Regional Gas Issues

Central Asian Gas Export Prospects

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Energy Security Conference
“Strengthening Regional Cooperation in Central Asia for Promoting Stable and Reliable Energy within Eurasia.

Ashgabat, 3-4 May 2010
Eurasia: Gas Pipeline Systems, January 2010
### Hard Security Issues: Gas Demand Uncertainty

**The European Gas Balance 2005-2020**

<table>
<thead>
<tr>
<th>Source:</th>
<th>Second</th>
<th>Strategic</th>
<th>Energy</th>
<th>Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU</td>
<td>Brussels</td>
<td>November</td>
<td>2008</td>
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</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual</th>
<th>Baseline</th>
<th>New Energy Policy</th>
<th>New Energy Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>$61/bbl</td>
<td>$100/bbl</td>
<td>$61/bbl</td>
<td>$100/bbl</td>
</tr>
<tr>
<td>Total</td>
<td>516</td>
<td>585</td>
<td>514</td>
<td>462</td>
</tr>
<tr>
<td>Net Imports</td>
<td>298</td>
<td>452</td>
<td>383</td>
<td>337</td>
</tr>
<tr>
<td>Domestic</td>
<td>218</td>
<td>133</td>
<td>131</td>
<td>124</td>
</tr>
<tr>
<td>Import change 2005-2020</td>
<td>+154</td>
<td>+85</td>
<td>+39</td>
<td>-14</td>
</tr>
</tbody>
</table>

- Oil price
- New Energy Policy
- Baseline
- Actual

**Note:** Import change values are shown as positive or negative differences from the actual values.
Europe: Reliable Gas Supply Increases

The EU import issue:

A gas powered future: Looking for an extra 70-80 bcm 2005-20

Should be possible from three reasonably predictable suppliers:
- Norway – but Arctic complexities
- North Africa – but rising demand
- Qatari LNG – but moratorium

Above all, this is predicated on a sustained level of gas imports from Russia
What the EU expects:
The contrast between old and new estimates/projections for EU gas imports amounts to **168 bcm/y** by 2020. That’s a range that is as almost as big as Russia’s TOTAL indigenous gas export availability in 2008.

What Russia expects:

What Russia might produce in 2030 – Two views:
1. **760 bcm** (Up 114 bcm from IEA output level of 646 bcm for 2007)
   *Source: IEA. WEO 2009 Reference Scenario: Gas Table 12.1 (Page 429)*

2. **885-940 bcm** (Up 239-294 bcm from IEA output level of 646 bcm for 2007)
   *Source: Energy Minister Sergei Shmatko 26 Nov 2009*

*NOTE:* Shmatko has also said Yamal could yield 360 billion cubic meters a year. But how to transform resources into output?
The reduced importance of take or pay
1. Russia-Ukraine
2. Russia-Turkmenistan
3. Turkey-Azerbaijan
A gas world with fewer guarantees as it moves to more flexible market structures.
The Problems for Caspian Gas Producers

Azerbaijan:
• Shakh Deniz and beyond
• A 30 bcm gas exporter?
• And when?

Turkmenistan:
• A genuine exporter
• South Yoloten/Osman
• Trans-Caspian aspirations

Kazakhstan:
• “If the Nabucco project gets real, Kazakh gas will be one of the main sources of the project along with the Azeri and Turkmen gases.”

The new SD-2 Timetable

- The 25 April Socar-Turkey agreement
- Mid-2010: Gas sales negotiations start
- IH-2011 Final Investment Decision
- 2011-2015 €20 bn project implementation
- 2016 First SD-2 Gas
- 2018 Full Field Development. c.16 bcm/y increase; total field output: c. 25 bcm/y.
Pipeline Implications:

- Mid-2010: Nabucco’s ‘Open Season’ gas supply negotiations start (the counterpart to SD-2 Gas sale negotiations).
- 2H-2010: Nabucco Financing
- Early 2011: FID for either Nabucco or ITGI (or TAP? – or a combination??).

The next stage of Azerbaijani field development:

Absheron: A real prospect for Total
Umid/Babek: Drilling by Socar SD-3

Deep Level Azeri-Chirag-Guneshli: “The Strategic Reserve. We recognise it’s there. But it doesn’t have to be developed immediately.”

Bottom Line: Azerbaijan set to become a major gas exporter:
• 20 bcm/y in 2018, perhaps 30 bcm by 2025.
• Implication: New pipelines beyond SCP
Implications for other Caspian producers:

- Short term: potential availability in SCP c.2013-2016
- The need for much greater South Caucasus capacity beyond 2018.
- Implications for Turkmenistan and Kazakhstan. Should they be taken into account for a 2014 pipeline system, for a 2018 pipeline system. Or are they irrelevant?
Turkmenistan: Taking Advantage of New Openings

The Short-term issue: Petronas and the issue of stranded gas

• Petronas: 8-10 bcm of gas output by 2013-14

Options:

• The Caspian Coastal Pipeline (Pri-Caspiy) to Kazakhstan and Russia. Technical capacity: 14-16 bcm/y: effective capacity, probably 7-8 bcm/y without significant repair.

Turkmen attitudes:

One: Renovate and upgrade CCP (Pri-Caspiy), as envisaged in the May 2007 agreements with Russia and Kazakhstan.

Two: Opt for a trans-Caspian solution.

• “Obviously, we are ready to supply gas for Nabucco when it reaches us,” said a Turkmen government official who asked not to be named.

• “As early as next year, 10 bcm can be exported from the Turkmen Caspian shelf where Petronas is working.”

Source: Reuters – Ashgabat 19 November 2009
CCP/Pri-Caspiy Issues

• But does Russia want Petronas/Dragon/Burren gas
• If so, on what terms?
• Does it envisage a return to the concept that it is Turkmen gas that will, in effect, be used to supply Ukraine – if so, would it be at the discounted price Russia recently agreed with Ukraine?
Key facets of Turkmenistan’s cash balance in 2010

Gas exports to:

<table>
<thead>
<tr>
<th>Volume</th>
<th>Price</th>
<th>Revenue</th>
<th>Growth prospect</th>
</tr>
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<tbody>
<tr>
<td>bcm</td>
<td>per '000cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Russia</td>
<td>12</td>
<td>$195</td>
<td>c. $2.34bn</td>
</tr>
<tr>
<td>China</td>
<td>6</td>
<td>$180</td>
<td>c. 1.08bn</td>
</tr>
<tr>
<td>Iran</td>
<td>10</td>
<td>$140</td>
<td>c. 1.68bn</td>
</tr>
<tr>
<td>Total</td>
<td>24-30</td>
<td></td>
<td>$5.1bn - $6.3bn</td>
</tr>
</tbody>
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*Source: Methinks Ltd, Scotland.*

Costs: $10-14 bn/y energy sector investment needs
c. $12bn/y all other government programmes
Borrowing hampered by unwillingness to furnish sovereign guarantees and persistence of Turkmengas as budgetary body, rather than as corporation with reportable balance sheet.
Turkmenistan’s Position – The View from Ashgabat?

- **Opportunity Cost:** Reduction in exports means Turkmenistan’s gas remains available for sale in future, so no long-term loss.

- **Pricing Policy:** The state considers it important to purchase gas from producers -- e.g. the output from Petronas & Dragon -- and then handle the resale for export itself. Under this system, the Turkmenistan Government retains its existing pricing system, which reflects political as well as commercial considerations.
Questions?

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Please note: All the views in this paper are those of the author alone.