa dvadsatogo veka, Nauka I Jizn, 1989
12. V. Sokolov, J. Jager, V. Pisarev et al. P.149
13. V. Sokolov, J. Jager, V. Pisarev et al. P.148

The Chernobyl power plant tragedy (1986) as well as local environmental issues were important in fuelling discontent with the Soviet system. Conscious of the disproportionly high energy intensity of the Soviet GNP, which was two times higher in the USSR compared to the European level, and inspired by Gorbachev's slogan of a "global ecological perestroika", a new state programme on Environmental protection and Rational Use of Natural Resources until 2005 was adopted in 1988. It mainly focused on elaborating sustainable development mechanisms in the context of climate change and on reducing carbon-dioxide emissions, increasing energy efficiency, introducing renewable sources of energy and decreasing the energy intensity of the GNP.[14]

These targets were never to be realized due to the collapse of the USSR and the political chaos of the 1990s.[15] Nonetheless, Russia was among the 38 industrialized countries to sign the Kyoto protocol in December 1997, seeing it as yet another confirmation that it retained its place in the group of leading, developed (Annex I) countries.

1.3. The pre-Kyoto era: pro and contra

During the first stage of Kyoto talks, the Russian position was favourable towards the ratification of the protocol. Russia, under the Kyoto protocol, was granted a large emissions quota, as the reference year in the Protocol was the 1990 emission level, which left the country, struggling with an economic recession, with a significant surplus of emissions permits, generally known as "hot air". While the USA, another major player in climate talks, was considering ratifying the protocol, Russia was convinced it would be able to sell its surplus thus gaining direct economic profit from the agreement. When the USA withdrew from the Protocol in 2001, this potential for direct economic benefit diminished.

In the meantime, the international community was anxious to have Russia on board. This anxiety was linked to the entry into force conditions set in the agreement: 1) 55 parties to the UNFCCC had to ratify the protocol; 2) within the Annex 1 Group, the Protocol had to be ratified by countries accounting for at least 55% of the group's 1990 CO_2 emissions. At that time, Russia was the third largest emitter in the world after the USA and the EU, which meant that after the US withdrawal, Russian ratification was the last chance to bring the protocol into force. The situation gave Russia leverage in international bargaining, which it used, apparently, to exchange ratification for EU support for its WTO membership bid.[16]

Climate change mitigation projects have three groups of supporters in Russia. First of all, the ecological NGOs, represented by renowned Russian scientists and non-profit business unions, some of which are financially strong and have some impact on the public opinion. These include the WWF Russia, Greenpeace, the Russian Socio-Ecological Union on the Issue of Climate Change and Energy Policy (RSEU) and the National Carbon Unit (NCU) that unites major energy and industrial producers in Russia.

The second "supporting camp" is some big business. Although passive in the 1990s, it gradually became a stronger lobbying force, seeing the ratification as a means of attracting reliable foreign investment in the energy sector via the Joint Implementation (JI) programmes, which allow countries to sell emissions reduction credits. The investment would thus help upgrade outdated equipment, give access to advanced technologies and improve management, all of which leads to cost savings. Relying on a number of independent international reports, business argued that even in the case of the most favourable scenario and the realization of the ambitious decadal economic growth targets, set by President Putin at the beginning of his first term in 2001, it was still virtually impossible ("probability zero") for Russia to exceed the Kyoto target.[17] Even before the Kyoto Protocol was officially ratified, Russian companies started submitting JI projects under the first tenders for emissions reduction projects, which were rejected as the Russian government didn't provide the official Letters of Approval to accompany the projects.

Russian regions, although to different extents, were the third pro-Kyoto group.[18] Similarly to

14. V. Yudin and O. Makarova, "Environmental issues in the future development of the USSR energy system", Energy Journal, 12(3): 9, 1991.

15. Gorbatchev went on with his idea of "global ecological perestroika" even after the collapse of the USSR and his ousting out of power. In 1992, during the United Nations Rio Conference of Environment and Development, the former leader launched Green Cross International, a so-called Red Cross for the environment, which is concerned with issues such as climate change and chemical contamination. Today the organization, presided by Gorbatchev, has 31 national subsidiaries. For details refer to: http://www.gci.ch/

16. Ch. Digges, "Putin signals Russia will sign Kyoto protocol for WTO membership", Bellona Center, May 2004: http://www.bellona.org/english_import_area/energy/34179

17. B. Muller, "The Kyoto Protocol: Russian Opportunities", RIIA brief note, March 2004

18. The region's position largely depends on the perceived gains and the possibility of hosting the JI projects. Thus, Volga, Ural and the Northwest are actively lobbying,

business, they viewed the investment in new technology and infrastructure modernization, foreseen under Kyoto, as a necessary step to maintaining and renovating the outdated energy sector infrastructure which can help save significant financial resources. Thus, a recent International Energy Agency's study estimated that energy efficiency improvements in Russia's district heating sector could save up to 50 billion cubic metres (bcm) per year of natural gas, while the optimisation of its transmission and distribution systems - up to a further 30 bcm/yr.[19]

Opposing the pro-Kyoto group was the group of the "unconvinced", which includes both renowned scientists, such as Yuri Izrael, former Head of Hydromet and Budyko's follower, renowned for his scepticism about the negative impacts of climate change for Russia as well as for questioning the impact of human activities on it[20], and influential political advisers, in particular Putin's economic advisor Andrei Illarionov and Medvedev's adviser on climate Alexander Bedritsky, who expressed concern over Russia's capacity to undertake GHG reduction obligations without hindering the country's economic growth.[21]

In addition, on the governmental level, the hesitation or hostility towards Kyoto were mainly part of internal political struggle. Thus, the Ministry of Economic Development and Trade radically changed its position from support to criticism after realizing in early 2002 that major emissions reductions projects would go to the Ministry of Energy, whereas the Ministry of Natural resources tended to view the protocol as a restriction on Russia's sovereignty over its nature and extraction of natural resources as well as an attempt of foreign companies to get stakes in the highly lucrative energy sector.[22]

Although formally ratified, the Kyoto Protocol did not lead to any major policy improvements during the first five years that followed. This began to change in the run-up to the Copenhagen negotiations in 2009.

1.4. Copenhagen climate change conference: a low profile attitude

The United Nations Climate Change Conference (COP15) in Copenhagen, the largest summit in the history of climate negotiations, ended in bitter disagreement, papered over by the "Copenhagen Accord". Contrary to the pre-summit promises given by some world leaders who assured that "Copenhagen was condemned to success",[23] the actual outcome of the talks turned out to be somewhat elusive.

From the start, major attention was paid to the stances of the United States and China, the two most important CO2 emitters, who alone could "make or break the Copenhagen deal", with some Russian experts arguing that their country was less needed than under Kyoto.[24] In other words, Russia did not "have specific requests for the new agreement, neither [did] it have any concrete fears, except for the variant when the country would be excluded from the agreement".[25] The fear of exclusion is revealing, as it shows the extent to which Russia views the international talks as an exercise in diplomacy, rather than a process touching its core interests.

Consequently Russia, a generally active player and coalition builder at other UN talks, preferred to keep a low profile. Other participants in the talks also largely ignored Russia, which was not even in the group that negotiated the Copenhagen Accord (unlike its fellow hydrocarbon exporter, Saudi Arabia, for example).

Climate change remained a marginal issue both for the Russian political elite and the population in general.[26] President Medvedev, addressing the Conference, stressed that even if no legally binding document was adopted, Moscow would still adopt the 25% reductions goal unilaterally, as it

while the South and Far East show little interest in the issue.

19. N. Trudeau and I. Murray, "Development of energy efficiency indicators in Russia", IEA Working Paper, 2011, p. 8

20. Y. Izrael, "Chto jdet Rossiju, esli jarkoe leto stanet normoj", Rossijskaya Gazeta, August 2010: http://www.rg.ru/2010/08/17/klimat.html

21. A. Bedritsky, "Rossija ne namerena ogranitchivat ekonomicheskiy rost dla snijenija vibrosov", RIA News, December 2009: http://eco.ria.ru/business/20091211/198651100.html

22. J. Karas, Russia and the Kyoto Protocol: Challenges, Royal Institute of International Affairs (RIIA) brief note, march 2004- p.2

23. R. Dimitrov, "Inside UN climate change negotiations: the Copenhagen Conference", Review of Policy Research, col. 27, Number 6 (2010), p. 795

24. A. Korppoo, "Russia and climate- on the road to Copenhagen", Baltic Rim Economies, 31.8.2009: http://www.tse.fi/FI/yksikot/erillislaitokset/pei/Documents/bre2009/378%204-2009.pdf

25. «Изменение климата ставят на поток», Коммерсант №229, 8 декабря 2009г.: http://www.kommersant.ru/doc/1288411?isSearch=True

26. Although data differs according to opinion poll, one of the most recent polls on the issue conducted by Levada Center shows that only 24% of the Russian population is concerned with climate change, compared to, for example, 50% worried about water pollution. «Состояние окружающей среды и актуальные экологические проблемы», Levada Center, July 2011: http://www.levada.ru/press/2011060203.html

is "beneficial primarily for Russia".[27] Projections based on Russia's submissions to the UNFCCC suggest that even under the most optimistic economic growth scenarios, Russia would still have a further surplus of emissions permits under this target.[28] Significant energy efficiency improvements would leave Russian emissions even lower in 2020.[29] Thus, although Russia played an extremely marginal role in Copenhagen, it adopted a rhetorically positive tone and did not upset the talks, as it had done in the past (at COP6 in the Hague in 2000 for example).

Two years after Copenhagen, it seems that Russia is also taking the first steps towards implementing climate-friendly policies.

2. THE CLIMATE DOCTRINE

2.1. Modernization and climate change mitigation

The climate change agenda, although still marginal, is increasingly discussed in Russia in such upper power instances as the Security Council of the Russian Federation and the government's Modernization Committee, fits well with the current national political discourse.[30] Benefiting from times of relative political and economic stability, if compared to the turmoil of the 1990s, Russia's top political leadership has set an ambitious goal of modernizing the country, transforming it, as stated in the Concept for Long-Term Social and Economic Development to 2020, into an "economy of leadership and innovation" and developing high-tech sectors that will enable the country to compete economically and geopolitically in a globalized world. The task was first formulated in Medvedev's emblematic 2009 manifesto *Go, Russia!,* considered as the President's political programme. Questioning Russia's future, Medvedev condemned the excessive reliance on natural resource revenues, technological backwardness and corruption. Among the possible solutions, five priorities were set, which included energy efficiency, diversification of the export portfolio and innovation.[31] Copenhagen was another good opportunity to reiterate Russia's modernization ambitions, at the same time as linking them to climate change mitigation.

What is more important is that Medvedev actually seems to proceed with the transformation of his "plan for a plan" into action, at least on the larger political level. In December 2009 the President made the first crucial step, finally signing the long-awaited Climate Doctrine, in which Russia officially acknowledges that global warming poses a significant challenge to its security. Climate change is predicted to manifest itself in the form of increased frequency and intensity of meteorological phenomena such as floods, winter melts, storms and droughts, with potentially severe impacts for agricultural production and housing, but also for oil pipelines and pumping facilities in the North, leading to possible disruptions of hydrocarbon exports.

The Doctrine's projections were supported by Roshydromet (the Federal Service on hydrometeorology and monitoring of the environment of the Russian Federation), which noted that during the year 2010 there were a record number of natural disasters in Russia.

The Doctrine stresses the necessity for Russia to support international efforts to combat climate change, using it as an impulse for economic modernization.[32] Measures should include introduction of instruments to incentivize rational natural resource use, adoption of energy saving technologies (the energy sector accounts for nearly 82% of the country's anthropological GHG emissions), broader use of renewable natural resources, all of which can enhance competitiveness of Russian industries.

In the wake of the abnormally hot summer 2010, Medvedev made another statement, underlining that the record heat waves were an evidence of climate change, which lead him to the conclusion that "we need to change the way we work- to change the methods we used in the past".[33] Finally, climate change is no longer seen as someone else's

27. President's Dmitry Medvedev's Discourse in Copenhagen, 18 December 2009 (Vistuplenije Presidenta Rossii D. Medvedeva v Kopengagine, 18 decabra 2009 (in Russian)): http://unepcom.ru.
28. Korppoo, A. and T. Spencer, "Approaching the AAU Issue with a strategic compliance reserve and optimized trading", Cambridge: Climate Strategies, 2010.
29. Novikova, A. et al, "Russian pledge vs. business-as-usual: Impelementing energy efficiency policies can curb carbon emissions", Helsinki: the Finnish Institute of International Affairs, 2009.
30. R. Oliphant, "Medvedev Says to Cash in on Kyoto", Moscow Times, 28 June 2011: http://www.themoscowtimes.com/business/article/medvedev-says-to-cash-in-on-kyoto/439596.html
31. D. Medvedev, "Go Russia!", Russia Today, September 2009: http://rt.com/politics/official-word/dmitry-medvedev-program-document/ , retrieved on 20 July 2011
32. The Climate Doctrine of the Russian Federation, 17.12.2009: http://eng.kremlin.ru/text/docs/2009/12/223509.shtml
33. Quoted in A. Vatansever, "Medvedev's Climate Moment", The Moscow Times, 27 August 2010

problem. At least, so is declared by the current President and, most probably, future Prime Minister. Given that the modernization agenda has been largely Medvedev's agenda, it remains to be seen what will become of this agenda under Putin's (almost inevitable) third term as President.

2.2. From doctrine to plan of action

The transformation of the vague Climate Doctrine into action took some time, but in April 2011 Governmental Plan №730-P was finally issued for the period up to 2020. The Plan, which includes 31 items, provides a detailed guide on what, when and by what state agency should be done. Unfortunately, it does not include any details on the amount of money allocated either to the program as a whole or to each individual item. It suggests that:

- comprehensive research and assessment of the Russian climate, climate change and its impact on national security will be conducted by the Russian Federal Service for Hydrometeorology and Environmental Monitoring by 2012;
- the Ministry of Economic Development will introduce changes into Russia's long-term macroeconomic forecasts "taking into account climate risks, mitigation of anthropogenic impacts on the climate, and adaptation to climate change" (2011-2020);
- the Ministry of Natural Resources will prepare "guidelines for the development of sector-specific methodologies of estimation and assessment" of particular consequences of climate change, in order to prepare regional and territorial adaptation plans for different industries and ministries (2011).

The same task is set for:

- The Ministry of Health with regard to infectious and parasitic diseases;
- The Federal Forestry Agency with respect to Russia's forests and peat bogs;
- The Ministry of Regional Development, regarding infrastructure endangered by permafrost melting;
- The Ministry of Agriculture, regarding harvest forecasts;
- The Russian Federal Service for Hydrometeorology and Environmental Monitoring, regarding precipitation and ocean level forecasts.

Part III of the Plan focuses on the operationalisation of the goals set in the previous parts, with the immediate action measures, spread across the 2011-2020 period, including action to be taken in the transport, housing and industry sectors, which implies modernisation, innovation, increasing measures to boost the use of renewable energy and energy efficiency. Finally, the necessity of greater international climate-change cooperation is acknowledged.[34]

3. DRIVERS OF CLIMATE POLICIES

3.1. Energy efficiency

The implementation of the climate policy focuses primarily on greater energy efficiency, even if it is clear that the issue is only one of the problems to be addressed within the climate mitigation framework. Russian officials seem to be more comfortable referring to energy efficiency than emission targets as this is considered to "leave more room for manoeuvre". Still, if the objective of the 2008 energy efficiency decree to improve Russia's efficiency by 40% by 2020 is attained, Russia can reduce its current level of emissions up to 30%.[35]

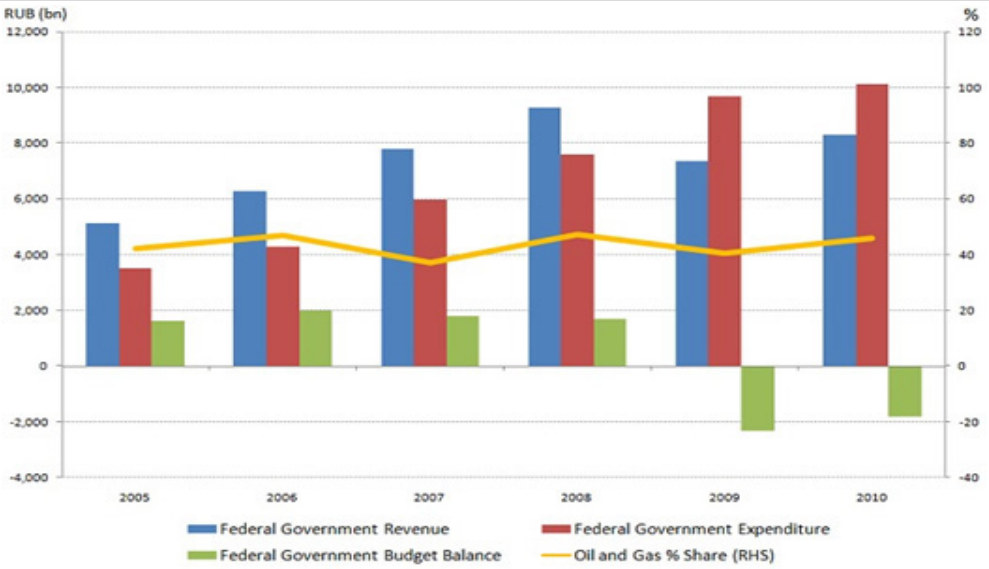
The 2011 IEA Russia working paper calls the country the "Saudi Arabia of energy efficiency", referring to its significant energy saving potential if wasteful and inefficient consumption were countered. The Agency estimates that energy improvements in Russia's heating sector could save up to 30-50 billion cubic meters of natural gas per year; a similar amount could be saved by the optimization of the gas distribution system and decreased gas flaring. It also underlines that companies in several sectors lack incentives to save energy due to low internal energy tariffs. The cost of hydrocarbons on the internal market has until recently been too low to incentivize Russian business and state corporations to introduce new energy-saving technologies, whereas state regulations were mild and hardly ever enforced. Soviet practices, such as, for example, running all production lines even if half-empty, rather than shutting them partly down, were and still are a common practice. In this regard, the continuation of electricity and gas sector reforms and price liberalization is a necessary, even if painful, step in the country's energy efficiency improvement.[36]

34. Комплексный план реализации Климатической доктрины Российской Федерации на период до 2020 года, 25 апреля 2011 г. № 730-р

35. A. Novikova et al, "Russian pledge vs. business-as-usual: Impelementing energy efficiency policies can curb carbon emissions", Helsinki: the Finnish Institute of International Affairs, 2009.

36. N. Trudeau and I. Murray, "Development of energy efficiency indicators in Russia", IEA Working Paper, 2011

Figure 1. Russian budget revenue, 2005-2010*



* "Russia's oil and gas revenues: federal budget dilemma", Russia CEIC Database, May 2011: http://blog.securities.com/2011/05/russias-oil-and-gas-revenues-federal-budget-dilemma/

The Law on energy efficiency, adopted in November 2009, is an important step to enhance efficient energy use and supply, as it introduces measures including restrictions on the sales of incandescent light bulbs, mandatory labelling of electrical products according to their energy efficiency, new energy standards for newly constructed buildings, and reductions in budget spending for purchasing energy resources.[37]

In 2011, a 15% increase in the household electricity tariffs has been sanctioned by the government, while the Unified Energy System of Russia (RAO UES), the former state electricity monopoly, was restructured and privatized with the energy prices for industrial consumers deregulated all together in order to promote the modernization of the sector and greater energy-efficiency.[38]

In February 2010 during a high-level domestic meeting, Medvedev reiterated his Copenhagen promises, suggesting that notwithstanding the disappointing outcome at Copenhagen, Russia should benefit from the GHG reduction mechanisms provided under Kyoto and, based on the Accord, use it as a "real chance for mass introduction of energy-efficient and low-emission technology. (…) We are going to improve our energy efficiency and reduce our emissions regardless of whether or not there is an international agreement. This is in our own interest both from an economic and environmental point of view".[39]

3.2. Energy as an economic and (geo)political leverage

As the environmental risks posed by climate change for Russia have been briefly outlined in Section 2.1, it is well worth focusing on the possible economic, as well as larger security drivers of the country's energy efficiency policies.

First of all, reformulating Emperor Alexander the Third's famous quote, Russia has only two friends: its Army and its Energy. With one of the world's biggest reserves of oil and natural gas, Russia considers energy as one of its most important leverages both on the international arena and in domestic politics. The recently opened Nord Stream pipeline, the planned South Stream pipeline as well as major pipelines to China (refer to Annex I for a detailed map) are important factors of Russia's geopolitical standing and economic well-being, as the oil and gas sector budget revenues account for up to 42 % of the Russian state budget with no significant changes foreseen.

The challenge is to fulfil the previously signed contracts with foreign consumers without depriving the internal market of energy resources, an objective which is at the top of the agenda once again in February 2012. The cold wave from Siberia that

37. Закон об энергосбурежении, ФЗ № 261 от 23 ноября 2009 г. : http://www.энергосайт.рф/news/zakon_ob_ehnergosberezhenii/2011-02-04-4

38. For further details please refer to the RAO UES official website: http://www.rao-ees.ru/ru/reforming/reason/show.cgi?content.htm

39. Cited in S. Charap, "Russia's Lackluster Record on Climate Change", Russian Analytical Digest, 27 May 2010

led to unexpected harsh winter temperatures both in Western parts of Russia (temperature in Moscow falling to nearly minus 30 Celsius overnight) and all over Europe was a test for Gazprom. On 31 January the company reported redirecting some gas initially aimed for EU consumers to meet domestic needs which consequently led to a 10-25 % decrease in gas exports to Austria, Poland, Hungary, Bulgaria, Romania, Greece and Italy.[40] Even if, according to the European Commission spokeswoman Marlene Holzner, the European Union has enough gas in underground storage to make up for the shortfall, this shortage is another argument and example of the importance and necessity for Russia to increase its energy efficiency and pay greater attention to larger development of alternative energy sources to increase and assure both its own and the European Union's energy security.

Although possible solutions include the reintroduction of coal to save gas for export,[41] the government is obliged to acknowledge the unpopularity of such measures with the population, already concerned by high air pollution in almost all regions of the country.[42] The existing gas transport infrastructure, and absence of coal transport infrastructure, also represents a physical path dependency that may be hard to break.

3.3. Upgrading and implementing new technologies

Improving energy efficiency and introducing new technologies, such as, for example, alternative energy generating capacities, is potentially a more feasible option. However, improving energy efficiency is a major macroeconomic task, with its results depending both on the reduction of energy consumption and the introduction of modern technological solutions.[43]

The technical upgrade of economy, including modernization of the energy sector, is seen as essential in countering the "age-long economic backwardness and the habit to live off exports of raw material" as well as the country's lack of competitiveness on the global market.[44] Most Russian energy generating facilities were constructed during the Soviet period and are quite obsolete, which has been proven by a series of major breakdowns, such as the 2009 Sajano-Sushenskaja power plant accident.

Relatively simple measures, including the renovation of the gas production and transport system, gas flaring reduction and larger use of alternative sources of energy are estimated to lead to significant improvements.[45] Yet coordinating economic actors and providing the right incentives and instruments requires effective policy interventions to reap these benefits. In the relative absence thereof, their actual implementation does not seem to be advancing quickly enough. Thus, the goal set by the government to increase associated gas utilisation to 95 % by 2012 [46] seems to have been too ambitious, with speculations ongoing about postponing it until 2014.

A vast technical potential also remains in the field of renewable energy generation (solar, wind, biomass, geothermal and small hydro). In this domain Russia is lagging farther behind not only developed, but also developing countries, with China, Indonesia, Turkey and Brazil making impressive leaps forward in the development of wind, geothermal and ethanol fuel energy respectively. Today, alternative energy sources in Russia account for no more than 1% of energy generation[47], but, if developed, they could cover up to 30% of the nation's energy needs.[48] As in the case of slow paced implementation of the gas flaring reduction programme, renewable energy lacks a legal and regulatory framework which would stimulate its use and development, although it has received attention on the Russian national policy agenda.[49] The draft Law on renewable energy generation, developed in 2007, is still not adopted by Parliament.[50]

In January 2009, Russian government passed a decree to increase the share of renewable energy

40. "Russia cuts gas supplies to Europe- European Commission", 3 February 2012, The Moscow Times: http://themoscownews.com/international/20120203/189425491.html

41. The Energy Strategy of Russia for the Period of up to 2020, Approved by Decree № 1234-P of 28 August 2003

42. М. Денисов, "Путин занялся экологией на потребу среднему классу?", BBC Russia services, 31 March 2011

43. М. Яворский, «Свистим хорощо-научимся ли делать?», АиФ Томск, 6-2008

44. D. Medvedev, "Go Russia!", Russia Today, September 2009: http://rt.com/politics/official-word/dmitry-medvedev-program-document/

45. "European Parliament Note on Energy and Climate Change in Russia", prepared by IEEP Brussels, June 2008, PP.8

46. "Russia country profile, 2010", Energy Information Administration, USA: http://www.eia.gov/emeu/cabs/Russia/pdf.pdf (accessed 21 July 2011)

47. "Renewable Energy Policy in Russia: Waking the Green Giant", IFC Green Paper, 2011

48. A. Novikova, A. Korppoo, M. Sharmina, "Russian Pledge vs Business-as-Usual", FIIA Working Paper 2009, No 61, P. 5

49. it was mentioned in the 2009 Energy Strategy to 2030, the 2008 Concept for Long-Term Social and Economic Development to 2020, the 2009 Climate Doctrine and in the 2010 State Programme on Energy Efficiency

50. For more details please refer to: http://vetrodvig.ru/?page_id=414

up to 4.5% by 2020. A number of ambitious projects were almost immediately prepared, such as, the Centre for Energy Efficiency Inter RAO UES Ltd's plan considering biofuel, wind and solar energy projects, designed to increase the company's share on the Russian renewable energy market by 25% by 2013. Rosnano, a state-owned corporation working on nano-technology projects, is also considering the option of creating a vertically integrated company in the field of solar energy, which would include development of new technologies, production of solar cells and electricity production.[51] Still, this is not sufficient, as according to the Energy Forecasting Agency, the 4.5% target will not be met with the current legal and regulatory framework by 2020.[52]

3.4. International projects

The state is also becoming increasingly aware that it cannot succeed with modernization on its own. Russia's big business is encouraged to invest; the International Finance Corporation, member of the World Bank group, and the European Bank for Reconstruction and Development have also pledged to allocate significant sums for energy sector retrofits. Kyoto emission trading mechanisms are an additional channel for investment in the sector. The latest positive development in this sphere is the final opening of the Russian GHG market to foreign investors. In July 2010 the Ministry of Economics of the Russian Federation published the list of the first 15 selected JI projects, among which initiatives by Rosneft, Sibur and Gazprom. The most ambitious one is the switching of the gigantic Amour TETS (heat and electricity generation station) from coal to gas. The result of these overall projects is estimated to be a 40 Mt of CO_2 reduction, which in today's AAU prices averages to about 472 mln Euros.[53]

At the end of 2010, another tender for GHG projects took place, with 17 more projects approved. On 12 August 2011, Sberbank, operating the project selection, launched another set of JI projects. Most are implemented in the oil and gas, industry and renewable energy spheres.

The first JI successfully materialized at the beginning of 2011 when Russia's Gazpromneft sold a quota of 290 000 tons of greenhouse gases to Japan's Mitsubishi and Nippon Oil, passed under the so-called Project of Cooperative Implementation. The value of the deal with Japanese companies is estimated at 3.3 million Euros. The programme, implemented together by the Russian and Japanese companies is designed to destroy associated petroleum gases at the Ety-Purovsk field in the Yamal-Nenets region.[54] JI has certainly provided business with an opportunity to implement climate friendly projects, and has raised awareness regarding climate and energy efficiency policy. However, due to long delays, and low demand among key buyer countries, JI will not live up to its expected potential as a vehicle of climate-friendly foreign investment. Its place in a post-2012 climate regime is also uncertain, as Russia and others' rejection of a second commitment period of the Kyoto Protocol puts the future of the JI mechanism in doubt. It is an open question whether Russia could be persuaded to participate in a transitional commitment period, as part of a comprehensive process towards a global agreement, in order to preserve JI investments.

In general, foreign investors are attracted by the energy efficiency projects as most of them are linked to the gas and petrol industries (as, for example, projects reducing the emissions of methane caused by natural gas leaks from low pressure pipelines) and, although risky, can also be highly profitable. The Russian side is also interested, as not only do these projects help mitigate GHG emissions at a least cost, create an gateway for investment and, in the longer run, potentially decrease Russia's GDP intensity, they also lead to lower air pollution and thus improved public health and increase Russian fossil fuel export potential.[55]

However, some Russian experts, notably Mikhail Yulkin, Head of the Center of Ecological Investment, have given a critical assessment of the whole process, regretting that large-scale programmes for major enterprises were preferred to small and middle-size projects, which most direly need outside investment. Secondly, the Russian authorities' "know-how" of involving a middleman, i.e. *Sberbank*, to select projects and conclude the deals between the interested parties has hindered the pace and efficiency of the process as a whole.[56]

51. M. Yulkin, "Opportunities for climate cooperation with/in Russia?", CCGS, Berlin, January 2011
52. "Renewable Energy Policy in Russia: Waking the Green Giant", *IFC Green Paper*, 2011
53. A. Shanovalov, Kommersant Journal, n 135(4435), 28.07.2010
54. For more details refer to B. Vishnevsky, Ch. Digges, "Russia begins to sell quotas on greenhouse gas emissions in a first for the country", January 2011
55. "Why Russia needs GHG Emissions Market", RSEU publications, 13 May 2011: http://www.rusecounion.ru/ang_klimat_13511 (consulted 20 July 2011)
56. Mikhail Yulkin, "Protses poshel: Sberbank I Minekonomrazvitija otobrali pervie 15 proektov dla Kiotskogo protocol", Nezavisimaya gazeta, 10 December 2010: http://www.ng.ru/energy/2010-10-12/14_kiot_protokol.html (consulted 20 July 2011)

CONCLUSION

More than two years have passed since Copenhagen. Little time is left before the first commitment period of the Kyoto protocol ends at the end of 2012. During the April 2011 Bangkok climate conference, Russia reiterated that it would not participate in a second commitment period and instead advocated an accord for all major international emitters. Among its proposals was also the idea of a sectorial approach to emissions reduction in metallurgy, cement industry and the energy sector. It was equally adamant in rejecting Kyoto at COP17 in Durban, 2011. At this meeting, Russia was active in proposing a revision to the anachronistic distinction between developed and developing countries under the UNFCCC. Russia is grouped together with the BRICS in international affaires (Brazil, Russia, India, China and South Africa), but is treated as a developed country under the UNFCCC. It does not see why its BRICS partners should be excluded from taking on binding targets under a global climate regime, which it is forced to do so. For Russia, this approach is not longer legitimate.

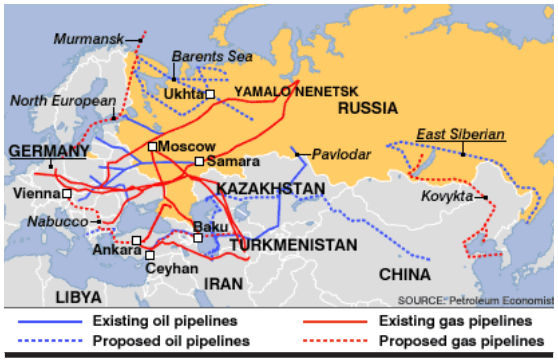
Thus, on the international arena Russia has maintained the "wait and see" approach. In the meantime, it has started acting at home, albeit slowly. The political discourse clearly shows that Russia is well aware of the need to modernize its economy, diversify exports and boost energy efficiency. The adoption of the Climate Doctrine and of its implementation Plan as well as the launching of the JI programmes and massive state-funding of the Skolkovo Energy Efficiency Cluster seem to be the first, tentative but also promising steps in the right direction. Is Russian energy policy finally starting to evolve from declarative to real?

Can we hope that Russia has finally realized that "it is actually in its national and strategic interests, not contrary to them, to treat climate change with due seriousness"?[57] With the post-Copenhagen talks slowly advancing, Russia still has some time to think and finally set a long-term consistent strategy for itself in the domain. Opportunities are numerous, but so are challenges.

57. Anthony Giddens, "Can climate change modernise Russia?", New Perspectives Quarterly, Volume 27 №4, Fall 2010: http://www.digitalnpq.org/archive/2010_fall/15_giddens.html

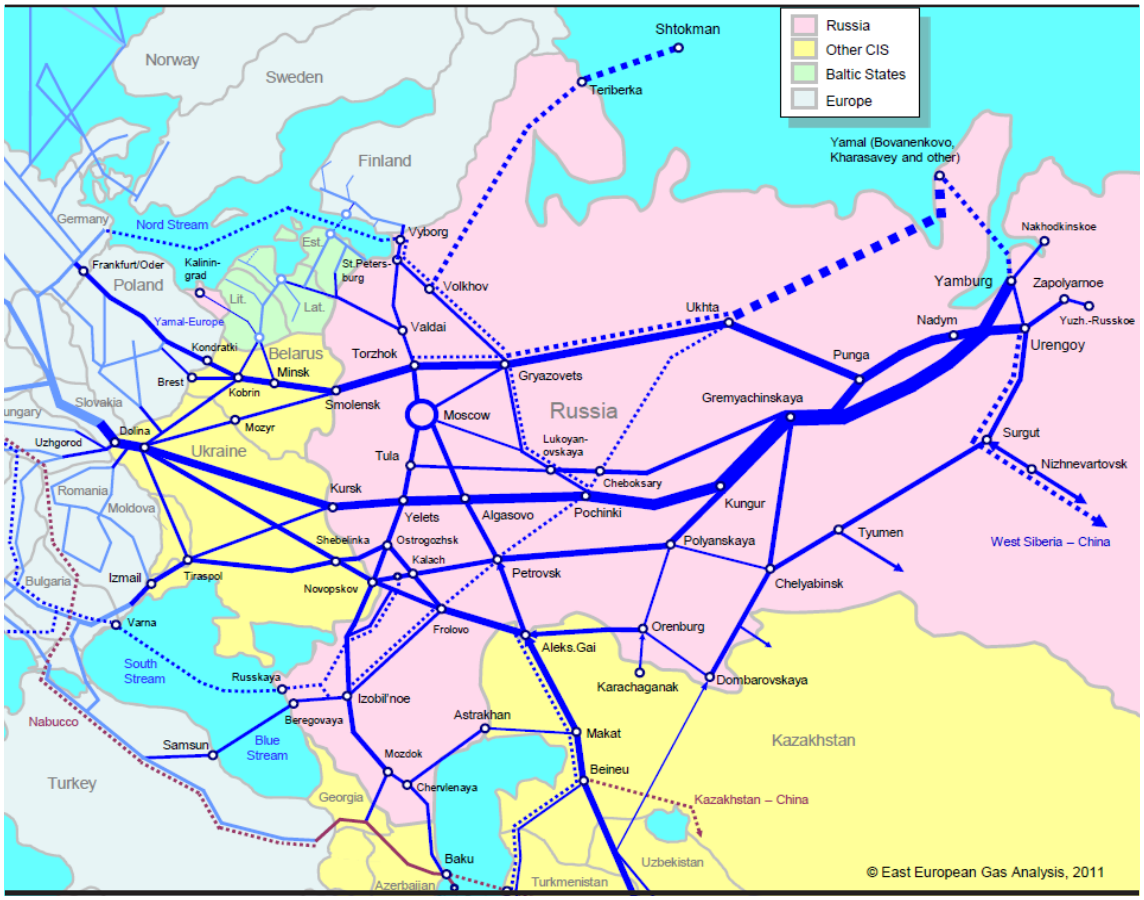
APPENDIX

Annex 1. Main oil and gas pipelines in Europe



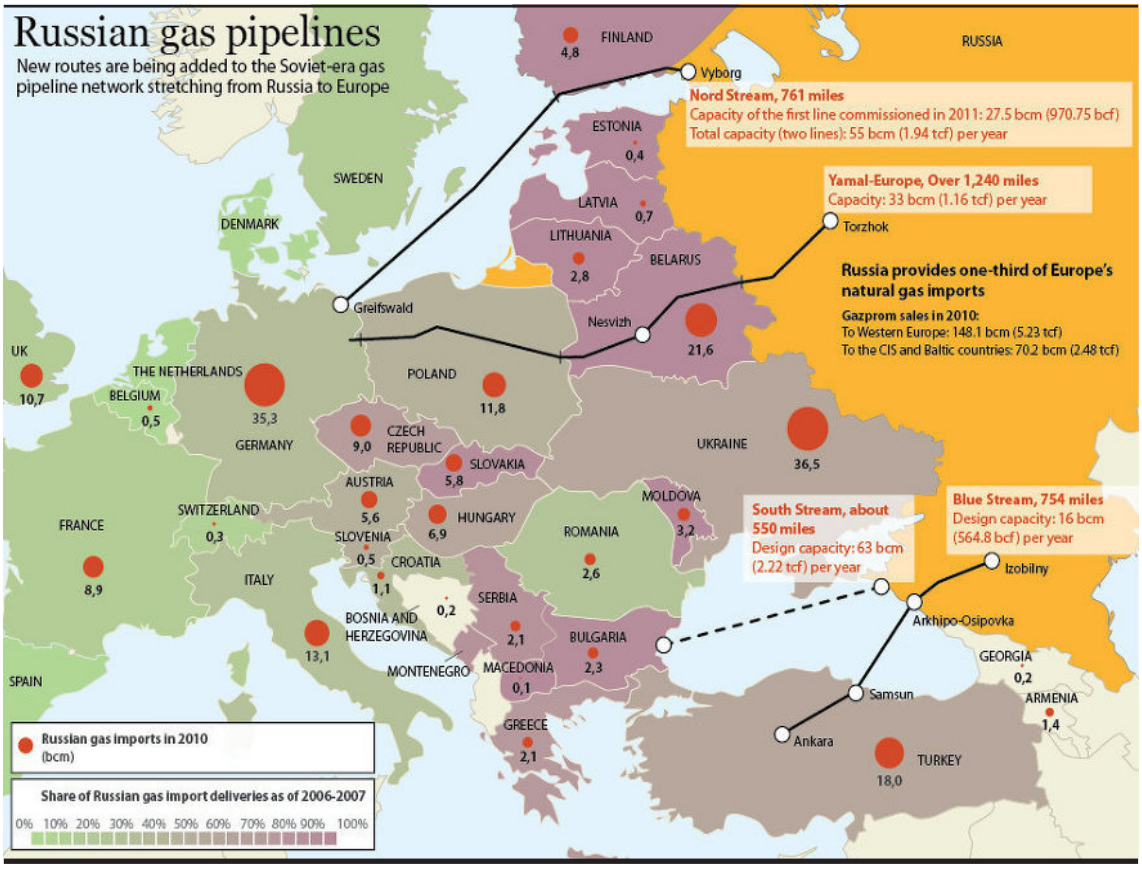
Source: http://news.bbc.co.uk/2/shared/spl/hi/guides/456900/456974/html/nn4page1.stm

Annex 2. Major gas pipelines of the Former Soviet Union Countries



Source: East European Gas Analysis, 2011: http://www.eegas.com/fsu.htm

Annex 3. Russian gas pipelines



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