

Eastern Neighbors and Russia's Energy Policy

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The distribution of energy resources between various nations based on market principles, free trade, and investment cooperation is the real achievement of the 20th Century. There are reasons to believe that in the coming decades the scale of the energy resources transmitted internationally will increase, while the local and regional energy markets will grow trans-continental. As a result, humankind could benefit from an advanced and reliable global system of energy supply.

However, in order to achieve that, not only the formidable economic and technological tasks must be addressed. What is needed is the modernization of the energy markets and micro-level changes in the energy companies who will be the main actors. The rules of behavior on the energy markets must also be modified. These and other problems were discussed at the G8 energy ministers meeting held in Moscow. The delegation of the Russian Federation, to which I was a member, made a number of proposals related to these future tasks and challenges.

Russia's fuels and energy sector is an important part of the world energy network. There are reasons to believe that, in the future, energy resources from Russia will contribute even more to the stability and security of the global energy supply. Russia's role is going to be particularly important in Eurasia, considering the huge energy resources available and the realistic opportunity to establish an adequate infrastructure.

Russia's own long-term energy policy is based on the Energy Strategy 2010 – a blueprint concept drafted by the Federal Government and approved by the President. As we speak, a work is under way to develop this concept further, and in the meantime a modified long-term energy strategy will cover the next two decades up to the year 2020.

Russia's energy sector in brief

Despite the current economic problems, the energy sector of the Russian Federation retains its production strength and adequately responds to both domestic and export demands. Moreover, in recent years the energy sector has played an increasingly important role in the Russian economy and international energy markets, generating a considerable portion of the hard currency earnings and budget revenues.

Russia, indeed, is uniquely endowed with energy resources that are more than sufficient to satisfy Russia's own needs and allow the expanding export of energy and Russia's enhanced international role. This strong resource base makes the energy sector a leading part of the national economy that accounts for about one fourth of industrial output, one third of budget revenues, and half of the exports earnings.

Moreover, Russia's energy sector contributes to international economic and investment cooperation,

accounting for almost 80% of the energy needs of Eastern European countries and the Baltic region, and significant oil and gas exports to Western Europe. This helps Russia to protect its interests, and stimulates newly independent states and former republics of the Soviet Union to maintain closer economic relations.

Russia's energy sector provides 2.9 million jobs, includes 133,500 oil and 6,400 natural gas wells, and oil refineries of a combined capacity of 261 Mt a year. The total installed capacity of the power plants is 205 TW, and the total length of the power grids is 2.5 million km. As of January 1999 Russia had 151 coal mines and 75 open cast coal projects with a total capacity of 335.6 Mt of coal a year. There are also 46,800 km of oil pipelines, 151,000 km of gas pipelines, and 20,000 km of product pipelines. Total capital investments in the energy sector account for one quarter of the entire capital investment in Russia.

As Russia continues its transition towards market mechanisms, the role of the state in the management of "natural monopolies" also increases. The energy sector remains vital to this transition and the entire Russian economy. It plays a critical role not only in economics, but also federal relations, and contributes significantly to the economic wellbeing of the nation.

In 1998, Russia's total energy output was estimated at 960 Mt of oil equivalent (Mtoe), including 345 Mtoe for exports. In view of the protracted economic crisis, the target figures for energy production were somewhat modified, but even these figures are sufficient to maintain and expand exports of energy.

Energy in Asia and energy security from a regional perspective

Asian economies in the 21st Century will be at the heart of global energy consumption. New centers of economic development, including China, India, and Southeast Asian and Northeast Asian economic subregions are likely to generate a new considerable demand for energy from both the neighboring and distant sources. New large-scale energy projects as well as transportation infrastructures for the energy transmissions must complement these developments.

Such infrastructure will require a lot of joint and coordinated efforts from the interested countries, and can be established only through cooperative and mutually beneficial mechanisms. This could help to concentrate the available resources on the projects with the highest possible economic and technological efficiencies. However, a new partnership-type relationship should cut across various sectors of government, private sector, customers, and energy producing and transportation entities.

In the long-term perspective, a mega-infrastructure for energy is only conceivable if the interests of the energy producers and energy consumers are integrated and fine-

tuned to their specific national interests, needs, and options. A journey to such a system of intertwined and harmonized interests will not be an easy one. This will also require a realistic evaluation of global trends, economics, and history. However, the region-wide energy infrastructure, once designed and launched, will become the foundation for a regional system of energy security and environmental management.

In large regions like Europe, where such a system is already operational, the role of the state and the governments in ensuring such region-wide energy security is already decreasing. International energy consortiums, national and transnational energy companies, on the other hand, are assuming a greater responsibility both as providers of energy and guarantors of energy security in the region.

In other regions, such as Northeast Asia, where the trans-border energy transportation infrastructure is only at the very initial stage of planning and conceptualization, leadership on the part of the governments is very important. This, first of all, is critical to establishing intergovernmental agreements that will make large regional projects technically possible and financially feasible. Secondly, these agreements are supposed to ensure a certain level of economic efficiency. Long-term market access and the guaranteed volumes of energy resource imports are particularly important for the trans-border gas pipelines and electricity transmission projects.

In Europe, Russia's preference is given to a unified regional energy system and an integrated energy transmission infrastructure that includes the neighboring areas that could lead to the creation of a unified Eurasian energy community. The important interest here is the non-discrimination of the transit transmissions of energy resources. However, the regional energy community concept offers significant technological and economic benefits to all participating parties, including the stable power and energy resources supply at lower costs, environmental protection, energy security, and international stability. This is why the Russian government would like to see more foreign investment participation in the mutually beneficial, economically viable, and non-discriminatory energy trade practices.

Russia favors open and fair competition on the Russian domestic markets and expects fair treatment for Russian companies on the markets of other states. The energy and environmental challenges in the years ahead are too serious to waste time on narrow-minded policies, political or other types of pressure. Instead, the ways and means must be found to develop cooperative and comprehensive approaches to the energy problems of the coming century.

The ' Eastern direction ' in the energy policy

Eastern Siberia and the Far Eastern region are uniquely rich in energy resources, making up 43% of the national coal reserves, 18% of oil, and 29% of natural gas (excluding the resources of the continental shelf). Moreover, eastern regions of Russia contain more than three-fourths of the economically viable hydropower resources of the nation. On the other hand, the

neighboring countries, China in particular, are economically dynamic and generate an immense demand for energy.

The energy resources of Eastern Siberia and the Far Eastern region should provide solid foundations of prosperity for these regions, employment, and economic development. This is one of the goals formulated in 1998 in the Energy Strategy for Siberia. On the other hand, in October 1998 the Ministry of Fuels and Energy initiated a framework to prepare Guidelines for the Energy Strategy for Russia 2020 that incorporates Russia's participation in the energy community that could be formed in Northeast Asia and beyond.

The following are the main policy priorities:

1. Mobilization of investment funds, from both domestic and foreign sources, for developing new deposits of oil and natural gas, and the modernization of existing extracting and processing facilities.
2. Electricity exports promotion to China, Japan, and the Republic of Korea, as well as other neighboring countries, by using trans-border transmission lines and cable systems.
3. Mobilization of investment funds to improve energy supply in the Far Eastern provinces.
4. Mobilization of external multilateral investment financing and funds from other sources for the restructuring of coal mining, improved quality of output, and export promotion.

Natural gas and oil

Within just the last decade a wider use of natural gas has predetermined deep changes in the global primary energy supply. In Northeast Asia, including Japan, the Republic of Korea, Taiwan, and in the not-so-distant future also China, the demand for natural gas first is driven primarily by environmental considerations. Russia could become a major exporter of natural gas to these markets, provided that a delivery infrastructure is built.

The list of major infrastructure projects include the Kovyktinskoe field in Irkutskaya Oblast, a pipeline from the northern part of Tumenskaya oblast to supply gas for domestic use and exports in the eastern provinces, development of resources in Krasnoyarskiy Krai, and the Sakhalin shelf development to produce at least 20 Bcm of gas by 2010, including 10 Bcm for exports. A number of options are now being studied for both exports and domestic use of natural gas from the Sakhalin shelf.

Beyond 2010, the northern part of Irkutskaya Oblast, Yakutia's southwest, and the offshore resources of Sakhalin could be linked into a unified gas transportation system in Eastern Russia that will cover a vast territory from Irkutsk to Vladivostok, providing at the same time about 50 Bcm of natural gas to the neighboring countries.

As far as the oil industry is concerned, Eastern Siberia and the Far eastern region could become leaders in the entire Pacific Asia, considering their combined oil resources in Krasnoyarskiy Krai (Urubchenskoe field), Irkutskaya Oblast (Verchnechonskoe field), Yakutia (Talankanskoe and Sredne-Botuobinskoe fields), and the oil fields of Sakhalin where first oil was extracted on July 4, 1999.

It is estimated that in Eastern Siberia, by 2010, the combined crude oil output will be 7-12 Mt. In the Far Eastern region, the production of oil could reach 20-24 Mt. It is quite likely that by 2020 the combined oil production in Eastern Russia will reach 70-75 Mt, including about 40 Mt available for exports.

Also, the eastern regions of Russia are rich in coal resources. Depending on the economics of energy use and the demand for coal, both domestic and external, the production volumes could increase. Currently, coal serves as the core fuel for power generation. This could contribute to the combined potential of Eastern Russia to export electricity to China. However, at the initial stage hydropower resources of Eastern Siberia will serve as the main source of electricity exports.

An intergovernmental agreement with China has already been reached, providing an opportunity for a large-scale trans-border power transmission project. Although this plan recently encountered some difficulties, it could be stated with certainty that prospects for long-distance power transmissions are generally favorable, particularly after the Boguchanskaya hydropower plant is the completed.

Another promising opportunity for electric power exports could be provided by the Sakhalin-Hokkaido project, which is currently under discussion between Russian and Japanese experts. Moreover, beyond 2010, hydropower plants in Eastern Siberia, Yakutia, and Amurskaya Oblast could allow large-scale energy exports to Northeast Asian countries.

Conclusions

Large-scale export-oriented energy projects in Eastern Russia, particularly gas and oil pipelines that will link Russia with Northeast Asia, are of high priority for Russia. Eastern Siberia and the Far Eastern region provide dozens of opportunities and options for international export-oriented energy projects. Both Russia and its potential partners in these projects must cooperate in envisioning the entire "energy landscape" in the first decade of the 21st Century and beyond.

Ideally, a proper place and an economic function should be allocated for each and every potential energy project in the area. This will allow the collective evolution of a bigger picture of energy production, transmission, and use that could integrate the needs and interests of Eastern Russia and the neighboring territories of the Northeast Asian countries for decades to come.

It is important therefore that the interested countries and the governments work together by uniting their research potentials to jointly study and evaluate the long-term prospects for the energy sector development in Northeast Asia. Both the opportunities for energy production and the energy needs, if carefully assessed, would help to form an original and future oriented concept of the energy community in Northeast Asia. Beyond this challenging goal, as Russia makes progress in developing closer links with its neighbors, the next and similar step should be considered a wider Asia-Pacific energy network.

ロシアのエネルギー政策と北東アジア周辺国（抄訳）

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今後数十年の間に国際的に輸送されるエネルギー資源の量は増加し、国内あるいは北東アジア域内のエネルギー市場は大陸全体に拡大し、成長すると考えられる。ロシアの燃料及びエネルギー部門は、世界のエネルギー市場の中でも重要な部分を占めており、将来的にロシアのエネルギー資源が世界的なエネルギー供給の安定性と安全保障にさらに貢献することも考えられる。巨大なエネルギー資源や必要なインフラ整備の可能性を考慮すると、ロシアの役割はユーラシア大陸では特に重要となろう。

現在の経済危機にも関わらず、ロシア連邦のエネルギー部門は生産力を保持し、国内および輸出需要の両方に充分に対応している。さらに、近年ではエネルギー部門はかなりの量のハードカレンシーの収入や予算歳入に貢献しており、ロシア経済やエネルギーの国際市場でますます重要な役割を果たすようになっている。また、ロシアのエネルギー

部門は東欧やバルト諸国のエネルギー需要のうちほぼ80%をまかない、また西欧に対しても相当量の石油とガスを輸出するなど、国際的な経済協力や投資にも貢献している。

こういったシステムが既に機能しているヨーロッパのような地域では、地域全体のエネルギー安全保障を確保する国家や政府の役割は既に小さくなってきている。一方で、エネルギー国際コンソーシアムや国内及び国際エネルギー企業は、域内のエネルギーを供給したり、エネルギー安全保障を保証したりする上で、より大きな責任を担いつつある。

国境を越えるエネルギー輸送が計画や概念化の初期段階である北東アジア地域では、政府のリーダーシップが非常に重要である。まず、大きな域内プロジェクトを技術的・経済的に実行可能にするためには政府間協定を締結することが必要不可欠である。次に、これらの協定によって一定のレベルの経済効率を確保する。越境ガスパイプラインや電力輸

送プロジェクトにおいては、長期的な市場へのアクセスやエネルギー資源が一定量保証されることが特に重要である。

長期的展望としては、もしエネルギーを生産する側と消費する側の利害関係が一致し、それぞれの国の利益、必要性、その他のオプションが調整された場合にのみ、エネルギーに関する巨大インフラ建設の実現が考えられる。これらの関係や利害関係をひとつのシステムへと繋げていく道は平坦ではない。世界的なトレンド、経済、また歴史の現実的な評価も必要となる。しかしながら、地域全体のエネルギーインフラは、一旦設計され着手されれば域内のエネルギー安全保障や環境管理の基盤となる。

東シベリア及び極東のエネルギー資源は、その地域の発展、雇用、経済開発の確固たる基盤となる。主要なインフラプロジェクトには、イルクーツク州のコピクタ油田、天然ガスの国内利用及び東部への輸出のためのチュメニ州北部からのパイプライン、クラスノヤルスク州の資源開発、サハリン大陸棚開発がある。2010年以降、イルクーツク州北部、ヤクート南西部、サハリン沖資源がイルクーツクからウラジオストクにわたる広大な地域をカバーする、ロシア東部の統合されたガス輸送システムで結ばれる可能性も

ある。ロシア東部の大規模な輸出志向のエネルギープロジェクト、特にロシアと北東アジアを結ぶ天然ガス及び石油パイプラインのプロジェクトは、ロシアにとっては優先順位が非常に高い。

国際的な輸出志向のエネルギープロジェクトにとって、東シベリアと極東地域には多くの可能性を秘めている。これらのプロジェクトにおいて、ロシアとその潜在的なパートナーの両者が、21世紀の最初の10年およびそれ以降について包括的な「エネルギーに関する全体像」を描くことで協力しなければならない。

従って、関係諸国の政府が、それぞれの研究を共同研究の形にし、北東アジアのエネルギー部門開発の長期展望を評価することなどで協力することが重要である。エネルギー生産の潜在力と需要の両方を注意深く評価することは、独創的で未来志向の北東アジアエネルギー共同体の概念を形成する一助となる。この困難な目標を達成した後に、ロシアは近隣諸国との関係を深めることができ、さらに次の段階が考えられよう。すなわち、さらに広範なアジア・太平洋エネルギーネットワークの構築である。

[ERINA抄訳]