

**IENE "2nd South East Europe Energy Dialogue"
International Conference
Thessaloniki 21st May 2008**

Planned gas import pipelines for South East Europe

Julian Lee

Senior Energy Analyst

Centre for Global Energy Studies

Oil market publications

Global Oil Report Monthly Oil Report Annual Forecast & Review
Long-term oil price outlook Product Price Report

Events

Out-of-town Retreat meetings One-day seminars Training

Retained services

Oil Market Advisory Service FSU Pipeline Advisory Service

Recent studies

The future of Caspian oil exports
FSU oil & gas pipeline maps
Hydrocarbon exploration and field development in Iraq
Iran's energy crisis
The impact of geopolitics on world oil production

Bespoke consultancy services

Planned pipelines

| Project | From | To | Via |
|---------------------|---|---|---|
| ITGI | Turkey 8 bcm/yr 2012 | Italy Edison, Depa | Greece |
| Nabucco | Turkey 31 bcm/yr 2013 | Austria | Bulgaria, Romania, Hungary Botas, Bulgargaz, MOL, OMV, RWE, Transgaz |
| South Stream | Russia 30 bcm/yr 2013 | Austria/Italy Italy Gazprom, ENI | Black Sea, Bulgaria, Serbia, Hungary Black Sea, Bulgaria, Greece |
| TAP | Greece 10 bcm/yr (? +5 bcm/yr for IAP) 2010 | Italy | Albania EGL, StatoilHydro |
| White Stream | Georgia 8 bcm/yr + 8 bcm/yr + 16 bcm/yr 2015 | Europe | Black Sea, Ukraine PSE |

A network of pipes



Sources of supply

| | |
|---------------------|--|
| ITGI | Azerbaijan (8 bcm/yr) |
| Nabucco | Phase 1: Azerbaijan (8 bcm/yr) Phase 2: ? Azerbaijan, Central Asia, Egypt, Iraq, Iran |
| South Stream | Russia, ? Central Asia |
| TAP | Iran (5.5 bcm/yr), Azerbaijan |
| White Stream | Phase 1: Azerbaijan (8 bcm/yr) Phases 2 & 3: ? |

Supply challenges

- Azerbaijan** Widely differing views of future gas availability.
- Iran** Reliability, sanctions, internal politics & gas needs.
- Iraq** Security, priorities.
- Central Asia** Is there enough gas to do everything?
- Egypt** Potential for ~10 bcm/yr

Almost any route to market is better than no route.

Producers will say 'yes' to everyone, until they have to commit.

Gas is only a small part of the geopolitical environment in which the Central Asian countries must operate.

Trans-Caspian gas pipes may not be politically possible, CNG ships maybe, but at what cost?

European consumers are facing big increases in their need for imported gas.

The EU wants to diversify gas import sources and routes.

Diversification is strongly supported by East and Central European countries, who are almost entirely dependent on Russia.

Non-Russian routes are supported not because the EU is 'anti-Russia', but because it is 'pro-diversification'.

How much does EU support really mean?

Transport challenges

How to get Central Asian gas to Turkey/Caucasus.

Trans-Caspian gas pipes may not be politically possible, CNG ships might be, but at what cost?

While demand forecasts suggest there should be little competition for markets, three routes will compete for existing Turkish infrastructure and three for Azerbaijani gas (at least in early phases).

Nabucco needs 20 bcm/yr for profitability, White Stream is claimed to be profitable at 8 bcm/yr.

Julian Lee
Senior Energy Analyst
Centre for Global Energy Studies
17 Knightsbridge
London SW1X 7LY
UK

julian.lee@cges.co.uk
+44 (0)20 7309 3613