



Partnership for Social Initiatives

პარტნიორობა სოციალური ინიციატივებისათვის

Transit Projects in New Price and Geopolitical Conditionalities,

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Conclusions -4

If low price maintained on EU gas market for medium and longer term and market forces let play for Turkmen and Iranian gas:

- This gas never reaches EU market;
- Georgia's transit position weakens so does its income from transit;
- The role of China and Russia increases in the region with China dominating the economic development and Russia – providing security guarantees of the Region;

Security threats from the south and east CA wider Middle East will strengthen rather than lessen the positions of Russia in the region as a sole military force in the region.

Or the entire region falls into turmoil...

Content

1. New Geopolitical Conditionalities- partial opening of Iran, war in Syria and Iraq, Russia-Turkey rapprochement- in light of low price environment :

- gas of Eastern Mediterranean and Northern Iraq,
- Russian, Norwegian pipeline gas
- US Shale LNG-

Competitors of the Caspian (Turkmen and Iranian) gas on EU market;

2. Market Conditions in EU- oversupplied, in transition, **looking for low price conditions;**

- **Opportunities for producers in the Caspian (Azerbaijan, Iran and Turkmenistan) in low price conditions**
- Traditional Supply Sources
- Traditional Supply Routes
- New Supply Sources and Routes

Conclusions

Targeted Market EU- Oversupplied, Price Collapse

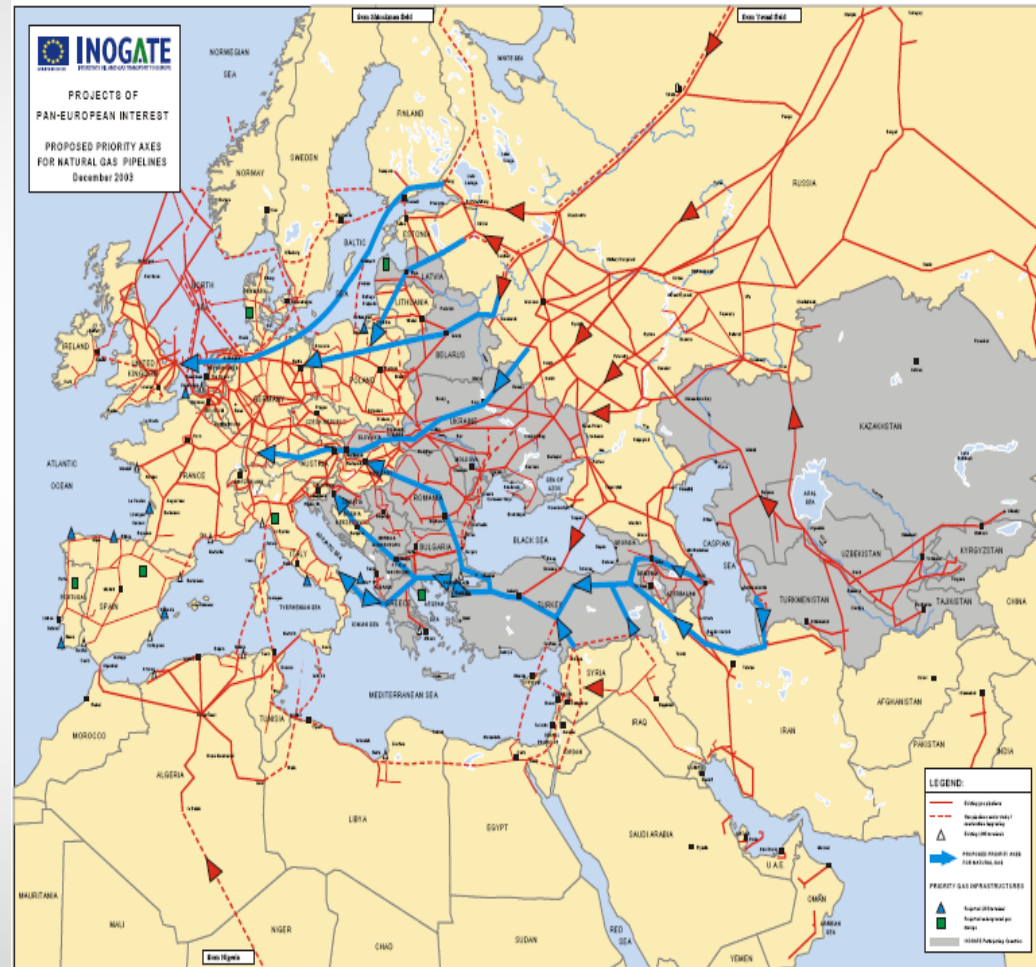
EU market in transition

- Financial crisis -collapse of demand on EU market in 2012 , slight recovery to 426 bcm pa in 2015, **but The International Energy Administration forecasts that the EU's overall demand for natural gas will increase by 74% between 2011 and 2035**
- With price collapse Coal loosing its positions in EU and elsewhere
- Oil indexed versus hub pricing, long term contracts versus hub based almost 50/50;
- **Prices: EU-\$5-6, US-\$2.6-3 and South East Asia-\$6 and \$7 per million BTU**
- Gas Price differential between EU and US markets narrowed, EU industries more competitive, threat of relocation of EU industries to US avoided;
- Historical and new suppliers have to comply with third energy package and antimonopoly legislation to get an access to the market or negotiate exemptions;

In these circumstances will low price gas projects be given priority? What about geopolitics?

Traditional Suppliers 2015

- Russia- 159 BCM to EU taking almost 32%
- Norway-28%
- Algeria -11%
- LNG takes only 15% with the receiving capacity to cover of 39% imports;



Competitors to Turkmen and Iranian gas - Existing Supply Routes

- Russia: Transit through Ukraine until 2019 and Byelorussia/Poland-Yamala; direct access to EU through Nord Stream; Nord Stream 2 under development, South Stream rejected, but Turk Stream top on the agenda again;
- Norway- pipelines
- Algeria-pipelines and LNG

New Supply Sources and Routes

- The Caspian Region- SCP, TANAP, TAP, AGRI on hold;
- Northern Iraqi gas-10BCM approved but **war in Syria and Northern Iraq, instability in south eastern part of Turkey;**
- East Mediterranean, Israel and Egypt, interests of Turkey cannot be underestimated if pipeline, otherwise LNG;
- US Shale LNG

EU looking for Cheap Gas-Southern Gas Corridor Costs

Costs of : SD2: production **16 bcm per annum,**
transportation SCP-EX P ,TANAP, Tap expandable
to 20 bcm pa :**Total: about \$40 bln, but if TANAP**
would take Turkmen, Iranian, Northern Iraqi,
and possibly Eastern Mediterranean gas? then it
makes sense;

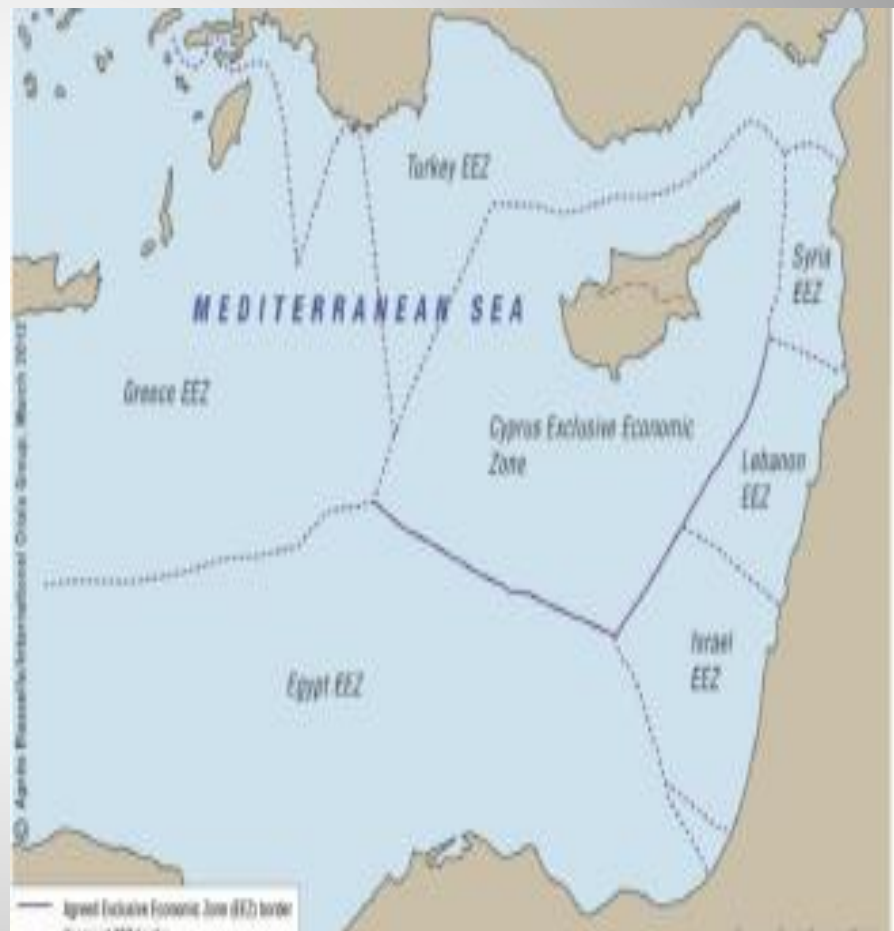
But the above costs don't include costs of gas
production in Iran, Turkmenistan, neither the
cost of Trans Caspian pipeline(if and when
built).

Competitors to Caspian Gas: Eastern Mediterranean problem – delimitation, currently just Israel

Cyprus may possess significant gas resources and opened bidding for E&P but problem of delimitation with Turkey requires solution. Talks have been ongoing on reunification of Cyprus, which would make possible a gas pipeline to Turkey and onward to EU but no solution yet.

Israel has significant gas reserves in Leviathan and Aphrodite fields able to produce 15-20 bcm pa by 2020

But if the problem of delimitation and reunification of Cyprus not solved, the price of East Mediterranean LNG is assumed at \$400 at least per 1000 cm.



Northern Iraq- Gas from Kurdistan

Divergences between Central and Regional Authorities

- November 2013: Government of Turkey signs a GSA with the KRG on gas exports to Turkey.
- Volumes set at initial 4 bcm/y in 2017, 10 bcm/y by 2020 and an option to move to 20 bcm/y thereafter.
- Principal resource base: Genel Enerji's fields at Miran and Bina Bawi.

10 bcm apparently will be used on Turkish domestic market for power generation, 10 bcm for exports through TANAP? But war in Syria and Northern Iraq, instability in south east of Turkey;

New Competitors

- Southern Gas Corridor scalable 16-30 bcm: SCP, TANAP, TAP, need for Turkmen gas;
- Nord Stream-2, avoiding Ukraine, taking altogether 100 BCM of Russian gas from including Bovanenkovo field starting from 2017;
- US Shale LNG – 60 million tons if optimistic scenario

Opportunities for producers in the Caspian (Azerbaijan, and Turkmenistan) in low price conditions

- Low diversified economies, price collapse – collapse of income, direct implications on spending and social stability, and most importantly on funding gas E&D in deep waters extremely expensive especially in current price environment;
- Local currency collapses, imports including equipments become more expensive;
- Majors involved in gas production in Azerbaijan in red zone, collapse of profits and capitalization, cuts of investment portfolios;

Competition in Low Price Environment among Producers in the Caspian Region

Azerbaijan/Russia in EU:

- Azerbaijan with 10BCM of SD2 gas is taking 8% of Russian gas on EU market(159 BCM in 2015)if consumption remains flat;
- Azerbaijan with delivering additional 6 BCM of gas on Turkish market taking almost 30% of Russian gas if consumption remains flat;

Relations remain good neighborly, and stable,
companies cooperate;

Competition in Low Price Environment among Producers- Eastern Caspian

Russia prioritize buying gas from loyal producers in the Caspian region;

- In 2016 Gasprom is buying 4 BCM from Uzbekistan;
- In 2016 Gasprom is buying 0 BCM from Turkmenistan
- In 2016 Gasprom is buying the same volumes of gas from Kazakhstan as in previous years.

Iran and Opening of North South Axis

- Iran potentially the largest gas exporter but of LNG rather than pipeline deliveries towards EU(depending on the settlement in Syria and security in Suez);
- Oil and gas swaps with Iran opens new opportunities for Turkmenistan and maybe for Russia to swap gas and diversify their markets to SEA;
- Recent gas swaps among Azerbaijan, Iran and Turkmenistan

US Shale LNG Exports- on EU market

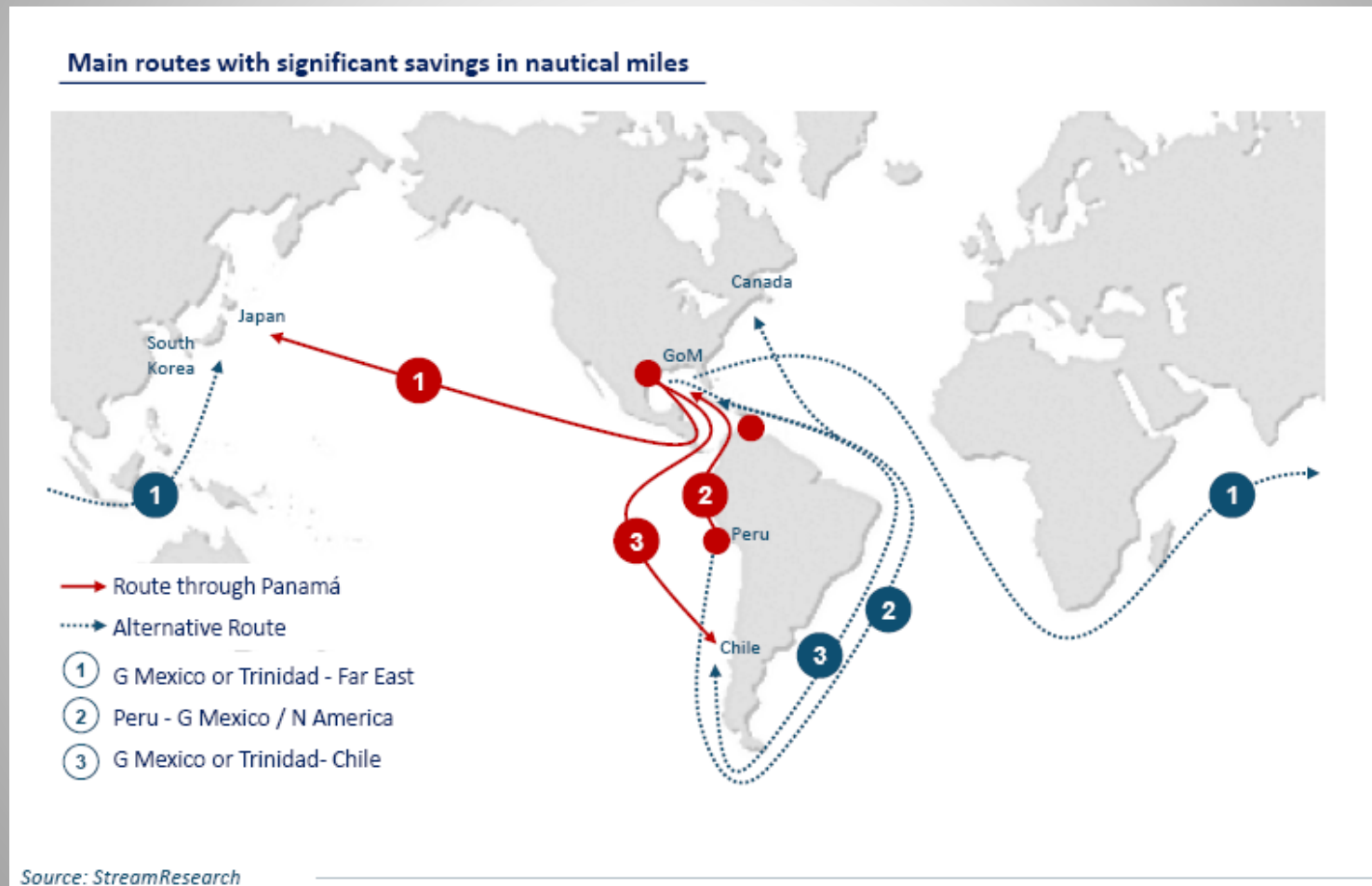
- LNG trains built in the areas of former regasification terminals which make these projects very competitive (infrastructure pipes and storage tanks ready available) ;
- US LNG estimated at about \$4-4.5 per MBU on EU market;
- US shale LNG has already reached Brazil, Portugal and recently Turkey
- US Shale LNG possibly going up to 60 mln tons if price recovered in the coming years;

Europe Is Already Heavily Invested in American Gas Shale

Company	Country	Shale Plays
Statoil	Norway	Marcellus (PA, WV,NY,OH)
		Eagle Ford (TX)
		Bakken (ND, MT)
Royal Dutch Shell*	UK and the Netherlands	Marcellus (PA)
		Haynesville (TX/LA)
		Eagle Ford (TX)
		Permian Basin (TX)
		Sand Wash Basin (CO)
BP	UK	Woodford (OK)
		Eagle Ford (TX)
		Haynesville (TX/LA)
		Utica (OH)
		Fayetteville (AR)
BG Group	UK	Marcellus (PA, WV)
		Haynesville (TX/LA)
Total	France	Barnett (TX)
		Utica (OH)
ENI	Italy	Barnett (TX)
Repsol	Spain	Mississippian (US)

*Shell has additional acreage in WY, British Columbia and Alberta
 Sources: Brookings Institute, IEA, Rice University, NERA, EIA

US Shale LNG Export Routes after Panama Expansion in 2015



US Shale LNG

- Competitive at \$3 per BTU at HH
- Less competitive at higher than \$5 par BTU

But European majors that have heavily invested in US shale production will probably opt for supplying their market in EU;

General Conclusions-1

- Price collapse improved competitiveness of EU industries; however it worsened opportunities to receive alternative gas from alternative routes;
- At preliminary estimates all new projects meant for delivering new gas to EU are quite expensive except for Russian gas;
- Indeed Gas delivered through Nord Stream-2 will be less expensive because it is a deviation project and does not involve the development of a new resource base, about 100 BCM of additional gas from Bovanenkovo field is expected to become available at German border at \$3.5 by 2017. However, not clear whether this includes the export duty;
- Southern gas corridor gas isn't cheaper evaluated at \$40 production and transportation of 16 BCM p/a on SD2;
- The price collapse limits maneuvering for producers in the Caspian –Iran and Turkmenistan to produce, to build the infrastructure and deliver cheap gas to EU; obviously it will be extremely difficult for them to compete with the Russian pipeline gas and US LNG which are at the advanced stage of development and ready to be delivered at between \$ 3.5 and \$5 per BTU.

Under market driven conditions historical and new suppliers have to comply with third energy package and antimonopoly legislation requirements for getting access to EU market or to negotiate exemptions with EU commission. It entirely depends on suppliers' understanding of market conditions and their negotiations' skills and ability to get an access to the market.

Conclusion- 2

If low prices maintained on EU gas market for medium and longer term and market forces let play for Turkmen and Iranian gas:

- Southern gas corridor fails to materialize limited only to 16 bcm of Azerbaijani gas from DS field delivered to EU and Turkey;
- Gas and oil transit across Georgia remains limited so does Georgia's income from transit; the transit position of Georgia much anticipated for years since its independence, weakened;

Conclusions-3

If low price maintained on EU gas market for medium and longer term:

- Gas demand and consumption expected to increase;
- Russian pipeline gas and US LNG will be prepared to meet increased demand;

In order to avoid the monopolization of EU market, huge gas resource of Iran and Turkmenistan need to be given due consideration;

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Thank You