Transportation of Eastern gas to Italy

Energy Charter Paper
Trade & Transit Group

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Estimated Natural Gas reserves in the world \((10^9\ \text{toe})\)

- North America: 6.1
- Latin America: 7.4
- Europe: 7.3
- FSU: 50.4
- Middle-East: 52.8
- Africa: 10.6
- Asia-Oceania: 13.5

**World Gas Reserves:** \(148.1\ 10^9\ \text{toe}\)

Source: Euro – Mediterranean Energy Forum
EU Natural gas demand & supply outlook 2003 - 2025

Source: EUROGAS Report 2004
DEPA’s key strategic goals

In this competitive environment, DEPA has oriented its strategic goals:

- Diversifying its suppliers of natural gas to achieve best economic terms.

- Promoting transit business with the transportation of Eastern Gas to Europe via Greece.
Transportation of Eastern Gas to Italy
DEPA’s key strategic project

IGI Cross Country III: 305 km

IGI Cross Country III Offshore: 212 km

IGI Cross Country II: 285 km

ITG Greek Part: 85 km

ITG Turkish Part: 210 km

Aegean Sea

Bulgaria

Karperi MR

Komotini CS

Ipsala Kipi CS

Karacabey CS

Otranto

Stavromenias CS

ITG Turkish Part:

210 km

ITG Greek Part:

85 km

Azerbaijani & Turkmen Gas

Russian Gas via Blue Stream

Greek Gas

Iranian Gas

Russian Gas via Blue Stream

ITG Greek Part:

85 km

ITG Turkish Part:

210 km
1) Interconnector Turkey – Greece (ITG)

- In 2000, DEPA started a cooperation with BOTAS with the support of E.U., in order to investigate the development of a pipeline which would connect the gas networks of Turkey and Greece.

- In February 2003, an Intergovermental Agreement signed in Thessaloniki, expressing the support of the two countries to the project.

- On 23 December 2003, the Gas Sales Agreement was signed. DEPA obliged to purchase 0.75 bcm/yr from BOTAS, starting from 2007.

- On 3 July 2005, an inaugural ceremony for the construction of the project was realized at Kipi / Ipsala, with the presence of the Prime Ministers of Greece and Turkey.
History of Greek – Turkish – Italian cooperation in Gas

Interconnector Turkey – Greece (ITG) (cont.)

Greek part
– 85km, 36”, MOP=75 barg
– Funding:
  • Studies: TEN 50%
  • Construction
    – CSF III (EU): 29%
    – CSF III (Greek State) 29%
    – Equity & loans 42%

Turkish part
– 210 km, 36”
  (17 km off-shore, max. depth 70m)
– Funding:
  • Studies: TEN 50%

Maximum capacity (with 2 compressors): 11.6 bcm/y
Current situation: Under construction
History of Greek – Turkish – Italian cooperation in Gas

2) Interconnector Greece - Italy (IGI)

- On 31 July 2002, the companies DEPA and EDISON, signed an M.O.U. to assess the feasibility of a gas pipeline connecting Greece to Italy. On 4 October 2002, BOTAS joined the above M.O.U.

- In April 2003, the pre feasibility study of the project was completed.

- In 2004, a technical and economical feasibility study was performed by international consultants (EON-engineering/INTEC), following an open bid procedure. The outcomes of the study was quite optimistic.

- In June 2005, a Protocol of Intent was signed between the Greek Minister of Development and the Italian Minister of Productive Activities, stipulating the terms for the cooperation between the two countries for the realization of IGI project.
History of Greek – Turkish – Italian cooperation in Gas

Interconnector Greece - Italy (IGI) (cont.)

- **1st phase: 4 bcm to Italy**
  - 305 km, 36”, DP=80 barg (Nea Mesimvria – Stavrolimenas)
  - 212 km, 32”, 150 barg off-shore
  - 285 km, 36”, doubling pipeline (from Komotini to Nea Mesimvria)
  - Compressor Stations: Kipi, Nea Mesimvria, Stavrolimenas)

- **2nd phase: 8 bcm to Italy**
  - New compressor station at Komotini
  - Upgrading of the existing compressor stations

3 bcm capacity to the Greek market is to be added

TOTAL COST: ~ 950 mil EURO’s
History of Greek – Turkish – Italian cooperation in Gas

Alternative off shore routes (cont.)
History of Greek – Turkish – Italian cooperation in Gas

3) Upgrades of the Turkish Gas System to transport 11.6 bcm/yr to G/T border

Extra loopings: 560 km, 36”
63 km, 48”

Extra compression: 325 MW
Financial Assessment

- Transportation Tariffs are calculated using an “industrial approach” i.e. allowing the remuneration of net invested capital, the recovery of assets depreciation and fixed and variable operating expenses on the basis of equity funding.

- The estimated transportation tariff can optionally be calculated either as Unitary Transport Fee or a Split Transport Fee or a Levelized fee.
Net Back Analysis
Corporate Structure

The IGI project is divided into two sections: offshore and onshore, to be developed via two separate companies: Poseidon Co. and Demeter Co. respectively. Edison, Depa and Botas respective role in the development of the IGI Project will be as follows:

**Edison:**
- Principal shipper within the IGI system (securing at least 80% of the Long term capacity)
- Shareholder in Poseidon Co.

**Depa:**
- Shipper within the IGI system for 20% of the capacity
- Shareholder in Poseidon Co
- Carrier through the Greek grid and 100% owner of the onshore section of the IGI project (Demeter Co)

**Botas:**
- Carrier through the Turkish grid
- Possible bridge supplier to IGI project shippers
- Possible shareholder in Poseidon
DEPA applied to E.C. in 2004 for financial aid in the framework of TEN committee in order to perform a FEED study for the onshore part of IGI project called “Demeter Project” (from Komotini to Stavrolimenas). The application has already been approved by E.C. and the study is expected to start within the last quarter of the current year.

In June 2005 EDISON & DEPA applied jointly to E.C for financial aid in the framework of TEN committee so as to perform FEED and financial studies for the “Poseidon Pipeline”, i.e. the off shore part of IGI pipeline from Stavrolimenas to Otranto. The final decision from E.C. is expected.

In early November, the Italian Minister of Productive activities and the Greek Minister of Development, will transform the “Protocol of “Intent” which was signed in June 2005 into a full Intergovernmental Agreement. The two Ministers have also invited the Turkish Minister of Development to verify the possibility of extending the Intergovernmental Agreement to Turkey as well.
Time Schedule of IGI project

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Expected start-up date: 2010