On the development of the new Energy Strategy of Russia (ESR-2035)

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October 30, 2014, Niigata, Japan
Russia's energy strategy is the main document containing the system of science-based claims about the priorities of long-term energy policy and the mechanisms for its implementation.

**Tools and mechanisms for implementation:**
- State the impact on the energy market
- Pricing policy
- Tax and customs policy
- Improvement of legislation and regulatory framework

**Energy Strategy of Russia for the period up to 2030**
(approved by the Government of the Russian Federation in November 2009)
<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>The concept of the energy policy of Russia under new economic conditions</td>
</tr>
<tr>
<td>1995</td>
<td>Main directions of the Energy Policy of the Russian Federation for the period till 2010&lt;br&gt;Energy Strategy of Russia (Main provisions)</td>
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<td>2000</td>
<td>Main provisions of the Energy Strategy of Russia for the period till 2020</td>
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<td>2003</td>
<td>Energy Strategy of Russia for the period till 2020</td>
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The Energy Strategy should be updated at least once in five years. In this regard, the government of the Russian Federation made a decision on the correction of the Energy strategy of Russia for the period up to 2030, with its prolongation until 2035.

**Additional reasons for the need to adjust your Strategy:**

- the prolonged stagnation of the world economy;
- the minimum increase of the energy demand both in Russia and in the world markets;
- numerous geopolitical, social, and natural disasters - 2010s;

The optimistic scenario of ESR-2030 turned out to be unrealistic.
Key challenges

Internal

Slow post-crisis development of the economy and the increasing dependency of the budget on fuel and energy complex;

The increase of energy prices for end consumers;

The need for rapid technological modernization for improvement of the energy sector efficiency.

External

The stagnation or low growth of demand for Russian energy resources;

The transition from resource globalization to regional energy self-sufficiency;

Increased competition, including through the use of alternative and unconventional energy resources;

External economic and technological sanctions.
The roadmap project of ESR-2035

The draft revised Energy Strategy was developed by the Institute of Energy Strategy, together with the Energy Research Institute of the Russian Academy of Sciences and Analytical Center under the Government of the Russian Federation and submitted to the Ministry of Energy of Russia.

Currently the project reconciliation procedure is in the process with ministries, agencies and state-owned energy companies.
The Central idea of ESR-2035 is the transition from resource to resource-innovative development of fuel and energy complex based on full use of domestic resources and innovative capabilities through the formation of long-term technological chains with their saturation innovative technologies.

The aim of the ESR-2035 is the creation of innovative and efficient energy sector for sustainable economic growth, improving the quality of life and promotion of its external economic positions.
Changing macroeconomic conditions

Average annual GDP growth rate

In ESR-2030 - 4.7%;
In ESR-2035 – 3.8% (target scenario);
- 2.8% (risk analysis scenario).

The production of fuel and energy (total)

In ESR-2030 - 4.7%;
In ESR-2035 – 3.8% (target scenario);
- 2.8% (risk analysis scenario).

Target scenario of ESR-2035

Risk analysis scenario of ESR-2035

Source: Vitaliy V. Bushuev, Institute of Energy Strategy
Prospects of demand for energy resources of Russia

Domestic demand

- Domestic consumption of primary energy, MTCE
- Per capita consumption of primary energy, TCE

External demand

- The growth of energy exports in real terms (2010 = 100%)
- The ratio of exports to domestic consumption

Source: Vitaliy V. Bushuev, Institute of Energy Strategy
Strategic initiatives of energy sector development

The formation of oil and gas complexes with the development of production, transport and social infrastructure in Eastern Siberia and the Far East

The development of the hydrocarbon potential of the continental shelf of the Arctic seas and the North of Russia

The development of energy efficient technologies

The development of the domestic energy infrastructure

Source: Ministry of energy of the Russian Federation
• Stabilization of oil production

• Creation in the East of the country of the infrastructure for 20 - 25 % of total production and 40 % of exports of oil and oil products

• The increase of oil recovery factor up to 40 - 45 %

• Preparation of explored reserves, infrastructure and technologies for development of the Arctic shelf
ESR-2035: the production and export of oil

**Oil production**

<table>
<thead>
<tr>
<th>Year</th>
<th>Target Scenario</th>
<th>Risk Analysis Scenario</th>
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<tr>
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</tr>
<tr>
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<td>470</td>
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<tr>
<td>2035</td>
<td>470</td>
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**Oil export**

<table>
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<th>Year</th>
<th>Target Scenario</th>
<th>Risk Analysis Scenario</th>
</tr>
</thead>
<tbody>
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<td>2012</td>
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<td>240</td>
</tr>
<tr>
<td>2020</td>
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<td>200</td>
</tr>
<tr>
<td>2035</td>
<td>200</td>
<td>180</td>
</tr>
</tbody>
</table>

**Structure of export of oil (target scenario)**

- CIS: 35 million tons/year
- Europe: 50 million tons/year
- APR: 75 million tons/year
- Source: Ministry of Energy of the Russian Federation

Alexey M. Mastepanov. ESR-2035. October 30, 2014, Niigata
Strategic initiatives in the gas industry

• The increase of gas production of 35-45 %

• Creation in the East of the country of the infrastructure for 15-20 % of total gas production and 35-40 % of exports of gas

• Deep processing of up to 25-30 % of produced gas

• Liquefaction (LNG) up to 8-11 % of produced gas

• Extension of the Unified gas supplying systems to Eastern Siberia and the Far East
ESR-2035: gas industry

Добыча газа: Gas production
Внутреннее потребление: Domestic demand
Экспорт: Gas export

Целевой сценарий: Target scenario
Сценарий риск-анализа: Risk analysis scenario

Структура экспорта (целевой сценарий):
Structure of export of gas (target scenario)

Source: Ministry of Energy of the Russian Federation
The implementation of already planned projects: "South stream", "Power of Siberia", the creation of LNG plants

The key task of ESR-2035 is the development of new energy corridor (the Northern sea route)

New LNG plants

LNG plant

Pechora LNG
Yamal LNG
Far East LNG of Rosneft
Sakhalin II
Vladivostok-LNG

Source: Vitaliy V. Bushuev, Institute of Energy Strategy
The development of oil and gas infrastructure in the Far East

- The development of oil and gas fields of Sakhalin oblast (on the continental shelf of the Okhotsk sea) and oil deposits on the territory of the Republic of Sakha (Yakutia) (Talakan and adjacent fields);
- Continued implementation of the projects "Sakhalin-1" and "Sakhalin-2";
- The construction of the refinery in Primorsk region;
- Modernization of oil terminals Nakhodka and De-Kastri;
- The formation of the Yakut gas Centre (on the basis of the Chayanda field, with the prospect of development of adjacent fields – Srednebotuobinskoe, Taas-Urjahskoe, Verhnevilyuchanskoe and others);
- Construction of new LNG plants in Vladivostok and Sakhalin;
- Completion of construction of the gas pipeline "Power of Siberia";
- Gasification of the southern Federal district.

Oil and Gas chemistry

The formation of oil, gas and petrochemical clusters, large gas processing facilities and chemical plants.

Alexey M. Mastepanov . ESR-2035. October 30, 2014, Niigata
The total length of the GTS is about 4000 km, the design capacity of 38 billion cubic meters of gas per year.

Implementation of projects in the East of Russia and of Energy Strategy as a whole opens additional possibilities for further development of mutually beneficial Russian-Japanese energy cooperation.
On the development of the new Energy Strategy of Russia (ESR-2035)

Thank you & good luck!