



The Impact of Recent Developments on Iran Gas Export project to Europe

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CONTENT

(Four Questions)

- Will the impact of Shale Gas change the gas business around the world?
- Will the nuclear disaster in Japan change gas prices and Europe's demand for gas imports from Caspian Region in future?
- Will the political turmoil in the Middle East change the potential gas export to Europe?
- What are the Current Potential Pipeline Routes for Iran Gas Export to Europe under consideration?

Estimated Gas Reserves and Production in the Caspian Region

Source: BP Statistical Review of World Energy June 2010

	Reserves (In TCM)	Production (In BCM)		
	End 2009	2008	2009	Change
○ AZERBAIJAN	1.31	14.8	14.8	
○ KAZAKHSTAN	1.82	29.8	32.2	(+2.4)
○ TURKMENISTAN	8.10	66.1	36.4	(-29.7)
○ TOTAL	11.23	110.7	83.4	(-27.3)
○ Russia	44.38	601.7	527.5	(-74.2)
○ Iran*	29.61	116.3	131.2	(+14.9)

* Iran's gas production in 2010 was over 150 BCM and will reach around 180 billion cubic meters in 2011 replacing Canada as the third largest gas producer in the world.



The impact of the Economic Crises

- **Decline in Gas Production of around 30BCM in Caspian Region mainly due to less demand for export of gas**
- **Decline of Gas Production of around 74 BCM in Russia due to the economic slow down and less demand for Russian gas in Europe**
- **Plenty of gas production capacity within the same transportation network**
- **Europe's gas consumption dropped by 6.8%**
- **Turkmenistan seems to be the swing producer as the demand falls**



Unconventional GAS

- Shale Gas is now pursued in US, China, India and Australia and Poland
- Gas to gas Competition is evolving and Traditional Oil-Indexed long term take or pay contracts will not dominate
- Diversion of LNG from US has changed the prices in Europe and Far East last year
- Unconventional Gas could have Geopolitical Implications in Europe



Japan's Nuclear Disaster

- Japan considers a nuclear free energy scenario and has scrapped plans for new Nuclear power plants
- Germany will shut down 7 Nuclear Power Stations now and all by 2022
- The demand for Natural Gas power stations will increase as the gap can not be filled by renewable energy



Developments in Gas Business that Influence Gas Export to Europe

- Gas to Gas Competition will increase and is a positive development for Europeans security of supply and their gas prices
- Oil indexed long term “take or pay” contracts are under pressure due to weakening link between oil and gas prices
- Private consortium initiatives will take over from the governments gas trade as privatization and less regulations take shape in the gas consumer and producer states



Developments in Iran that will Affect Gas Export to Europe

- The removal of energy subsidies will curtail the domestic demand for gas and is positive for Gas Export
- Sanctions will slow down the development of new gas resources which will have a negative impact on Gas Export
- Political turmoil in the Middle East will initially delay plans but a more democratic Middle East is positive for Gas Export to Europe



Why Liquid Natural Gas (LNG) Export is no longer Iran's priority

- **The Economics of LNG has Changed**

1. The Impact of Shale Gas in US
2. The LNG competition does not allow price of gas to the plant at a level which is not domestically accepted in Iran.

- Gas Demand for Gas based industries create jobs and has better added value

- Investors for Iran LNG are hard to find and needed technology is subject to US and EU sanctions



Conversion of Gas to Petroleum Products is Ideal for Iran

- Around 2 barrels of Oil has to be refined to produce one barrel of Middle Distillates. This at today's prices is \$200 in the oil market, which would be available to treasury if gas is used.
- 9 million BTU of gas can produce one barrel of Middle distillates in GTL process. If the feed cost is \$5/mmbtu the total cost will be \$68 per barrel
- \$130 advantage plus better quality products, Creating Employment, Tax and social insurance benefits for the Government



There are Few Options for Exporting Gas from Iran to Europe

- **The costs associated to these options range from 10-20 billion Dollars**
- **In most scenarios Greece is the first European country to benefit from this trade.**
- **If the gas passes through Turkey, it will add to Turkish strategic influence on Europe**
- **Mediterranean option is expensive but will be the first direct sale to Europe from the Middle East**

Potential Gas Export Pipeline Route to Austria (Via Turkey)



- Length: 4900KM
- Estimated Investment~ \$15 billion
- The pipeline passes through; Turkey, Bulgaria, Romania, Hungary to Austria
- Gas Volumes:35 bcm/y

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Persian Gas Export Pipeline Route to Italy (Southern Europe Via Turkey)



- Length: 5800KM
- Estimated Investment ~ \$17bn
- The pipeline passes through; Turkey
Greece
Italy
- Gas Volume 35 bcm/y

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Potential Gas Export Pipeline Route to Italy (South Europe Via Mediterranean Sea)



- Length: 5000KM
- Estimated Investment ~ \$20bn
- The pipeline passes through;
Iraq
Syria
Greece
Italy
- Gas Volume to Syria is 35 bcm/y and to Europe 25 bcm/y

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Persian Pipeline

The Superiority of the Persian Pipeline to the Nabucco Pipeline is that the route of the pipeline is through gas Consumer Countries (Customers) and not through Transit Countries



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Main Points

- **Iran is by far the largest producer and consumer of gas and gas based products in the ME. The country is strategically located to benefit from regional and international trade.**
Domestic and international political and economic considerations has slowed down the development of gas industry and consequently it has deprived Iran from gaining its right place in the world gas business
- **LNG Export has lost its lustre due to the development of shale gas and US/EU Sanctions.**
- **GTL is currently more viable due to increase in oil prices and relatively slower increase in gas prices as well as Iran's need for petroleum products.**



Main Points (Cont)

- **Export of gas by Pipeline to Europe and Indian subcontinent is still amongst the objectives of the National Iranian Gas Company**
- **There are several routes for gas export to Europe which will cost around \$10-20 billion**
- **The strategic and economic value of these projects are intermingled and for Iran gas to enter Europe it must be priced to compete with other existing and planned projects**



THANK YOU

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