

# Russia's Energy Strategy

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## Conflicting Strategic Goals

The fate of the “Russian Energy Strategy Up to 2035” paper—a key document defining the country’s strategic priorities in this critically important industry and submitted by Russia’s Energy Ministry every five years—illustrates well the contradictory predicament of Russia’s energy sector. In 2015, after two years of preparations, the latest version was submitted to the government, but national authorities have not approved it until now.<sup>1</sup> Behind the scenes, many conflicting interests prevent the setting of a clear and coherent long-term vision.

The sector’s challenges mirror those of the Russian economy as a whole. There is no clear understanding about the path of Russia’s overall economic development. Is it going to move “back to the USSR”—resulting in further isolation, a growing state sector, and an increasingly administrative economy? Or will it try, despite current trends, to increase entrepreneurship and private sector activity, market economics, and international economic cooperation? The choice is three-fold, between

- ◆ international isolation or cooperation;
- ◆ private business or state-controlled assets; and
- ◆ a market-driven or an administrative command system.

Influential actors in the Russian establishment favor different options. The authorities’ current strategy points toward a “mobilization economy,” which, as such, dictates stronger state involvement, creeping

The Eurasia Center’s mission is to enhance transatlantic cooperation in promoting stability, democratic values, and prosperity in Eurasia from Eastern Europe and Turkey in the West to the Caucasus, Russia and Central Asia in the East.

<sup>1</sup> Ministry of Energy of Russian Federation, Legislation, 2018, <https://minenergo.gov.ru/documents/zakon>, accessed September 20, 2018.

nationalization of national assets, and very limited participation in the global economy.

The irony is that the energy sector, which is providing the bulk of the state's (and the elite's) revenues, naturally dictates an absolutely opposite approach: in order to remain competitive, it is necessary to cooperate, establish innovative ecosystems, and allow markets to work. If Russia can't find a way to reconcile these mutually exclusive choices, the authorities will continue to send contradictory signals about its energy strategy and overall economic approach. This would be similar to recently blocking up to 30 percent of Russia's IP addresses in spring 2018, in order to ban the Telegram messaging app,<sup>2</sup> while simultaneously declaring the "digital economy" a state priority.<sup>3</sup>

At the moment, there is no consistent long-term strategy for developing Russia's energy sector. Short-term reactive adaptation in the sector drives many decisions, rather than long-term proactive strategic behavior. Nevertheless, one can identify some components of the energy strategy being consistently implemented by the authorities and each of these will be analyzed in this paper. The analyses will be built on the official goals of the "Russian Energy Strategy Up to 2035."<sup>4</sup> These goals include:

- ◆ to sustain Russia's position in global energy markets
- ◆ market diversification with a significantly higher share of Asian markets
- ◆ energy availability and affordability for domestic consumers

- ◆ strong reduction in energy intensity and emissions

- ◆ renewable energy systems (RES) development

These five targets have different weights for Russian leaders. Sustaining export revenues and improving ties with Asia, as well as maintaining social stability supported by low energy prices, appear critical for the sustainability of the regime. While Russians do not seriously regard the climate agenda, when RES development received some state support and guaranteed cash flow, it immediately became a battlefield for elites, who are now each trying to get a piece of the pie.

### Sustaining Energy Exports and Budget Revenues

The first goal—to increase energy exports and revenues—is priority number one for both the government and the elites, and all of the other targets could conceivably be sacrificed in order to achieve it. Despite accounting for only 3 percent of the world's gross domestic product (GDP) and 2 percent of its population, Russia is the third-largest producer of energy resources, behind China and the United States, and is also the fourth-largest consumer after China, the United States, and India.<sup>5</sup> Russia consistently holds first place in world rankings for gas exports, first or second for oil, and third for coal.<sup>6</sup>

Russia has developed a huge transportation system to bring these energy resources to export markets, which includes over 70,000 kilometers of oil trunk pipelines<sup>7</sup> and over 170,000 kilometers of gas trunk pipelines.<sup>8</sup> During the last decade, it managed to expand this transportation system to the east with the

2 Andrew Roth, "Moscow court bans Telegram messaging app," *Guardian*, April 13, 2018, <https://www.theguardian.com/world/2018/apr/13/moscow-court-bans-telegram-messaging-app>.

3 President of Russia, Presidential Address to the Federal Assembly, 2018, <http://en.kremlin.ru/events/president/news/56957>, accessed September 20, 2018.

4 Ministry of Energy of Russian Federation, Draft of the Energy Strategy of the Russian Federation for the Period up to 2035 (Editorial from 01.02.2017), <https://minenergo.gov.ru/node/1920>, accessed September 20, 2018.

5 ERI RAS, *Global and Russian Energy Outlook Up To 2040*, ERI RAS, ACRF, 2016, [https://www.eriras.ru/files/forecast\\_2016.pdf](https://www.eriras.ru/files/forecast_2016.pdf), accessed September 20, 2018.

6 Ibid.

7 Transneft, Transneft Program of Strategic Development Up to 2020, 2012, <http://www.transneft.ru/files/2012-03/2JQvOV0j7cuBsm6.pdf>, accessed September 20, 2018.

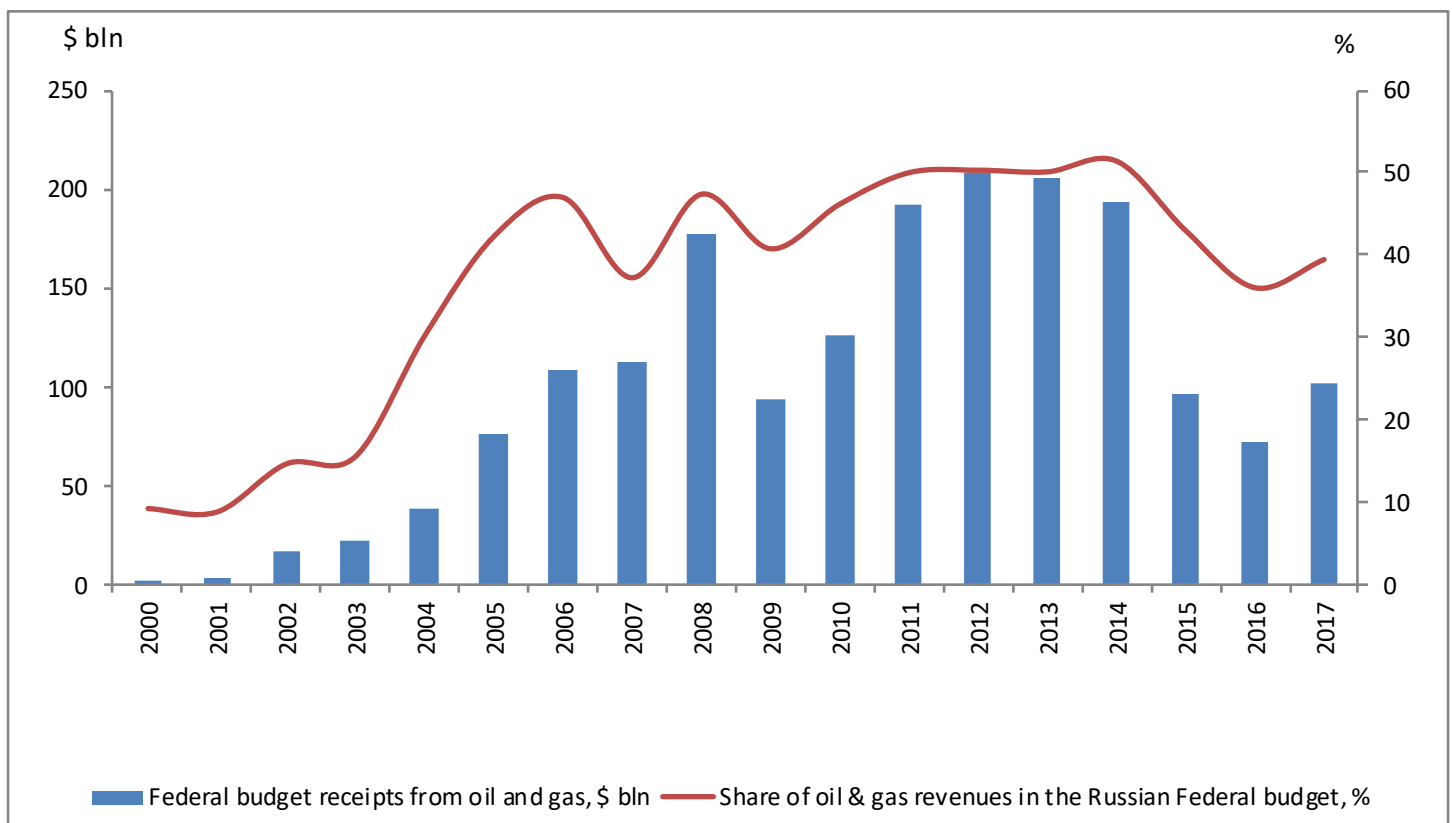
8 Gazprom, Transmission, 2018, <http://www.gazprom.com/about/production/transportation/>, accessed September 20, 2018.

Eastern Siberia-Pacific Ocean (ESPO) oil pipeline system and the Power of Siberia gas pipeline; the latter is supposed to begin supplying gas in 2020.<sup>9</sup>

All of these efforts are central to Russia's energy policy for a very simple reason: the country remains strongly dependent on hydrocarbon revenues. In 2017, they provided 39 percent of the federal budget revenues

(Figure 1). That proportion is significantly lower than the amount seen in 2011-2014, which was 50 percent, but is still much higher than it was in the early 2000s, when hydrocarbon revenues provided under 10 percent of the federal budget. Moreover, the energy sector makes up more than 65 percent of total export revenues, as well as 25 percent of the country's GDP.<sup>10</sup>

**Figure 1: Oil and Gas Revenues in Russia's Federal Budget**



Source: Russian Ministry of Finance, *Federal Budget*, 2018, [https://www.minfin.ru/ru/statistics/fedbud/?id\\_65=80041&page\\_id=3847&popup=Y&area\\_id=65](https://www.minfin.ru/ru/statistics/fedbud/?id_65=80041&page_id=3847&popup=Y&area_id=65), accessed September 20, 2018.

In the early 2000s, Russia managed to radically increase energy exports. Booming global demand was driven by Chinese energy consumption coupled with rising oil and gas prices and Russia's ability to increase supply, due to investments made in the late 1990s and

early 2000s by private companies in the Russian oil and gas sectors and the availability of the new technologies. From 2000 to 2005, oil and gas exports grew by an unparalleled 56 percent, exceeding the Union of Soviet Socialist Republics (USSR)'s total energy

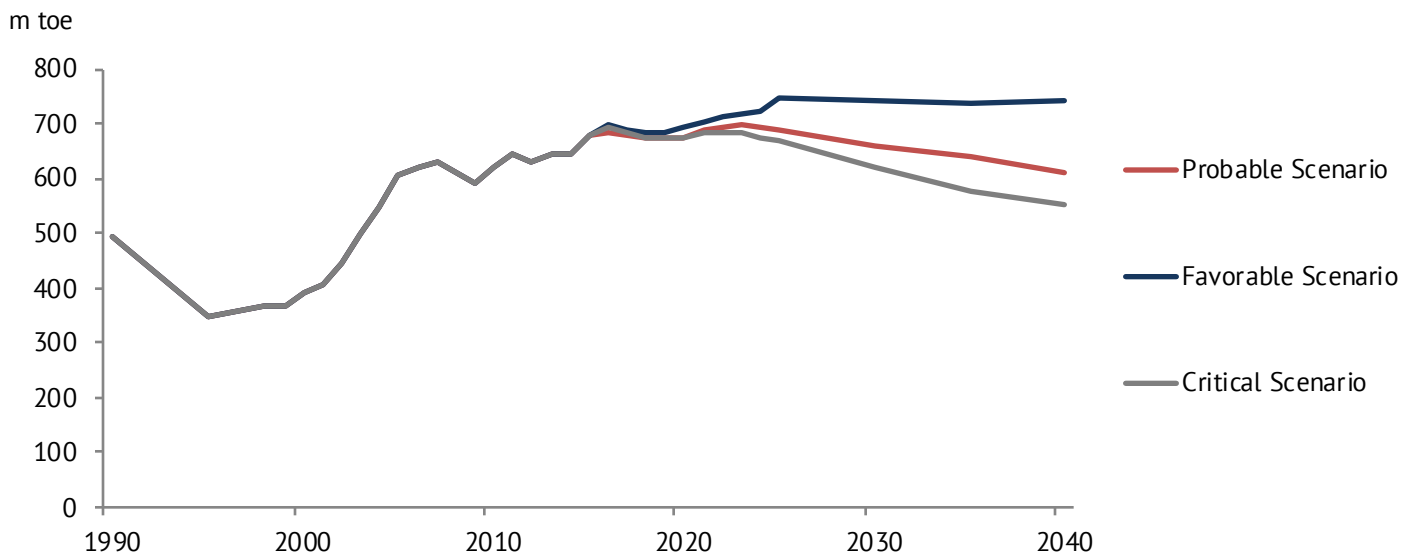
<sup>9</sup> "Power of Siberia gas pipeline completed by 90.5 per cent, 1,954 kilometers built," Gazprom, last updated July 25, 2018, <http://www.gazprom.com/press/news/2018/july/article446731/>.

<sup>10</sup> Trading Economics, Russia GDP Growth Rate, 2018, <https://tradingeconomics.com/russia/gdp-growth>, accessed September 20, 2018.

exports (Figure 2),<sup>11</sup> providing an incredible boost to the national economy and strengthening the country's position in the international arena as an "energy superpower." However, when the global financial and economic crisis struck in 2008, energy exports stopped

growing.<sup>12</sup> The post-crisis years of 2011–2014 saw very high oil prices but stagnant export volumes, and the lack of petrodollar revenues resulted in GDP stagnation, a sign of deep structural economic problems.<sup>13</sup>

**Figure 2: Total Russian Energy Exports, 1991-2030, Million Tonnes of Oil Equivalent**



Source: *Global and Russian Energy Outlook-2016*, ERI RAS-AC

In 2014, Russia faced a confluence of serious challenges: the collapse of the price of oil, Western sanctions, and a lasting energy export volume stagnation. The situation was critical and the state accepted a risky strategy of devaluing the ruble. This allowed the government to not only balance the budget but to also improve Russian energy exporters' competitive edge, as the vast majority of their costs are fixed in rubles. This sudden reduction, in dollars, of all Russian export commodities resulted in another round of impressive

energy export growth in 2015–2017. Even oil exports, which had been declining for a decade, ramped up, demonstrating a 7 percent increase over the last three years.<sup>14</sup> Natural gas exports reached a historical record in 2017, showing 30 percent growth in the last three years.<sup>15</sup> Of course, in terms of revenues, the picture is far less positive. Despite volume growth, neither the oil nor the gas industry managed to increase its total export revenue. But the Russian energy sector fulfilled

11 ERI RAS, *Global and Russian Energy Outlook Up To 2040*.

12 IEA, Russian Federation Energy Balance, 2015, <http://www.iea.org/Sankey/#?c=Russian%20Federation&s=Balance>, accessed September 20, 2018.

13 Statista, Russia: Gross domestic product (GDP) in current prices from 2012 to 2022 (in billion U.S. dollars), 2018, <https://www.statista.com/statistics/263772/gross-domestic-product-gdp-in-russia/>, accessed September 20, 2018.

14 Ministry of Energy of Russian Federation, Statistics, <https://minenergo.gov.ru/en/activity/statistic>, accessed September 20, 2018.

15 Artur Toporkov, "Gazprom Set an Absolute Record of Gas Exports," *Vedomosti*, January 8, 2018, <https://www.vedomosti.ru/business/articles/2018/01/09/747176-gazprom-eksporta-gaza>.

the most important strategic task: the budget received the required revenues.<sup>16</sup>

Since May 2016, with the growth of oil prices, macroeconomic recovery has started, although it is still very slow. The World Bank and the Russian Economic Development Ministry are both cautiously optimistic about the country's GDP in 2018, expecting the recession to end and growth to come in at 1.5–2 percent.<sup>17</sup> The broader macroeconomic outlook is rather gloomy, in the range of 1.5–2 percent for the next decade,<sup>18</sup> which is very low for an emerging market like Russia and far below the 7–8 percent seen in the first decade of this century;<sup>19</sup> those numbers could actually go even lower as a result of new sanctions.

In order to protect its primary objective of defending oil exports, Russia even consented to a groundbreaking production cut agreement with the Organization of the Petroleum Exporting Countries (OPEC), a so

called OPEC+ deal, signed in December 2016,<sup>20</sup> despite its historical geopolitical enmity toward Saudi Arabia. Once again, this development illustrates the critical importance of oil revenues for the government, which can even lead to the revision of international policy.<sup>21</sup>

So far, the OPEC+ deal has worked relatively well. Given the ruble devaluation due to the floating exchange rate, Russia now earns more rubles per barrel of oil than at any point in its history (Figure 3). Record nominal prices per barrel in the national currency are helping to “repair fiscal and external deficits and rebuild foreign currency reserves, even though oil prices in dollar terms remain at \$69, well below the peak of \$150, set in 2008.”<sup>22</sup> Although the ruble is normally driven by the global oil price, at least to some degree, “Moscow has in essence prevented its currency from strengthening since June 2017 even though Brent crude has jumped more than 50 [percent] over this period.”<sup>23</sup>

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16 Darya Korsunskaya, Andrey Ostroukh, “Russia eyes budget surplus for first time since 2011,” Reuters, May 11, 2018, <https://www.reuters.com/article/us-russia-budget-surplus/russia-eyes-budget-surplus-for-first-time-since-2011-idUSKBN11C0DS>.

17 World Bank, Country Data – Russian Federation, 2017 <https://data.worldbank.org/country/russian-federation>, accessed September 20, 2018.

18 “Modest Growth Ahead. Russia Economic Report,” World Bank Group, May 2018 (39), <http://pubdocs.worldbank.org/en/162681527086868170/RER-39-Eng.pdf>.

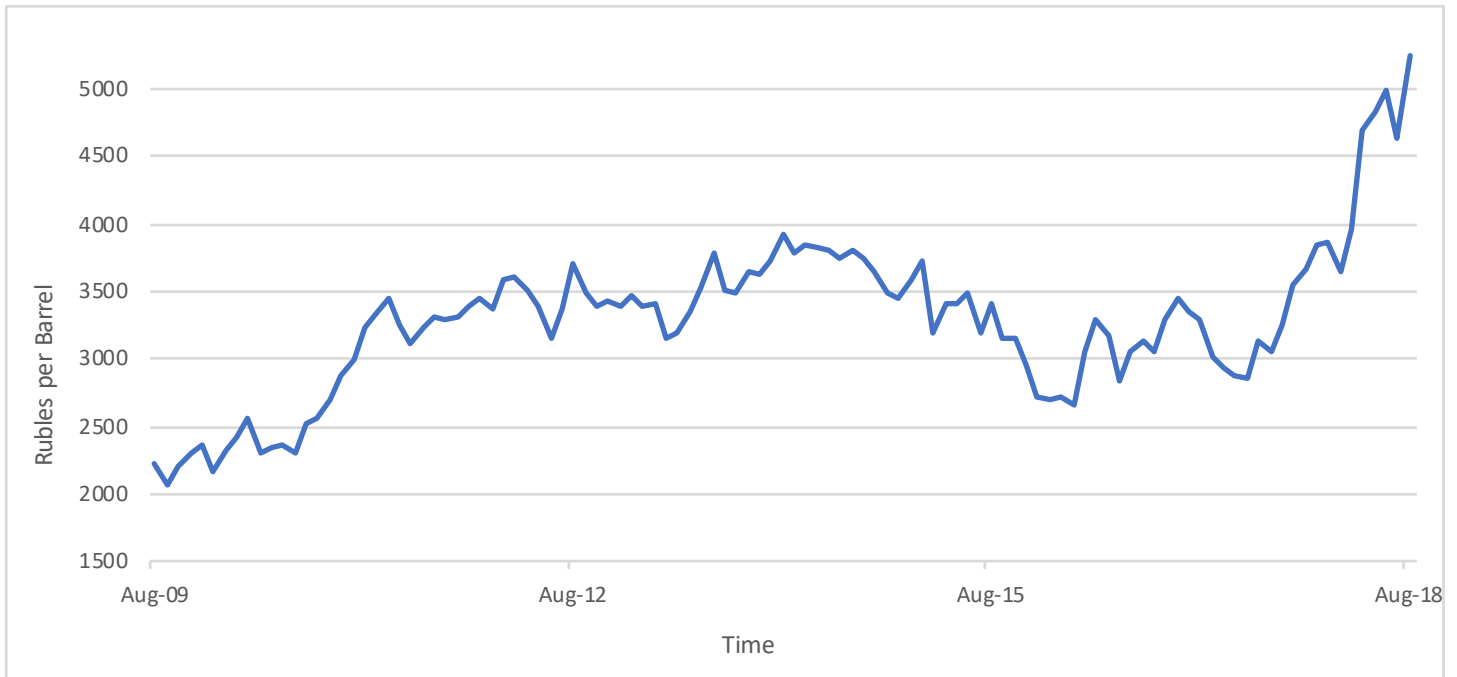
19 World Bank, Indicators – GDP Growth, 2018, <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=RU>, accessed September 20, 2018.

20 Vladimir Soldatkin, Rania El Gamal, Alex Lawler, “OPEC, non-OPEC agree first global oil pact since 2001,” Reuters, December 9, 2016, <https://www.reuters.com/article/us-opec-meeting/opec-non-opec-agree-first-global-oil-pact-since-2001-idUSKBN13Z0J8>.

21 Claire Potter, “Are Russia and Saudi Arabia Becoming Friends?,” The Gate, November 8, 2017, <http://uchicagogate.com/articles/2017/11/8/are-russia-and-saudi-arabia-becoming-friends/>

22 Steve Johnson, “Oil price touches record high in Russian rouble terms,” Trending News Worldwide, January 19, 2018, <https://www.newshunters.club/oil-price-touches-record-high-in-russian-rouble-terms/>.

23 Ibid.

**Figure 3: Oil Prices in Rubles**

Source: *Kursovoy Monitor*. [https://kurs2015.ru/grafik.html?tvwidgetsymbol=UKOIL\\*USDRUB](https://kurs2015.ru/grafik.html?tvwidgetsymbol=UKOIL*USDRUB)

Despite this adaptation, recent changes to Russia's main export markets have led to stabilization, and after 2023-2025 could potentially lead to declining absolute volumes of total energy exports, particularly oil product exports to foreign markets.<sup>24</sup> This is primarily the result of "the influence of domestic factors (the stabilization and subsequent fall in production, against a background of rising domestic demand for liquid fuels), as well as negative signals from the European market, with its significantly declining demand for liquid fuels."<sup>25</sup>

Oil production in Russian brownfields (oil fields which have operated for some time) was down by 5 percent in 2012-2016. The share of production in western Siberia, Russia's main oil production region, was also noticeably down, from 62 percent to 56 percent.<sup>26</sup> Production dynamics in brownfields show that they

have entered the stage of declining output; not even a 22 percent drilling rate increase over the past five years has been able to compensate for this reduction.<sup>27</sup>

A whole complex of measures is needed to maintain current output levels in brownfields, such as enhanced recovery of traditional oil reserves in active fields, hydraulic fracturing methods, and the development and application of profitable tertiary oil recovery methods. However, sanctions make access to these technologies more difficult, and the profitability of these projects is lower, resulting in an unattractive concept for companies.<sup>28</sup>

The decrease in brownfield production is forcing producers to move toward greenfields (new oil fields which just started their operation). Usually, these are remote and technically complex oil fields, and the ma-

24 E. D. Belotskaia et al., *Global and Russian Energy Outlook 2016*, The Energy Research Institute of the Russian Academy of Sciences and The Analytical Center for the Government of the Russian Federation, 2016, <http://ac.gov.ru/files/publication/a/12767.pdf>, 149.

25 Belotskaia et al., *Global and Russian Energy Outlook 2016*, 150.

26 Tatiana Mitrova, Ekaterina Grushevenko, and Artyom Malov, *The Future of Oil Production In Russia: Life Under Sanctions*, Energy Centre SKOLKOVO Business School, May 2018, <https://energy.skolkovo.ru/downloads/documents/SEneC/research04-en.pdf>.

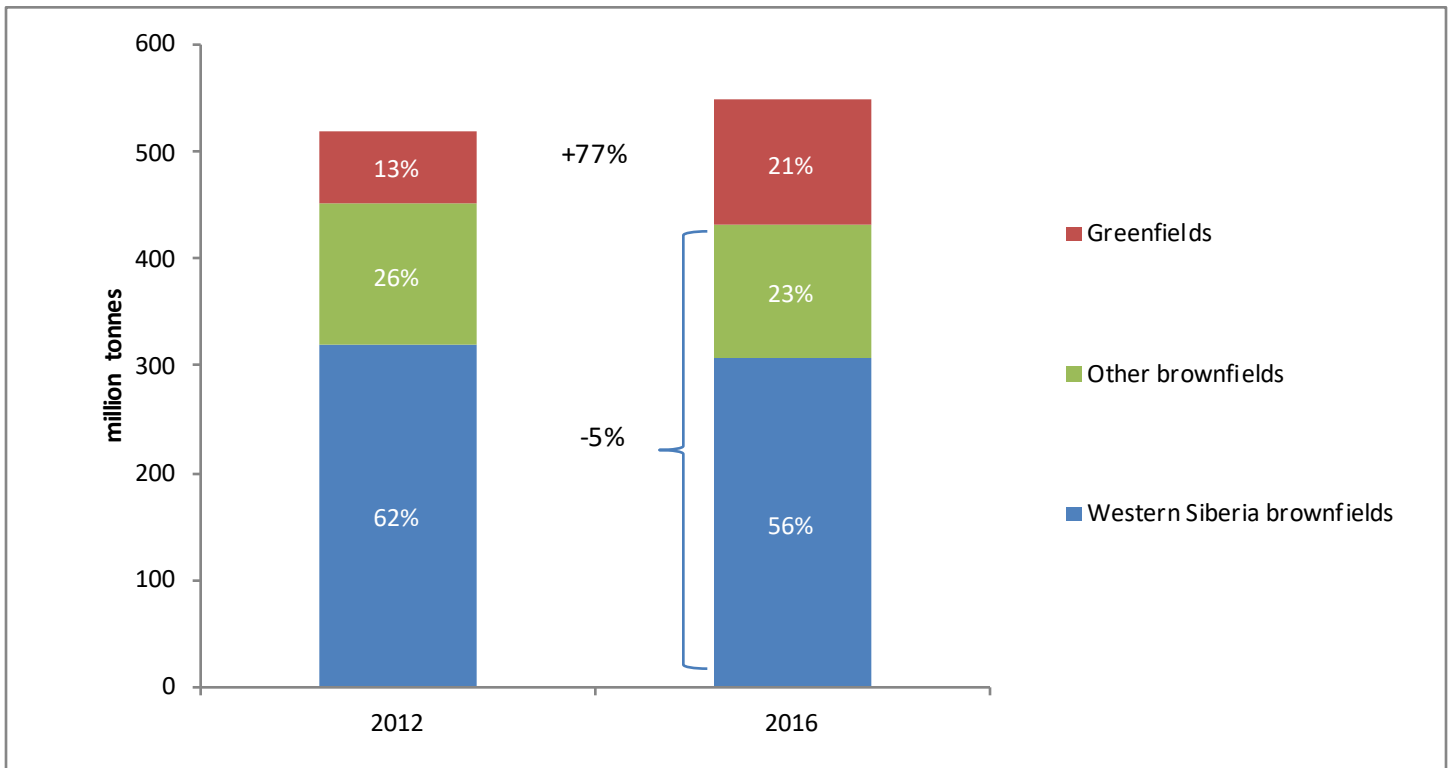
27 Ibid.

28 Ibid.

jority require significant taxation advantages.<sup>29</sup> In recent years, the commission of new fields ensured an

overall growth in production, which has increased by 77 percent in the last five years (Figure 4).

**Figure 4: Russian Oil Production at Active and New Fields**



Source: The Ministry of Energy for the Russian Federation, Mitrova, Grushevenko, and Malov, *The Future of Oil Production in Russia: Life Under Sanctions*.

It is expected that in 2018-2019, oil production will continue to grow as in previous years, ensured by production growth at newly commissioned fields. After 2025, companies in Russia will increasingly struggle to maintain the same level of oil production, primarily due to the decrease in reserve quality.<sup>30</sup> Although, Russian oil production could be supported by:

- ◆ “development of new conventional deposits;

- ◆ in-depth development of existing conventional oil fields using oil production intensification methods;
- ◆ development of offshore fields (including on the Arctic shelf); and
- ◆ development of non-conventional oil reserves.”<sup>31</sup>

However, Russian companies do not possess their own technologies and equipment necessary to develop un-

<sup>29</sup> Alexey Topalov, Ekaterina Karpenko, “Tax will be pumped out of the difficult oil,” *Gazeta.ru*, 30 April, 2013, <https://www.gazeta.ru/business/2013/04/30/5287077.shtml?updated>.

<sup>30</sup> Mitrova, Grushevenko, and Malov, *The Future of Oil Production in Russia: Life Under Sanctions*.

<sup>31</sup> *Ibid.* 4-5.

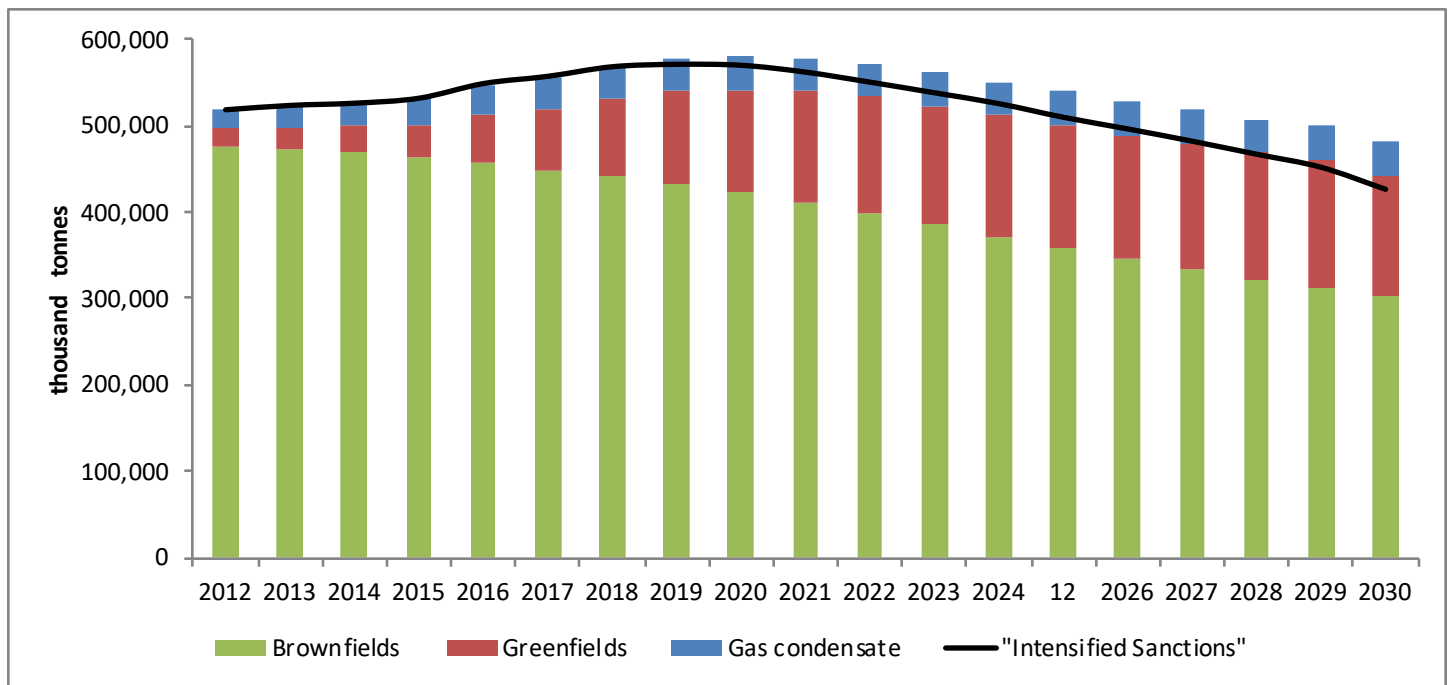
conventional and offshore oil reserves, and imposed sanctions tightly limit their access to foreign technology. 2014 saw the adoption of import replacement measures meant to tackle this issue, but the measures have not yet shown signs of significant results.<sup>32</sup>

The technology most critical to maintaining oil production in Russia is hydraulic fracturing equipment. Because it is “capable of both maintaining output at existing fields and ensuring output growth at prospec-

tive non-conventional oil deposits,” domestic hydraulic fracturing fleet manufacturing and personnel training must become a priority for both oil companies and regulators.<sup>33</sup>

As a result of both the deteriorating reserve base and technological and financial sanctions, overall Russian oil production is projected to decrease up to 2030 (Figure 5). It is likely that there will be some free production capacity in Russia.<sup>34</sup>

**Figure 5: Projected Oil and Gas Condensate Production in Russia to 2030**



Source: Mitrova, Grushevenko, and Malov, *The Future of Oil Production in Russia: Life Under Sanctions*.

Oil production is expected to decrease to 540 million tons by 2025.<sup>35</sup> In *The Future of Oil Production in Russia: Life Under Sanctions*' scenario of intensified sanctions, which seems to be increasingly relevant in the current geopolitical environment, oil production could, due to major projects being cancelled, peak

as early as 2019 and total 505 million tons by 2025.<sup>36</sup> Generally speaking, the possibility of further sanctions applied to the oil sector is the major challenge for the Russian energy strategy and the sustainability of oil revenues. The difference in production between the report's two scenarios—the previously mentioned

<sup>32</sup> Ibid. 5

<sup>33</sup> Ibid.

<sup>34</sup> Mitrova, Grushevenko, and Malov, *The Future of Oil Production in Russia: Life Under Sanctions*.

<sup>35</sup> Ibid.

<sup>36</sup> Ibid.



intensified sanctions scenario (adding new sanctions) and the baseline scenario (keeping the status quo)—is projected to reach 35 million tons by 2025,<sup>37</sup> not only due to the several new projects being cancelled, but also a quicker production decline at existing fields.<sup>38</sup> By 2030, these processes will be exacerbated; the difference in production between the two scenarios is projected to reach 55 million tons, which represents 10 percent of current oil production and more than 20 percent of current oil exports.<sup>39</sup>

This expected reduction in oil output could be partially offset by increased volumes of gas exports. While the country was unquestionably late to the liquefied natural gas (LNG) game, it is now emerging as a major LNG exporter. Its position in traditional European markets is stronger than commonly appreciated, and its eastern strategy, with the Power of Siberia pipeline at its center, is now back on track after years of equivocation and delays on both sides.

LNG development seems to be another one of the Russian authorities' big bets. Until last year, Russia, the largest pipeline exporter in the world, had only one operational LNG terminal, the Sakhalin 2 project in the country's far east.<sup>40</sup> Russia's LNG fortunes started to change at the end of 2017, however, when the Yamal LNG terminal opened commercial operations in the Russian Arctic. Thanks to the combination of Chinese financing and European technology, Novatek managed to complete the project on time and on budget, despite the harsh operating environment in the Yamal Peninsula and tough US sanctions against the company.<sup>41</sup> Novatek is already planning several new LNG

megaprojects in the vicinity of its first plant, with the ultimate aim of creating a "major LNG production center in the Russian Arctic zone that will rival Qatar, Australia, and the United States," according to the company's chief financial officer.<sup>42</sup> The Russian state strongly supports development of LNG production in its Arctic territory and is providing tax breaks and other regulatory support—like a zero Mineral Extraction Tax for the first twelve years, lower profit tax, and state financing for the 75 percent of Sabetta Port construction.<sup>43</sup>

### Market Diversification with a Significantly Higher Share of Asian Markets

The Russian energy sector has shifted its focus to its secondary strategic plan, in the face of continued Western sanctions and tense relations with the US and Europe, and moved towards the emerging energy market in Asia. In 2015, Asia received 27 percent of Russian oil exports; by 2025, this figure is expected to increase to 40 percent.<sup>44</sup> The share of Asia-oriented Russian gas exports is supposed to increase from 7 percent in 2015 to nearly 20 percent in 2025.<sup>45</sup> Construction of projects of this nature have increased in pace, with China requesting an increase in the assembly rate of the Power of Siberia pipeline, driven by a boom in Chinese gas demand.<sup>46</sup> This development reduces Russia's dependence on European markets, and also allows for closer economic relations with China and other Asian powers. At the same time, it should be mentioned that this "pivot to the east" has not worked exactly as intended; China in particular was very cautious about providing financing or acquiring equity shares in Russian oil and

37 Ibid.

38 Mitrova, Grushevenko, and Malov, *The Future of Oil Production in Russia: Life Under Sanctions*.

39 Ibid.

40 Tim Boersma, Tatiana Mitrova, and Akos Losz, *A Changing Global Gas Order 2.0*, Columbia Center on Global Energy Policy, April 2018, <https://energypolicy.columbia.edu/sites/default/files/pictures/A%20Changing%20Global%20Gas%20Order%202.0.pdf>.

41 Henry Foy, "China signs up for more Arctic gas from Russia's Novatek," *Financial Times*, November 1, 2017, <https://www.ft.com/content/05342c41-b638-3899-adc0-2f82da0e8556>.

42 Henry Foy, "Novatek Commits up to \$47.6bn on Arctic LNG Projects," *Financial Times*, December 12, 2017, <https://www.ft.com/content/929c676c-df25-11e7-a8a4-0a1e63a52f9c>.

43 Irina Gladysheva, "Gas price benefit: how the state helped to build Yamal LNG," RBC, December 11, 2017, <https://www.rbc.ru/opinions/business/11/12/2017/5a2e37599a79476b576c3f91>, accessed September 20, 2018; Elena Mazneva, "Putin Blesses Multibillion-Dollar Bet on Russia Competing in LNG," Bloomberg, December 8, 2017, <https://www.bloomberg.com/news/articles/2017-12-08/putin-blesses-multibillion-dollar-bet-on-russia-competing-in-lng>.

44 ERI RAS, *Global and Russian Energy Outlook Up To 2040*.

45 Ibid.

46 "Construction of China-Russia natural gas pipeline gains steam," *Xinhuanet*, December 13, 2017, [http://www.xinhuanet.com/english/2017-12/13/c\\_136823941.htm](http://www.xinhuanet.com/english/2017-12/13/c_136823941.htm).

gas projects. Already in 2015–2016, it became clear that Asian counterparts will not take any sanction risks, and that they will provide financial support only on their commercial conditions.

## Energy Availability and Affordability for Domestic Consumers

In addition to external threats to Russian energy exports, the development of the domestic energy sector faces a number of significant problems:

- ◆ Structural economic crises accompanied by stagnant domestic energy demand and frozen domestic regulated prices have not incentivized new investments for domestic energy supply.
- ◆ Soviet legacy fields are being naturally depleted, and there is a growing need to replace them with new fields in expensive-to-develop oil and gas provinces.
- ◆ There are increasing problems with access to financing due to sanctions, lower prices, and a weak domestic financial market.
- ◆ Corporate consolidation, state micromanagement, and a lack of market mechanisms have brought the institutional framework of the energy sector to a critical level of inefficiency. The Russian government has not established a system of rules for the energy and chooses to individually intervene in particular cases.

Most importantly, the final point illustrates the Russian state's lack of strategic vision. Dominant state companies with a high market share, often captured by the largest vertically-integrated companies, characterize the Russian oil sector. Following the return of Bashneft to state ownership in 2014, the share of companies with the state-majority ownership in Russian oil production reached over 50 percent, compared to 33 percent in 2012 (Figure 6).

Rosneft alone is responsible for 38 percent of production, and there are grounds to suggest that the company will not stop there. So far, Rosneft's growth strategy has mainly been based on mergers and acquisitions, rather than organic growth. In 2013, Rosneft's production grew after the acquisition of Russian oil company TNK-BP, but it decreased in later years. The 2017 increase in production also followed the acquisition of a new asset: Bashneft, which had been showing rapid oil production growth. Unfavorable global hydrocarbon price conjuncture, "mobilization economy"<sup>47</sup> rhetoric, and the need to deal with OPEC have made state-controlled companies a better counterpart to the state. Therefore, further centralization of the industry and the possibility of a new round of mergers and acquisitions cannot be excluded.

The problem is that the quality of the oil resource base requires much more competition in the oil industry and stronger participation of smaller and more flexible companies. It is important to note that in 2013–2017, independent oil companies contributed most to the increase in production. In 2017, independent producers "recorded a 35 million tonnes increase in oil output compared to 2012," and "their share of overall Russian oil output went up from 14 [percent] to 17 [percent]."<sup>48</sup> But the number of these independent companies is shrinking, and the state clearly identifies which of these companies' development it regards as a priority.

Gas dominates Russian energy production, which meets 52 percent of total primary energy demand.<sup>49</sup> Inefficiency in the domestic gas market and the need for reform has been under discussion for more than two decades. However, the lack of political will to push for its liberalization has resulted in the preservation of the sector's unsolved problems and even their aggravation over time.

In the electricity sector, state-controlled companies are again gaining control, despite the unbundling of electric power holding company RAO UES and market liberalization in 2008,<sup>50</sup> while direct state interventions increasingly limit real market mechanisms.

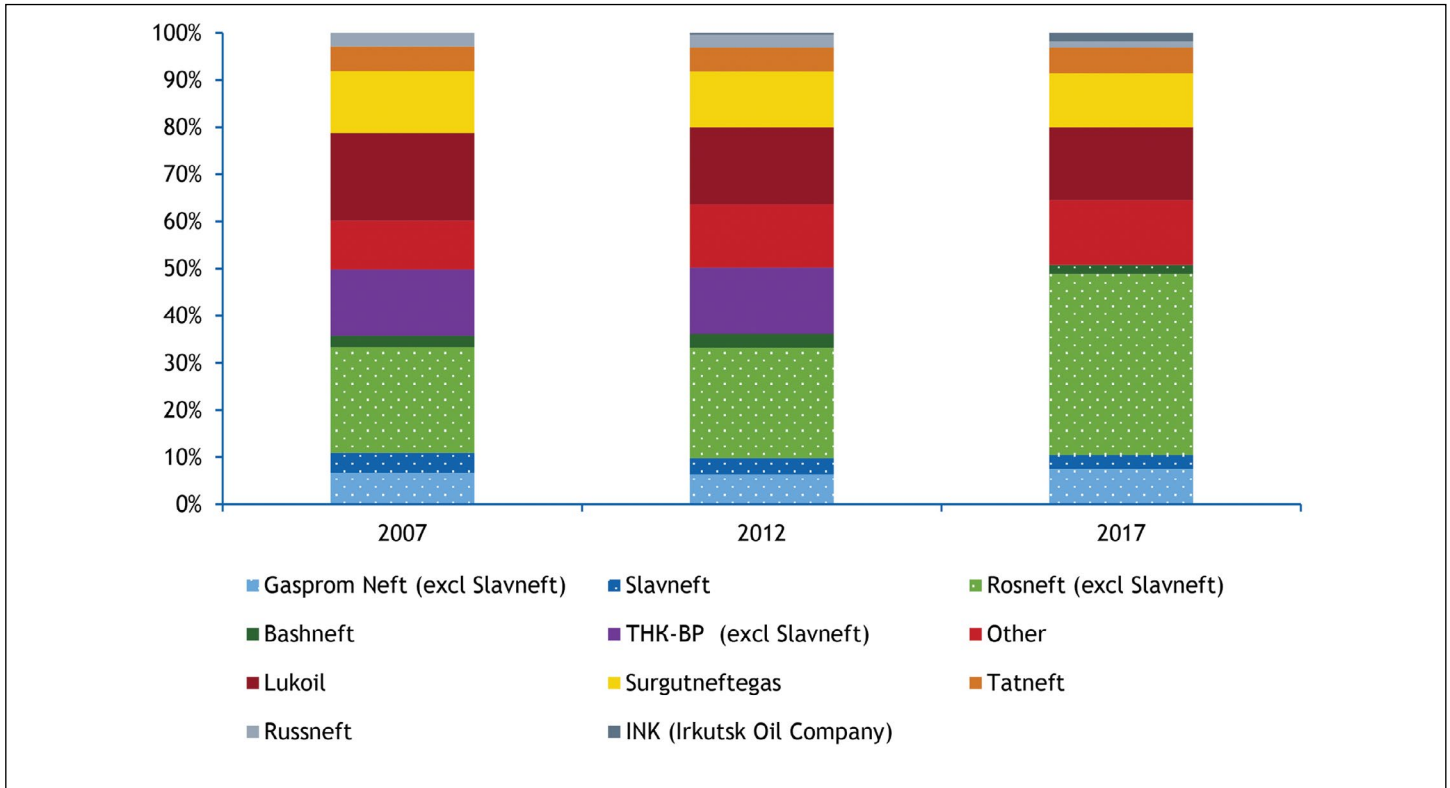
47 Dr Andrew Monaghan, "Russian State Mobilization: Moving the Country on to a War Footing," Chatham House, May 20, 2016, <https://www.chathamhouse.org/publication/russian-state-mobilization-moving-country-war-footing>.

48 Mitrova, Grushevenko, and Malov, *The Future of Oil Production in Russia: Life Under Sanctions*. 23

49 ERI RAS, *Global and Russian Energy Outlook Up To 2040*.

50 Tatiana Mitrova, "The corporate landscape" in *Oxford Energy Forum - Issue 97*, (Oxford Institute for Energy Studies, August 2014), 7-9, <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2014/09/OEF-97.pdf>.

**Figure 6: Oil Production Structure by Company  
(Shading Denotes that the State has a Controlling Stake)**



Source: Energy Centre SKOLKOVO Business School, based on CDU TEK data, Mitrova, Grushevenko, and Malov, *The Future of Oil Production in Russia: Life Under Sanctions*.

## Strong Reduction in Energy Intensity and Emissions

The main potential for improvement to the Russian energy system lies in energy efficiency. Currently, the country's energy intensity<sup>51</sup> exceeds the global average by 1.5 times and the Organisation for Economic Co-operation and Development (OECD) average by two to three times. According to the International Energy Agency, average OECD technologies could de-

crease Russian energy consumption by almost a third, which would allow the country to save 180 billion cubic meters of gas per year.<sup>52</sup> However, the utilization of this potential requires radical changes in the investment climate and overall energy sector regulation. This does not appear to be acceptable to authorities, and contradicts the goal of maintaining low energy prices.

Though Russia is the fifth-greatest source of anthropogenic emissions in the world,<sup>53</sup> providing for approxi-

51 Energy intensity - the amount of energy used in producing a given level of output or activity. It is measured by the quantity of energy required to perform a particular activity (service), expressed as energy per unit of output or activity measure of service. <https://www.energy.gov/eere/analysis/energy-intensity-indicators-terminology-and-definitions>

52 OECD / IEA, *World Energy Outlook 2011*, Paris 2011, [https://www.iea.org/publications/freepublications/publication/WEO2011\\_WEB.pdf](https://www.iea.org/publications/freepublications/publication/WEO2011_WEB.pdf), accessed September 20, 2018.

53 OECD / IEA, *Energy and Climate Change. World Energy Outlook Special Report*, Paris 2015, <https://www.iea.org/publications/freepublications/publication/WEO2015SpecialReportonEnergyandClimateChange.pdf>, accessed September 20, 2018.

mately 5 percent of global emissions,<sup>54</sup> global warming and the energy transition are not popular topics in the country—not among the establishment, nor the population. Local pollution issues have become increasingly urgent and provoke some social protests, even though a decarbonization agenda is not on the table.<sup>55</sup> But authorities rarely pay attention to, or take seriously, statements concerning greenhouse gas emissions.

## RES Development

In a recent draft report, the Energy Ministry deemed new technologies, renewables, electricity storage, and electric vehicles as threats to Russian energy security.<sup>56</sup> This says a lot about the real attitude of the country's leadership toward these technological developments. As mentioned, the decarbonization agenda is not deemed relevant in Russia, so the only reason to promote RES, which the authorities began to do a couple of years ago, is to play technological catch-up and localize foreign technologies. In addition, several important influential groups have chosen this sector for their business and were successful enough to lobby for strong government financial guarantees for their investments in renewables and the modernization of existing thermal generation.

## What's Next?

Russia in 2019 finds itself in an extremely difficult position: it has a stagnant economy, decreasing revenues, an inefficient energy sector, growing international isolation, and an urgent need to diversify the economy away from oil and gas—with no clear idea how to accomplish that. The country's increasing technological inferiority, accompanied by expanding technological sanctions and outdated existing assets, challenges the future development and competitiveness not only of the energy sector but of the whole Russian economy. Unfortunately, the absence of a strategic vision suggests that it will most likely continue to engage in a reactive, short-term policy of adaptation rather than any profound new direction.

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54 OECD / IEA, *Energy and Climate Change*.

55 Tatiana Laprad, "Krasnoyarsk: the townspeople went to the rally "For a Clear Sky"," *Sibir.Realii*, April 7, 2018, <https://www.sibreal.org/a/29151145.html>.

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