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Energy, Climate Change and Security: The Russian Strategic Conundrum

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Abstract

Global and regional energy markets are increasingly influenced by policies aimed at climate change mitigation, with possible grave implications for major producers and exporters of fossil fuels – including Russia, which is planning further increases. This article examines the evolution of Russian official thinking on the role of climate change as a strategic factor in policymaking as expressed in key documents on security and in strategic statements made by Presidents Putin and Medvedev (2000–2020). The set of strategic statements examined in this article show surprisingly little attention to this important matter.

Keywords

climate change, grand strategy, strategic culture, energy policy, Russia

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Introduction[1]

Energy, as the basis of economic growth, is central to the strategic evaluations of virtually every country (O'Sullivan, 2013). This applies not least to Russia: with its massive reserves of fossil fuels, it has become a key global energy player, a global energy superpower (Godzimirski 2013; Rutland, 2008) whose strategic wellbeing depends on the revenues generated by this important sector (Gaddy & Ickes, 2020); moreover, Russia has expressed ambitions to play a major role in regional and global affairs and energy plays a part in these strategic designs.

The strategic importance of energy in Russia's strategic designs is well understood by the country's policymakers (Balzer, 2005) and by experts who present various assessments of Russian strategic objectives (Kofman, 2019; Liuhto, 2007; Marsh, 2019; NSI et al., 2019; Person, 2019; Tsygankov, 2011). Energy can be said to play an important strategic role in three ways (O'Sullivan 2013):

1. A resource/means facilitating achievement of other strategic goals – for instance, the re-establishment of Russia's great-power status, as exemplified by the increasing share of spending on defence and security in the period of oil-price boom;
2. An instrument/tool helping to project economic and political power to areas dependent on energy supplies from Russia – as evident in the role played by energy resources in Russian exports and in relations with main importers of energy;
3. An objective/goal of Russian state policy – 'the goose that lays the golden egg' – a resource that generates a substantial share of state revenues crucial for securing regime stability and survival, as well as the ability to project power beyond Russia's borders and to shape the international environment to its liking – two major strategic objectives pursued by the Kremlin.

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Russia's endowment with energy resources is often presented as one of its key strategic advantages, but sometimes it also is viewed as creating a dangerous addiction on resource rent (Gaddy & Ickes, 2020). When thinking in strategic terms, policymakers must explore how to combine various instruments of national power – including abundant energy resources – to achieve their strategic objectives in a given international context (Biddle, 2015; Milevski, 2018).

Russia (IEA, 2020) ranks as the top global exporter of energy, the third-biggest global producer and the fourth-biggest consumer of energy and emitter of greenhouse gases (GHGs). In 2018, Russia's total energy production reached 1484.1 mtoe: third place in the global ranking of energy producers, behind China and the USA. In 2019, Russia was the second-largest global producer of oil, behind the United States, with 560 mtoe, or 12.7% of global production, and the second-biggest exporter of oil after the Saudi Arabia, exporting 260 mtoe of oil. Also in 2019, Russia ranked as the second-biggest global producer of natural gas, with production reaching 750 bcm and was the number one global exporter of gas, exporting 265 bcm. In coal production, Russia occupied sixth position producing 418 mt of this commodity and ranked third on the list of coal exporters, exporting 189 mt. Altogether, Russia's net energy exports reached 701.3 mtoe, making it the number one global exporter of energy resources. To meet its domestic energy needs, Russia itself consumed 759.3 mtoe of energy (IEA, 2020).

As all countries need access to energy resources, achieving such access is often viewed as one of the goals of national grand strategy. But energy resources are also instrumental for achieving other grand-strategy goals. In Russia, the production and sales of energy commodities generate huge revenues for the state. Up to 50% of the state budget revenues has over the past years come from the energy sector; the Kremlin depends on these revenues to be able to implement various budget-funded programmes – including the recent rearmament programmes that have improved Russia's military capabilities and social transfers that help secure political stability in the country (Ministry of Finance Russia, 2020; see also Bradshaw and Connolly 2016). Energy resources are also Russia's main export commodity, generating up to 70% of the value of exports thereby securing trade surplus and influence (Central Bank of Russia, 2020a). Further, revenues generated by the energy sector have enabled Russia to amass huge gold and currency reserves, some of which are set aside as a financial cushion for times of crisis (Central Bank of Russia, 2020b, see also Gaddy & Ickes, 2014). This makes the energy sector important in both economic, strategic and security terms (Gaddy and Ickes 2014, 2020; Liuhto, 2007). This strategic connection is described in the 2003 official Russian Energy Strategy as follows (Government of the Russian Federation, 2003, 4):

Russia has abundant energy resources and a powerful fuel and energy sector that forms the basis of economic development and is an instrument in [the] realization of domestic and foreign policy. The role of the country at the global energy market in many respects defines geopolitical influence.

However, strategic dependence on oil prices and the heavy interdependence between Russia as an energy producer/exporter and the importing countries emplaces limitations on Moscow's freedom of action and may thus limit geopolitical influence. Since climate change and its impacts on strategic choices made by Russia and its energy partners may have serious implications for the future of the country's energy sector it is therefore important to examine whether and how the issue of climate change is factored in Russian strategic calculations. (Figure 1).

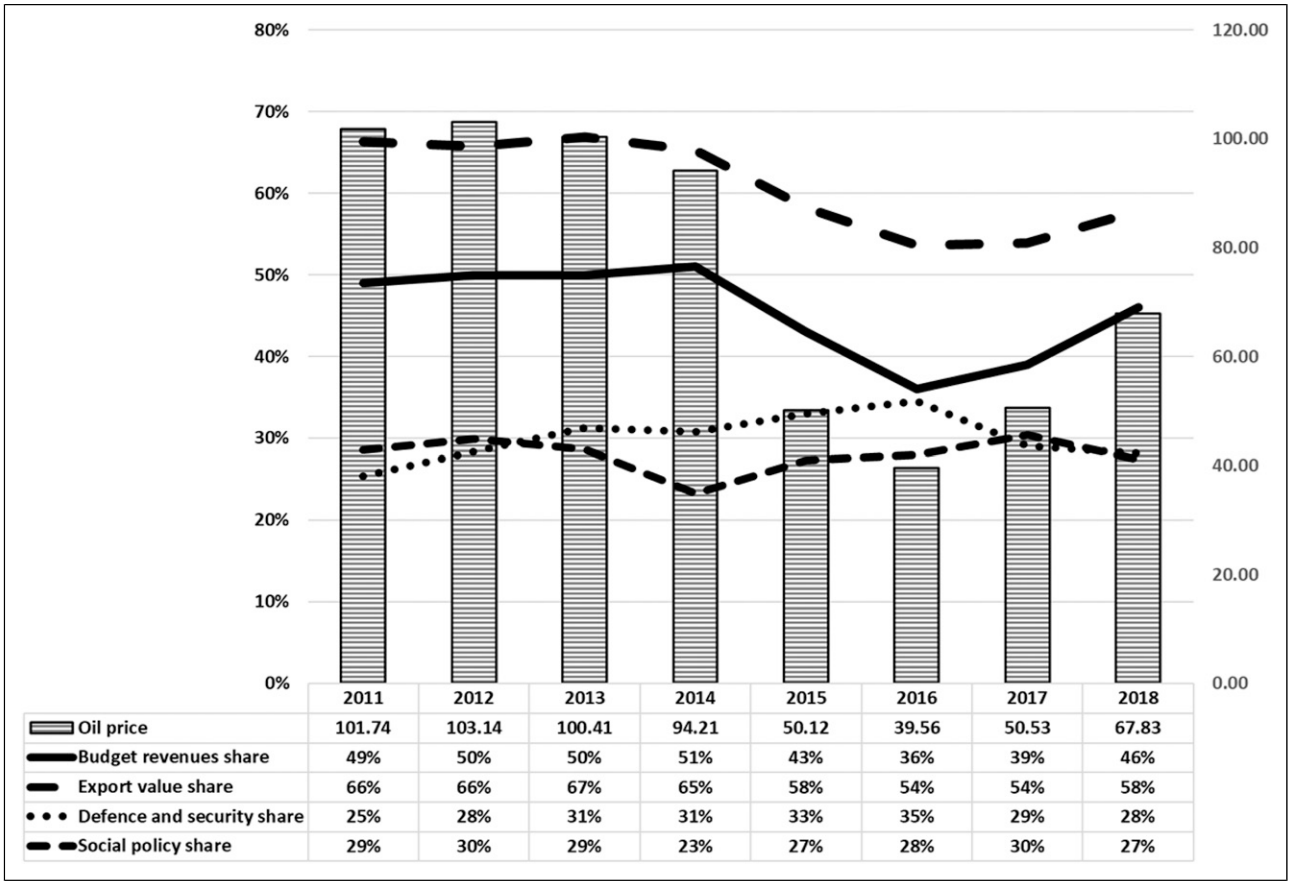
This article aims to examine how the issue of climate change has been framed in Russian official debate on strategic national interests, 2000–2020. To achieve this goal, the author collected Russian texts of 37 official key documents presented at the official website of the Security Council of the Russian Federation as core texts on various aspects of national security.[2] Also texts of the official English translations of Presidential Addresses to the Federal Assembly (PAFA)[3] were added to this collection of texts and the whole collection was examined using AntConc multi-platform, multi-purpose corpus analysis toolkit (Anthony, 2020). The aim of this examination was to map: 1) the main lines of reasoning about climate change as a strategic challenge, as reflected in official documents on security; 2) understandings of climate change as a strategic challenge in strategic PAFA statements made by Vladimir Putin and Dmitrii Medvedev between 2000 and 2020; 3) how these questions are reflected in the set of official doctrines on energy policy, security and international relations.

Given the centrality of energy resources in Russian strategic approaches, this article examines how Russian policymakers view the challenge of climate change in the broader context of debates on national strategy, security and the future of Russia as a key regional and global energy player.

Dependence on External Energy Markets as a Strategic Factor

Russia's endowment with various types of energy resources helps Russia to cover its own needs and export huge volumes of energy to other markets. Russia uses almost 52% of energy produced within its borders to cover its own energy needs (IEA, 2020) and remains the world's top net exporter of energy having 701.3 mtoe in energy trade surplus (IEA, 2020). In 2019, Russia's shares in global exports of fossil energy commodities were 12.7% in oil, 13.2% in oil products, 26.1% in natural gas and 16.6% in coal (BP 2020).

Russia must find external markets for almost half of the energy it produces, making it extremely exposed to external factors (see Turdyeva, 2020 on Russia's oil-price vulnerability) and creating a situation characterized by relatively



	2011	2012	2013	2014	2015	2016	2017	2018
Oil price	101.74	103.14	100.41	94.21	50.12	39.56	50.53	67.83
Budget revenues share	49%	50%	50%	51%	43%	36%	39%	46%
Export value share	66%	66%	67%	65%	58%	54%	54%	58%
Defence and security share	25%	28%	31%	31%	33%	35%	29%	28%
Social policy share	29%	30%	29%	23%	27%	28%	30%	27%

Figure 1. Average annual oil price in USD (right scale), share of petroleum revenues in value of export and in budget revenues, share of spending on defence and security and social policy in budget (data from CBR and Ministry of Finance, Russian Federation).

high energy interdependence between Russia as a major energy producer/exporter and countries that depend on Russian energy to meet their own energy needs.

Russia's geography offers important opportunities for its energy producers and exporters, because of proximity of the major European energy markets with shrinking own energy production and relatively stable demand for energy (on the dominant position of the EU in this context see Kardaś, 2016; 2017). Geography also makes it possible to swing to another major consumer – China, with its almost insatiable appetite for energy (Zachmann, 2019). As a major producer and exporter of energy, Russia should be therefore expected to grasp the chance to diversify its markets to avoid over-dependence on only one consumer. Market diversification is particularly relevant now that political relations with main European consumers of Russian energy have become more constrained in the aftermath of the 2014 aggression against Ukraine (Godzimirski, 2016). This conflict has undermined trust in Russia as a strategic partner: there have been concerns that Russia might use its energy resources as a political tool, whereas others hold that, due to the need to mitigate climate change, not only Russian but *all* fossil fuels should be banned (Egenhofer et al., 2015). It is argued that the growing political tensions in relations with the EU have been among the drivers of Russia's increased attention to opportunities in the growing Asian energy market (Marsh, 2019). By exporting more of its energy resources to Asia, first and foremost China, Russia could reduce its exposure to political pressures exerted by traditional energy partners in Europe and secure access to financing for developing new energy infrastructure and energy resources located closer to Asian markets (Overland & Kubayeva, 2018; Skalamera, 2018).

By 2019 Russia had succeeded only partly in energy export diversification, as Europe/EU remained the main market for Russia's energy commodities. Russia exported 153 mtoe of oil to Europe; China was the second most important market for oil from Russia, receiving 77.7 mtoe (BP 2020). Further, the share of Europe in exports of Russian oil was 53.5%, whereas against slightly more than 27% went to China. The situation was similar in the export of oil products, with Europe receiving 106.1 mtoe (64.5%); Asia and Pacific 14.9%, but China only 1.9%. In 2019,

Russia exported 256.6 bcm of gas, 39.4 bcm (15.3%) of which as LNG. Most of the piped Russian gas – 188 bcm, or 86.5% of piped export – went to Europe: export to Asia was almost non-existent as of end 2019 but the situation changed with opening of the Power of Siberia pipeline in December 2019. Further, most of the Russian LNG export – 20.5 bcm (52%) – went to Europe, whereas 17.9 bcm (45.4%) went to Asia, which had been intended as the main receiver. Finally, as to exports of Russian coal, Europe received 41%, and Asia/Pacific had a 50% share.

From the viewpoint of Russia as a major fossil-fuel producer/exporter, the strategic energy turn to Asia could also delay the negative impacts of the global green energy transition on Russia's ability to market its fossil fuels, preventing them from becoming stranded assets. This has become increasingly salient as Russia is still heavily dependent on access to the EU energy market, while EU policymakers seem increasingly serious about making the EU transit to a greener energy future (European Commission, 2020).

Surely, this planned greening of the European energy mix, which might in the mid- and long-term perspective result in a ban on the import of Russian fossil fuels, could be expected to make alarm bells ring in Russia (Guriev, 2020; Mitrova, 2020). However, according to the latest official energy strategy (Government of the Russian Federation, 2020), by 2035 Russia expects to increase its export of fossil fuels and petroleum products by 15.2% (low scenario) or by 46.2% (high scenario). Export of coal and coal products is expected to increase by 22.2% (low scenario) or by 86.4% (high scenario); export of oil is expected to decrease by 6.5 or by 3.3%, respectively, and piped gas to increase by 15.8% (low scenario) or by 36.3% (high scenario); LNG by more than 400% (low scenario) and by 702.6% (high scenario). Also exports of petrol and diesel fuel are to increase by between 425.2 and 472.7% and by 53.1 and by 81%, respectively. But – will demand in traditional target markets for Russian fossil-fuel exports be sufficient to accommodate the export interests of Russian producers now that the pace and the scope of the fourth energy transition seem poised to change the logics of the global energy game (Korppoo et al., 2015; Korppoo, 2015; Kokorin & Korppoo, 2017; Makarov et al. 2017, 2020; Makarov, 2020; Poberezhskaya, 2016)? In the next section we examine how the questions of climate change and the fourth energy transition are factored and framed in the official Russian strategic discourse.

Russian Official Debate on Climate Change and Energy Transition

Several sets of Russian official documents are relevant for mapping the evolution of official thinking on climate change. The focus here is on the Putin years (2000–2020) and official set of documents on national security and strategy.

We start by exploring how core official texts on Russian security policy presented on the website of the Security Council of the Russian Federation address the question of climate change and energy transition. We begin with a quantitative examination of how the question of climate change is addressed in these documents. Then follows a quantitative and qualitative analysis of how the views on climate change of presidents Putin and Medvedev have evolved, examining the texts of the Presidential Addresses to the Federal Assembly (PAFA) given between 2000 and 2020. Finally, we examine how these questions are addressed in the current set of relevant Russian doctrines, to see whether and how these concerns are framed in official Russian policy guidelines.

The choice of this set of official documents is explained by their relevance and representativeness. The Security Council of the Russian Federation (SCRF) is the main body coordinating policy on strategically important questions, so documents from its official website can be understood as expressing official views on strategically important issues. Presidential Addresses to the Federal Assembly of the Russian Federation (PAFA) can show how Russian official approaches to various issues, including the climate change challenge have evolved over the past twenty years. Examination of relevant documents of doctrinal character can indicate how questions related to climate change have been internalized by the broader policymaking community.

Russian security doctrines on climate change as a strategic concern

The SCRF website presents a list of 37 documents as key texts on national security and strategy,[4] divided into seven categories: (1) founding documents, (2) international security, (3) military and military defence-industry security, (4) economic security, (5) state and public security, (6) anti-terrorism activities and (7) information security. Excerpts from the 1993 Constitution are the earliest text in this set. Two other documents were published in the late 1990s; the remainder emerged in or after 2000, the latest in 2017. Further, this list contains references to all PAFA speeches between 2000 and 2020.

This set of official Russian documents on security was used to map the occurrences of two terms: климат* (climat*) and энерГ* (energ*) to show how questions related to climate change and energy figure in the most representative collection of Russian official texts on strategy and security. (See Table 1.)

Table 1 offers some interesting insights. 'Climate' is mentioned altogether 276 times in this set of documents and 'energy' 1635 times. Both terms are strongly represented in documents on economic security, with 230 and 1427

Table 1. Occurrences of the strings климат* (climat*) and энерГ* (energ*) in key Russian texts on national security.

Documents from SCRF	Hits: климат* (Climat*)	Hits: энерГ* (energ*)	Year
Founding documents	**37**	**113**	
Constitution of the Russian Federation (extract, Article 83)			1993
Federal Law 'On Security'			2010
National Security Strategy of the Russian Federation	4	25	2015
Annual Addresses of the President of the Russian Federation	33	88	2000–2020
International security	**4**	**14**	
The foreign policy concept of the Russian Federation	4	11	2016
Decree 'On measures to implement the foreign policy of the Russian Federation'		3	2012
Military and defence industry security	**4**	**79**	
Maritime Doctrine of the Russian Federation	4	18	2015
Federal Law 'On Military-Technical Cooperation with Foreign States'			1998
On the State Defence Order		3	2012
On the Advanced Research Foundation		1	2012
Fundamentals of state policy in the field of ensuring chemical and biological safety			2013
Fundamentals of state policy in the field of nuclear and radiation safety		55	2012
Military Doctrine of the Russian Federation		2	2014
Economic security	**230**	**1427**	
Environmental Doctrine of the Russian Federation	3	7	2002
Fundamentals of state policy of the Russian Federation in the Arctic until 2020	8	5	2008
Food Security Doctrine of the Russian Federation	2		2012
Water Strategy of the Russian Federation for the period until 2020	5	13	2009
Climate Doctrine of the Russian Federation	190	23	2009
Energy Strategy of Russia for the period until 2030	16	1365	2009
Transport Strategy of the Russian Federation for the period until 2030	6	14	2014
State and public security	**1**	**2**	
Fundamentals of the border policy of the Russian Federation			1996
The concept of cross-border cooperation in the Russian Federation		1	2001
The concept of state migration policy of the Russian Federation for the period until 2025			2012
The concept of public safety in the Russian Federation	1	1	2013
Strategy of the state anti-drug policy of the Russian Federation until 2020			2010
Strategy of the state national policy of the Russian Federation for the period until 2025			2012
Strategy for countering extremism in the Russian Federation until 2025			2014
Anti-terrorism activities	**0**	**0**	
Official website of the National Anti-Terrorism Committee			
Federal law 'On the Fight Against Terrorism'			2004
Federal Law 'On Countering Extremist Activities'			2002
Federal Law 'On Combating the Legalization of Criminally Received Incomes and Financing of Terrorism'			2001
Information security	**0**	**0**	
Information Security Doctrine of the Russian Federation			2016
Convention on ensuring international information security (concept)			2011
State policy in the field of ensuring the security of automated control systems […]			2012
State policy in the field of international information security […]			2013
Extract from the main directions of scientific research in the field of ensuring information security […]			2017
Extract from the state system for detecting, preventing and eliminating the consequences of computer attacks […]			2014
Total in all documents	276	1635	

mentions, respectively. The central document dealing with the issue of climate is the 2009 Climate Doctrine of the Russian Federation, with 190 mentions of 'climate'; unsurprisingly, the Energy Strategy of Russia for the period until 2030 has the most mentions of the term 'energy'. Further, the two terms are mentioned in the set of founding documents – 'climate' 37 times and 'energy' 113 times – and in documents on military and defence security (4 and 79 mentions), as well as in the category International security, with 4 and 14 mentions. In the remaining categories, the two terms occur occasionally or not at all.

The two strategic documents with most of the mentions of the 'climate' and 'energy' approach the issue of climate change impact on Russia in a 'compartmentalized' manner, without presenting a comprehensive, intersectoral understanding of this strategic challenge which is often typical in the Russian bureaucratic context. In the Energy Strategy of Russia (Ministry of Energy, 2009), the issue of climate change is mentioned directly only two times – as a risk with unpredictable impacts on the global energy market, and as a key driver of the development of renewable sources of energy, intended to reduce the rate of growth of anthropogenic load on the environment and help to mitigate climate change.

The 2009 Climate Doctrine (President of the Russian Federation, 2009) is the most comprehensive official document dealing with the issue of climate change and mentions it 90 times. The opening sentence describes climate change as a pressing international problem, a complex interdisciplinary issue with impacts on the environmental, economic and social aspects of sustainable development of Russia, expected to accelerate in the 21st century. Climate change must be taken into consideration as a major long-term element in the security of the Russian Federation and as such requires a comprehensive and balanced public approach. Climate change poses not only scientific challenges: due to its expected impacts on many aspects of everyday life, economy and security, it should be dealt with politically. In designing and implementing national climate policy, the authorities should take steps in line with national interests, with a focus on mitigating the adverse effects of climate change. The 2009 Climate Doctrine states clearly that the anticipated climate changes, with global impacts, pose a threat to Russian security. As climate change is likely to affect the regions of the Russian Federation and various groups, economic sectors and natural sites differently, national climate policy should consider all related losses and benefits, taking their specific vulnerabilities into consideration.

The Doctrine outlines the main objectives of Russia's climate policy, with a list of measures to be taken to make the country better prepared to cope with the challenges. Some of the proposed measures will also have impacts on the energy sector: the Doctrine calls for reducing GHG, proposing, inter alia, to enhance energy efficiency in all economic sectors and to expand the use of renewable and alternative energy sources. Further, the Doctrine notes specific Russian factors that must be taken into consideration, such as the vast territory of the country, much of which will be exposed to the negative effects of climate change. It also notes the possible positive impacts, and the advantages Russia has as regards dealing with climate change.

For those who are responsible for national security policy, a better understanding of the *negative* impacts of climate change is of paramount importance. The 2009 Climate Doctrine lists the following possible negative impacts of climate change: increased health risks in some groups; increased occurrence, intensity and duration of droughts in some regions, and extreme precipitation patterns, with floods, soil over-moisture, dangerous for agriculture, in others; increased fire risk in forest areas; permafrost degradation in the northern regions; disturbance of the ecological balance; prevalence of infectious and parasitic diseases and increased electric power consumption for summertime air conditioning. Further, strategic calculations should take into account the possible *positiv*e effects of climate change in Russia, which include decreased energy consumption during heating seasons; improved ice situation with better conditions for freight hauling in the Arctic seas and easier access to the Arctic continental shelf and its exploration; improved structure and expansion of plant cultivation area, with more efficient cattle breeding; and greater productive efficiency of boreal forests.

Also the 2002 Environmental Doctrine (Government of the Russian Federation, 2002) might have been expected to pay attention to the issue of climate change. However, we find only three mentions of climate-related issues – climate change is noted twice among the factors causing degradation of the natural environment and as an issue that must be studied further to understand the potential impacts on nature. The 2008 Arctic Strategy (Security Council of the Russian Federation, 2008) contains eight mentions of climate-related issues; climate change is described as a factor influencing ecological security that must be studied and dealt with in the Arctic region, where harsh climatic conditions are a significant element in the broader picture. The 2009 Water Strategy (Government of the Russian Federation 2009) has two references to climate change as an important factor in shaping future policies in this area. The 2012 Food Security Doctrine (Government of the Russian Federation, 2010) mentions climate change only once: as an agro-ecological risk to be aware of. The 2014 Transport Strategy (Government of the Russian Federation, 2014) has six mentions of 'climate', but five of them refer to the *investment* climate as a factor that will shape the future of transport in Russia. The 2015 Maritime Doctrine (President of the Russian Federation, 2015a) contains four

mentions of climate; it calls for a better understanding of the impacts of seas and specific regions – the Arctic and the Antarctic – on global climate trends.

Finally, there are two strategic documents that deal more directly with the question of national security and Russia's international position. Each contains four mentions of climate. The 2015 National Security Strategy of the Russian Federation (President of the Russian Federation, 2015b) identifies climate change as one of the more tangible factors influencing security – together with freshwater shortages, demographic factors, problems in natural environment, food shortages and various epidemics. Climate change is also described as a cause of various natural disasters, accidents and catastrophes mentioned as among the most serious threats to Russia's security. Finally, global climate change is listed together with economic activity as an element that must be factored in when dealing with the possible negative impacts of human activity on ecology. The Foreign Policy Concept of the Russian Federation (President of the Russian Federation, 2016) mentions climate change as among the transborder challenges and threats in today's world – together with the proliferation of weapons of mass destruction, illegal arms trade, illegal migration, human and drug trafficking, corruption, piracy, cybercrime, global poverty and questions related to food, ecological and sanitary-epidemic security. As all these transborder challenges and threats must be dealt with by the international community and organizations, the Russian Federation favours expanding international cooperation with a view to ensuring environmental security and fighting climate change; it sees the 1995 Paris Agreement as a reliable regulatory framework for cooperation on climate-related issues.

Climate change in Presidential Annual Addresses to the Federal Assembly (PAFA)

Examination of the set of official Russian documents on various aspects of security has shown a certain level of awareness of the gravity of the problem of climate change among Russian policymakers. Such issues are discussed thoroughly in several documents, also those dealing directly with national security. However, due to specific features of the Russian political setting and the relatively high level of personalization of power and concentration of power in the power vertical controlled in various manners by the country's president, it is important to examine how the issue of climate change is addressed in the set of strategic statements made by presidents Vladimir Putin and Dmitrii Medvedev between 2000 and 2020. In their annual addresses to the Federal Assembly of Russian Federation, both leaders have presented their views on the most important issues facing Russia. Through an examination of these 19 statements, we can reconstruct the map of issues considered important and see what place climate change occupies on this strategic ideational map.

Figure 2 presents the results of a quantitative examination of these 19 strategic statements. We see that climate-related questions are mentioned in these documents 33 times; energy seems to interest Russian leaders even more, as the term 'energy' (and its variants) is mentioned 85 times. However, closer scrutiny of this set of documents leads to some puzzling conclusions. Russia's most influential political leaders seem to have been preoccupied with a different climate change than the one Russian official doctrines have identified as a serious challenge or even threat to Russia's security. Of the 33 mentions of 'climate' in this set of strategic statements made by the two Russian presidents, eighteen concern the business climate, nine the investment climate, and two climate conditions as factor driving costs and energy consumption up in Russia. In addition, there is one mention of the moral climate in Russia, one mention of a favourable climate for the development of Russian culture, and one of the entrepreneurial climate in Russia. Only in 2020 is *climate change* per se mentioned in this set of key presidential statements made over the past twenty years as an issue requiring a higher level of international cooperation that Russia is interested in joining. President Putin said the following (PAFA 2020):

I would like to stress that Russia is ready to support Russian and foreign scientists' joint research on ecology, climate change, environmental and ocean pollution. These are global development challenges shared by everyone.

Examination of the 19 PAFAs also reveals that interest in energy is much more prominent in the strategic speeches of the two Russian presidents than their interest in climate change. What are the dominant motives in the presidents' discourses on energy? Do they see any impact that climate change can have on the Russian energy sector in a short-, mid- and long-term perspective?

To show what 'energy' means to Russian presidents, we examined not only occurrences of the term 'energy' but also occurrences of terms referring to various types of energy. Table 2 shows what types of energy are dominant in the official presidential discourse and the evolution of their interest in various sources of energy over the past twenty years.

This simple quantitative examination reveals some interesting points. First, the interest in various types of energy expressed by these presidents in their strategic speeches reflects the perception of the strategic importance of various types of energy in Russian strategic calculations as these have evolved over the past twenty years. Oil, nuclear energy and gas dominate the picture, for various reasons. Oil and gas are the backbone of the Russian economy and the main source – together with petroleum products – of export and budget revenues. Nuclear energy is one of the technological

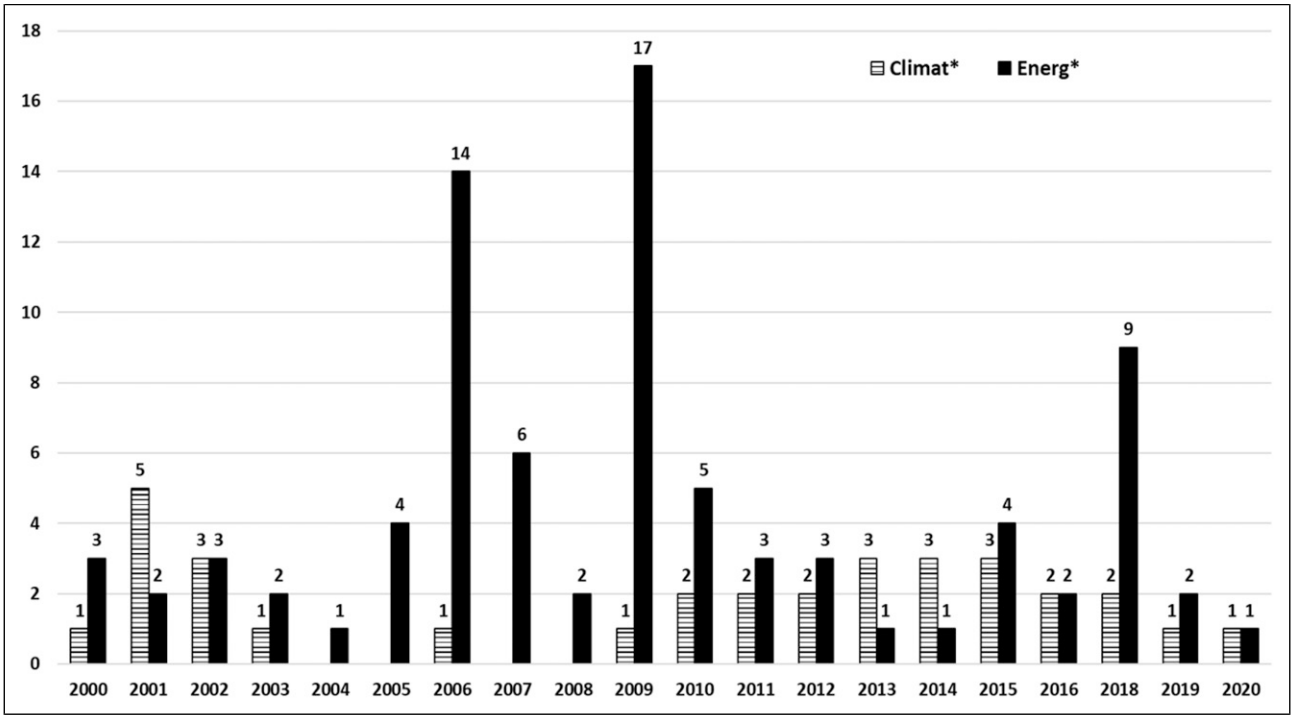


Figure 2. Occurrences of terms climat* and energ* in Presidential Addresses 2000–2020

edges Russia still has in the global context; as the overwhelming interest in the military dimension of nuclear energy shows, it is also central to the broader strategic security context, providing 'strategic nuclear life insurance'. This opinion was expressed clearly in President Medvedev's 2009 PAFA, where he noted that oil and gas production facilities 'generate most of our budget revenue' while 'nuclear weapons … guarantee our security'. In addition, as President Putin put it in his 2019 PAFA, 'the nuclear defence project gave the country nuclear power'– one of few historical examples of a successful transfer of technology from the military sphere to civilian use in Russia. The increased interest in electricity expressed in 2007 may be explained by the ongoing preparations for launching a major reform of the Russian energy sector planned for 2008 – the liberalization of the power-generation sector, to be coordinated by the father of the liberal turn in the Russian economy, Anatoly Chubais.

Second, and disturbingly, this detailed examination reveals these two presidents' utter lack of interest in renewable energy or the impacts of climate change on Russia and its energy sector. The only form of renewable energy mentioned in their speeches is hydropower: four mentions (PAFA 2007) made in connection with discussion of the planned liberalization of the power generation sector. Additionally, two mentions of hydrogen as a potential source of energy (PAFA 2006 and 2009) might be viewed as a possible input to changing the pattern of energy production in Russia.

One way of dealing with the environmental impact of the use of energy could be, as noted, to improve the energy efficiency of the Russian economy. Indeed, the issue of energy efficiency was mentioned seven times by Medvedev, in his 2009 and 2010 PAFAs; he also called for improving energy efficiency by 40% by 2020 – which could be an important Russian contribution to the global fight against climate change and also boost the global competitiveness of the country's economy.

Third, examination of the 19 presidential speeches – and of the 37 strategic documents on security – reveals a complete lack of the ability to connect various important strategic dots. Not one of the official strategic statements examined here presents any thoughts on how the expected change in regional and global patterns of energy consumption driven by concern for the negative consequences of climate change may make Russian fossil fuels – the backbone of the Russian economy today – less relevant if not utterly redundant on the export markets. Although no one expects fossil fuels to be phased out immediately, it would seem logical to find at least some form of concern as to how the future of Russian energy sector may be affected by the ongoing fourth energy transition, driven as it is by the need to mitigate climate change and to develop new, more sustainable, affordable and acceptable technologies (Makarov, 2020; Makarov et al., 2020).

Table 2. Various types of 'energy' in PAFAs 2000–2020.

PAFA	Energ*	Nuclear (energy)	Nuclear (military)	Oil	Gas	Hydrocarbon	Petroleum	Coal	Electricity	Hydropower	Hydrogen	Renewables	Solar photovoltaic	Wind
2000	3													
2001	2			1	2				1					
2002	3			2										
2003	2		2	1	1		1		1					
2004	1		1	5	5									
2005	4													
2006	14	5	12	1	1						1			
2007	6	6		10	7			3	9	4				
2008	2			1	1									
2009	17	7	3	4	3				2		1			
2010	5	1		2										
2011	3	3		1										
2012	3	1		2	2									
2013	1	4	8	1	1				1					
2014	1	1		1										
2015	4			3	1									
2016	2			1	1									
2018	9	1	27	1	1	1	1		2					
2019	2	1	4		2									
2020	1		2											
Total	85	30	59	37	28	1	2	3	16	4	2	0	0	0

Connecting the climate change, energy and security dots the Russian way

Although reflection on the potential impact of climate change on the Russian energy sector and on Russia is lacking in the set of strategic documents examined above, this does not mean that these issues are not discussed by the Russian decision/policymaking community. Several official documents not listed on the website of the Security Council of the Russian Federation as core texts on national security deserve closer scrutiny.

First, there is the Strategy of the Economic Security, issued in 2017 (President of the Russian Federation, 2017). This document states clearly that the Russia's economic security is increasingly influenced by global climate change, which may lead to deficits of food and fresh water, and greater competition for access to renewable resources, also in the Arctic and Antarctic zones and the Arctic Ocean. The document lists several challenges and threats related to economic security that can have negative consequences for Russia's fossil-fuel dominated energy sector. The list includes such factors as increased price volatility on the global markets, changes in the patterns of global demand for energy resources, development of energy-saving technologies, lower material intensity of new products and the development of green technologies. All these factors may render the current model of economic development in Russia based on export of raw materials no longer viable. Various measures can be implemented to counter these negative developments, including greater energy efficiency of the Russian economy, the development of energy infrastructure, implementation of energy-saving technologies, greater processing of energy resources and diversification of export markets, given the current trend towards developing a low-carbon economy. The document also describes the country's fuel and energy sector – together with defence industrial complex and transport sector – as a strategically important sector that should be protected against harmful actions of foreign special services and other foreign actors. What further underlines the strategic importance of the energy sector is the fact that the petroleum-related deficit of the state budget is included as one of the 40 indicators used for taking stock of the Russian economy.

The second document that deserves closer attention is the 2019 Energy Security Doctrine of the Russian Federation (President of the Russian Federation, 2019), which reflects the official view on how to ensure Russian energy security and its two major elements, uninterrupted provision of energy to domestic consumers and smooth flow of energy exports. The document expands and develops the provisions of the National Security Strategy of the Russian Federation and other strategic planning documents. It defines key concepts such as energy security, threats, challenges and risks to energy security, and identifies some of the challenges, threats and risks the country's energy sector must deal with. These crucial issues include the limited access to modern technology caused by sanctions; measures undertaken by other actors, which are viewed as discriminating against Russian energy actors; and the impact of international climate policies and accelerating green energy transitions that may lower global demand for energy resources – especially challenging, now that global hydrocarbon reserves are growing, and the energy momentum is shifting to the Asia-Pacific region (APR) where Russia lacks adequate infrastructure to become an important supplier. Further, the Russian energy sector faces several legal and regulatory challenges caused by 'excessive environmental regulations', especially in relations with Russia's most important energy partner, the EU, which sees the shift towards a greener economy as the best measure to mitigate climate change. However, although the document warns that the global shift to renewable energy poses a serious challenge to Russia, the proposed solution – to increase support for the oil and gas sector rather than promote the development of renewable energy sources or new technology – seems disappointing.

Finally, there is the new updated version of the Energy Strategy until 2035 (Government of the Russian Federation, 2020), with several reflections on the potential impact of climate change on the Russian energy sector. 'Climate' is mentioned 21 times. This document describes energy sector as the backbone of the Russian economy, serving as a basic infrastructure, generating vast revenues for the state budget and acting as the key partner for other industries.

There are two main objectives to be achieved by implementation of this strategy: first, to enable this sector to support the socio-economic development of the country; second, to strengthen and secure the position of the Russian Federation in the global energy sector, at least for the period until 2035. To achieve these objectives, the document calls for minimizing the negative impacts of the sector on the environment, and for adaptation to climate change, to help Russia to contribute to transition to the development of a global low-carbon economy and to mitigate climate change. The document lists measures taken to address the problems related to climate change in the period 2008–2019, presenting data on GHG emissions in Russia that demonstrate progress in that area. In assessing future trends on the global energy market, the strategic document underlines that this market is characterized by instability and high levels of unpredictability; in addition comes the ongoing transformation, which may change the outlook for the global energy system and bring new challenges. This could also have direct consequences for Russia, which has long been highly dependent on developments in this market. Further, the document presents assessments of how the situation on this market may evolve in the years to come. Here it argues that peak in oil demand may come already in the 2030s, that gas

will strengthen its position in the global energy mix because of its lighter environmental footprint compared with other fossil fuels and the emergence of a global gas market, and that the coal market will be characterized by high unpredictability. This strategy also assumes that electricity will gain ground in the future, providing some 25% of energy by 2040. It notes that new disruptive technologies may have an important role in the evolution of the global energy market, and proposes measures aimed at reducing the environmental footprint of the country's energy sector which will help mitigate climate change–related risks, listing indicators of progress in that field. The most important indicator here is the level of GHG emissions in the Russian economy. According to the Energy Strategy until 2035, by 2017 these emissions had been reduced by 50.7% compared with 1990; by 2024 and 2035 they should be reduced by between 70% and 75%.

Formal and informal framework for climate policymaking in Russia

The official strategic discourse offers inadequate framings of climate change as a challenge to the future of Russia's fossil-fuel-based energy sector, so dependent on access to external markets. However, such issues are discussed in documents more narrowly focused on industrial policy, as well as in official statements of official bodies responsible for implementing environmental, resource, industrial and economic policy – notably, the Ministries of Natural Resources, Energy, Industry and Trade, Finances, Economic Development, Labour and Social Protection, Transport, Agriculture, Health, and the Ministry of Civil Defence and Extraordinary Situations. All these bodies have direct or indirect stakes in the impacts of climate change on Russia's economy and society. Also relevant here is the Ministry of Defence, responsible for providing security to the Russian state and its citizens. For instance, in the Arctic, Russia must cope with climate change–induced changes in the environment, on the one hand opening new opportunities – like the Northern Sea Route – but also creating new set of security challenges and threats.

The formal division of labour among various stakeholders dealing with climate change issues is described in detail in the 2009 Climate Doctrine (President of the Russian Federation, 2009). This document states that 'possible future climate change will affect areas of responsibility of practically all federal state bodies' and presents therefore a detailed prescription of who is responsible for what.

The federal executive branch is responsible for elaborating public policy and legal regulations considering climate factors. Further, the public authorities of the Russian federal subjects and local self-government bodies are expected to take part in shaping policy on climate change in Russia. As many of Russia's economic resources are controlled by private owners, also national and international business communities are expected to deal with climate change–related challenges, risks and threats when operating in Russia. Finally, also Russian citizens directly or indirectly affected by climate change where they live, as well as various public associations/organizations and the mass media should take their share of responsibility for mitigating the possible negative impacts of climate change, especially as regards the country's strategically important energy sector.

However, how policies on climate change are designed and implemented in Russia depends not only on how the formal responsibilities are defined in core policy documents, but also on how the political system functions in reality. At least two factors need to be considered when assessing the possible implementation of any policy in Russia. First, there is the high level of centralization, verticalization and personalization of power in Russia. Second is the co-existence and interaction between the two parallel ways of organizing the Russian state – the formal rules and institutions (the constitutional state: Sakwa, 2010), and the set of informal rules, practices and connections labelled as the administrative regime or the Russian network state (Kononenko and Moshes 2011; Ledeneva 1998, 2013; Sakwa, 2010).

Closer scrutiny of these formal and informal ways of Russian policymaking as regards climate change is beyond the scope of this article: the aim has been to map how climate change–related issues are framed in Russian official discourse, not a detailed examination of Russian policymaking in this area. (For a good overview of the evolution of climate policy in Russia see Korppoo et al., 2015; Korppoo, 2015, 2020; Rowe, 2013).

However, Table 3 provides a good overview of the key institutional actors involved in shaping Russian official policy on climate change. This synthetic examination of the official Russian institutional framework is based on two sets of data. Figures in the second column represent the number of hits for the term 'изменение климата' (climate change) on the official websites of these institutions using their own search engines; these figures indicate the institutional 'quantitative' interest in this specific issue.[5] The third column shows the number of members representing these institutions in the main formal body responsible for coordination of Russian policy on climate change, the Interdepartmental Working Group under the Administration of the President of the Russian Federation on Issues Related to Climate Change and Sustainable Development (IWGCCSD) (President Administration, 2020). For a more complete overview, I have added the names of official Russian state institutions representing the executive branch that had no mention of 'climate change' on their websites

Table 3. Institutional Interest in Climate Change and Membership in IWGCCSD.

Climate change formal framework	Climate change hits at the official institutional website	Number of members representing institution in IWGCCSD
President Administration	294	**5**
Ministry of Industry and Trade	3	**3**
Ministry of Economic Development	271	**2**
Ministry of Foreign Affairs	189	**2**
Ministry of Civil Defence and Extraordinary Situations	90	**2**
Ministry of Energy	45	**2**
Ministry of Natural Resources	23	**2**
Ministry of Agriculture	4	**2**
Federal Forestry Agency		**2**
Ministry of Labour		**2**
Ministry of Science and Higher Education		**2**
Ministry of Natural Resources Rosgidromet	110	**1**
Ministry of Health	4	**1**
Committee of the Chamber of Commerce and Industry of the Russian Federation on nature management and ecology		**1**
State Duma Committee on Ecology and Environmental Protection		**1**
Directorate for Energy Saving and Environmental Management, Sberbank		**1**
Non-Governmental Ecological Fund V.I. Vernadsky		**1**
Federal State Statistics Service		**1**
Ministry of Transport		**1**
Centre for Sustainable Development and Environmental Health of the IBR RAS		**1**
Soil Institute V.V. Dokuchaev		**1**
Federation Council Committee on Agrarian and Food Policy and Environmental Management		**1**
Climate Processes Research Department, Institute of Atmospheric Physics, Russian Academy of Sciences		**1**
Russian Union of Industrialists and Entrepreneurs		**1**
Ministry of Finance		**1**
Public Organization 'Business Russia'		**1**
Federal Service for Supervision of Consumer Rights Protection and Human Welfare		**1**
State Duma		**1**
International Chamber of Commerce (ICC Russia)		**1**
Russian government	100	
Security Council RF	36	
Ministry of Communication	35	
Ministry of Natural Resources, Rosnedra	26	
ROSKOSMOS	22	
Federal Service for Finance Monitoring FEDSFM	17	
Ministry of Natural Resources Rosvodresursy	16	
Ministry of Culture	15	
Ministry of Justice	7	
Rospotrebnadzor	7	
Obrnadzor	6	
Ministry of the Interior MVD	4	
ROSATOM	3	
Ministry of Defence MO	2	
Ministry of Finance MinFin	2	

(continued)

Table 3. (continued)

Climate change formal framework	Climate change hits at the official institutional website	Number of members representing institution in IWGCCSD
Federal Antimonopoly Service FAS	1	
Ministry of Construction Industry, Housing and Utilities Sector	1	
Ministry of Far-East Development and the Arctic	1	

but are represented in the working group, and names of institutions which do not represent the executive branch but are represented in the IWGCCSD. Including formal state institutions that have shown interest in climate change and non-governmental actors represented in the working group offers a more complete picture of bodies involved in shaping Russian policy on climate change. This could also be a good starting point for a more detailed mapping of the Russian climate policy making process.

Conclusions: Climate Change, Energy Transition and Russian Grand Strategy

It could be expected that official statements would pay great attention to the question of climate change as a factor that might undermine Russia's position as a key energy actor, leading thus to crippling of its strategic influence in which energy resource endowment plays both a direct and indirect role. After all, in a worst-case scenario, the climate change mitigation policies implemented by other actors could make Russian fossil fuels less effective as a strategic policy instrument, perhaps completely redundant.

However, this examination of key strategic statements and documents has revealed an almost complete lack of strategic reflection on possible negative impacts of global climate change on Russia's position on the global energy market. As this may have massive negative consequences for Russia's ability to survive as a key energy player in the emerging post-fossil world such a lack of strategic interest in this issue is truly puzzling, not least because Russia plans to increase energy exports and the domestic market will probably need less energy.

How can this apparent lack of expressed strategic interest in an issue that can have a devastating impact on the most important sector of Russian economy be explained? Graaf and Sovacool (2020) argue that there are four dominant frames shaping the international debate on energy: neo-mercantilism, market liberalism, environmentalism and social justice. The detailed examination of the Russian strategic discourse on climate change and energy presented here has shown that Russian policymakers speak and probably think about energy in purely neo-mercantilist terms: as an instrument of state policy useful in economic and hard-security terms. Further, the elements of social justice thinking in their approach to energy can be explained by the fact that reliable provision of affordable energy is a central element in the social contract between the Russian regime and the citizenry (Makarkin 2011, see also Tynkkynen & Tynkkynen, 2018; Tynkkynen, 2019, 16). This social contract has been instrumental in securing survival and stability of the current Russian regime whose key actors are believed to have used their control over Russian energy sector to enrich themselves but have also been able and willing to share some of the energy profits with their 'subjects'. However, kleptocratic regimes – and Russia is sometimes referred to as such a regime (Dawisha, 2014) – are per definition interested in short-term gains, not long-term thinking. The Russian energy sector has generated revenues that could be used to fill the pockets and bank accounts of key actors, to make Russia regain its great power status and to share some of the energy profits with citizenry (Gaddy and Ickes 2014, 2020). However, as indicated by Overland et al. (2019), Russia's position as a key global energy player, and consequently the future of this social contract and thus the survival of the regime – can be undermined by the lack of interest/understanding of how climate change and mitigation policies may change the global energy scene and the rules of the global energy game – with Russia among the key losers.

Russia has turned to Asia to make itself less exposed to negative impacts stemming from the current overdependence on access to the European energy market and to alleviate fears caused by possible negative impact of climate change on the framework conditions in which Russian energy actors will operate in the years to come.

The energy turn to Asia has also a neo-mercantilist motivation: Asian energy markets seem set to expand while the European energy market has entered a stagnation phase and is expected to shrink drastically, at least for fossil fuels. However, also major Asian energy consumers and importers may embark on the fourth energy transition – to mitigate climate change but also to lessen their dependence on external supplies of energy that will be replaced by locally available, perhaps more affordable and acceptable sources of energy. This perspective may seem utopian, but technological change can have, as demonstrated by the recent shale gas and oil revolution, major impacts on position of actors on the market (Konnov, 2020; Makarov et al., 2017; Morris et al., 2017; Paltsev, 2016).

These diversification efforts notwithstanding, it seems that Russia may face its 'Kodak' or 'Nokia' moment as its inability to predict the impacts of disruptive technological change caused in this case by concern for climate change can deal a heavy blow not only to its dominant market position but also to its great power ambitions supported by revenues generated by its energy sector.

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2. http://www.scrf.gov.ru/security/docs/, accessed 19 November 2020.
3. The official English translations of all these Addresses, available at www.kremlin.ru, are used in this examination.
4. http://scrf.gov.ru/security/docs/, accessed June 15, 2020.
5. See http://www.gov.ru/main/ministry/isp-vlast44.html, accessed 15 November 2020.

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