Gas turn of Russia and Central Asia to the East: problems and prospects

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Russian priorities in the natural gas export: diversification & safety

- Long-term stability and reliability of deliveries
- Entering the new markets (China, South Korea, India etc.)
- Access to the final buyers of natural gas and electricity produced by gas generation
- Decrease of the dependence on transit counties (Ukraine, Byelorussia etc.)
Main markets for Russian Gas 2030

The share of the Asia-Pacific region by 2030 will reach 20%

Current markets, stable up to 2030
Expected loss of current markets
New markets

Sources: Institute of Energy Strategy
Reasons for Russian and CA turn: European gas crisis

- long-term stagnation of gas demand in the EU-27, the increase only in Turkey;
- reduction of gas consumption in the CIS countries (largely because of high prices, very heavy for the region);
- the prospect of permanent price conflicts;
- progressive toughening of requirements to suppliers (third energy package);
- the volume of Russian delivery to Europe will be stable until 2020 (in the framework of the current contracts):
- The growth of supplies while maintaining the current price ratios will be insignificant (mainly, at the expense of the countries not included in the EU)

Sources: Institute of Energy Strategy
European market stagnates.
Existing supply + LNG + Nigeria is enough in the foreseeable future.
Russia's natural gas exports to Europe (cases)

Gazprom will lose significant part of EU market in case of success in shale gas

Sources: Institute of Energy Strategy
Main directions for Central Asian gas export

- Developing of local consumption
- In leaps and bounds growing Asian markets
Reasons for Russian turn: regional development

Production on the Far East
Production in East Siberia
Internal consumption

Sources: Eastern gas program
Changes of Russian gas production map

Stabilization of production in West Siberia and fast growth in European part (Shtokman) and on the Russian East

Sources: Institute of Energy Strategy
## First results in the East

<table>
<thead>
<tr>
<th>Main tasks</th>
<th>2008</th>
<th>2010</th>
<th>Target to 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of Eastern Siberia and the Far East in the gas production</td>
<td>2%</td>
<td>4.70%</td>
<td>7-8%</td>
</tr>
<tr>
<td>Share of LNG in the gas export</td>
<td>0%</td>
<td>4.00%</td>
<td>4-5%</td>
</tr>
<tr>
<td>Share of the Asia-Pacific countries in the structure of gas export</td>
<td>0%</td>
<td>4.50%</td>
<td>11-12%</td>
</tr>
</tbody>
</table>

Sources: Institute of Energy Strategy
Goals of Eastern program

2011

Total export: 230,1 bcm per year

The share of the Asia-Pacific region: 6,0%

The share of LNG: 6,2%

2030

300-350 bcm per year

not less than 20%

not less than 18%

Forecast estimates of the volumes of production of energy resources in Eastern Siberia and the far East

<table>
<thead>
<tr>
<th>Measure</th>
<th>2000</th>
<th>2010</th>
<th>2020</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fact</td>
<td>Fact</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>Oil (million tonnes)</td>
<td>4</td>
<td>35</td>
<td>71</td>
<td>83</td>
</tr>
<tr>
<td>Natural gas (bcm per year)</td>
<td>4</td>
<td>26</td>
<td>91</td>
<td>122</td>
</tr>
<tr>
<td>Coal (million tonnes)</td>
<td>107</td>
<td>115</td>
<td>147</td>
<td>187</td>
</tr>
<tr>
<td>Electricity (Terawatt-hours)</td>
<td>177</td>
<td>194</td>
<td>280</td>
<td>370</td>
</tr>
</tbody>
</table>

Источники: CDU TEK, CB RF, ES-2030, IES
The targets of export

Sources: Institute of Energy Strategy
Gas pipelines and LNG plants

- Eastern Gas Program
- Natural gas Export to China
- Sakhalin development
- LNG Projects in Sakhalin and Vladivostok

Sources: Gazprom
The Arctic

Sources: IES
- Gas pipeline along VSTO (Yakutia – Khabarovsk – Vladivostok)
- Vladivostok LNG
- Russian gas export to 2020:
  - Japan - 20-35 bcm per year
  - South Korea - 10-16 bcm per year
  - China – 0-40 bcm per year
- Without export in China the implementation of Russian Eastern Gas program is impossible
The growing role of unconventional gas in Asia Pacific

- The role of unconventional resources in Asia Pacific will grow
- The development of unconventional gas in Asia-Pacific has better prospects than the same in Europe

Sources: Institute of Energy Strategy
Price question: arbitration between regional markets

2012: 0.2-0.3  
2030: 0.6-0.7  

= 1

2012: 1.3-1.4  
2030: 1.05-1.15

Model of price arbitration to 2030

Sources: Institute of Energy Strategy
Instead of conclusions: regionalization and regional integration

Energy - system of systems

Bee honeycombs of Eurasia: the mesh of the energy structure

Sources: Institute of Energy Strategy
Directions of integration

• The complex solution of the problems of marketing of gas resources of Central Asia (development of supplies to Pakistan, India, China, etc.)
• to avoid acute and destructive competition of Russia, Kazakhstan, Uzbekistan and Turkmenistan in the China market (potential coordination)
• Joint development of the gas processing and gas chemical production

Sources: Institute of Energy Strategy
Potential of the energy dimension of the SCO

The key internal opportunity – elimination of mutual and multilateral contradictions, the coordination of energy projects and directions of development

Key external opportunity – the formation of the agenda for global energy policy (instead of following the policy, formed, without the participation of the SCO countries, in EU and USA)

Energy cooperation – the most actual and important basis for the economic cooperation in the SCO framework

First goal is avoid long-term and destructive rivalry in the region between Russia and China

Second goal is overcome of raw character of economic relations
Thank you for your attention

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