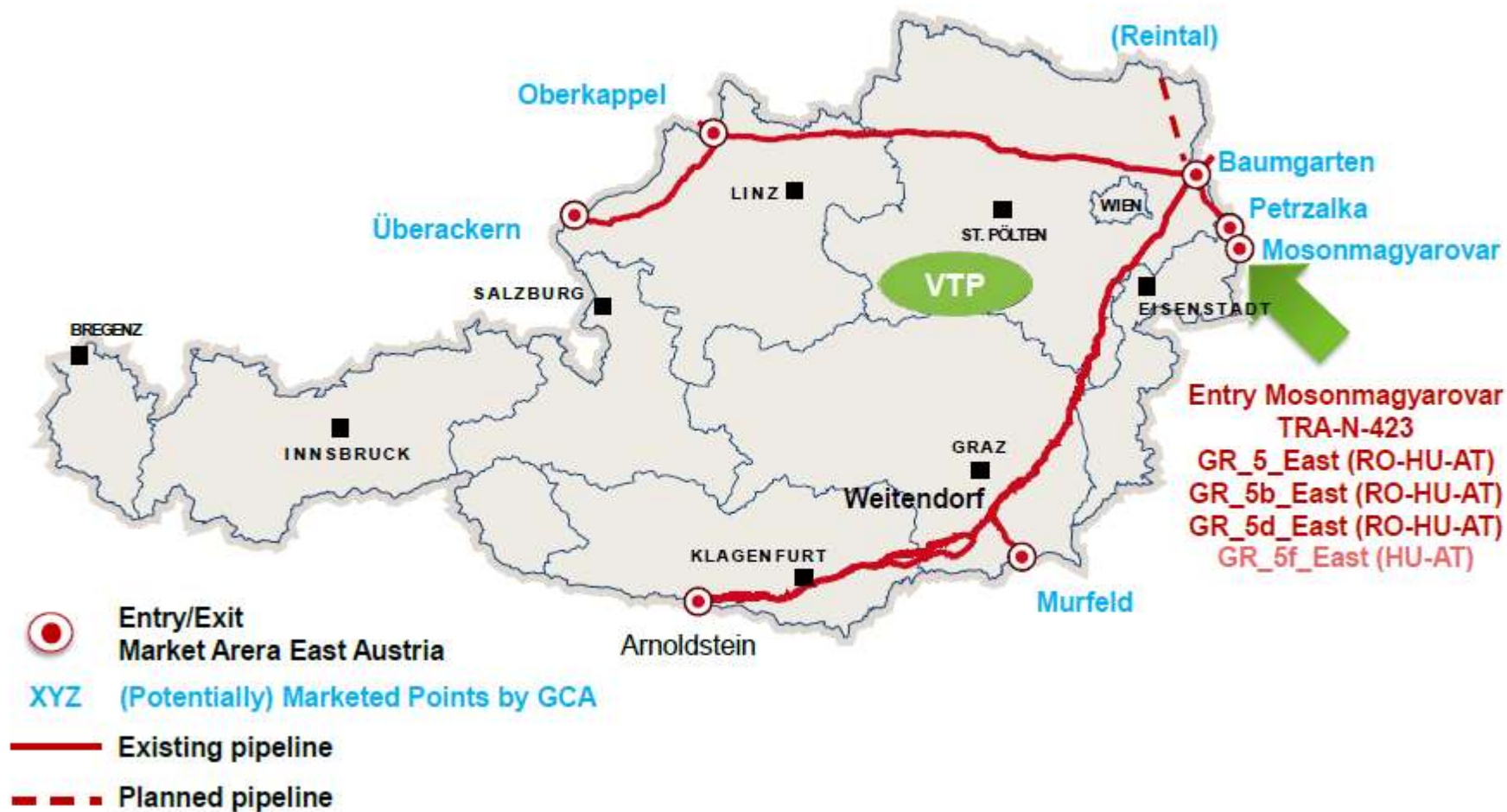




# **PCI candidates presentations; project by project**

**SGC Regional Group  
24<sup>th</sup> of February 2015**

# GAS CONNECT AUSTRIA – Southern Gas Corridor Regional Group



24 February 2014

An aerial photograph of a large industrial gas processing facility, likely a compressor station or refinery. The facility features several large, cylindrical storage tanks, complex piping systems, and tall distillation columns. In the background, there are rolling hills and a clear sky. Overlaid on the bottom half of the image is a semi-transparent map of a region, with various colored lines (red, blue, green, yellow) representing proposed gas pipeline routes. The map shows a network of lines connecting different areas, with some lines being solid and others dashed.

The projects proposals of Bulgartransgaz EAD for  
inclusion into the second PCIs list


# The project proposal of Bulgartransgaz EAD for inclusion into the second PCIs list - SGC

## [TRA-N-140 Interconnection Turkey-Bulgaria \(ITB\)](#)

The action "Feasibility Study for the project Interconnection Bulgaria-Turkey" has been selected to receive financial support under the Connecting Europe Facility Mechanism in the end of 2014.

The FS will be implemented during 2015.





Thank you for your attention!

[www.bulgartransgaz.bg](http://www.bulgartransgaz.bg)  
[hq@bulgartransgaz.bg](mailto:hq@bulgartransgaz.bg)

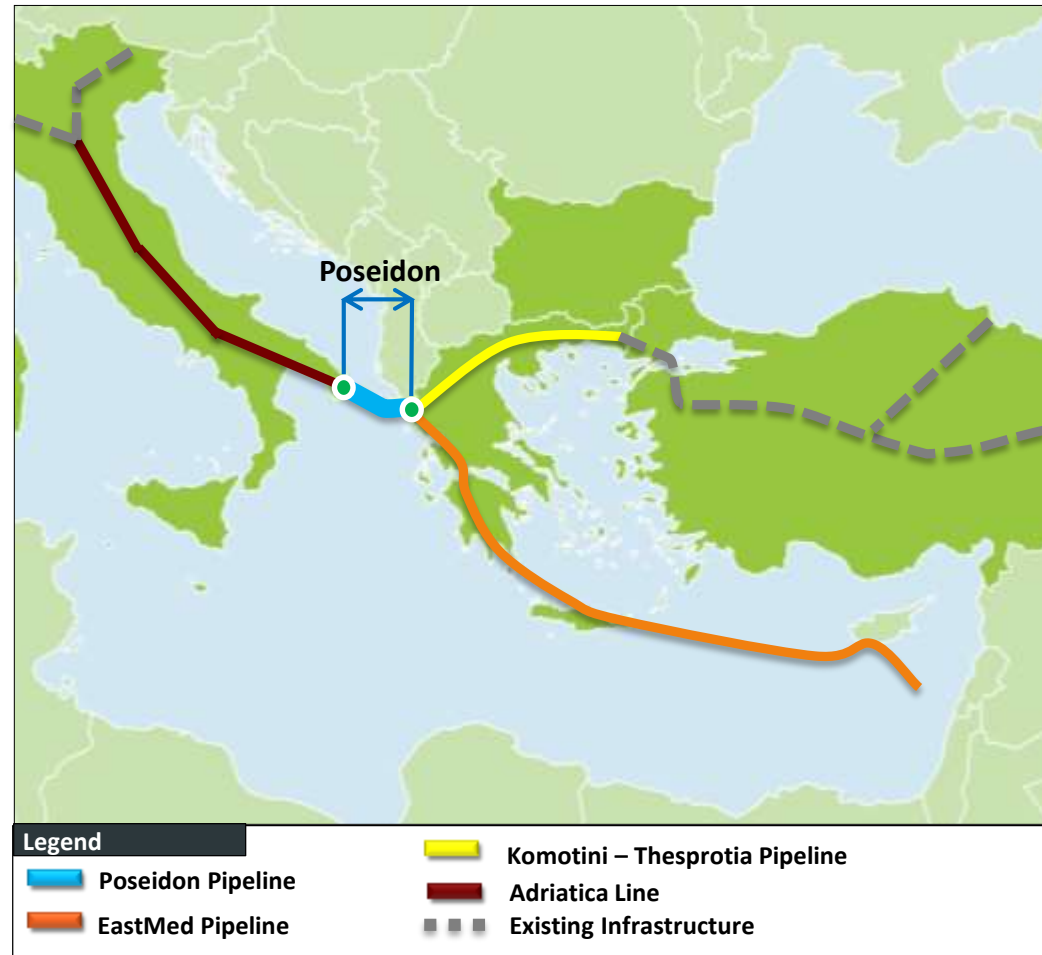
# POSEIDON pipeline project

## ❑ Project main figures:

- 12-14 Bcm/y forward flow capacity (from Greece to Italy)
- up to 9 Bcm/y reverse flow capacity (from Italy to Greece)
- 207 km length
- 32 inch diameter
- 2017 start construction
- 3Q2020 start operation

## ❑ Project development status:

- all technical development activities completed
- all necessary permits in Italy obtained
- permitting procedure in Greece significantly advanced (latest the EIA approval decision on 15<sup>th</sup> of January 2015)



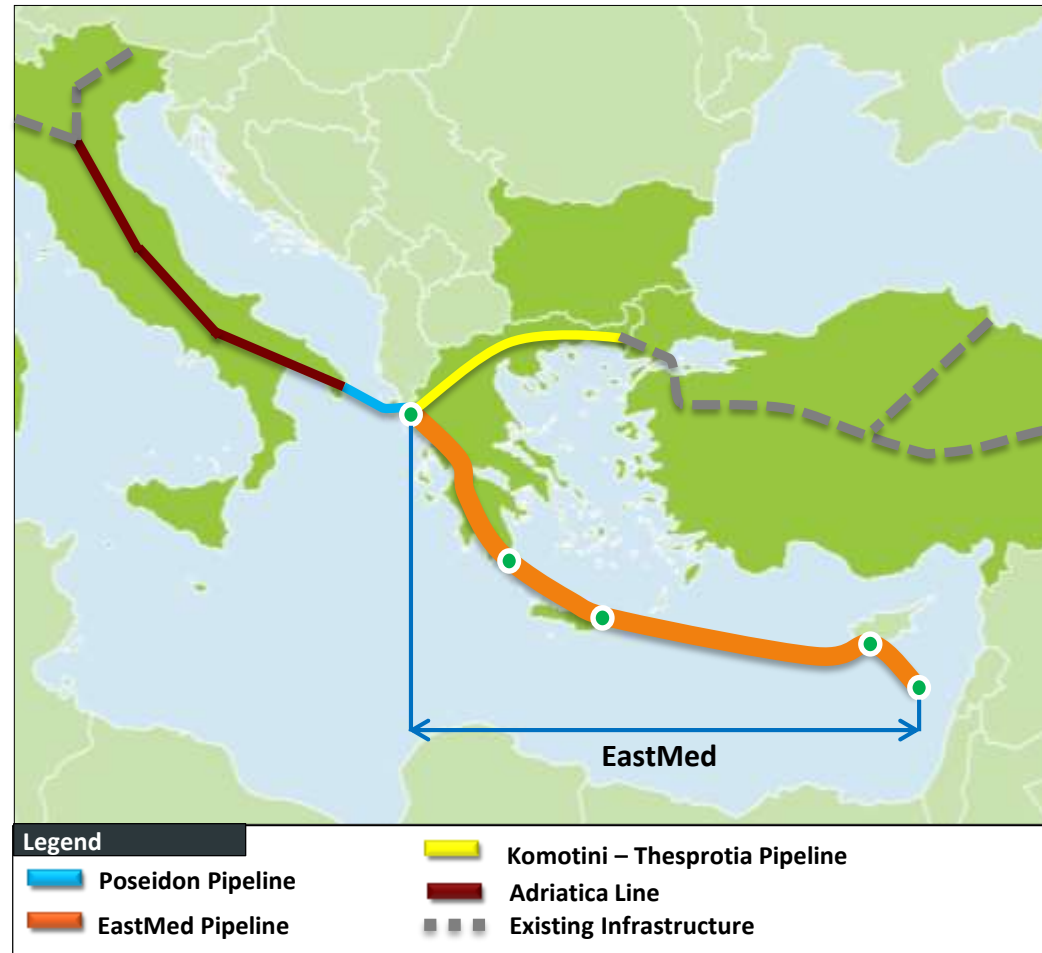
# EASTMED pipeline project

## ❑ Project main figures:

- 12-14 Bcm/y forward flow capacity (Poseidon exit point)
- 0.7 Bcm/y forward flow capacity (Crete exit point)
- 1 Bcm/y forward flow capacity (Cyprus exit point)
- 3 Bcm/y forward flow capacity (Peloponnese exit point)
- 1.7 Bcm/y reverse flow capacity (Peloponnese entry point)
- 1700 km length (1200km offshore)
- 2018 start construction
- 3Q2020 start operation

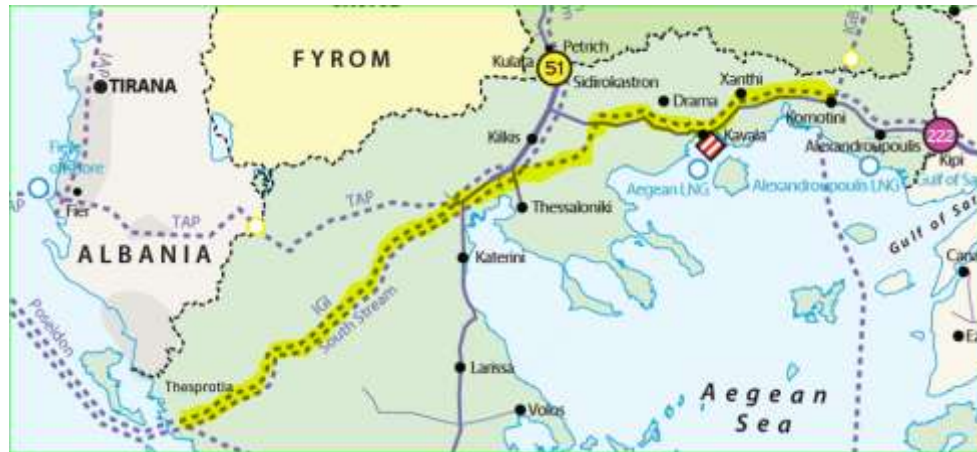
## ❑ Project development status:

- Pre-Feasibility study completed
- Engineering activities ongoing





## Group\_58 & 59\_SGC TRA-N-014 Komotini-Thesprotia pipeline



- **Description:** 613 km, 42" high pressure pipeline from Komotini (in north-eastern Greece) to Thesprotia area (near Ionian coast) along with 2 compressor stations (total power 58 MW) and 1 operation & maintenance centre.
- **Benefit:** The project, together with Poseidon pipeline project (sponsored by IGI Poseidon) will establish one more energy corridor between Asian, Middle Eastern and Eastern Mediterranean gas sources and European consumers. The project aims at enhancing the diversification of supply sources at a European level and contributing to the improvement of the Security of Supply level in the region of South Eastern Europe.
- **Comments:** DESFA is waiting for legal commitments by shippers in order to reactivate this project..



## Group\_17 & 58\_SGC TRA-N-128 Compressor Station Kipi



- **Description:** The project consists of a Compressor Station on the GR side of the GR/TK border.
- **Benefit:** The project aims at increasing the capacity of the Greek transmission system in order to make possible the transmission of natural gas to the Greek and European markets with the use of downstream transmission systems.
- **Comments: Three** variants have been considered in the TYNDP 2015-24:
  - 1+1 x 4.5 MW allowing for the supply of the Greek TS and/or IGB assuming an increase of the flows through Turkey
  - 1+1 x 9.7 MW allowing for an increase of the supply to IGB
  - 2+1 x 9.7 MW allowing, in addition, the supply of TAP or IGI.

The CBA will be based on the first and the third variant



## TRA-N-512 Metering & Regulating Stations for the connection of the Greek Transmission system with TAP



- **Description:** The project consists in the implementation of one or two Metering & Regulating Stations connecting TAP to the Greek transmission system at Komotini and Nea Messimvria.
- **Benefit:** The project will enable the flow of gas from TAP to the Greek transmission system.

## PCI project: Development for new imports from the south (Adriatica Line)



### Technical information

- 430 km - DN1200
- 33 MW
- new capacity: 24 MScm/d



SNAM RETE GAS

# Trans-Caspian Pipeline (TCP)

W-Stream



- Length ~ 300 km
- Relatively shallow waters

Existing & under implementation			
TAP (870km of 48"); initially 10 Bcm/y Final 20 Bcm/y First gas in 2018	BOTAS Gas Pipeline System: up to 8 Bcm/y TANAP (1810km of 48"/56"); up to 31 Bcm/y First gas in 2018	SCPX (Loops & Compr.): 25 Bcm/y FID was 12/2013	
Trans-Caspian Pipeline Phase 1 „Early Gas“ – Diameters to be confirmed during Pre-FEED			
Two optional entry points: (i) TAP or (ii) Nabucco West or other PCI	Transfer via BOTAS Gas Pipeline System and TANAP	Transfer via SCPX + Expansion II	TCP Phase 1 „Early Gas“ [1 x 28" 8 Bcm/y]
Trans-Caspian Pipeline Expansion(s) – Diameters to be confirmed during Pre-FEED			
Optional entry points: (i) TAP and/or (ii) Nabucco West and/or other PCI from Constanta and Trans-Balkan Pipeline	Transfer via TANAP Expansions and/or White Stream	Transfer via SCPX + Expansions + SCPCFX	TCP Expansion(s) [2 x 28" 16 Bcm/y] [3 x 28" 24 Bcm/y]

# White Stream

W-Stream



- Length ~ 1100 km
- Depth ~ 2150 m

Existing & under implementation			
TAP (870km of 48"): initially 10 Bcm/y Final 20 Bcm/y First gas in 2018	BOTAS Gas Pipeline System: up to 8 Bcm/y TANAP (1810km of 48"/56"): up to 31 Bcm/y First gas in 2018	SCPX (Loops & Compr.): 25 Bcm/y FID was 12/2013	
Trans-Caspian Pipeline Phase 1 „Early Gas“ – Diameters to be confirmed during Pre-FEED			
Two optional entry points: (i) TAP or (ii) Nabucco West or other PCI	Transfer via BOTAS Gas Pipeline System and TANAP	Transfer via SCPX + Expansion II	TCP Phase 1 „Early Gas“ [1 x 28" 8 Bcm/y]
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Optional entry points: (i) TAP and/or (ii) Nabucco West and/or other PCI from Constanta and Trans-Balkan Pipeline	Transfer via TANAP Expansions and/or White Stream	Transfer via SCPX + Expansions + SCPFX	TCP Expansion(s) [2 x 28" 16 Bcm/y] [3 x 28" 24 Bcm/y]

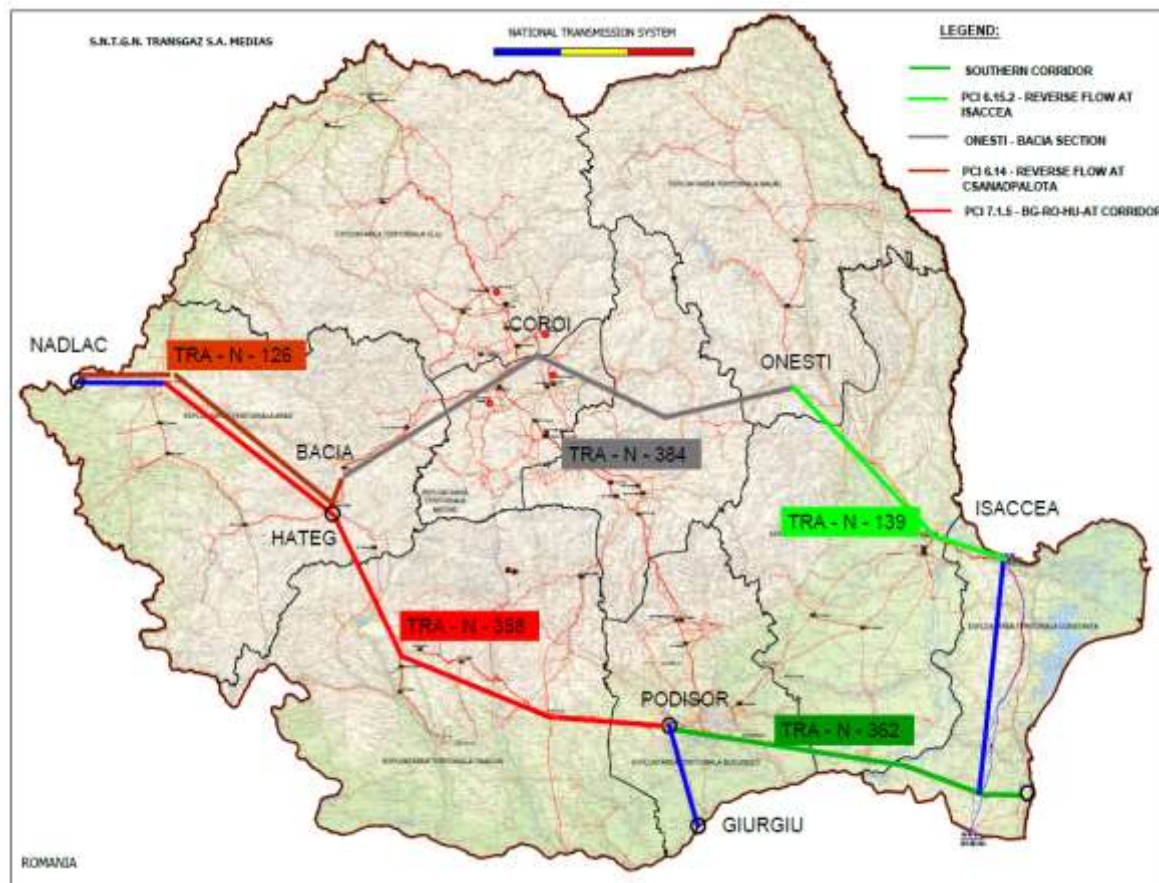


## ***Southern Gas Corridor: Projects TRA-N-358, 362, 139, 384, 126***

### ***Projects Promoter: TRANSGAZ***

*Projects proposed envisage building of pipeline sections and new compressor stations, and are aimed at:*

- ✓ *Granting access to supply sources from Black Sea and Caspian region*
- ✓ *increasing connectivity with neighboring EU states*



TRA-N-358: creates transmission capacities between IPs with BG and HU.

TRA-N-362: connects the BG-RO-HU-AT corridor with the gas sources at the Black Sea

TRA-N-139: connects the transit capacities with the Romanian transmission system enabling bidirectional flows between the RO and BG markets.

TRA-N-384 and 126: connected to project 139, will create a new corridor for additional capacities from the Black Sea towards Central European markets.

***The implementation of these projects will bring significant added value to the regional gas market***

# Trans Adriatic Pipeline



## Overview Map





## Project Background

### Legal Framework

TANAP Project is supported by an Intergovernmental Agreement (IGA) (between Turkey and Azerbaijan) and a Host Government Agreement (HGA).

Important highlights from IGA and HGA:

- Host Government (Turkey) grants to TANAP Project Entity the exclusive right to conduct the transit passage of natural gas via the TANAP System.
- Ministry of Energy and Natural Resources is appointed as Designated State Authority.
- A State Entity BOTAS is appointed as Land Right Entity for land acquisition.

Currently TANAP is 100% owned by Southern Gas Corridor Closed Joint Stock Company (SGC). The agreed shareholder structure will be SGC 58%, BOTAS 30% and BP 12%.

### Project Phases

Phase	Starting Year After First Gas	Actual Year(s)	Total Pipeline Capacity (bcma)	Off-Take Within Turkey (bcma)	Volume to European Countries (bcma)
0	0	2018*	6*	6*	0*
1	1	2019 - 2021	16	6	10***
2	4	2022 - 2025	25	6	19***
3	8	2026 – 2042**	31	6	25***

\*: After completion of commissioning in 2018, the total throughput capacity will be achieved.

\*\*: Relevant economic lifetime.

\*\*\*: The destination of the volumes exceeding 16 bcma has not been determined yet.



## Project Background

### TANAP Gas Transit/Transportation Agreements (GTA)

- Two GTA s were concluded, with Azerbaijan Gas Supply Company (AGSC) acting as Shah Deniz gas Shipper in December 2013 and with BOTAS in May 2014.
- Single Entry Point at Georgian Border (Fiscal Measurement Station in Turkish Territory to be owned and operated by TANAP)
- Exit Points
  - Turkey Exit Points (Eskisehir and Thrace), BOTAŞ as Shipper.
  - Greece, AGSC as Shipper.
- GTA s are based on 100 % Capacity Payment charges based on Annual and Daily Reserved Capacity (ARC and DRC).
- Negotiations are on going for the Operation Agreements with the Shippers and Interconnection Agreements with the Connected Transmission System Operators (TSO)  
**TSO s** : South Caucasus Pipeline Company (SCPC), BOTAS (as Transmission Operator) and Trans Adriatic Pipeline (TAP).



# Procurement & Contracts and Financial Position

## Highlights from Procurement & Contracts

- **Main Line Pipes and Hot Bends:** Contracts awarded on 14 October 2014 to four vendors.
- **56" Onshore Pipeline Construction (OPLC):** Contracts awarded on 23 December 2014 to three contractors (one of which is consortium). Main Camps and Stock Yards are ready for handover to OPLC Contractors.
- **Main Line Ball Valves and Actuators:** Technical and commercial evaluation is completed. Forecasted contract award by February 2015.
- **Turbo Compressors:** Final Commercial Clarifications with the Bidders have been completed. Forecasted contract award by February 2015.
- **SCADA and Telecom:** 9 entities/consortiums have been prequalified. Planned contract award in June 2015.
- **48" Onshore Pipeline Construction:** PQ evaluation is completed. Planned contract award in August 2015.
- **Offshore Pipeline EPC Contract:** PQ applications have been received. Planned contract award in October 2015.
- **Stations Construction:** PQ evaluation is completed. Planned contract award in October 2015.

## Financial Position

- **Total Construction Budget:** Approximately up to 11 billion USD.
- **Financing structure:** 100% equity.
- **Current injected capital:** 632 million USD.

## Gas Value Chain





## Gas Value Chain

The Southern Gas Corridor is one of the most complex gas value chains ever developed in the world. Stretching over 3,500 kilometers, crossing seven countries and involving more than a dozen of major energy companies, it is comprised of several separate energy projects representing a total investment of approximately US\$45 billion:

- [The Shah Deniz 2 development](#), drilling wells and producing gas offshore in the Caspian Sea.
- Expansion of the natural gas processing plant at the [Sangachal Terminal](#) on the Caspian Sea coast in Azerbaijan.
- Three pipeline projects:
  - [South Caucasus Pipeline \(SCPX\)](#) – Azerbaijan, Georgia
  - [Trans Anatolian Pipeline \(TANAP\)](#) – Turkey
  - [Trans Adriatic Pipeline \(TAP\)](#) – Greece, Albania, Italy
- Expansion of the [Italian gas transmission network](#).
- Possibilities for further connection to gas networks in South Eastern, Central and Western Europe.

The partnership operating the Shah Deniz gas field in the Caspian Sea includes SOCAR and BP. The green light has been given to the Stage 2 development of this giant energy project.

# AGRI LNG project map



# Information about AGRI LNG project

- AGRI LNG PROJECT COMPANY SRL, shareholders are SOCAR (Azerbaijan), GOGC (Georgia), ROMGAZ (Romania) and MVM (Hungary) each with 25% interest. On 13 April, 2010 the Ministers of Azerbaijan, Romania and Georgia signed a memorandum and in February, 2011 the Company was established in Bucharest for the implementation of the project.
- The elements in the transport system are as follows:
  - 1) Pipeline transport of gas from Republic of Azerbaijan to Georgian Coast (partly existing)
  - 2) Liquefaction of gas into LNG at the new terminal on Georgian Coast (new)
  - 3) Ship transport of LNG from Georgia to Romania (new)
  - 4) Re-gasification of LNG to gas at new regasification terminal on Romanian Coast (new)
  - 5) Pipeline transport of gas from Regasification terminal to Romania, Hungary and other potential gas markets (partly existing)
- The study has covered both existing and new transmission systems against the three gas supply scenarios of 2, 5 and 8 bcm/year.
- The Feasibility study of the project started on 28<sup>th</sup> of June 2012, when consultant Penspen UK was chosen as an engineering contractor through the competitive report tendering. Board of Directors of AGRI LNG Project Company SRL accepted the results of the report on AGRI feasibility study provided by Penspen on 4 December 2014. These results confirmed the competitiveness of AGRI and its attractiveness for implementation.

# AGRI project PCI activity

Initially project promoters for Romanian and Hungarian parts of AGRI project were SNTGN Transgaz SA and Magyar Gaz Tranzit Zrt. respectively. In December 2014 AGRI BoD recommended that AGRI LNG project company SRL will be appointed as the promoter for all segments of the AGRI project. The proposed transport system included into 2<sup>nd</sup> PCI list will comprise the following scheme:

1. TRA - N - 376 Azerbaijan, Georgia Romania Interconnector – AGRI
2. TRA - N - 132 AGRI Pipeline - Romanian section (East-West Pipeline)
3. TRA - F - 195 AGRI Pipeline - Hungarian section

