Reforming The Gas Sector in Russia
Myths versus Reality

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Myths vs. Reality

Background:

• On January 27, 2003, Hermitage Capital Management met with Igor Yusufov, Russian Minister of Fuel and Energy, who posed a number of questions about the myths of reforming the Russian gas industry.

• Hermitage Capital Management engaged the Boston Consulting Group (BCG) to analyze the myths of the Russian gas market and present the reality.

• The BCG study was presented to the Minister of Fuel and Energy on March 31, 2003.

• The following is a summary of the Myths vs. Reality of from the BCG study. The findings are BCG’s. Some of the interpretations are Hermitage’s.
Myths vs. Reality

Commodity price deregulation in Russia is almost finished except for gas and electricity sectors

Regulated commodities

1990

2003
**Myth #1:** Raising gas prices will create runaway inflation

**Reality:** Raising gas prices will have only a marginal impact on consumer price inflation

<table>
<thead>
<tr>
<th>Index</th>
<th>Services</th>
<th>Non-food</th>
<th>Food</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>102.35</td>
<td>+7.6%</td>
<td>+1%</td>
</tr>
</tbody>
</table>

**Service bill increase:**
- **Gas price increase**
  - US$/
  - 1,000 m³
  - +138%

**Municipal services spending per person per month**
- **Gas**
  - 285 RUR
  - +138%
- **Electricity**
  - 50 RUR
  - +138%
- **Heating**
  - 21 RUR
  - +138%
- **Hot water**
  - 21 RUR
  - +32%
- **Other services**
  - 350 RUR
  - +23%

**Russian consumer spendings**

**Source:** Goskomstat; BCG analysis

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**Myth #1:** Raising gas prices will create runaway inflation

**Reality:** Experience in Europe shows significant energy savings from introducing efficiencies

- Price increase => 20% savings
- Automatic valves => 15% savings
- Meters installation => 15% savings
- Introduction of valves

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### Poland gas consumption per household after price increase

- '95: 700 m³
- '96: 620 m³
- '97: 640 m³
- '98: 590 m³
- '99: 570 m³

-19% for 4 years

### Heating consumption in Western Germany

-15% after valves implementation

### Heating consumption in Eastern Europe

-20% after valves implementation

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Source: PgNIG; Techem practice, BCG case experience
Myth #1: Raising gas prices will create runaway inflation

Reality: With decreased consumption, raising gas prices by 138% will only create 1.75% inflation

Source: Goskomstat; BCG analysis;
**Myth #2:** Raising gas prices will destroy Russian industry

**Reality:** Only a small part of Russian industry will feel the effect of raising gas prices (electricity, chemicals and construction materials)

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(1) Exp Gazprom self-consumption and transport losses
Source: Goskomstat; BCG estimates

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Myth #2: Raising gas prices will destroy Russian industry

Reality: These same industries have had the highest margins because of massive gas subsidies in the first place

Pre-tax margin by industries in 2001 (actual) and estimated pre-tax margin at gas price $50/1,000 m³

Source: Goskomstat; BCG estimations
Myth #2: Raising gas prices will destroy Russian industry

Reality: In addition to certain industries losing, the Russian coal industry would gain

- **US$84/ ton of mazut**
- **US$21-27/ ton of coal**
- **US$21 / 1000 m3 gas**

*Increase of service costs after switching to mazut*

*Investments for switching to coal*

*Gas price for significant mazut substitution*

*Gas price for significant coal substitution*

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(1) RAO UES purchasing prices July-December 2002
(2) BCG estimation
**Myth #3:** Electricity prices will need to increase by the same amount as gas prices

**Reality:** If gas prices are raised by 138%, Mr. Chubais can only justify a 32% increase in electricity prices.

### Cost Structure of Unified Energy (%)

<table>
<thead>
<tr>
<th>Cost Category</th>
<th>Before Increase in Gas Prices</th>
<th>After 138% Increase in Gas Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gas (21%)</strong></td>
<td>366 bln. RUR</td>
<td>483 bln. RUR</td>
</tr>
<tr>
<td><strong>Coal &amp; Mazut (18%)</strong></td>
<td></td>
<td>+138%</td>
</tr>
<tr>
<td><strong>Other Costs (61%)</strong></td>
<td></td>
<td>+32%</td>
</tr>
</tbody>
</table>

**Total Costs**

- Before Increase: 366 bln. RUR
- After Increase: 483 bln. RUR

**Myth #4:** Low Russian gas prices are correct because of high transportation costs to Europe

**Reality:** Even adding $60 per 1000 cubic meters for transportation, Russian gas prices would have to go up 5 times (!) to match European prices

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*Gas prices for households and industry in October 2002*(1)

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(1) For Russian and Eastern European countries prices at the beginning of 2003

Source: Energy Advice Ltd; BCG Analysis
**Myth #5:** Ruhrugas is a good partner because Russia makes a lot of money on its exports

**Reality:** Gazprom leaves a lot of money on the table with Ruhrugas

**Purchasing prices of Gazprom gas by German customers***

(US$ per 1000 m3)

- **US$103**
- **US$352**
- **241%**

Source: European Gas Markets Issue 10.02.1, Eurostat “Gas prices for EU householders on 1 July 2002”

* All prices exclude taxes, ** 50 mln m3 per year, *** 10 mln m3 per year, **** 1 mln m3 per year, ***** 2,025 m3 per year
**Myth #6:** Cheap gas is Russia’s national advantage

**Reality:** Cheap gas is Russia’s national opportunity to waste a valuable resource

<table>
<thead>
<tr>
<th>Usage of gas</th>
<th>Electricity consumption</th>
<th>Electricity consumption per ton of steel produced(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Usage of gas m³ per $1 GDP</strong>: 1.13</td>
<td><strong>KWh/$ GDP</strong>: 2.85</td>
<td><strong>MWh/t</strong>: 1.3</td>
</tr>
<tr>
<td>RUS 0.29</td>
<td>FIN 0.75</td>
<td>JAP 0.90</td>
</tr>
<tr>
<td>HUN 0.1</td>
<td>CAN 0.69</td>
<td>SPA 0.83</td>
</tr>
<tr>
<td>POL 0.18</td>
<td>CZE 0.42</td>
<td>ITA 0.73</td>
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<tr>
<td>CR 0.07</td>
<td>USA 0.39</td>
<td>MEX 0.69</td>
</tr>
<tr>
<td>GB 0.04</td>
<td>JAP 0.27</td>
<td>CAN 0.63</td>
</tr>
<tr>
<td>GER 0.03</td>
<td>UK 0.29</td>
<td>TUR 0.62</td>
</tr>
<tr>
<td>FRA 0.03</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) Data for 1999
Myths vs. Reality - Conclusion

By raising gas prices, Russia will eliminate one of the last barriers to WTO entry

Issues Resolved:
- Customs code
- Currency regulations
- Antidumping regulations
- Access to telecom services market
- Export of ferrous metals
- Tariffs for imported electronic goods
- Import of medical equipment
- Import of beer
- Clothes and textile
- Fish markets
- Tariffs for alcohol
- Import of pharmaceuticals

Issues still under Discussion:
- Domestic price of gas
- Domestic price of electricity
- Tariffs for imported cars
- Tariffs for imported aircrafts
- Subsidies to agriculture
- Access to financial services market

8,250 (75% of all) tariffs on various goods and services
Myths vs. Reality - Conclusion

Effects on economy:

Higher efficiency of domestic energy usage
  ➢ Households’ energy consumption- 30%

Russian coal industry gets additional growth
  ➢ +50 mln t/yr = 1 bln. $

Additional gas available for export
  ➢ ~30 bln m3 = $3 bln

Raising Gazprom profits allowing for investment in gas industry
  ➢ ~$7 bln

Tax collection increase
  ➢ ~$2.2 bln (+3% to federal budget)
Disclaimer

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