

Interview with the Expert



The Expert

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His research areas spans from modeling of spatially distributed energy systems, Northeast Asian energy markets, energy policy, and energy cooperation institutions.

Dr Popov was a former visiting researcher in Asia Pacific Energy Research Centre (APERC).

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The Interview

APERC — Russia is among the most important oil and gas producers and consumers in APEC, can you explain briefly Russia's role in oil and gas supply security in the APEC region or in the world?

Dr Popov — On demand side, Russia is able to meet all prospective requirements of national oil and gas consumer, while domestic consumption is still far from saturation. For example, gasification of transport vehicles is just getting started, the share of coal consumption in Siberia and in the Arctic regions is overwhelmingly high, and currently there is no connectivity of gas supply systems of the vast territories of Eastern Siberia and the Russian Far East.

As a producer Russia possess significant global share of hydrocarbon resources and has sufficient transportation infrastructure to deliver oil and gas to the West and/or East of the Eurasian continent by pipelines, railroad, or by sea tankers. Russia's ability to provide arbitrage between Europe and East Asia by land transportation modes is supported by direct maritime link between Atlantic and Pacific RIM through Arctic Ocean. This option was demonstrated in February 2021, when two LNG tankers independently performed the Yamal-East Asia round-trip route.

After the Vostok Oil project implementation, similar features will become available for Russian oil traders. The crude oil and petroleum product pipeline systems of the Russian Federation, currently spreading from Baltic Ports to terminal at the Pacific shores, will have a supportive alternative with Northern Seas Route infrastructure. **(next page)**

“.....whether Russia will see suitable oil and gas markets, when time comes to consider projects for “shale and tight resources”.....

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Finally, oil and gas security in long-term perspective means reliable long-term supplies, legal protection against non-performance of contract obligations, diversity of transportation routes and their sufficient capacity, stable and predictable pricing policy within the regional oil and gas markets. It is all about infrastructure and institutions, which are equally important for consumers and producers.

Russia, by developing diversified energy transportation infrastructure connectivity between Pacific and Atlantic markets, and by participating in the international market regulation institutions, namely OPEC+ and Gas Exporting Countries Forum, provides essential contribution to the Global, as well as to the APEC region's, energy security improvements.

APERC — From your perspective, how do you think threats to oil and gas supply security have evolved in recent years? Is the likelihood of major disruption increasing or declining?

Dr Popov — First, these **threats have become multi-faceted**, i.e., they have increased quantitatively. It is reflected **both in diversity and origin**. To the accounts of new "threats", one can add the new investment framework created by regulators, hindering the development of oil and gas infrastructure. That new environment for industry has arisen as a result of the officially announced "zero" carbon balance policy by institutional investors. Such a position has been jointly developed by Governments and financial institutions on national and international levels. At the same time, they are the main actors, on which the provision of the investment cycle of the transformation processes for entire energy infrastructure, for all energy sectors, along all links of the energy supply chains, fully depends.

The technological factor – the successful

commercialization of hydrogen technologies and the use of renewable energy, IT and semiconductor technologies (AC vs. DC, smart grid)- has become a new source of "threats". However, it should be considered rather as objective challenges to the evolution of technologies that can become new drivers for the oil and gas industry development in a new framework.

Traditional political and social factors remain almost unchanged. Instead of Somali pirates on international sea lanes, there is a phenomenon of increasing industry violations of legitimate international sanctions – as in the case of petroleum products sea transshipment to North Korean vessels. The internal instability of the MENA countries still does not contribute to risk reduction for hydrocarbons at the production and transportation stages. Even the construction of gas pipelines on the seabed, which does not affect land areas, can be declared a military threat to third countries that are not directly involved in the production, transportation and consumption of this gas! This is what the United States did in relation to Nord Stream 2 gas pipeline, which is supposed to meet the needs of Germany and other European countries for natural gas from Russia without any mediators. Earlier, in a similar way, Bulgaria secured the termination of the South Stream project – the construction of an undersea pipeline from Russia to the Southern Europe.

On the other hand, in Southeast Asia, the Trans-ASEAN Gas Pipeline (TAGP) project is being successfully implementing, the net of pipelines from central, southern and northern Asia to China are under expansion. By 2025, their total capacity should be the equivalent of some 90 million tons of LNG. The regular deliveries from oil and gas fields on the North of the Eurasian continent to numerous consumers on its Eastern and Western outskirts have already began through Northern Sea Route, even at win-

tertime. The Northern Sea Route will provide new opportunities to solve logistic challenges both for the Pacific and Atlantic oil and gas markets.

The recent incident with the closure of the Suez Canal became a reminder on the Natural threats and human errors that can create significant obstacles to the oil and gas routes to consumers.

Extremely short answer to **"Is the likelihood of major disruption increasing or declining?"** is as follows: **in terms of market supply it remains on the very similar level as for previous 30 years**. Why it is so – see the answer to the 1st question.

APERC — The COP 21 Paris Agreement brought all nations together to exert efforts in creating a sustainable future. How do you think the Agreement affects future oil or gas supply?

Dr Popov — The transition from depleting fossils to renewable energy resources is inevitable. This process is characterised, on one hand, by transition to exploration of deep offshore and "shale/tight" resources, and on the other hand, by accelerated commercialisation for renewable and hydrogen technologies. The major point for implementation phase of this process is to ensure fair environment for socio-economic development on a way to the "new sustainable future". The Paris Agreement is undoubtedly an important milestone on the path to transformed energy security institutions, just like the preceding Kyoto Agreement two decades earlier. The real effectiveness of the transformation process depends entirely on the actual "implementation" of the Paris Agreement, and such process can be turbulent and volatile.

In addition, variability and political inconsistency can significantly change the trajectory towards the goals of sustainable human development – for example, the back-and-forth behaviour of the United States after signing first the Kyoto and **(next page)**

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then the Paris Agreements in the framework of the UNFCCC process...

Like “Global Warming consensus”, the “Peak Oil” and “Gas as a Bridge Fuel” paradigm is taking root within general energy policy experts. However, oil and gas industry is still alive and struggling. While gas is a more “fastidious” energy carrier than petroleum, methane resources significantly exceed those of crude oil, and the prospects for gas industry seem to be somewhat more favourable than those for petroleum. Gas is increasingly used on the former exclusively petroleum territory – transportation and chemistry. The range of gas consumers is wider, gas resources (which includes shale/tight, the Arctic, methane hydrates (clathrates), and small offshore fields developed by FLNG technologies) – are significant and diversified.

It is important to understand the relevance of the coupling between the Paris Agreement and the Sustainable Development Goals. My personal doubts arise from a tendency to substitute the spirit of Humanity's joint efforts on a path to harmonious existence within nature – the Sustainable Development Goals – with some false landmarks. Somehow, the fight against climate change superseded the struggle for pure air

and water without pollutions, for healthier habitation for people and outdoor environment. In turn, the fight against global warming is also transforming into the battle for carbon – free energy, transmuted to the final goal of Nations and Governments – to ensure “zero carbon balance”. So said, my inner conviction is that Human's ability to utilise wisely vast oil and gas resources will help our future generations to adapt smoothly to non-fossil energy supply infrastructure.

The second, brief version of the answer to this question is partly due to the processes that caused the relevance of the previous question. **Yes, volatility in the oil and gas markets will increase in terms of regulatory mechanisms**, primarily due to the restructuring of the institutions for the development of these markets, which will **significantly affect the stresses experienced by producers. At the same time, the demand for oil and gas as energy carriers**, with the exception of such “black swans” as the pandemic, **will in fact change quite predictably and in an evolutionary way.** Energy infrastructure is one of the most inertial technical and economic systems.

APERC — The COVID-19 pandemic caused oil demand, and consequently oil prices, to plunge dramatically. How do

you think the pandemic changes world oil and gas supply going forward? How has the pandemic changed Russia's perspective on the global oil or gas supply?

Dr Popov — First of all, the pace of the World economy adaptation to the COVID-19 pandemic should be taken into account. At the same time, this factor should be separated from the deep economic and social fundamental changes we are witnessing. These processes have been going on at the global, regional, and national levels since the beginning of the new millennium. Hopefully, precisely biohazard aspects of the COVID-19 pandemic will be overcome in a few years. On both supply and import sides of oil (and particular gas) supplying chain, the spreading of the viruses could be stopped under stricter safety measures. The most important issue is whether demand will suffer, and to what extent.

So, we can find the evidence from more than year-long statistics, that the combined impact of COVID-19 pandemic and socio-economic driving forces leads to declining, sometime drastically, to the petroleum and (to a less extent) gas consumption. The COVID-related issues will be overcome in one to two years, however, lifestyle and social **(next page)**

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institutions will be changed forever with more developed IT communications and business practices, affecting petroleum and electricity demand. Regarding fundamental economic changes, it seems to be much more powerful influence. That phenomenon is coined as “Energy transition” with the nickname "Green New Deal".

Even putting aside political events, like “defence budget [US FY 2020], which includes sanctions on the Nord Stream 2 gas pipeline”, the decline in oil and gas consumption due to COVID-19 pandemic and surging number of declarations on national low-carbon targets provide clue to understand perspective of the global oil and gas markets development. **The most important development in regional oil and gas markets in the coming decades will be pricing and trading institutions transformation.** Being constructed within liberal agenda, the new regulatory framework should be designed to provide transparent price signals for business in order to acquit extensive development of the variable renewable energy as feasible on economy scale.

The global economy, not only APEC economies, is facing a long and dramatic period of coexistence for various energy supply technologies in transport, industry and everyday life. It is most clearly represented by the high expected rates of electrification of road transport, which to some extent conceals the preparation for wide utilisation of hydrogen as an energy carrier also for stationary consumers. Less attention is given to the fact that hydrogen production from hydrocarbons will be the most suitable option in terms of energy and financial efficiency for a long time. To solve the chicken and egg problem – the necessity to introduce the energy infrastructure for a new energy carrier (hydrogen) – the hydrogen infrastructure at first stages will be filled up with “grey”, and probably “blue” hydrogen.

In addition, fundamental economic laws should not be excluded from consideration. The “consumer” phase of the investment

cycle in oil and gas industry will be aggravated with introduction of new institutional market regulation – like subsidies of various kinds to increase the share of renewables in primary energy consumption, implantation of hydrogen technologies for energy end-users, etc. At the beginning of this phase, the pressure of projects in a pipeline (as it was recently demonstrated in the LNG sector, when significant supply growth came from producers in Australia and the US) will lead to suspension for new projects and freezing expansion for already operational projects.

Underinvestment in the industry, further reinforced by the policy of financial institutions in refusing to lend to fossil fuel projects, will contribute to a gradual price growth in several years, thus increasing attractiveness for “old” energy (oil and gas). The amplitude and duration of such cycles will be determined by implementation of transformed market institutions at global and regional scales.

The process described will continue for several decades. In such circumstances Russia, as an important actor with respect to oil and gas security, and the top World’s energy supplier (**Figure**), will focus on the for-

mation of international institutions that contribute to reducing volatility in energy markets, including oil and gas markets.

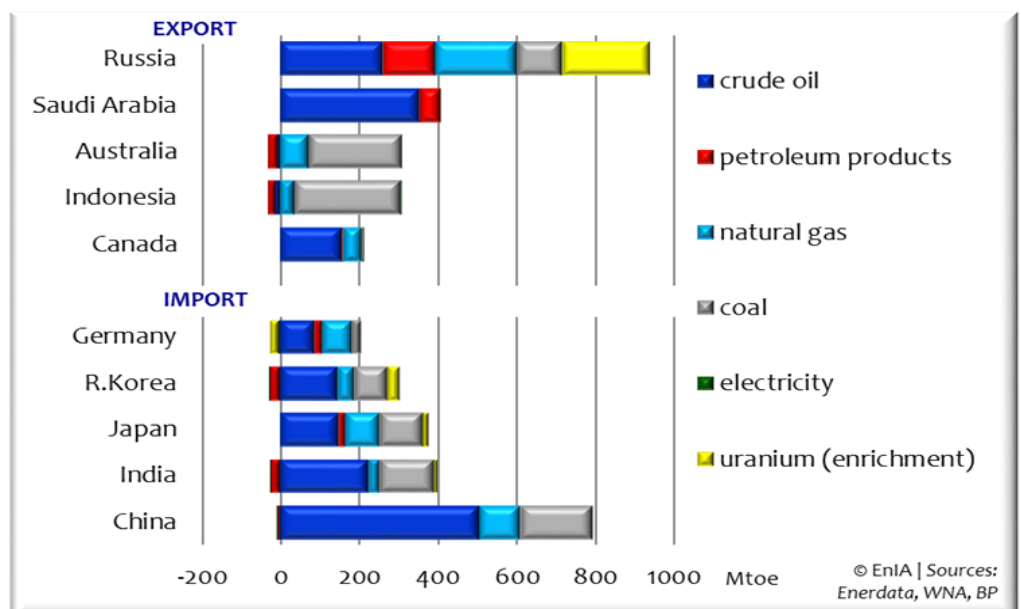
BTW, four out of five major energy exporters are APEC members, and three East Asian economies are among World’s top five energy importers. Russia and China headed the lists and, interestingly, have quite complimentary structure and similar scale of energy trade.

One of the mechanisms to improve energy security on the part of Russia was the offer to several major oil-importing countries on the Eurasian continent to participate in the VostokOil project. This is a new project for the development of traditional hydrocarbon resources in the north of Eastern Siberia (Taimyr Peninsula), started last year. VostokOil will take advantage of the new Northern Sea Route to supply oil and gas East Asian and West European consumers as reliable and direct supplier through unrestricted sea shipping transportation mode. We will keep eye on the progress would be shown by VostokOil project in coming years.

Yet, the Energy Transition process is accelerating, steaming and whistling, with

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Figure : Top 5 Net Energy Exporters and Importers, 2019



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Paris Agreement being its locomotive. The reason is simple as this – decarbonisation of energy supply is considered as an ultimate solution to the Energy Security issue. Therefore, eliminating demand for oil and gas will withdraw oil/gas energy security from political agenda. Here we have come back to the *question on the role of Paris Agreement and our common sustainable future.*

APERC — For years Russia has been balancing its oil interests between its obligations to the OPEC+ alliance and its desire to grow production and exploit new resources. Is the divergence of Russia from the OPEC+ alliance contingent on an oil market recovery?

Dr Popov —The OPEC as an oil market institution is important and has become even more influential after its transformation into OPEC+. For sure, the amended goals of such a “new” organisation are a bit different from the goals declared in 1960. The OPEC+ actors are different in resource and production scales, policy, institutional and natural framework, social and economic background, etc. However, the organisation’s ability to follow its primary declared goal, utilising almost a single mechanism for decades, provides a good example of one sustainable

multilateral energy initiative. The Goal/Mission of the OPEC, which is keeping together stakeholders of the so-called OPEC+, is “to ensure the stabilization of oil markets in order to secure an efficient, economic and regular supply of petroleum to consumers, a steady income to producers and a fair return on capital for those investing in the petroleum industry”. As long as the results from coordinated efforts satisfy each player’s expectations, partners will play in accord, doing their best. Russia is not an OPEC member (that’s why OPEC+) and may have different view on what is the threshold level of the set of indicators for “secure” and “efficient” petroleum supply.

The general overview of the current OPEC+ status and activity, by the way, was inspired by the legacy of the APERC project “Understanding International Energy Initiatives in the APEC Region”. Saying that, I have to follow the key implications of the second (2008) project’s publication. First, Energy Business and Governments have asymmetric benefits and expected costs. Second, the mechanisms of the OPEC remain effective, while objectives are still relevant. OPEC+ maintains adequate and effective organisational management,

being able to review policy makers’ considerations.

It is better to teach somebody how to fish than to donate fish to him. It is better for both of them. Those who are questioning – can come to the precise answer he/she is looking for. Those who are being questioned – have an opportunity to escape loosely formulated puzzle.

Coming back to the situation we are discussing: to get answer for himself, one should understand each actor’s goals (say, OPEC minus Russia as one entity, and Russia as independent subject plus Russian oil and gas business as another set of actors), set of criteria and procedures to assess complex effectiveness for each actor, prepare future scenarios for the OPEC+ process development under proposed/assumed market environment, and finally come to the conclusion – for Russia, either it is worth staying with OPEC, or the country should depart from the market regulation institution. Considering long chain for the discourse, possible misunderstandings and miscalculations, knowledge gaps, and different time horizon in mind of each person, we are struck by another “impossible” question. Yet, the pragmatic way to **(next page)**

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forecast Russian behaviour in OPEC+ is to weight possibilities for market recovery and gains for each actor, i.e., exactly what OPEC+ is doing. If the gains outweigh penalties – Russia will terminate collaborative activity, if not – Russia will be active in OPEC+.

APERC — International sanctions against Russia are restricting access to funding and technology, which could limit its ability to exploit its Arctic offshore, shale and tight resources. How can Russia overcome these sanctions to grow production?

Dr Popov — This question relates to the category of so called “impossible” one. The question implies that the Russian Federation is too eager to increase export of hydrocarbons. However, the latter is not obvious. Yet, coming back to the topic – at least, the sanctions are real¹, and it is an issue: for the Russian Oil & Gas industry, Russian economy, and Russian hydrocarbon export. It will be important in the medium to long term, supposedly. At least, there is some time to overcome hurdles and mitigate consequences for domestic economy and international energy security.

For sure, there are different pathways to increase crude oil and natural gas production in Russia. The point is **whether Russia will see suitable oil and gas markets, when time comes to consider projects for “shale and tight resources”, as well as Arctic offshore.**

Next, any crisis reveals new opportunities. The case arises for Russian entrepreneurs interested in technological development and project management. That do-

mestic driver for economic development in Russia has already been created, thanks to the sanctions. It should be comparable with “shale [r]evolution” in the USA started just before 2008 Great Crisis. In financial sector, sanctions actually will favour Russian economy, enforcing both Government and Business actors to establish much healthier environment for domestic investors. Anyway, bans on financing energy infrastructure projects related to oil and gas, not to mention coal and (often) nuclear energy, are being pronounced loudly by both national and international financial institutions as a part of the Energy Transition policy², where environmental (read “fighting Climate Change”) issues are coming at the first place. Such a strong crackdown may have a more significant impact on the security of oil and gas supplies to the world market than sanctions against Russia have.

Now let’s turn to the technologies issue, once more.

The new giant Rosneft project – Vostok Oil – from the very beginning relies on domestic technologies. The development, production and application of such technologies is either already underway, or in the process of creating. The process of developing production chains within Russian economy that are less or completely independent of external impact is underway. These technologies include the construction of ice-class tankers Ice 7 (will be also employed in Novatek projects), drilling rigs, technologies for directional drilling and hydraulic fracturing, and large-scale LNG production trains. It is part of the ongoing process for rebuilding back Russian industrial institutions for aggressively innovative, more efficient and better productive manufacturing.

Vostok Oil project at south-west of Taymyr peninsula at the Arctic Ocean in East-

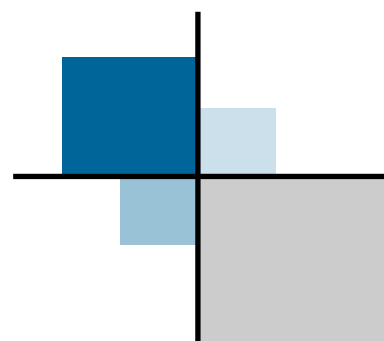
² for example, see Principles for Responsible Investment [https://www.unpri.org/]

ern Siberia, actually, means eastward expansion of Oil and Gas industry from mature and declining Western Siberia. It’s not tight /shale resources, it is conventional oil and gas, and it’s nearby to the Northern Sea Route. Yet, there are promising offshore resources in Kara and Laptev seas. Anyhow, that will be the next stage of the O&G development, and at the moment it is hardly possible to assess whether sanctions will affect future monetization of the resources of the Arctic Seas.

Considering particular gas industry issues, it should be noted that the sanctions’ pressure is concentrated at the European side of the Eurasian mainland (continent). After the completion of the North Stream II the development of pipeline export infrastructure from Russia to the Eurasia’s west will come to an end decisively.

On the other side, in East Asia, there are no problems with pipelines since pipeline infrastructure is developing only to China. And China keeps good neighbourhood relations with Russia. Yet, there are some issues with Yuzhno-Kirinsky deep-water field, where sanctions are causing the slowdown for the project’s development. Again, this incident leads to the intervention of the “invisible hand of the market”, pushing the supply of 15 million tons of natural gas to the right along the time axis.

Now we understand the role of the market regulation and international market institutions, i.e., the very drivers for the OPEC+ creation.



¹ The Countering America’s Adversaries Through Sanctions Act became Public Law in August 2017 [https://www.congress.gov/bill/115th-congress/house-bill/3364/text#tocH3420FDCB95BC4483B63B45D6E38E3C66]. Timely and comprehensive overview of the US/EU (and Brexit-UK) Russia sanctions could be found here [https://www.morganlewis.com/pubs/2021/03/us-and-eu-russia-sanctions-update-overview-and-energy-sector-focus-and-emerging-russian-countersanctions-july-2020]