How Is Russia Responding To increased Global Competition From New Suppliers & How Will Russia Develop Its Export Strategy?

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1. Everything is bad 😊

2. Is it that bad?

3. So what is the Russian's response?
Situation on the European gas market does not favor Russian exports

- Growing supplies of LNG
- Diversification of pipeline supply sources

- Spot volumes are increasing very fast (30-40% p.a.)
- Majority of the European stakeholders support transition to the spot pricing

- Lower than contracted volumes
- Recovers very slowly
- In the power sector gas is strongly competing with coal

- Unbundling
- Gas Target Model requires all gas to be supplied at the virtual hubs
Market niche in Europe: strong competition in the future

Source: WEO2011, IEA; Cedigaz; SKOLKOVO Business school Energy Centre.
Global LNG supply is expected to boom during the next decade: it seems to be a buyers market.
By 2020 there is no market niche in China, by 2030 the niche might reach 66 bcm
Limited demand on all markets, including domestic

Russian gas demand by sector until 2020 (optimistic scenario)

<table>
<thead>
<tr>
<th>Sector</th>
<th>2012</th>
<th>2020</th>
<th>Δ</th>
<th>AGR 2012-2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total consumption</td>
<td>428</td>
<td>468</td>
<td>40</td>
<td>1,12%</td>
</tr>
<tr>
<td>Power generation</td>
<td>188</td>
<td>201</td>
<td>14</td>
<td>0,88%</td>
</tr>
<tr>
<td>Centralized heating</td>
<td>72</td>
<td>64</td>
<td>-7</td>
<td>-1,36%</td>
</tr>
<tr>
<td>Industry and feedstock</td>
<td>79</td>
<td>94</td>
<td>15</td>
<td>2,17%</td>
</tr>
<tr>
<td>Residential</td>
<td>75</td>
<td>86</td>
<td>11</td>
<td>1,78%</td>
</tr>
</tbody>
</table>
Evolution of the Russian gas export strategy

Traditional strategy
1990-2002
Volume maximization, Price damping
One target market – Europe
Only pipeline gas

Miller’s team strategy
2002-2008
Price maximization and volume growth
One target market – Europe
Only pipeline gas

Anti-crisis strategy
2009-2013
Minimal price adjustments acceptable for the consumers (price maximization in the new conditions), stagnating volumes
Attempts to diversify markets (Asia)
Strong desire to develop LNG

???
2013-2020
Most probably price maximization
1. Everything is bad 😊

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3. So what is the Russian’s response?
Devil is in detail: new additional gas to Europe - where will it come from?

- Australian gas is going to be most expensive. It is almost completely contracted for the Asian buyers.
- US and Canadian LNG will be primarily targeted at the Asian markets.
- For East Africa Asian markets also seem to be more attractive.
- Norwegian gas is still an option?
- Qatar?
- Chinese shale gas?
- Japanese methane hydrates?
- Azerbaijan?
- Iran?
- Algerian gas?
- Nigerian gas?
US LNG seems to be competitive in Europe, but Asia is a much more attractive market for it.

![Cost comparison for the US LNG sales to Europe and Asia](image-url)

- Europe: 0.55
- Asia: 2.55

Legend:
- Henry Hub price
- Liquification
- Transportation
- Regasification
- Margin
The same situation with East African LNG

Cost comparison for the East African LNG sales to Europe and Asia

- Europe: €-0.7
- Asia: €2.8

Production
Liquefaction
Transportation
Regasification
Margin
1. Everything is bad 😊

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3. So what is the Russian's response?
Gazprom has a huge portfolio of oil-linked long term contracts for supplies to Europe for the next 25 years and longer.

Source: Enerdata.
Existing long-term contracts guarantee stable sales volumes for Russia until at least 2022

Sources: Cedigaz, Gazprom
Arguments: oil indexation vs. gas indexation

<table>
<thead>
<tr>
<th>Oil indexation</th>
<th>Spot indexation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disappearing gas glut on the European gas market in the medium term – gap between oil-indexed and spot prices will narrow</td>
<td>Strong pressure from the customer side</td>
</tr>
<tr>
<td>Arbitration lasts for several years</td>
<td>Gazprom could demand financial compensation for contract review + 3rd Package exemption for the South Stream and NEL + transitional period for price adjustments + European-level financial support for its mega-projects (like EBRD and other European financial institutions)</td>
</tr>
<tr>
<td>Gazprom will face price reopening and contract expiration only after 2015</td>
<td>Gazprom could become a dominant player dictating prices at the spot market by changing its supply volumes</td>
</tr>
<tr>
<td>With high oil prices even lower sales volumes are providing high revenue</td>
<td></td>
</tr>
<tr>
<td>New projects need high prices</td>
<td></td>
</tr>
<tr>
<td>Oil indexation is needed for the project financing</td>
<td></td>
</tr>
</tbody>
</table>

There are strong commercial reasons for Gazprom to protect the oil indexation at least during the next 3 years
Eastern Gas Program

Sources: Gazprom
By 2020 market niche in OECD Asia might reach 50 bcm, by 2030 - 116 bcm

Japan and South Korea gas balance

- Uncontracted market niche
- Others
- USA and Canada
- Russia
- Qatar
- Other Middle East
- Papua New Guinea
- Malasia
- Indonesia
- Brunei
- Indigenous production
- Australia
- OECD Asia demand

Source: Cedigaz
Russian LNG Projects

- Baltic LNG
- Shtokman LNG
- Yamal LNG
- Pechora LNG
- Kharasavey LNG
- Chukotka
- Kamchatka
- Sakhalin LNG
- Vladivostok LNG

- Existing LNG facilities
- Prospective discussed or implemented projects
- Postponed projects
- Possible future areas for projects
Conclusion: Russian response

» Russia is for the first time facing demand constraints on all its markets
» European policy and market situation create no incentives to invest in additional gas supplies to Europe
» There are strong commercial reasons for Gazprom to protect the oil indexation at least during the next 3 years, and there is strong political will to protect oil linkage
» Russia will have to market more expensive gas from the new projects, revenue maximization seems to be more attractive
» Asian markets are becoming more attractive than European market with weak demand, unpredictable and unfavorable regulation and stronger competition
» Russian gas export policy response so far includes three pillars:
  • Price reviews with minor adjustments (remaining oil indexation as a basis)
  • Eastern development
  • LNG
» Discussion on gas exports liberalization might be only for special cases and only under very strict control of the State
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