

# Iranian natural gas exports between economics and geopolitics

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David Ramin Jalilvand, MSc

## Headlines from Iran's press

“We are in the worst situation of gas”

“در بدترین شرایط گازی قرار داریم”

“We don't have gas”

“گاز نداریم”

“Gas cuts for industry brought Zangeneh before Majles”

“قطع گاز صنایع زنگنه را به مجلس کشاند”

“Government should stop gas exports”

“دولت صادرات گاز را متوقف کند”

“Gas cuts for power plants and likelihood of reduced exports”

“قطع گاز نیروگاهها و احتمال کاهش صادرات”

## The state of affairs: basic statistics

- World's largest gas reserves
- At 167 and 162 bcm/y, production and consumption roughly at par
- < 10 bcm/y of exports [Turkey (8.7 bcm), Armenia (< 1 bcm), Azerbaijan (< 1 bcm)]
- 5 bcm/y of imports
- > 30 bcm/y of gas losses (flaring etc.)
- Ambitious export plans: totalling 160 bcm/y (!)

Source: BP (2014)

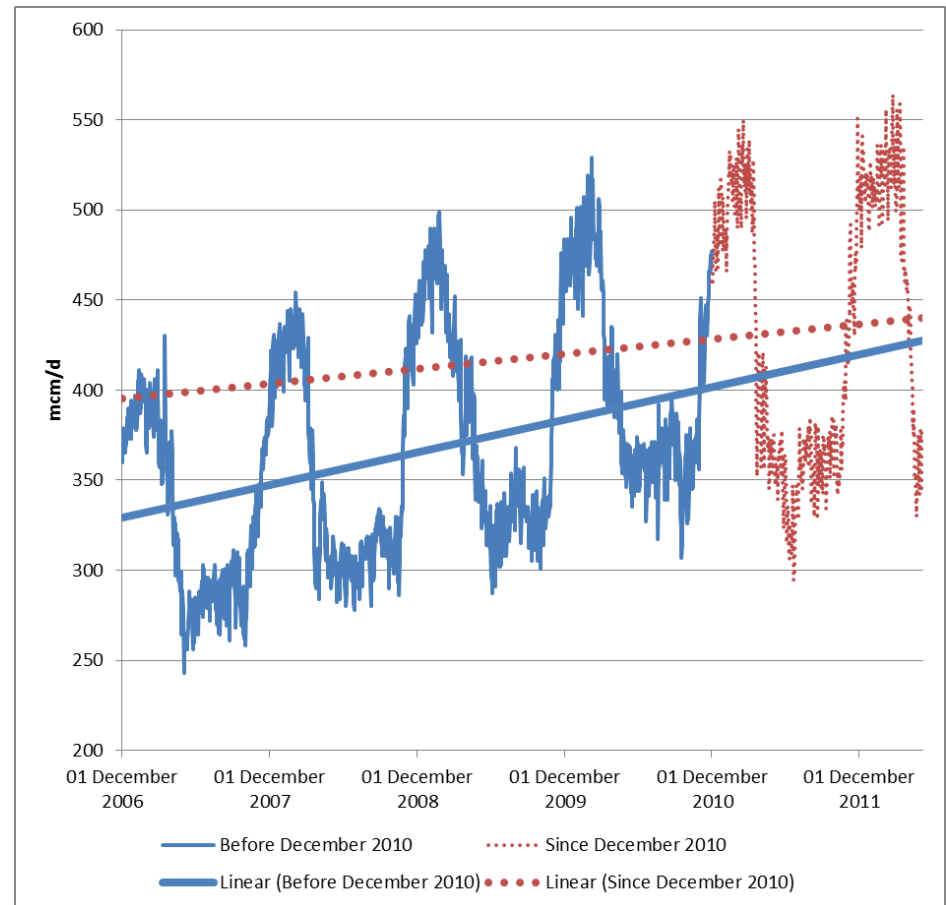
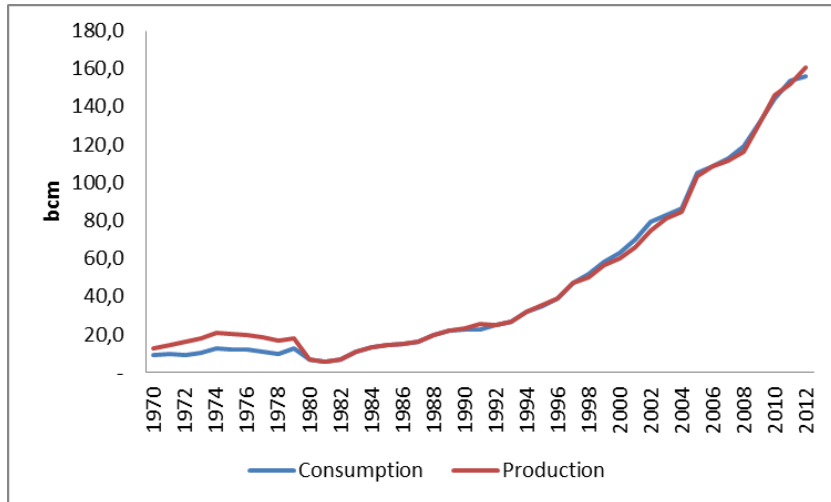
## Obstacles to Iranian gas exports

- Sanctions (since 2010)
- Subsidies
- Objections to foreign participation
- Policy and institutional conflicts

<http://www.oxfordenergy.org/wpcms/wp-content/uploads/2013/06/NG-78.pdf>

Iran's gas exports: can past failure become future success?

# Subsidies and domestic consumption



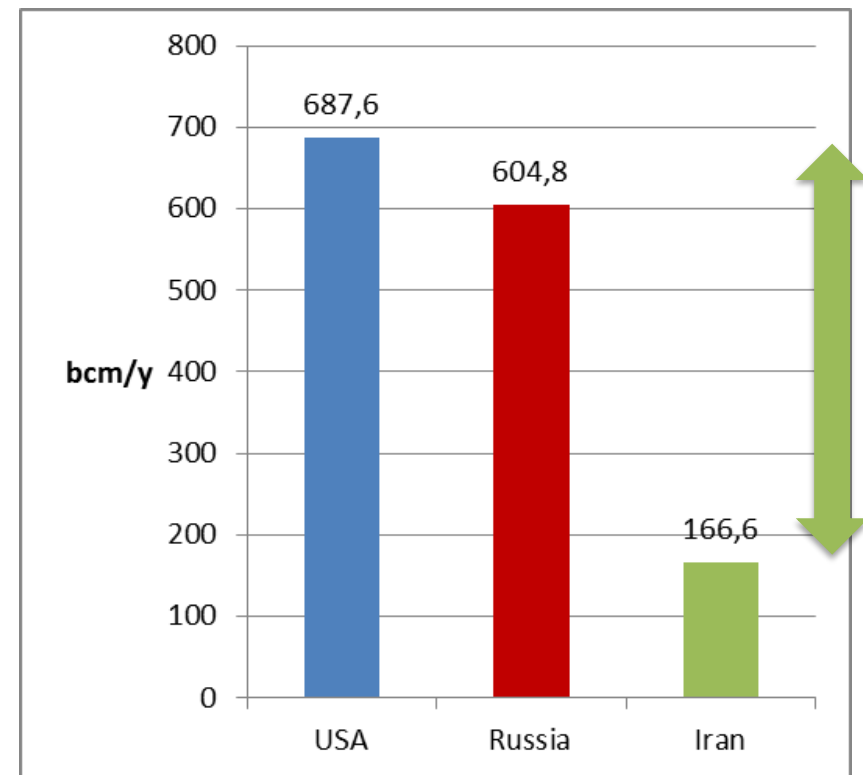
Source: BP (2013); NIGC (2013)

# Policy: conflicting pathways for Iranian gas

Iranian natural gas output:  
Domestic utilization or exports?

## Policy: conflicting pathways for Iranian gas

- At present: gap between Iran and world top producers
- The long-term future: sufficient production for both domestic consumption and exports
- In the meantime: choice between domestic utilization and exports



Source: BP (2014)

# Domestic utilization

## Electricity generation

- From 121.393<sub>2000-2001</sub> to 254.275<sub>2012-2013</sub> Gwh/y
- 62%<sub>2011-12</sub> of electricity consumption based on natural gas
- Electricity consumption: 35% industry, 31% households, 16% agriculture, 9% public, 7% trade, 2% others
- Energy intensive industries are at the forefront of Iran's industrialization efforts



# Domestic utilization

## Feedstock for the petrochemical industry

- Competitive advantage
- From 2005-06 to 2012-13: increase from 16 to 41 million tons/y
- Annual average growth rate of 15.1%
- Intention to double output by 2020

# Domestic utilization

## Road transportation

- Problems with oil: tight domestic market for refined oil, reduction of oil exports, environmental harm
- Extensive promotion of compressed natural gas (CNG)
- 2013: world's largest natural gas fleet at 2.95 million vehicles
- Replacement for gasoline from oil: first efforts to develop gas to liquids (GTL) capacities

## Domestic utilization

### Re-injection into maturing oil fields

- Many mature oil fields, risk of declining oil production
- Currently, re-injection of 32 bcm/y (> 3x of exports)
- NIOC target of 73 bcm/y
- Behind schedule due to shortage in supply

# Domestic utilization

## Household demand

- Largest natural gas consumer: 43% of final domestic demand
- Premier energy carrier for heating
- Excessive over-consumption due to subsidies
- Consumption peaks in the winter: supply cuts for industrial consumers

# Domestic utilization

## Indirect natural gas exports

- Employment and domestic value addition
- Particularly energy intensive products: competitive advantage
- Increase of indirect exports
  - Petrochemicals: ~ five-fold from 2005-06 to 2012-13 to a level of \$11.2 bn
  - Cement and clinker: plus 38% from 2012-13 to 2013-14 to a level of 18.8 million tons
  - Electricity: six-fold from 2007 to 2012 to a level of 5,290 GWh

# Exports

## Export earnings for NIOC/NIGC

- International (=non-subsidized) prices
- Greater IOC involvement
  - Investment
  - Technology

# Exports

## Advancing strategic depth

- Rapidly increasing gas demand in the MENA region
- Interdependencies with third countries improving Iran's strategic standing
- Advancing geopolitical position through economic ties
- Weakening the relative position of competitors
  - Qatar (economic)
  - Saudi Arabia (geopolitical)

## Conclusions

- Long-term potential for both extensive domestic use and exports
- Domestic utilization
  - Wealth creation
  - Environment
  - Increasing oil exports
- Exports
  - Export earnings for NIOC/NIGC
  - Strategic depth
- Until production is massively expanded and decoupled from domestic consumption: choice between economics and geopolitics



**Thank you very much  
for your attention!**

David Ramin Jalilvand, MSc  
Research Fellow

Berlin Centre for Caspian Region Studies  
Freie Universität Berlin

[d.r.jalilvand@fu-berlin.de](mailto:d.r.jalilvand@fu-berlin.de)  
[www.fu-berlin.de/bccare](http://www.fu-berlin.de/bccare)