

DIGITALES ARCHIV

ZBW – Leibniz-Informationszentrum Wirtschaft
ZBW – Leibniz Information Centre for Economics

Bogoviz, Aleksei Valentinovich; Lobova, Svetlana Vladislavlevna; Ragulina, Yulia Vyacheslavovna et al.

Article

Russia's energy security doctrine : addressing emerging challenges and opportunities

Provided in Cooperation with:

International Journal of Energy Economics and Policy (IJEPP)

Reference: Bogoviz, Aleksei Valentinovich/Lobova, Svetlana Vladislavlevna et. al. (2018). Russia's energy security doctrine : addressing emerging challenges and opportunities. In: International Journal of Energy Economics and Policy 8 (5), S. 1 - 6.
doi:10.32479/ijeep.6736.

This Version is available at:
<http://hdl.handle.net/11159/2608>

Kontakt/Contact

ZBW – Leibniz-Informationszentrum Wirtschaft/Leibniz Information Centre for Economics
Düsternbrooker Weg 120
24105 Kiel (Germany)
E-Mail: [rights\[at\]zbw.eu](mailto:rights[at]zbw.eu)
<https://www.zbw.eu/econis-archiv/>

Standard-Nutzungsbedingungen:

Dieses Dokument darf zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden. Sie dürfen dieses Dokument nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, aufführen, vertreiben oder anderweitig nutzen. Sofern für das Dokument eine Open-Content-Lizenz verwendet wurde, so gelten abweichend von diesen Nutzungsbedingungen die in der Lizenz gewährten Nutzungsrechte.
<https://zbw.eu/econis-archiv/terms-of-use>

Terms of use:

This document may be saved and copied for your personal and scholarly purposes. You are not to copy it for public or commercial purposes, to exhibit the document in public, to perform, distribute or otherwise use the document in public. If the document is made available under a Creative Commons Licence you may exercise further usage rights as specified in the licence.



Russia's Energy Security Doctrine: Addressing Emerging Challenges and Opportunities

Aleksei Valentinovich Bogoviz^{1*}, Svetlana Vladislavlevna Lobova², Yulia Vyacheslavovna Ragulina³, Alexander Nikolaevich Alekseev⁴

¹Federal Research Center of Agrarian Economy and Social Development of Rural Areas, All Russian Research Institute of Agricultural Economics, Moscow, Russia, ²Altai State University, Barnaul, Russia, ³Federal Research Center of Agrarian Economy and Social Development of Rural Areas, All Russian Research Institute of Agricultural Economics, Moscow, Russia, Plekhanov Russian University of Economics Russia, Moscow, Russia. *Email: aleksei.bogoviz@gmail.com

ABSTRACT

The paper focuses on the significance of energy security in the general structure of Russia's national security. Given the importance of the fuel and energy complex in the economy of Russia, we review the main provisions of the Energy Security Doctrine of Russia, which was adopted in the year of 2012 and became one of the key strategic documents on energy in Russia that should guide all energy policies both at the federal and regional levels. Then we argue that the Doctrine is to be advanced because of the new emerging threats and challenges that Russia's energy sector is facing at the moment. We give particular importance to the development of transport and energy infrastructure in Russia and neighboring countries as a way of strengthening country's energy security. The issue of regional energy security is also discussed, including its main theoretical provisions. We demonstrate that the development of the energy dimension in the integration processes within the Eurasian Economic Union is to become one of the key priorities of a new version of the 2012 Energy Security Doctrine of Russia.

Keywords: Energy Security, Energy Security Doctrine of Russia, Eurasian Economic Union

JEL Classifications: Q2, Q3, Q4

1. INTRODUCTION

Russia as one of the leading energy states of the world ensures its role by the guaranteed supply of the needed volumes of energy resources to the global market and their reliable transit from the places of production to the major centers of consumption on its own territory and on the territories of neighboring countries. To this time, Russia satisfies more than 30% of the European demands in gas, but it brings not only economic and political dividends based on the mutual dependence. Permanent frictions in the relationship with close and remote neighbors conditioned by natural difference in the interests of suppliers, transit countries and energy consumers are also seen as legitimate. However, with active organizational and diplomatic efforts in this direction, Russia enormously contributes to the ensuring of global energy security.

Ensuring energy development and energy security is one of most important directions of the Russian state policy. This is defined by

the special system-forming role of the fuel and energy complex of Russia in the country's life (Kuboniwa et al., 2005). Fuel and energy complex provides vital activity of the population of the country, functioning of its productive forces, forms more than 50% of the consolidated budget of the Russian Federation and integration of the regions into the united economic system. In turn, the fuel and energy complex is the biggest consumer of products of other economic branches of the country. Therefore, the fuel and energy complex is an important factor of the socio-economic, geopolitical, infrastructural and technological development of Russia and of its modernization.

Given the importance of the energy and fuel complex in the economy of Russia, the Government of the Russia has to adopt an implement effective policies on the federal level that would ensure energy security of the country. One of the most important strategic documents with relation to energy security is the 2012 Energy Security Doctrine of the Russian Federation. The Doctrine

defines the total of three levels of energy security (global, national, and regional), identifies two groups of threats to Russia's energy security (external and internal), and proposes to develop a number of indicators that could be used for measuring the level of energy security in Russia (Energy Security Doctrine, 2012).

Despite the unquestionable relevance of the Energy Security Doctrine's main principles, we believe that this document of the highest importance could be advanced with respect to the growing challenges and opportunities in the world and Russian energy that we witness today. This paper reviews the main provisions of the 2012 Energy Security Doctrine of the Russian Federation, analyzes the key challenges Russia is facing now, and provides a number of recommendations on how Russia can improve its energy security.

The paper consists of three parts. We focus, first of all, on the official documents adopted in the field of energy security in Russia and on the 2012 Energy Security Doctrine in particular. Then we identify the key threats to Russia's energy security, analyze the challenges of the integration of intellectual systems in energy, discuss the main trends in energy consumption (oil, gas, and coal), as well as issues of transport and energy infrastructure, and dilemmas of energy cooperation within the Eurasian Economic Union (EAEU). Finally, we conclude with some recommendations on the basis of the analysis.

2. RUSSIA'S ENERGY SECURITY DOCTRINE: KEY PROVISIONS

In 1992, the Law on Security was adopted for the first time in Russia, which focused on the legal foundations of the security of individuals, society, and the state. The energy sector was briefly mentioned in the Article 12 of this Law, along with industry, transport, and agriculture and in the context of state forces and means of ensuring security (BaseGarant, 1992). Another important document, the Concept of National Security of the Russian Federation, was adopted in Russia in 1997, becoming the major document that defined governmental policies in the sphere of security. However, the issue of energy was mentioned only within the threats of natural resources depletion, as well as the deterioration of the ecological situation in the country, with an emphasize on the predominant development of the fuel and energy industries in Russia (President of Russia, 1997).

In the new century, the issues of energy security (in connection to a broader scope of security issues) were fully reflected in the Energy Security Doctrine of the Russian Federation, which was adopted in the year of 2012 (Energy Security Doctrine, 2012). The development of the Doctrine was based on a complex study of the contemporary status of the fuel and energy complex of the country that outlined a lot of bottlenecks, and, the major issue, negative trends in the sphere of energy. Leading expert and analytical groups have significantly contributed to the theoretical background and to the methodological development of this important strategic document (Bushuev et al., 2012; Mesherin, 2011).

The Energy Security Doctrine is a normative document approved by the President of the Russian Federation on the submission of the

Security Council and the Government of the Russian Federation that fixes the administrative and legal principles, mechanisms and responsibilities of the government officials at the federal and regional levels, as well as economic entities, for the provision of energy security on the territory of the Russian Federation, as well as consideration of the external conditions preventing geopolitical, financial, economic, technological and other threats to the energy security of Russia (Energy Security Doctrine, 2012). In the Doctrine, the energy security is defined as the state of defense of the citizens, society, state, and economy from different threats in satisfying their energy needs by the economically accessible energy resources of the acceptable quality, as well as from the threats of violation of the uninterrupted energy supply (Energy Security Doctrine, 2012). Thus, the definition of energy security used in the Doctrine is quite similar to the discussed ones in the scholarly literature (Sovacool and Brown, 2010; Sovacool, 2011; 2014).

According to the Doctrine, the energy security includes the resources sufficiency, economic availability, and technological reachability of the balanced provision of the demand and supply with respective energy resources (write on the similar provisions in the literature, cite the sources). Herewith, the total of three levels of the energy security are outlined, such as the global, national, and regional energy security (Energy Security Doctrine, 2012).

Both potential and already existing threats to the energy security of Russia as a whole and its regions are defined in the document. They are conditionally divided on two groups: (a) A number of internal threats, such as economic, social, political, technogenic, and natural; and (b) external factors of international politics and economics that could weaken the energy security of Russia as a result of their accumulative actions or separately (Energy Security Doctrine, 2012). It is worth mentioning that the internal threats mainly focus on the fuel and energy complex itself, while the external threats are closely relate to the issues of macroeconomics and geopolitics, considering the energy sector being deeply connected with all other economic, political, and social spheres.

Ensuring energy security, according to the Doctrine, is the activity aimed at preventing the abovementioned threats or softening their consequences, and by that contributing to the preservation or increasing the level of energy security and decreasing risks of its weakening (Energy Security Doctrine, 2012). The indicators of energy security and basic principles of its provision were discussed at the early stages of working on the draft of the Energy Security Doctrine (Mesherin, 2011). These principles include: (a) The reliability of functioning of the systems of fuel and energy supply; (b) energy effectiveness of the national economy; (c) the balanced fuel and energy resources production and consumption; (d) sustainability of the energy sector as part of the national economy to the threats of different nature and its ability to minimize losses of these threats; and (d) technological processability and economic efficiency of the fuel and energy complex, etc., (Energy Security Doctrine, 2012). The Doctrine supports the following parameters to be used as the indicators of energy security of Russia: (a) A ratio of the increasing investigated deposits of hydrocarbon reserves to their excavation; (b) dynamics of decreasing the energy

intensity of the country's GNP; (c) a share of equipment that is close to the end of its resource of use; (d) a coefficient of renewal of the fixed production assets; (e) a coefficient of diversification of the incoming component of the energy balance; (f) a ratio of export and production of fuel (Energy Security Doctrine, 2012). More than that, the Doctrine provides for constant monitoring of the level of energy security with the purpose of timely identifying and preventing the existing and possible threats.

In short, the main goal of the Doctrine is to define the strategy of actions that should be followed by the federal and regional government in ensuring the energy security of Russia and its regions for the future. Also, according to our reading of the Doctrine, the energy security of Russia can be characterized by three factors. The first factor is the ability of the fuel and energy complex to provide a sufficient supply of economically accessible and high-quality fuel and energy resources. The second factor is the ability of the economy, as a system of energy resources consumers, to rationally (carefully) expend the availability of energy resources and, accordingly, to limit their demand. And finally, the third factor is a sufficiently high level of sustainability of the energy and fuel complex systems as a whole to disturbing impacts of potential threats (such as economic, socio-political, technogenic, and natural ones), and the sustainability of energy consumption to energy supply disruptions caused by these threats.

3. RUSSIA'S ENERGY SECURITY: CHALLENGES AND OPPORTUNITIES

Despite the unquestionable importance of the main provisions of the 2012 Energy Security Doctrine, some conceptual amendments, taking into account certain global, macro-economic, and technological changes, should be also adopted. According to some experts and forecasts on in the decades to come, there will be cardinal changes in the energy sector itself (Carvalho et al., 2017; Lukatskaya et al., 2016; Zubieta, 2016; Asif and Muneer, 2007; Umbach, 2010; Armaroli and Balzani, 2006). These changes will be connected not only with the intensive innovative development of energy technologies (Rodriguez-Diaz et al., 2016; Zhang et al., 2016) and the large-scale use of the intellectual information and communication technologies (Strasser et al., 2015; Voropai et al., 2018), but also with the change in the paradigm of functioning and development of energy systems as the key client-oriented infrastructural systems for uninterrupted and effective servicing of the national economy and the social sphere of the country (Nastasi and Lo Basso, 2016; Yuan et al., 2016; Ellabban et al., 2014).

The emergence of principally new innovative technologies in energy is able to radically change the correlation of threats to Russia's energy security. It would require not only changes in priorities aimed at addressing threats to the energy security and in the improvement of the complex measurement of ensuring energy security, but also changes are necessary in the fundamental provisions of the concept of energy security of Russia and its regions. In addition to that, in connection with the developing integration of common energy markets of the Eurasian Economic Union, the political component in the provision of the energy

security will inevitably grow. This political component includes, in our opinion, the role of international institutions in the implementation of energy politics in the countries that are parts of this integration entity, as well as the need to address new common threats and implement effective policies aimed at their neutralization.

In this part of the paper, we do not have a goal to cover all the challenges Russia is facing now with respect to its energy security. Instead we explore the two issues of great importance for ensuring Russia's energy security that, in our opinion, should be addressed in a new version of the Energy Security Doctrine. In particular, we analyze the topical issue of building transport and energy infrastructure in Russia and focus on the importance of fostering energy cooperation within the Eurasian Economic Union.

3.1. Building Transport and Energy Infrastructure for Ensuring Energy Security

The formation of the general transport and energy infrastructure of Eurasia will become one of the key tasks for the next decades (Johnson and Derrick, 2012; Fallon, 2015; Bradshaw, 2010; Konoplyanik, 2009). However, the territory of Eurasia, including the eastern regions of Russia, Central Asia, and the North-Western part of China is a poorly developed space with a low density of population and the island type of dislocation of industries. There are two major challenges that define the role of Russia as a leading energy factor on this space. Firstly, it is the formation of the Eurasian economic union on the substantial part of post-Soviet territory as a full-scale international community (Tarr, 2016; Roberts and Moshes, 2016). Secondly, it is the necessity to integrate all regions of Russia, including the Eastern Siberia and the Far East, into the united socio-economic space with the help of transport and energy, information and institutional infrastructure.

The higher are infrastructural possibilities of the territories, the higher and more diversified will be reliability of the energy streams (Bridge, 2018). The implementation of both internal and international energy policies of Russia provides for the construction of new and development of the existing infrastructure. The rationalization of the structure of the fuel and energy balance is the key direction of the provision of energy security of the Russian Federation. In this regard, we believe that the new version of the Energy Security Doctrine of Russia should also reflect and support the following: (a) Formation of the oil and gas complexes in the eastern regions of the country; (b) development of the hydrocarbon potential of the continental shelf of the Arctic seas and the North of Russia; (c) development of the domestic energy infrastructure (in particular, hydro-energetics) in the Eastern Siberia and on the Far East.

It is worth mentioning that Russia is already strengthening its positions on the global energy markets (Söderbergh et al., 2010) by raising competitiveness of the Russian energy, diversifying its routes and products of the export, and providing security of export, which should be reflected as a strategic goal in the new version of the Energy Security Doctrine. A large role in this process is supposed to be played by the large-scale export projects, such as the North Stream 2, Power of Siberia, South Stream, etc., as

well as the creation of infrastructure for liquefying of the natural gas, including the development of the North sea route (Paltsev, 2014). The project of the Asian Energy Super Ring is the biggest infrastructural project in the sphere of electricity (Sokolov and Takaishvili, 2018; SputnikNews, 2016a, SputnikNews, 2016b). A multipurpose project "CASA-1000" is focused on the hydro energy problems (Bhutta, 2014). The creation of the Silk Road Economic Belt will be combined with the execution of many projects aimed at the development of transport and energy infrastructure (Li et al., 2015).

3.2. Fostering Energy Cooperation within the Eurasian Economic Union

The formation of common market of energy carriers of the Eurasian economic space with the common regulatory principles, free traffic of goods, services and technologies, as well as investments to the branch of energy meaning the creation of international energy infrastructure is one of the priority tasks of the energy policy of the Russian state (Sergiab, 2018; Bogoviz et al., 2017; Rutland, 2008; Baev, 2012). It makes the tasks of ensuring its security and reliability even more significant and complicated. It is worth to note that the problems of ensuring the energy security on the national level and on the level of an interstate entity (regional energy security) differ in many respects, especially if there are significant differences in the energy complexes of the countries that are components of such units. The same applies to the case of the Eurasian Economic Union (EAEU). However, this already existing aspect of Russia's energy policy is not fully reflected in the 2012 Energy Security Doctrine and should be emphasized.

In our perspective, it is necessary, first of all, to understand the theoretical foundations of regional energy security in order to fully understand the importance of the common energy policies aimed at ensuring energy security within the EAEU. The problems of regional security (including the energy security) are often considered based on the theory of securization proposed by B. Buzan, a representative of the Copenhagen School of Security Studies. According to his concept, security of each country deeply depends on other countries and is a combination of political, economic, environmental, and social and energy securities (Buzan and Waever, 2003).

The study of the followers of this school laid down basis for the developments in the sphere of regional energy security as applied to the countries of South America, Scandinavia, North East Asia, etc. This approach significantly contributed to the ideology of energy security of the European Union (EU) (Proedrou, 2012; Mareš and Laryš, 2018; Umbach, 2010; Coq and Paltseva, 2009). The experience of the EU in ensuring regional security is, undoubtedly, of great importance for the EAEU. First of all, a coordinated energy policy has been formulated in the EU. Second, there has been created an institutional framing, including the institutes of management, regulations, and control for the energy security. Third, the united legal basis has been formed for discussing any possible contradictions, along with a united information base (Szulecki, 2018). More than that, a major attention has been devoted to the achievement of environmental goals (Knox-Hayes et al., 2013).

The scholars (Leal-Arcas and Wouters, 2017; Hughes, 2010; Vivoda, 2010) point out a number of peculiarities of the regional energy security, namely (a) both positive and negative effects can happen when assessing energy security of the countries combining a community, when such an integrated energy community is organized; (b) the level of energy security of a given region (or of an integration entity) is not ensured with the sum and levels of energy security of separate countries; (c) there can be positive or negative synergy effects for the regional energy security when forming interstate energy entities; (d) regional energy security requires a complex approach, inter alia, by the analysis of the system of integrated and particular energy balances on the national and regional levels; (e) since there is a leading country in a regional integration entity, this leader is supposed to play a specific role in the provision energy security (and other kinds of securities) for the integration entity as a whole.

Such principles of energy security as the diversification of energy sources, prevention of ineffective use of energy, as well as following certain requirements of environmental security in the development of the energy sector are common for all the states. At the international level, in our opinion, one should distinguish the energy security of the energy rich and energy poor countries. Approaches to understanding and provision of the energy security should be substantially different for these two groups of countries. For the states with rich resources, the key aspects of energy security are the increase of the effective excavation and utilization of energy resources, monitoring of deposits of the key energy resources, such as oil, gas and coal, prevention of depletion of the fields, active exploration of new resources, development of the export and sales network and keeping control on the markets of the importing countries. For the countries with poor energy basis, the key directions are different. These are the exclusion of dependence from just one supplier or the kind of resources, the issue of creating reserves, desire to the provision of favorable market situation, as well as search of the alternative ways to provide energy and increase effectiveness of its utilization. However, there are some common issues for these two groups of the states, such as the reliability of transit and transport network, and decrease of the costs of energy supply.

Today, those countries that are the consumers of energy are in a more favorable situation. They managed to adapt to the dynamic market environment and learned to build their energy policy effectively. In the situation of current low prices on the energy resources, these countries are in the comfortable situation, continuing at the same time to develop new approaches to their energy policy and energy security, including use of alternative sources of energy. The countries-exporters of energy resources, to which Russia belongs, are in a more complicated situation. They could not manage, in our perspective, to get a favorable for them scenario of preserving high prices for energy resources in the long-term perspective. Additionally, the competition of leading energy states on the global energy markets became sharper, and the mechanisms of formation of prices became very volatile.

In such circumstances, it is needed to create a new approach to ensuring energy security and developing the energy sector as a

whole. The process of energy integration may become a way out of the current complicated situation. This is rather a new phenomenon in the global economy and energetics, the study of which has just started in the Russian science. We believe that the formation of the united legal framework, common energy markets, mutual utilization, and development of the united transport and energy infrastructure are the key elements for the creation of the common energy space. Therefore, the link between the energy integration of its participants and their energy security becomes very clear. Russia has to make the energy integration processes within the EAEU one of the top priorities of a new version of the 2012 Energy Security Doctrine, focusing on regional energy security as well, not only on the international and national levels of this concept.

4. CONCLUSION

In sum, the 2012 Energy Security Doctrine of Russia is the document of greatest importance for Russia because of the role played by the fuel and energy complex in the Russian economy. Despite the fact that the Doctrine mainly defines energy security as the security of supply and demand, the document has a number of great points on the types of energy security, its dimensions, and the ways of ensuring it. However, there are a number of emerging threats and challenges to Russia's energy security that should be seriously taken into consideration. At the same time, there also many opportunities to develop the energy sector and ensuring energy security of the country by, for instance, developing infrastructure at the national and international levels and fostering regional integration within the EAEU or other integration projects.

REFERENCES

- Armaroli, N., Balzani, V. (2006), The future of energy supply: Challenges and opportunities. *Angewandte Chemie*, 46(1□2), 52-66.
- Asif, M., Muneer, T. (2007), Energy supply, its demand and security issues for developed and emerging economies. *Renewable and Sustainable Energy Reviews*, 11(7), 1388-1413.
- Baev, P.V. (2012), From European to Eurasian energy security: Russia needs and energy perestroika. *Journal of Eurasian Studies*, 3, 177-184.
- BaseGarant. (1992), The Law of the Russian Federation of March 5, 1992, No 2446-I on Security (with Amendments, Expired). Available from: <http://www.base.garant.ru/10136200/#friends>.
- Bhutta, Z. (2014), CASA-1000 Project: Pakistan, Tajikistan Agree on Electricity Tariff. Available from: <https://www.tribune.com.pk/story/726016/casa-1000-project-pakistan-tajikistan-agree-on-electricity-tariff/>.
- Bogoviz, A.V., Lobova, S.V., Ragulina, Y.V., Alekseev, A.N. (2017), A comprehensive analysis of energy security in the member states of the Eurasian economic union, 2000-2014. *International Journal of Energy Economics and Policy*, 7(5), 93-101.
- Bradshaw, M. (2010), A new energy age in Pacific Russia: Lessons from the Sakhalin oil and gas projects. *Eurasian Geography and Economics*, 51(3), 330-359.
- Bridge, G., Özkaynak, B., Turhan, E. (2018), Energy Infrastructure and the Fate of The Nation: Introduction to Special Issue. Available from: <https://www.sciencedirect.com/science/article/pii/S2214629618302251>.
- Bushuev, V.V., Voropay, N.I., Senderov, S.M., Saenko, V.V. (2012), About the energy security doctrine of Russia. *Economy of Region*, 2, 40-50.
- Buzan, B., Waeber, O. (2003), *Regions and Powers: The Structure of International Security*. New York, NY: Cambridge University Press.
- Carvalho, D., Rocha, A., Gómez-Gesteira, M., Silva Santos, C. (2017), Potential impacts of climate change on European wind energy resource under the CMIP5 future climate projections. *Renewable Energy*, 101, 29-40.
- Coq, C.L., Paltseva, E. (2009), Measuring the security of external energy supply in the European Union. *Energy Policy*, 37(11), 4474-4481.
- Ellabban, O., Abu-Rub, H., Blaabjerg, F. (2014), Renewable energy resources: Current status, future prospects and their enabling technology. *Renewable and Sustainable Energy Reviews*, 39, 748-764.
- Energy Security Doctrine. (2012), Energy Security Doctrine of the Russian Federation. Available from: http://www.labenin.z4.ru/Docs/en_bezop_project.doc.
- Fallon, T. (2015), The New Silk Road: Xi Jinping's grand strategy for Eurasia. *American Foreign Policy Interests*, 37(3), 140-147.
- Hughes, L. (2010), Eastern Canadian crude oil supply and its implications for regional energy security. *Energy Policy*, 38(6), 2692-2699.
- Johnson, C., Derrick, M. (2012), A splintered Heartland: Russia, Europe, and the geopolitics of networked energy infrastructure. *Geopolitics*, 17(3), 482-501.
- Knox-Hayes, J., Brown, M.A., Sovacool, B.K., Wang, Y. (2013), Understanding attitudes toward energy security: Results of a cross-national survey. *Global Environmental Change*, 23(3), 609-622.
- Konoplyanik, A. (2009), Gas transit in Eurasia: Transit issues between Russia and the European Union and the role of the Energy Charter. *Journal of Energy and Natural Resources Law*, 27(3), 445-486.
- Kuboniwa, M., Tabata, S., Ustinova, N. (2005), How large is the oil and gas sector of Russia: A research report. *Eurasian Geography and Economics*, 46(1), 68-76.
- Leal-Arcas, R., Wouters, J. (2017), *Research Handbook on EU Energy Law and Policy*. Northampton, MA: Edward Elgar Publishing.
- Li, P., Qian, H., Howard, K., Wu, J. (2015), Building a new and sustainable "Silk Road economic belt". *Environmental Earth Sciences*, 74(10), 7267-7270.
- Lukatskaya, M.R., Dunn, B., Gogotsi, Y. (2016), Multidimensional materials and device architectures for future hybrid energy storage. *Nature Communications*, 7, 1-13. Available from: <https://www.nature.com/articles/ncomms12647.pdf>.
- Mareš, M., Laryš, M. (2018), Oil and natural gas in Russia's eastern energy strategy: dream or reality? *Energy Policy*, 50, 436-448.
- Mesherin, A. (2011), Did you call the Doctrine? *Nephtegazovaya Vertical*, 5, 40-42.
- Nastasi, B., Lo Basso, G. (2016), Hydrogen to link heat and electricity in the transition towards future smart energy systems. *Energy*, 110, 5-22.
- Paltsev, S. (2014), Scenarios for Russia's natural gas exports to 2050. *Energy Economics*, 42, 262-270.
- President of Russia. (1997), Decree of the President of the Russian Federation No. 1300 of 17.12.1997 on the Approval of the Concept of National Security of the Russian Federation. Available from: <http://www.kremlin.ru/acts/bank/11782>.
- Proedrou, F. (2012), *EU Energy Security in the Gas Sector: Evolving Dynamics, Policy Dilemmas, and Prospects*. London: Routledge.
- Roberts, S.P., Moshes, A. (2016), The Eurasian economic union: A case of reproductive integration? *Post-Soviet Affairs*, 32(6), 542-565.
- Rodriguez-Diaz, E., Vasquez, J.C., Guerrero, J.M. (2016), Intelligent DC homes in future sustainable energy systems: When efficiency and intelligence work together. *IEEE Consumer Electronics Magazine*, 5(1), 74-80.
- Rutland, R. (2008), Russia as an energy superpower. *New Political Economy*, 13(2), 203-210.
- Sergiab, B.S. (2018), Putin's and Russian-led Eurasian Economic Union:

- A hybrid half-economics and half-political “Janus Bifrons”. *Journal of Eurasian Studies*, 9(1), 52-60.
- Söderbergh, B., Jakobsson, K., Aleklett, K. (2010), European energy security: An analysis of future Russian natural gas production and exports. *Energy Policy*, 38(12), 7827-7843.
- Sokolov, A., Takaishvili, L. (2018), Coal resources of the Eastern regions of Russia for power plants of the Asian super ring. *E3S Web of Conferences*, 27, 02004.
- Sovacool, B. (2011), Evaluating energy security in the Asia Pacific: Towards a more comprehensive approach. *Energy Policy*, 39(11), 7472-9.
- Sovacool, B. (2014), What are we doing here? Analyzing fifteen years of energy scholarship and proposing a social science research agenda. *Energy Research and Social Science*, 1, 1-29.
- Sovacool, B.K., Brown, M.A. (2010), Competing dimensions of energy security. *Annual Review of Environment and Resources*, 35(77), 77-108.
- SputnikNews. (2016a), Asian Energy Ring has Potential to be Created, Needs Fundamental Study. Available from: <https://www.sptnkne.ws/hGAX>.
- SputnikNews. (2016b), Asian Energy Super Ring opens up new horizons for economic growth. Available from: <https://www.sptnkne.ws/hGAP>.
- Strasser, T., Andrén, F., Kathan, C.J.C., Buccella, C., Siano, P., Leitão, P., Zhabelova, G., Vyatkin, V., Vrba, P., Mařík, V. (2015), A review of architectures and concepts for intelligence in future electric energy systems. *IEEE Transactions on Industrial Electronics*, 62(4), 2424-2438.
- Szulecki, K. (2018), *Energy Security in Europe: Divergent Perceptions and Policy Challenges*. Berlin: Springer.
- Tarr, D.G. (2016), The Eurasian economic union of Russia, Belarus, Kazakhstan, Armenia, and the Kyrgyz Republic: Can it succeed where its predecessor failed? *Eastern European Economics*, 54(1), 1-22.
- Umbach, F. (2010), Global energy security and the implications for the EU. *Energy Policy*, 38(3), 1229-1240.
- Vivoda, V. (2010), Evaluating energy security in the Asia-Pacific region: A novel methodological approach. *Energy Policy*, 38(9), 5258-5263.
- Voropai, N., Efimov, D., Kolosok, I., Kurbatsky, V., Glazunova, A., Korkina, E., Tomin, N., Panasetsky, D. (2018), Intelligent control and protection in the Russian electric power system. In: Lamont, L., Sayigh, A., editors. *Application of Smart Grid Technologies: Case Studies in Saving Electricity in Different Parts of the World*. London, UK: Academic Press.
- Yuan, X., Ma, R., Zuo, J., Mu, R. (2016), Towards a sustainable society: The status and future of energy performance contracting in China. *Journal of Cleaner Production*, 112(Part 2), 1608-1618.
- Zhang, X., Ma, C., Song, X., Zhou, Y., Chen, W. (2016), The impacts of wind technology advancement on future global energy. *Applied Energy*, 184, 1033-1037.
- Zubieta, L.I. (2016), Are microgrids the future of energy? DC microgrids from concept to demonstration to deployment. *IEEE Electrification Magazine*, 4(2), 37-44.