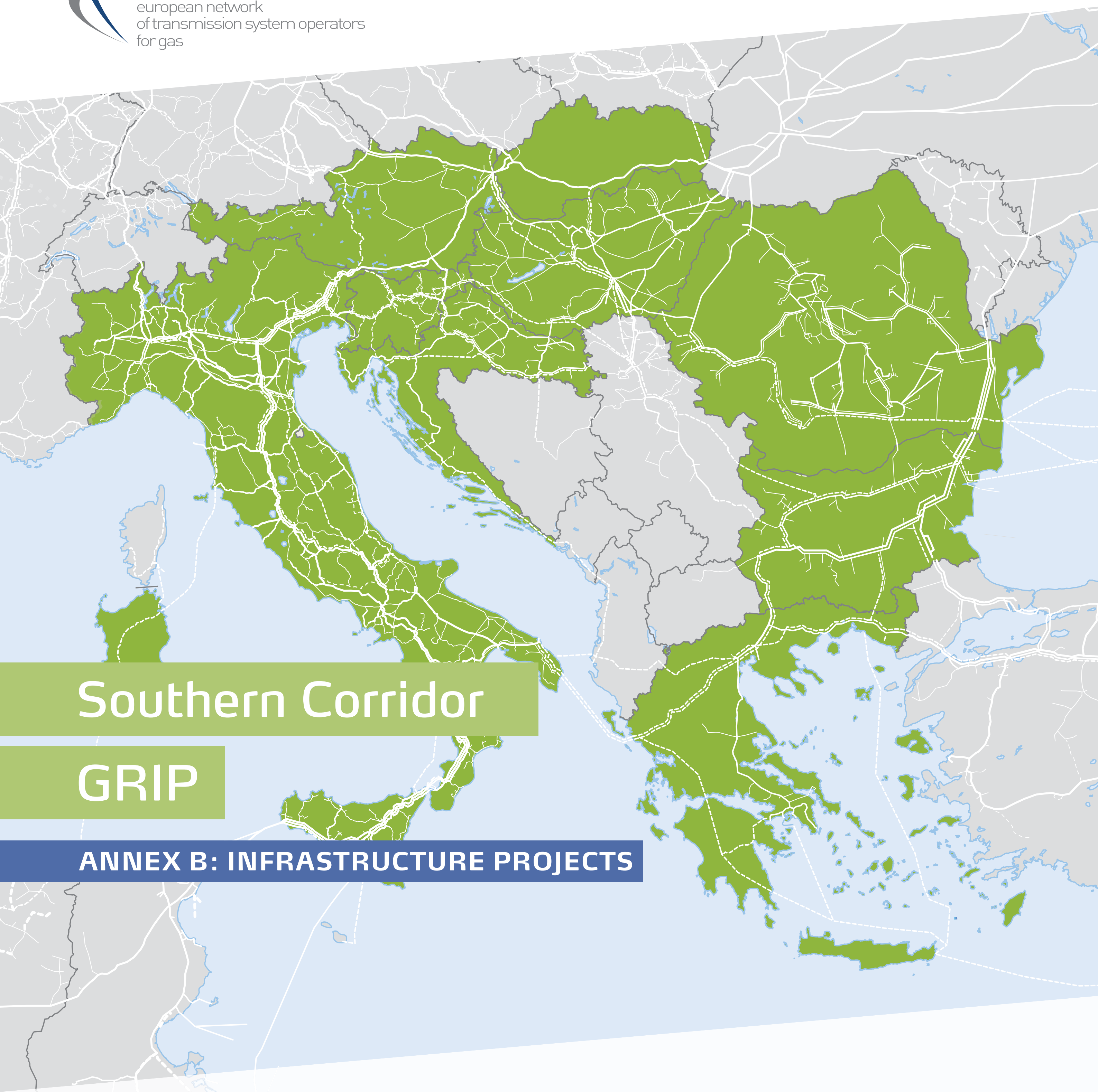
entsog
european network
of transmission system operators
for gas

GAS REGIONAL INVESTMENT PLAN 2014 – 2023



Southern Corridor GRIP

ANNEX B: INFRASTRUCTURE PROJECTS

B•G GAS CONNECT AUSTRIA TAG Trans Austria Gasleitung GmbH BULGARTRANSGAZ PLINACRO DESFA Hellenic Gas Transmission System Operator S.A.

FGSZ LTD. SNAM RETE GAS Infrastrutture Trasporto Gas TRANSGAZ eustream SLOVAK GAS TSO Plinovodi Connected through energy

1 LNG projects

FID

LNG-F-147	Revythoussa (2nd upgrade)	FID

LNG Terminal

SPONSORS

Promoter	DESFA S.A.
Operator	DESFA S.A.

GENERAL INFORMATION

TEN-E Project ?	Project of Common Interest
In PCI list ?	No
IGAs	None
Web Link	www.desfa.gr

TEN-E Requests	Date of Request	Year Funding Granted
	30.04.2010	Not approved (G176/10)

FINANCING

Public Financing	35%
Private Financing	15%
Multilateral Financing	50%

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2014 Q1
FID	2011 Q1
Construction	2013 Q3
Commissioning	2016 Q1
Last completed Phase :	FEED

TECHNICAL INFORMATION

Regasification facility	Revythoussa LNG Terminal
Expected volume (bcm/y)	+2.10
Storage capacity (m3)	+95,000
Send-out (mcm/d)	+5.68
Ship size (m3)	260,000
Reloading ability ?	Yes

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Revythoussa	Yes	entry	67.40	LNG Terminals Greece	Hub Greece

DESCRIPTION OF THE PROJECT

The projects consists of:

- the upgrading of the send-out capacity from 1,000 to 1,400 m3/h (from 14.14 to 19.82 Nm3/d)
- the upgrading of the storage capacity from 130,000 m3 to 225,000 m3 with the addition of a 3rd tank
- the increase of maximum ship size from 140,000 to 260,000 m3

EXPECTED BENEFITS

Security of Supply, Market integration (BG- RO), Reverse Flows, Diversification of sources, Diversification of routes, N-1 National (GR), N-1 Regional (BG- RO), The LNG Terminal at Revythoussa plays significant role regarding the Security of Supply of gas in Greece and contributes to the stable operation of NNGS. The project will enhance the above attitudes along with its flexibility for serving more shippers. It will also increase the storage capacity of the terminal. Both above benefits will also be felt by BG and RO through the reverse flow arrangements or new North-South interconnections.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing
Greek State and EU funds (NSRF 2007-2013)		Loan application submitted to EIB in July 2013

2 LNG projects

non-FID

LNG-N-011	Brindisi LNG	Non-FID

LNG Terminal

SPONSORS

Promoter	BG Group
Operator	BG Group

GENERAL INFORMATION

TEN-E Project ?	Priority Project
In PCI list ?	No
IGAs	None
Web Link	www.brindisilng.it

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Negotiated (e.g. Exemption)
Considered Tariff Regime	Negotiated (e.g. Exemption)
Applied for Exemption ?	Yes
Exemption granted ?	Yes
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2013 Q4
FID	2014
Construction	
Commissioning	2017 Q4
Last completed Phase :	Planned

TECHNICAL INFORMATION

Regasification facility	
Expected volume (bcm/y)	+8.00
Storage capacity (m3)	+320,000
Send-out (mcm/d)	+25.00
Ship size (m3)	
Reloading ability ?	No

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Brindisi	No	exit	275.00	LNG Terminals Italia	Hub Italia

DESCRIPTION OF THE PROJECT

No data made available by sponsor

EXPECTED BENEFITS

Security of Supply, Market integration, Diversification of sources, SoS:
o Gas for the Project is intended to be sourced from BG's LNG supply portfolio. The Project should therefore increase the number of supply sources to the Italian market and reduce the EU's dependence on a few large suppliers (Russia and Algeria). This will enhance the security of supply not only to Italy but also to the Southern European region.

o The development of the Brindisi LNG project will provide an alternative mechanism to pipelines at a national and European level for the transportation of gas into the EU.

o The investment in the Terminal will also support wider infrastructure enhancement in the SNAM Rete Gas national transportation network.

Market Integration (Increase of competition):
o The project will allow the entry of new operators into the Italian wholesale gas market and will provide the power generators, industrial users and the retail gas market with important alternative sources to the incumbent gas wholesaler. The project will therefore promote competition in both the wholesale and retail markets, whilst constituting an important investment in Italian gas infrastructure.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

LNG-N-062	Alexandroupolis Independent Natural Gas System - LNG Section	Non-FID

LNG Terminal

SPONSORS

Promoter	Gastrade S.A.
Operator	Gastrade S.A.

GENERAL INFORMATION

TEN-E Project ?	Project of Common Interest
In PCI list ?	Yes
IGAs	None
Web Link	

FINANCING

Public Financing	30%
Private Financing	70%
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2014 Q2
FID	2014 Q4
Construction	2015 Q1
Commissioning	2016 Q2
Last completed Phase :	Planned

TECHNICAL INFORMATION

Regasification facility	Alexandroupolis INGS LNG - FSRU
Expected volume (bcm/y)	+3.00
Storage capacity (m3)	+170,000
Send-out (mcm/d)	+16.80
Ship size (m3)	170,000
Reloading ability ?	No

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Alexandropolis LNG	**Yes**	**exit**	**187.50**	**LNG Terminals Greece**	**Hub Greece**

DESCRIPTION OF THE PROJECT

The project comprises an offshore floating LNG terminal (FSRU) including mooring, flex risers, PLEM, etc. located permanently in the Sea of Thrace, NE Greece.

EXPECTED BENEFITS

Security of Supply, Market integration (SEE+Serbia+FYROM), Diversification of sources, Diversification of routes, N-1 National (Greece), N-1 Regional (SEE+Serbia+FYROM), Back-up for renewables, Power-to-gas.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

LNG-N-082	LNGRV	Non-FID

LNG Terminal

SPONSORS

Promoter	Plinacro Ltd
Operator	LNG Hrvatska d.o.o.

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	None
Web Link	

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Not applicable
Considered Tariff Regime	Not applicable
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	
Construction	
Commissioning	2017
Last completed Phase :	Planned

TECHNICAL INFORMATION

Regasification facility	LNG RV Croatia
Expected volume (bcm/y)	+2.00
Storage capacity (m3)	
Send-out (mcm/d)	+5.50
Ship size (m3)	
Reloading ability ?	No

PROJECTED CAPACITY INCREASES					
Interconnection	**Modelled**	**Direction**	**Capacity (GWh/d)**	**From Zone**	**To Zone**
LNG RV (Regasification Vessel) to Croatia	**Yes**	**exit**	**60.50**	**LNG Terminals Croatia**	**Hub Croatia**

DESCRIPTION OF THE PROJECT

The LNG RV will be situated in Omišalj on the island of Krk, Republic of Croatia.
It is considered a part of the Energy Community Gas Ring, which is the concept of gasification for the entire region, proposed by the WB Study and accepted by the Gas Fora of the Energy Community.

EXPECTED BENEFITS

Security of Supply, Market integration (Croatia, markets of Central and Western Europe (Austria, Slovenia, Hungary, Slovakia, Check Republic) as well as the Balkan countries (Serbia, B&H, Montenegro…)), Diversification of sources, Diversification of routes, N-1 National (for Croatia), N-1 Regional, Back-up for renewables.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

LNG-N-085	api nòva energia S.r.l. – LNG off-shore regasification terminal of Falconara Marittima (Ancona, Italy)	Non-FID

LNG Terminal

SPONSORS

Promoter	API Nova Energia S.r.l.
Operator	API Nova Energia S.r.l.

GENERAL INFORMATION

TEN-E Project ?	Project of Common Interest
In PCI list ?	No
IGAs	None
Web Link	apinovaenergia.gruppoapi.com/Gas-Power/Terminale-GNL/

TEN-E Requests	Date of Request	Year Funding Granted
	24.04.2009	2010
	28.02.2011	Not yet

FINANCING

Public Financing	–
Private Financing	100%
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Negotiated (e.g. Exemption)
Considered Tariff Regime	Negotiated (e.g. Exemption)
Applied for Exemption ?	Yes
Exemption granted ?	Not yet
% Exemption in entry direction	100%
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2012 Q1
FID	2014 Q3
Construction	2015 Q3
Commissioning	2018 Q1
Last completed Phase :	Permitting

TECHNICAL INFORMATION

Regasification facility	api nòva energia S.r.l. – LNG off-shore regasification terminal of Falconara Marittima (Ancona, Italy)
Expected volume (bcm/y)	+4.00
Storage capacity (m3)	+150,000
Send-out (mcm/d)	+25.90
Ship size (m3)	150,000
Reloading ability ?	No

PROJECTED CAPACITY INCREASES					
Interconnection	**Modelled**	**Direction**	**Capacity (GWh/d)**	**From Zone**	**To Zone**
Falconara Marittima	**No**	**exit**	**284.90**	**LNG Terminals Italia**	**Hub Italia**

DESCRIPTION OF THE PROJECT

The project envisages the utilization of
(i) an off-shore mooring structure, Single Point Mooring type, located 16 km off the coast and currently used for the crude oil discharge for the Falconara Marittima refinery, to be adapted in order to allow also the mooring of Floating Storage Regasification Unit (FSRU) vessels and the discharge of regasified natural gas in the national gas network through a new off-shore and on-shore 20 km long connection pipeline, and
(ii) one or more FSRU vessels for the onboard regasification of LNG and the discharge through the SPM of regasified natural gas. Regasification operations shall be performed directly onboard the FSRU vessels, that shall load LNG either from liquefaction plants abroad or via transhipment from LNG carriers away from the SPM. No on-shore fixed LNG storage facilities shall be installed: the regasified gas shall be transported to the coast through a new submarine pipeline and shall then be redirected to a regulation and metering station for the connection with the existing national transport network, located close to the landing point.

EXPECTED BENEFITS

Security of Supply, Market integration, Reverse Flows, Diversification of sources, Diversification of routes, N-1 National, N-1 Regional.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

LNG-N-088	LNG Medgas Terminal S.r.l.	Non-FID

LNG Terminal

SPONSORS

Promoter	Sorgenia S.p.A.
Operator	LNG Medgas Terminal S.r.l.

GENERAL INFORMATION

TEN-E Project ?	Priority Project	
In PCI list ?	No	
IGAs	None	
Web Link	www.sorgenia.com / www.gruppoiren.it	
TEN-E Requests	Date of Request	Year Funding Granted
	02.12.2008	2010

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	(probably) Regulated
Considered Tariff Regime	(probably) Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2012 Q1
FID	2014 Q4
Construction	2015 Q1
Commissioning	2008 Q1
Last completed Phase :	Permitting

TECHNICAL INFORMATION

Regasification facility	LNG Medgas Terminal S.r.l.
Expected volume (bcm/y)	+12.00
Storage capacity (m3)	+640,000
Send-out (mcm/d)	+32.90
Ship size (m3)	270,000
Reloading ability ?	No

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Medgas Terminal LNG	**No**	**exit**	**361.90**	**LNG Terminals Italia**	**Hub Italia**

DESCRIPTION OF THE PROJECT

New large LNG Terminal of Gioia Tauro, in southern Italy.

EXPECTED BENEFITS

Security of Supply, Market integration (Development of Italy as a gas hub and possibility to become an exporting country.), Reverse Flows, Diversification of sources, Diversification of routes, N-1 National (Italy), N-1 Regional, N-1 criteria completion (regional level): a region is not yet formally defined; the LNG Medgas Terminal will however bring advantages at both national level and at regional level, considering the nature of a LNG project. It will contribute to the satisfaction of the European and Italian gas needs. Furthermore, the LNG Terminal of Gioia Tauro, by guaranteeing the possibility of buying LNG worldwide, will mitigate the European geopolitical risk, in particular for Italy which is highly dependent on Russian and Algerian imports. This aspect is in line with the specific criteria of the security of supply.

The position of Gioia Tauro is extremely strategic both for cargoes coming from the Suez Channel and from Atlantic basin. In the eventuality of disruptions in gas supplies from North African countries, the Gioia Tauro LNG Terminal would play a crucial role in allowing the supply of natural gas from alternative sources, without affecting the distribution chain that, from the Calabria region, provides natural gas to the rest of Italy and potentially also to Northern Europe.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

LNG-N-129	Aegean LNG Import Terminal	Non-FID

LNG Terminal

SPONSORS

Promoter	DEPA S.A.
Operator	DEPA S.A.

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	None
Web Link	

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Negotiated (e.g. Exemption)
Considered Tariff Regime	Negotiated (e.g. Exemption)
Applied for Exemption ?	Not yet
Exemption granted ?	Not yet
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2014 Q3
FID	2014 Q3
Construction	2014 Q4
Commissioning	2016 Q1
Last completed Phase :	Planned

TECHNICAL INFORMATION

Regasification facility	Regasification facility is integrated at the FSRU
Expected volume (bcm/y)	+5.00
Storage capacity (m3)	+170,000
Send-out (mcm/d)	+14.00
Ship size (m3)	150,000
Reloading ability ?	Yes

PROJECTED CAPACITY INCREASES					
Interconnection	**Modelled**	**Direction**	**Capacity (GWh/d)**	**From Zone**	**To Zone**
Aegean LNG	**Yes**	**exit**	**154.00**	**LNG Terminals Greece**	**Hub Greece**

DESCRIPTION OF THE PROJECT

The LNG import terminal will be a FSRU, located at the North-Eastern (Northern Aegean) area of Greece, with a capacity of 3-5 bcm/y. It will supply LNG directly to Greece and, further north, to Bulgaria and Romania.

EXPECTED BENEFITS

Security of Supply, Market integration, Diversification of sources, N-1 National, Back-up for renewables, Power-to-gas, Being located in the North of Greece it will provide more balanced LNG supply in the country than the existing Revythousa terminal. The upgrading of the pipline network could be facilitated by creating an additional access point in this particular geographical area. Will make available small quantities of LNG for industrial/commercial applications and for its use as a transportation fuel for road, rail and marine applications.The availability of LNG in the South-Eastern Balkan area will increase the use of Natural Gas for electricity production and other big industrial applications, reducing substantially the GHG emissions. As a LNG storage facility, the project will respond to daily increases in demand (short term resilience).

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

LNG-N-198	Porto Empedocle LNG	Non-FID

LNG Terminal

SPONSORS	
Promoter	Nuove Energie S.r.l.
Operator	Nuove Energie S.r.l.

GENERAL INFORMATION	
TEN-E Project ?	Not part of TEN-E
In PCI list ?	No
IGAs	None
Web Link	www.enel.it/it-IT/eventi_news/news/terminale-di-rigassificazione-di-porto-empedocle/p/090027d9819310b8

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Negotiated (e.g. Exemption)
Considered Tariff Regime	Negotiated (e.g. Exemption)
Applied for Exemption ?	Yes
Exemption granted ?	Yes
% Exemption in entry direction	100%
% Exemption in exit direction	100%

SCHEDULE	
End of permitting phase	2012 Q1
FID	2014 Q3
Construction	2015 Q3
Commissioning	2018 Q1
Last completed Phase :	Permitting

TECHNICAL INFORMATION	
Regasification facility	Porto Empedocle LNG
Expected volume (bcm/y)	+8.00
Storage capacity (m3)	+320,000
Send-out (mcm/d)	+23.10
Ship size (m3)	155,000
Reloading ability ?	Yes

PROJECTED CAPACITY INCREASES					
Interconnection	**Modelled**	**Direction**	**Capacity (GWh/d)**	**From Zone**	**To Zone**
Porto Empedocle LNG	**Yes**	**exit**	**254.10**	**LNG Terminals Italia**	**Hub Italia**

DESCRIPTION OF THE PROJECT

The planned Porto Empedocle LNG Terminal will be located in Italy, in the Sicily Region, cadastral area of Porto Empedocle, for which the promoter received a thirty-year concession. It will consist of:
– two underground storage tanks of 160,000 of m³ of capacity each,
– vaporiser pumps and other treatment facilities required to process LNG and
– a breakwater with mooring jetty and unloading arms.
The LNG Terminal at Porto Empedocle will offer:
– a nominal yearly regasification capacity of 8 billion m3;
– will be able to receive LNG tankers up to 155,000 m3 of capacity.
The LNG Terminal will be able to inject the gas at the standard grid pressure (around 70 bar) and will be connected to the transmission system operated by SnamReteGas by means of a pipeline section specifically built by SnamReteGas.

EXPECTED BENEFITS

Security of Supply, Market integration, Diversification of sources, Diversification of routes, The LNG terminal will provide some storage capacity within its tanks, allowing to provide flexibility to the system in an area where gas storage is not currently present.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

LNG-N-217	Zaule - LNG Terminal in Trieste (Italy)	Non-FID

LNG Terminal

SPONSORS

Promoter	Gas Natural Rigassificazione Italia
Operator	gasNatural Rigassificazione S.p.A.

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	None
Web Link	www.rigassificatoretrieste.gasnatural.com/it/1285085357074/inizio.html

FINANCING

Public Financing	–
Private Financing	100%
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Negotiated (e.g. Exemption)
Considered Tariff Regime	Negotiated (e.g. Exemption)
Applied for Exemption ?	Not yet
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2014 Q2
FID	2015 Q1
Construction	2015 Q4
Commissioning	2018 Q4
Last completed Phase :	FEED

TECHNICAL INFORMATION

Regasification facility	Zaule LNG Terminal (Trieste - Italy)
Expected volume (bcm/y)	+8.00
Storage capacity (m3)	+280,000
Send-out (mcm/d)	+24.00
Ship size (m3)	145,000
Reloading ability ?	No

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Zaule LNG (Trieste)	No	exit	264.00	LNG Terminals Italia	Hub Italia

DESCRIPTION OF THE PROJECT

Onshore regasification terminal with 8 bcm/y capacity. Storage capacity: 2 x 140,000 m3; Send-out capacity: 1,075,000 Sm3/hour. Single jetty and maximum vessel size of 145,000 m3.

EXPECTED BENEFITS

Security of Supply, Market integration (Italy and North and Central Europe), Reverse Flows, Diversification of sources, Diversification of routes, N-1 National (Italy), N-1 Regional (Region South - North), Back-up for renewables, Power-to-gas, Decontamination of part of Trieste Industrial Harbour. Boost in economic activity in the city, province and region.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

3 Transportation projects FID

TRA-F-016	Slovakia - Hungary interconnection	FID

Pipeline including CS

SPONSORS

Promoter	eustream, a.s.
Operator	eustream, a.s.

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list?	Yes
IGAs	1
Web Link	www.eustream.sk/en_transmission-system/en_sk-hu-interconnector

FINANCING

Public Financing	16%
Private Financing	84%
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2012 Q1
FID	2010 Q1
Construction	2012 Q2
Commissioning	2015 Q1
Last completed Phase :	FID

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	+18.00
Total Compressor Power (MW)	
Expected Load Factor	+0.80
Diameter (range) (mm)	DN 800
Diameter (range) (inches)	32"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Balassagyarmat	Yes	exit	127.40	Hub Slovakia	Hub Hungary (SK-HU Interconnector)
	Yes	entry	50.90	Hub Hungary (SK-HU Interconnector)	Hub Slovakia

DESCRIPTION OF THE PROJECT

Creation of a missing interconnection between SK and HU and thus increase the Security of Supply in CEE region, and enhance market integration and functionality.

EXPECTED BENEFITS

Security of Supply, Market integration (CEE region), Reverse Flows, Diversification of sources, Diversification of routes, N-1 National (Slovakia, Hungary), N-1 Regional (CEE region), Back-up for renewables, Power-to-gas.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing
Interconnector Slovakia – Hungary: EEPR: € 3.3 mil.	eustream, a.s.	

TRA-F-017	System Enhancements - Eustream	FID

Pipeline including CS

SPONSORS	
Promoter	eustream, a.s.
Operator	eustream, a.s.

GENERAL INFORMATION	
TEN-E Project ?	Not part of TEN-E
In PCI list ?	No
IGAs	None
Web Link	www.eustream.sk.

FINANCING	
Public Financing	–
Private Financing	100%
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	2009 Q4
FID	2010 Q1
Construction	2010 Q1
Commissioning	2017
Last completed Phase :	FID

TECHNICAL INFORMATION	
# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	not appliccable
Total Compressor Power (MW)	
Expected Load Factor	
Diameter (range) (mm)	
Diameter (range) (inches)	

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone

DESCRIPTION OF THE PROJECT

Modernization and Upgrade (i.e. redesign, increase, of integrity and flexibility) of the network and replacement of technologies in order to meet environmental norms.

EXPECTED BENEFITS

Security of Supply, Market integration, Back-up for renewables, Power-to-gas, Modernization and upgrade of the network and replacement of technologies due to environmental norms.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing
	eustream, a.s.	

TRA-F-029	RO-BG Interconnection	FID

Pipeline including CS	Same project as TRA-F-059

SPONSORS

Promoter	Transgaz
Operator	Transgaz

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	No
IGAs	None
Web Link	www.transgaz.ro

FINANCING

Public Financing	37%
Private Financing	63%
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2011 Q4
FID	2010 Q4
Construction	2013 Q2
Commissioning	2014 Q2
Last completed Phase :	FID

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	+25.00
Total Compressor Power (MW)	
Expected Load Factor	+1.00
Diameter (range) (mm)	DN 500
Diameter (range) (inches)	20"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Ruse (BG) / Giurgiu (RO)	Yes	exit	14.38	Hub Romania	Hub Bulgaria (NGTS)
	Yes	entry	14.38	Hub Bulgaria (NGTS)	Hub Romania

DESCRIPTION OF THE PROJECT

The projects consists in linking the GIORGIU gas metering station (GMS), on the Romanian side, with the Ruse GMS on the Bulgarian side with a 25 km, DN 500 pipeline. It includes a crossing under Danube river. The design pressure is 40 bar and the annual capacity 1.5 bcm/y. Same project as TRA-F-059.

EXPECTED BENEFITS

Diversification of sources, Diversification of routes, Diversification of sources of energy, routes and supplies; increasing the degree of interconnectivity between the gas transmission systems of the two countries; safety, reliability and interoperability of interconnected energy networks, including enabling bidirectional gas flows; contribution to the establishment of the South-Eastern European regional gas market.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-F-139	Integration of the transit and transmission system - reverse flow Isaccea	FID

Pipeline including CS

SPONSORS	
Promoter	Transgaz
Operator	Transgaz

GENERAL INFORMATION	
TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	None
Web Link	www.transgaz.ro

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	
FID	2010
Construction	
Commissioning	2016
Last completed Phase :	Permitting

TECHNICAL INFORMATION	
# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	
Total Compressor Power (MW)	
Expected Load Factor	
Diameter (range) (mm)	
Diameter (range) (inches)	

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Isaccea (RO) - Orlovka (UA)	Yes	entry	147.00	Transit Ukraine	Hub Romania

DESCRIPTION OF THE PROJECT

The project implies the construction of a connection pipeline between the DN 1000 Pipeline (Transit 1 Bulgaria) and the Romanian Transmission System, with the possibility to meter the natural gas volumes transmitted in both directions. The project is currently under reassessment.

EXPECTED BENEFITS

Security of Supply, Market integration (RO, BG, UKR), Reverse Flows, Diversification of sources, Power-to-gas, Biogas.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-F-142	Reverse flow at Negru Voda	FID

Pipeline including CS

SPONSORS	
Promoter	Transgaz
Operator	Transgaz

GENERAL INFORMATION	
TEN-E Project ?	Not part of TEN-E
In PCI list ?	No
IGAs	None
Web Link	www.transgaz.ro

FINANCING	
Public Financing	50%
Private Financing	50%
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	
FID	2010
Construction	
Commissioning	2013
Last completed Phase :	Commissioning

TECHNICAL INFORMATION	
# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	
Total Compressor Power (MW)	
Expected Load Factor	
Diameter (range) (mm)	
Diameter (range) (inches)	

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Negru Voda I	Yes	entry	168.00	Hub Bulgaria (NGTS)	Trans-Balkan Pipeline (Romania)

DESCRIPTION OF THE PROJECT

Upgrades of technical installation currently existing at the GMS Negru Voda in order to ensure reverse flow capacity with the possibility to measure such capacity.

EXPECTED BENEFITS

Security of Supply, Market integration (Romania, Bulgaria, Ukraine), Reverse Flows, Diversification of sources, Power-to-gas, Biogas.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-F-148	Slovak-Hungarian interconnector (Vecsés-Szada-Balassagyarmat)	FID

Pipeline including CS

SPONSORS	
Promoter	Magyar Gaz Tranzit Zrt.
Operator	MGT Hungarian Gas Transit Ltd.

GENERAL INFORMATION	
TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	1
Web Link	

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	regulated
Considered Tariff Regime	regulated
Applied for Exemption ?	No
Exemption granted ?	no
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	2014
FID	
Construction	2013
Commissioning	2015 Q1
Last completed Phase :	FID

TECHNICAL INFORMATION	
# of Pipelines, nodes, CS	2
Total Pipeline Length (km)	+110
Total Compressor Power (MW)	
Expected Load Factor	
Diameter (range) (mm)	DN 800
Diameter (range) (inches)	32"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Balassagyarmat	Yes	entry	127.40	Hub Slovakia	Hub Hungary (SK-HU Interconnector)
	Yes	exit	50.90	Hub Hungary (SK-HU	Hub Slovakia

DESCRIPTION OF THE PROJECT

Hungarian section 92 km. Slovak section 18 km. PN 75 bar. Bidirectional transportation possibility.

EXPECTED BENEFITS

Security of Supply, Market integration

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-F-195	AGRI Pipeline - Hungarian section	FID

Pipeline including CS

SPONSORS

Promoter	Magyar Gaz Tranzit Zrt.
Operator	MGT Hungarian Gas Transit Ltd.

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	1
Web Link	

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Not applicable
Considered Tariff Regime	Not applicable
Applied for Exemption ?	No
Exemption granted ?	no
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	
Construction	
Commissioning	2023
Last completed Phase :	

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	
Total Compressor Power (MW)	
Expected Load Factor	
Diameter (range) (mm)	
Diameter (range) (inches)	

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone

DESCRIPTION OF THE PROJECT

The project is in feassibility phase.

EXPECTED BENEFITS

Security of Supply, Market integration

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-F-213	Support to the North West market	FID

Pipeline including CS

SPONSORS

Promoter	Snam Rete Gas S.p.A.
Operator	Snam Rete Gas S.p.A.

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	None
Web Link	http://www.snamretegas.it/en/services/Thermal_Year_2013_2014/Ten-year-Plan/index.html

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	
Construction	
Commissioning	2015 Q4
Last completed Phase :	Supply contract

The project consists of sub projects that are in different stages of progress

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	+370
Total Compressor Power (MW)	
Expected Load Factor	
Diameter (range) (mm)	DN 1200
Diameter (range) (inches)	48"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Griespass (CH) / Passo Gries (IT)	Yes	exit	54.00	Hub Italia	Hub Switzerland

DESCRIPTION OF THE PROJECT

Project title changed since TYNDP 2013-2022 publication. The project consists in new on-shore pipelines in the north of Italy and it permits to increase the flexibility of the gas transmission and the security of supply in the north-west area of Italy, allowing a first step of export capacity.

EXPECTED BENEFITS

Security of Supply, Market integration, Reverse Flows, Diversification of routes, N-1 Regional, Back-up for renewables, Power-to-gas, Market Integration (Increase of competition), Flexibility of the system, reducing of GHG emissions.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-F-214	Support to the North West Market and bidirectional cross-border flows	FID

Pipeline including CS

SPONSORS

Promoter	Snam Rete Gas S.p.A.
Operator	Snam Rete Gas S.p.A.

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	None
Web Link	http://www.snamretegas.it/en/services/Thermal_Year_2013_2014/Ten-year-Plan/index.html

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	
Construction	
Commissioning	2017 Q4
Last completed Phase :	FID

The project consists of sub projects that are in different stages of progress

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	+80.00
Total Compressor Power (MW)	+95.00
Expected Load Factor	
Diameter (range) (mm)	DN 1200
Diameter (range) (inches)	48"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Griespass (CH) / Passo Gries (IT)	Yes	exit	375.00	Hub Italia	Hub Switzerland

DESCRIPTION OF THE PROJECT

Project title changed since TYNDP 2013-2022 publication. The project consists in new on-shore pipelines and new compressor stations in the north of Italy and it permits to increase the flexibility of the gas transmission and the security of supply in the north-west area of Italy and it makes available additional export capacity over the project "Support to the North West market".

EXPECTED BENEFITS

Security of Supply, Market integration, Reverse Flows, Diversification of routes, N-1 Regional, Back-up for renewables, Power-to-gas, Market Integration (Increase of competition), Flexibility of the system, reducing of GHG emissions.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

4 Transportation projects non-FID

TRA-N-007	Development for new imports from the South (Adriatica Line)	Non-FID

Pipeline including CS

SPONSORS	
Promoter	Snam Rete Gas S.p.A.
Operator	Snam Rete Gas S.p.A.

GENERAL INFORMATION	
TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	None
Web Link	http://www.snamretegas.it/en/services/Thermal_Year_2013_2014/Ten-year-Plan/index.html

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	
FID	
Construction	
Commissioning	2019
Last completed Phase :	Planned

TECHNICAL INFORMATION	
# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	+430
Total Compressor Power (MW)	+33.00
Expected Load Factor	+0.65
Diameter (range) (mm)	DN 1200
Diameter (range) (inches)	48"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
New Entry Point in South Italy	Yes	entry	264.00	Trans-Adriatic Pipeline (Greece)	Hub Italia

DESCRIPTION OF THE PROJECT

Project title changed since TYNDP 2013-2022 publication. The project consists in new on-shore pipeline and compressor station along the center-south of Italy that will allow the increase of transport capacity at new or existing Entry Points in south Italy. The implementation plan and, in particular, the FID could be influenced by other projects creating a new entry point in southern Italy, in the context of the Southern Gas Corridor.

EXPECTED BENEFITS

Security of Supply, Market integration, Diversification of sources, Diversification of routes, N-1 National (Italy), Back-up for renewables, Power-to-gas, Market Integration (Increase of competition), Flexibility of the system.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-008	Import Developments from North East	Non-FID

Pipeline including CS

SPONSORS	
Promoter	Snam Rete Gas S.p.A.
Operator	Snam Rete Gas S.p.A.

GENERAL INFORMATION	
TEN-E Project ?	Not part of TEN-E
In PCI list ?	No
IGAs	None
Web Link	http://www.snamretegas.it/en/services/Thermal_Year_2013_2014/Ten-year-Plan/index.html

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	
FID	
Construction	
Commissioning	2021
Last completed Phase :	Planned

TECHNICAL INFORMATION	
# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	+120
Total Compressor Power (MW)	+100
Expected Load Factor	+0.65
Diameter (range) (mm)	DN 1400
Diameter (range) (inches)	56"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
	No	entry	350.00		

DESCRIPTION OF THE PROJECT

Project title changed since TYNDP 2013-2022 publication. The project consists in new on-shore pipeline and in a new compressor station in the north east of Italy to permit the increase of transport capacity at new or existing Entry Points in that area.

EXPECTED BENEFITS

Security of Supply, Market integration, Diversification of sources, Diversification of routes, N-1 National (Italy), Back-up for renewables, Power-to-gas, Market Integration (Increase of competition), Flexibility of the system.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-009	Additional Southern Developments	Non-FID

Pipeline including CS

SPONSORS

Promoter	Snam Rete Gas S.p.A.
Operator	Snam Rete Gas S.p.A.

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	No
IGAs	None
Web Link	http://www.snamretegas.it/en/services/Thermal_Year_2013_2014/Ten-year-Plan/index.html

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	
Construction	
Commissioning	2021
Last completed Phase :	Planned

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	3
Total Pipeline Length (km)	+850
Total Compressor Power (MW)	+165
Expected Load Factor	+0.65
Diameter (range) (mm)	DN 800 - 1200
Diameter (range) (inches)	32" - 48"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
New Entry Point in South Italy	Yes	entry	264.00	LNG Terminals Italia	Hub Italia

DESCRIPTION OF THE PROJECT

Project title changed since TYNDP 2013-2022 publication. The project consists in new on-shore and off-shore pipelines and in development of compressor stations along the center-south of Italy to permit the increase of transport capacity at new or existing Entry Points in south Italy.

EXPECTED BENEFITS

Security of Supply, Market integration, Diversification of sources, N-1 National (ITALY), Back-up for renewables, Power-to-gas, Market Integration (Increase of competition), Flexibility of the system.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-010	Poseidon Pipeline	Non-FID

Pipeline including CS

SPONSORS	
Promoter	IGI Poseidon S.A.
Operator	IGI Poseidon S.A.

IGI Poseidon S.A. is a Joint Venture of
50% DEPA S.A. and
50% Edison International Holding NV, a 100% subsidiary of Edison SpA

GENERAL INFORMATION	
TEN-E Project ?	Project of European Interest
In PCI list?	Yes
IGAs	6
Web Link	www.igi-poseidon.com

TEN-E Requests	Date of Request	Year Funding Granted
	23.04.2003	2003
	15.06.2005	2006
	06.07.2009	2010

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Negotiated (e.g. Exemption)
Considered Tariff Regime	Negotiated (e.g. Exemption)
Applied for Exemption ?	Yes
Exemption granted ?	Yes
% Exemption in entry direction	–
% Exemption in exit direction	89%

SCHEDULE	
End of permitting phase	2014 Q4
FID	2014 Q4
Construction	2015 Q3
Commissioning	2019 Q2
Last completed Phase :	FEED

TECHNICAL INFORMATION	
# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	+210
Total Compressor Power (MV	+100
Expected Load Factor	+1.00
Diameter (range) (mm)	DN 800
Diameter (range) (inches)	32"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Komotini - GR / IGI Poseidon	No	exit	252.50	ITGI Poseidon (Greece)	Hub Greece
Otranto - IT / IGI Poseidon	No	exit	329.40	ITGI Poseidon (Greece)	Hub Italia
Komotini - GR / IGI Poseidon	No	entry	329.40	Hub Greece	ITGI Poseidon (Greece)
Otranto - IT / IGI Poseidon	No	entry	252.50	Hub Italia	ITGI Poseidon (Greece)

DESCRIPTION OF THE PROJECT

Offshore pipeline, including compressor station, from Western Greece to Southern Italy

EXPECTED BENEFITS

Security of Supply, Market integration (Greece (SEE) and Italy), Reverse Flows, Diversification of sources, Diversification of routes, N-1 National (Italy, Greece), N-1 Regional (NSI East Gas), Back-up for renewables, Power-to-gas, Biogas, Connecting diversified natural gas reserves not yet linked to Europe, providing diversification of gas supply sources, routes and supplier counterparts. The project promoters, being not gas producer, have strong interest in minimising the gas supply cost. In addition, being the project multi source, the promoters aim to foster competition among producers to supply competitive gas.
Moreover, the project, providing new diversified gas supplies from new counterparts, route and sources, will boost the liquidity of the Italian market contributing to the development of a hub with transparent price signals. This will also benefit Greece, that will be linked for the first time with an accessible gas trading hub.

The Project will support the creation of a more liquid market in Italy and create an excess of gas availability, also contributing to the security of supply of other regions such as the North South Interconnection in WE through the reverse flow of the Transit gas pipeline.
The possible use in Reverse Flow of Poseidon pipeline, not involving transit in non-eu countries, significantly contributes to security of supply of SEE. The project promoters, being not gas producer, have strong interest in minimising the gas supply cost. In addition, being the project multi source, the promoters aim to foster competition among gas producers to supply competitive gas.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-012	GALSI Pipeline	Non-FID

Pipeline including CS

SPONSORS	
Edison SpA	21%
SONATRACH	42%
Sfirs SpA	12%
Hera Trading Srl	10%
Enel Produzione SpA	16%
Promoter	Edison
Operator	Galsi S.p.A.

GENERAL INFORMATION	
TEN-E Project ?	Project of European Interest
In PCI list ?	Yes
IGAs	1
Web Link	www.galsi.it

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	Not relevant
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	2014 Q1
FID	2014 Q2
Construction	2015 Q1
Commissioning	2018 Q1
Last completed Phase :	FEED

TECHNICAL INFORMATION	
# of Pipelines, nodes, CS	3
Total Pipeline Length (km)	+861
Total Compressor Power (MW)	+151
Expected Load Factor	
Diameter (range) (mm)	DN 650 to 1200
Diameter (range) (inches)	26" to 48"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Porto Botte (Galsi)	Yes	exit	244.00	GALSI (Algeria International)	Hub Italia (Sardinia)
Algerian Coast (Galsi)	Yes	entry	244.00	Supplier Algeria	GALSI (Algeria International)
Olbia (Galsi)	Yes	entry	244.00	Hub Italia (Sardinia)	GALSI (Italia National)
	Yes	exit	30.50	GALSI (Italia National)	Hub Italia (Sardinia)
Piombino (Galsi)	Yes	exit	244.00	GALSI (Italia National)	Hub Italia

DESCRIPTION OF THE PROJECT

Gas pipeline project aiming to create a new link between Algeria and Italy via Sardinia

EXPECTED BENEFITS

- Security of Supply, Market integration (The Galsi project represents an opportunity to bring natural gas to Sardinia island, currently not connected to the Italian gas network. Through GALSI, new entrants will be able to develop and/or consolidate their market positions in the Italian gas market through an independent infrastructure).

Similar benefits could potentially be further extended to Corsica, through the Cyrénée Project, improving thereby cohesion within Europe). - Reverse Flows, Diversification of sources, Diversification of routes, N-1 National (On the basis of the "Transportation Capacity Multi – Annual" as published in Snam web site, in the year of commissioning of Galsi project, the largest gas supply infrastructure to Italy – in terms of transportation capacity – will be the Trans Austrian Gas pipeline (TAG) with a firm capacity of 107,000,000 Sm3/day at the entry point of Tarvisio.

Therefore, in the event of technical or political disruption of the TAG pipeline, additional capacities could be made available by maximizing the gas flow in the Galsi pipeline, to an extent that will depend upon the then prevailing operating conditions).

- The Galsi project will improve security of supply in Italy and Europe, providing for a new and more efficient route for Algerian gas to reach the centre of Italian gas consumption (located in northern Italy) and further on the northern European markets. In the longer term, with the development of new projects interconnecting different gas sources in Africa (e.g. new Algerian shale gas or TSGP project for Nigerian gas), the Galsi pipeline could provide a highly strategic diversification of gas supply routes to European markets and their supply flexibility.
- The Galsi project will contribute to the creation of an Italian gas hub for gas supply to Europe which, through the increase of gas liquidity, will enable the export of major gas volumes from Italy to other European markets through the development of reverse flow capacities.
- Reduction of GHG emissions (The Galsi project complies with sustainable development guidelines, i.e. the promotion of the substitution of high pollutant fossil fuels with a low pollutant such as natural gas, the improvement of efficiency in the electricity production by switching from other fossil fuels to natural gas, and the penetration of the use of natural gas in industrial/residential and tertiary sector).
- Support back-up of renewable energy (a significant quota of electricity generation in Italy (today ~50%) is represented by CCGTs whose utilization is increasingly shifting towards a back-up of RES, in the light of their dramatic increase witnessed in these last years).

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-014	Komotini-Thesprotia pipeline	Non-FID

Pipeline including CS

SPONSORS

Promoter	DESFA S.A.
Operator	DESFA S.A.

GENERAL INFORMATION

TEN-E Project ?	Project of Common Interest
In PCI list ?	Yes
IGAs	1
Web Link	www.desfa.gr

TEN-E Requests	Date of Request	Year Funding Granted
	01.04.2003	2004
	01.04.2005	2013

FINANCING

Public Financing	-
Private Financing	-
Multilateral Financing	-

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	Not relevant
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	
Construction	
Commissioning	
Last completed Phase :	FEED

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	613
Total Compressor Power (MW)	+58.20
Expected Load Factor	
Diametre (range) (mm)	DN 1050
Diametre (range) (inches)	42"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone

DESCRIPTION OF THE PROJECT

High pressure pipeline, with a capacity of 9 bcm/y, from Komotini to Thesprotia area, in Western Greece, near the Ionian coast where it will supply with gas the compressor station of the project TRA-N-010. The project also includes two compressor stations (in Komotini and in the Thessaloniki area) and an operation and maintenance centre.

This project is on hold following the selection of TAP by the Shah Deniz II Consortium. Moreover DESFA has proposed to the Greek Regulatory Authority for Energy to have it deleted from the 10-year Development Plan.

EXPECTED BENEFITS

Security of Supply, Market integration (Western Greece), Diversification of sources, The project, together with Poseidon project (sponsored by DEPA and Edison) will establish an 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 ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-018	Városföld-Ercsi-Győr	Non-FID

Pipeline including CS

SPONSORS	
Promoter	FGSZ Ltd.
Operator	FGSZ Ltd.

GENERAL INFORMATION	
TEN-E Project ?	Not part of TEN-E
In PCI list?	Yes
IGAs	None
Web Link	www.fgsz.hu

FINANCING	
Public Financing	–
Private Financing	100%
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	1st phase	2nd phase
End of permitting phase	2021 Q4	2022 Q4
FID	2020 Q2	2020 Q2
Construction	2021 Q3	2022 Q3
Commissioning	2022 Q4	2023 Q4
Last completed Phase :	Planned	Planned

TECHNICAL INFORMATION	
	DN 1000
	40"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Interconnector HU-AT	Yes	exit	153.00	Hub Hungary	Hub Austria
	Yes	entry	153.00	Hub Austria	Hub Hungary
Mosonmagyarovar	Yes	exit	153.00	Hub Hungary	Hub Austria
	Yes	entry	25.00	Hub Austria	Hub Hungary

DESCRIPTION OF THE PROJECT

Pipeline between Városföld-Ercsi and Győr nodes, PN 100. This project will enable the Mosonmagyarovar interconnection point to reach its full capacity of 153 GWh/d from Austria to Hungary.It will also enable the Mosonmagyarovar interconnection point to realize reverse flow capacity up to 153 GWh/d from Hungary to Austria.

EXPECTED BENEFITS

Security of Supply, Market integration (Increase AT/HU border capacity, Security of Supply of Western Hungary, new power plant supply, Reverse fllow HU>AT, Increase capacity Sk>HU and HU>SK, Create capacity RO>AT), Reverse Flows, Diversification of sources.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-021	Bidirectional Austrian-Czech Interconnector (BACI, formerly LBL project)	Non-FID

Pipeline including CS

SPONSORS

Promoter	Gas Connect Austria GmbH & Net4Gas (CZ)
Operator	Gas Connect Austria GmbH & Net4Gas (CZ)

GENERAL INFORMATION

TEN-E Project ?	Project of Common Interest
In PCI list ?	Yes
IGAs	None
Web Link	http://www.gasconnect.at/en/Unser-Netz/Projekte/BACI

TEN-E Requests	Date of Request	Year Funding Granted
	27.02.2012	2013

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	
Construction	
Commissioning	2019
Last completed Phase :	Planned

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	2
Total Pipeline Length (km)	+58.00
Total Compressor Power (MW)	+24.00
Expected Load Factor	
Diameter (range) (mm)	DN 800
Diameter (range) (inches)	32"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Reinthal - Bidirectional Austrian-Czech Interconnector	Yes	entry	255.13	Hub Czech Republic	Hub Austria
	Yes	exit	255.13	Hub Austria	Hub Czech Republic

DESCRIPTION OF THE PROJECT

The first pipeline connecting the Austrian and the Czech Markets. The BACI will be a new infrastructure directly connecting the Austrian and Czech market. It will be connected to the existing Czech transmission system via CS Břeclav (NET4GAS, s.r.o.) and to the Austrian transmission system via Baumgarten (GAS CONNECT AUSTRIA GmbH). The BACI will enable capacity transmission for the first time between these two member states and it will facilitate better market integration and security of gas supply also for adjacent countries like Hungary, Poland, Germany, Italy, France, Slovenia, Croatia and Slovakia due to the creation of additional transportation opportunities. The project will also increase the overall flexibility of the Czech, Austrian and also Polish system by diversification of gas supply routes and by connecting UGS in the Czech Republic and Austria.

EXPECTED BENEFITS

- Security of Supply, Market integration (Austrian Market, Czech Market), Reverse Flows, Diversification of sources, Diversification of routes, N-1 National (Austria, Czech Republic), N-1 Regional (CEE Region), o Security of Supply
- Extension of transport capacity of Russian gas to the West
- Integration of Nord Stream off- and on-Shore in the European gas infrastructure.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-035	Tauerngasleitung Gas Pipeline Project *	Non-FID

Pipeline including CS

SPONSORS

Promoter	Tauerngasleitung GmbH
Operator	Tauerngasleitung GmbH

* On 2.4.2014 the sponsor's shareholders announced that they intended to amend the sponsor's ownership structure through a tendering process. The TGL GmbH was liquidated on 11.4.2014

GENERAL INFORMATION

TEN-E Project ?	Project of common interest
In PCI list ?	Yes
IGAs	None
Web Link	www.tauerngasleitung.at

TEN-E Requests	Date of Request	Year Funding Granted
	28.04.2010	2011
	26.04.2006	2007

FINANCING

Public Financing	–
Private Financing	70%
Multilateral Financing	30%

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	Not yet
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2014 Q4
FID	2014 Q2
Construction	2015 Q1
Commissioning	2018 Q4
Last completed Phase :	Planned

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	+290
Total Compressor Power (MW)	+66.00
Expected Load Factor	
Diameter (range) (mm)	DN 900
Diameter (range) (inches)	36"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Haiming (bayernets) - DE / Burghausen (Transit) - TGL	Yes	entry	180.74	Hub Germany (NCG)	Tauerngas Leitung (Austria)
Haiming (bayernets) - DE / Burghausen (Austrian Hub) - TGL	Yes	entry	148.61	Hub Germany (NCG)	Hub Austria
Haiming (bayernets) - DE / Burghausen (Transit) - TGL	Yes	exit	30.14	Tauerngas Leitung (Austria)	Hub Germany (NCG)
Tarvisio - IT / Arnoldstein (Transit) - TGL	Yes	exit	314.96	Tauerngas Leitung (Austria)	Hub Italia
Haiming (bayernets) - DE / Burghausen-Auerbach (Austrian Storage) - TGL	Yes	exit	136.65	Storage Austria	Hub Germany (NCG)
Haiming (OGE) - DE / Burghausen-Auerbach (Austrian Storage) - TGL	Yes	entry	143.82	Hub Germany (NCG)	Storage Austria
Haiming-Oberkappel (OGE) - DE / Burghausen (Transit) - TGL	Yes	exit	33.82	Tauerngas Leitung (Austria)	Hub Germany (NCG)
Tarvisio - IT / Arnoldstein (Transit) - TGL	Yes	entry	65.40	Hub Italia	Tauerngas Leitung (Austria)

DESCRIPTION OF THE PROJECT

Pipeline (incl. compressor stations) in North-South direction, linking the German and Italian transmission systems. TGL allows feed significant volumes from different sources from South-East regions towards Central Europe.

EXPECTED BENEFITS

Security of Supply, Market integration, Reverse Flows, Diversification of sources, Diversification of routes, N-1 National, N-1 Regional, Back-up for renewables, Power-to-gas, Biogas, SoS: Investments will be necessary, especially in cross-border gas transmission capacity, with a view to diversifying sources of supply, and gas transmission systems in general, especially where capacities may be needed in an emergency to supply areas with capacity shortfalls. The TGL is in line with these objectives, which focus mainly on security of supplies. Market Integration: By linking the Central European (Southern Germany) with the South-East European (mainly Italy) natural gas market, the TGL increases interoperability between gas markets in Europe which are still separate, develop new natural gas sources for these markets and therefore significantly improve competition within a European single market for natural gas. Diversification of European natural gas supplies: By creating the infrastructure required for a functioning North-South/South-North system to develop the North African and Middle East supply region, including liquefied natural gas (LNG) for the Mediterranean region, the TGL will reduce dependence on individual suppliers in the North and East.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing
	Own financing 30%. Loans 70% of which 70-80% fromcommercial banks and the rest from multilateral financing	20-30% of 70% of the overall external financing needs

TRA-N-051	Trans Adriatic Pipeline	Non-FID

Pipeline including CS

SPONSORS

Promoter	Trans-Adriatic Pipeline AG
Operator	Trans-Adriatic Pipeline AG

GENERAL INFORMATION

TEN-E Project ?	Project of Common Interest
In PCI list ?	Yes
IGAs	4
Web Link	www.trans-adriatic-pipeline.com

TEN-E Requests	Date of Request	Year Funding Granted
	16.05.2005	2009
	21.04.2004	2008

FINANCING

Public Financing	–
Private Financing	30%
Multilateral Financing	70%

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Negotiated (e.g. Exemption)
Considered Tariff Regime	Negotiated (e.g. Exemption)
Applied for Exemption ?	Yes
Exemption granted ?	Yes
% Exemption in entry direction	100%
% Exemption in exit direction	100%

SCHEDULE

End of permitting phase	2016 Q4
FID	2013 Q4
Construction	2015 Q2
Commissioning	2019 Q1
Last completed Phase :	FID

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	2
Total Pipeline Length (km)	+871
Total Compressor Power (MW)	+180
Expected Load Factor	+0.90
Diameter (range) (mm)	DN 1200
Diameter (range) (inches)	48"

PROJECTED CAPACITY INCREASES					
Interconnection	**Modelled**	**Direction**	**Capacity (GWh/d)**	**From Zone**	**To Zone**
Melendugno - IT / TAP	Yes	exit	337.00	Trans-Adriatic Pipeline (Greece)	Hub Italia
Komotini (DESFA) - GR / TAP	No	exit	243.00	Trans-Adriatic Pipeline (Greece)	Hub Greece
Kipi (TR) / Kipi (TAP)	Yes	entry	337.00	Trans-Anatolian Pipeline (Turkey)	Trans-Adriatic Pipeline (Greece)
Melendugno - IT / TAP	Yes	entry	243.00	Hub Italia	Trans-Adriatic Pipeline (Greece)

DESCRIPTION OF THE PROJECT

The Trans Adriatic Pipeline (TAP) will transport natural gas from Kipoi in Greece near the Greek/Turkish border, via Albania and across the Adriatic Sea, to Italy's southern Puglia region in Province of Lecce. In its upstream part, TAP will interconnect with TANAP which is linked further to the east with systems in Turkey, to secure access to the Shah Deniz natural gas field in Azerbaijan and tie into Italy's gas transportation grid operated by Snam Rete Gas in the province of Lecce.

EXPECTED BENEFITS

Security of Supply, Market integration (Italy, Greece and Albania), with the potential to further integrate the Western Balkans (Croatia) and broader South Eastern Europe area (Bulgaria, FYROM, Serbia, Hungary, Romania, Slovenia, Austria)), Reverse Flows, Diversification of sources, Diversification of routes, Back-up for renewables, TAP represents the pipeline chosen to transport gas from the Shah Deniz 2 field to EU borders and beyond. TAP will directly support the development of competition in the Italian, Greek, Albania and European gas markets. In addition to promoting diversification of routes and supply sources, TAP will also support diversification of counterparts (and shippers), as new players enter the markets together with completely new sources of gas.

The entry of new counterparts in the Italian market will also directly contribute to the development of the Italian gas hub and overall liquidity of the Italian market, as well as to liquidity and development of markets in Greece and South Eastern Europe and the Balkans.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing
	Shareholders financing to amount to 30% of total project costs.	External debt financing to amount to 70% of total project costs. The lenders group envisaged by TAP at this stage includes Multilaterals, ECAs and commercial banks.

TRA-N-053	White Stream	Non-FID

Pipeline including CS

SPONSORS

Promoter	White Stream
Operator	White Stream

GENERAL INFORMATION

TEN-E Project ?	Priority Project
In PCI list ?	Yes
IGAs	2
Web Link	http://www.white-stream.com/

TEN-E Requests	Date of Request	Year Funding Granted
	30.06.2008	2011
	31.08.2007	2009

FINANCING

Public Financing	30%
Private Financing	30%
Multilateral Financing	40%

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Negotiated (e.g. Exemption)
Considered Tariff Regime	Negotiated (e.g. Exemption)
Applied for Exemption ?	Not yet
Exemption granted ?	Not yet
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2016 Q1
FID	2016 Q2
Construction	2016 Q3
Commissioning	2019 Q4
Last completed Phase :	Planned

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	2
Total Pipeline Length (km)	+1,250
Total Compressor Power (MW)	+375
Expected Load Factor	+0.95
Diameter (range) (mm)	DN 1050
Diameter (range) (inches)	42"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
White Stream into Romania (RO)	No	exit	505.00	Supplier Azerbaijan	Hub Romania

DESCRIPTION OF THE PROJECT

The WS pipeline will transport gas produced in the Caspian area from Georgia to the EU. It will branch off an existing pipeline from Azerbaijan to Georgia and will include an onshore pipeline to the Black Sea Georgian coast where a major compressor station will provide the high pressue required to transmit gas to Romania, across the Black Sea.

EXPECTED BENEFITS

Security of Supply, Diversification of sources, Diversification of routes, N-1 National, N-1 Regional, Back-up for renewables.
o Security of Supply
o Extension of transport capacity of Russian gas to the West
o Integration of Nord Stream off- and on-Shore in the European gas infrastructure

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-054	Trans-Mediterranean Gas Pipeline	Non-FID

Pipeline including CS	expected to be merged with project TRA-N-189 sponsored by DEPA

SPONSORS

Promoter	Ministry of Cyprus
Operator	Cygas

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	2
Web Link	

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Negotiated (e.g. Exemption)
Considered Tariff Regime	Negotiated (e.g. Exemption)
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2015 Q1
FID	2015 Q1
Construction	2015 Q2
Commissioning	2018 Q2
Last completed Phase :	Market test

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	+1,400
Total Compressor Power (MW)	+111.00
Expected Load Factor	+0.90
Diameter (range) (mm)	DN 500
Diameter (range) (inches)	20"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Interconnector CY-GR (Trans-Mediterranean)	Yes	exit	222.49	Hub Cyprus	Hub Greece
	Yes	entry	47.68	Hub Greece	Hub Cyprus

DESCRIPTION OF THE PROJECT

Transmission pipeline for the transport of natural gas from the Levantine Basin into Greece's National Gas Transmission System, through Cyprus.
Gas could be then transported, using existing or new/upgraded transmission networks/pipelines, through mainland Greece to the Central Eastern and South Eastern Europe (not part of current project).
The proposed gas transmission pipeline will have a total length of around 1,400km and could allow for reverse flow. Other relevant project infrastructure (facilities) includes three compressor stations – one located onshore Cyprus, the second onshore Crete (Greece) and the third onshore mainland Greece.

EXPECTED BENEFITS

Security of Supply, Market integration (Mediterranean and South-Eastern Europe), Reverse Flows, Diversification of sources, Diversification of routes, N-1 National (Cyprus), N-1 Regional (South-Eastern Europe), Biogas, Project has significant impact on cross-border transmission capacity between Greece and Cyprus.
Project establishes a new connection and contributes to the interconnection of Cyprus with the European Grid, through Greece, thus also eliminating the isolation of Cyprus from the Internal Energy Market (by allowing for reverse flow).
Project provides for additional capacity able to cover peak demand and daily demand, as well as for reverse flow.
Enhanced flexibility is also offered since the project involves gas transmission through an additional route, source and counterpart.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing
Project Financing structure not yet finalized	Project Financing structure not yet finalized	Project Financing structure not yet finalized

TRA-N-061	Ercsi-Szazhalombatta	Non-FID

Pipeline including CS

SPONSORS	
Promoter	FGSZ Ltd.
Operator	FGSZ Ltd.

GENERAL INFORMATION	
TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	None
Web Link	

FINANCING	
Public Financing	–
Private Financing	100%
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	2022 Q3
FID	2021 Q2
Construction	2022 Q2
Commissioning	2023 Q4
Last completed Phase :	Planned

TECHNICAL INFORMATION	
# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	+11.00
Total Compressor Power (MW)	
Expected Load Factor	
Diameter (range) (mm)	DN 800
Diameter (range) (inches)	32"

PROJECTED CAPACITY INCREASES					
Interconnection	**Modelled**	**Direction**	**Capacity (GWh/d)**	**From Zone**	**To Zone**
Vecsés MGT / FGSZ	**Yes**	**exit**	**51.00**	**Hub Hungary**	**Hub Hungary (SK-HU Interconnector)**
	Yes	**entry**	**25.50**	**Hub Hungary (SK-HU Interconnector)**	**Hub Hungary**

DESCRIPTION OF THE PROJECT

New pipeline between Ercsi and Szazhalombatta nodes, on the pipeline ring surrounding Budapest.

EXPECTED BENEFITS

Security of Supply, Market integration (Security of Supply of Budapest region, New power plant supply at Budapest region, Increase capacity Sk>HU and HU>SK), Reverse Flows, Diversification of sources.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-063	Alexandroupolis Independent Natural Gas System - Pipeline Section	Non-FID

Pipeline including CS

SPONSORS

Promoter	Gastrade S.A.
Operator	Gastrade S.A.

GENERAL INFORMATION

TEN-E Project ?	Project of Common Interest
In PCI list?	Yes
IGAs	None
Web Link	

FINANCING

Public Financing	30%
Private Financing	70%
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2014 Q2
FID	2014 Q4
Construction	2015 Q1
Commissioning	2016 Q2
Last completed Phase :	Planned

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	+29.00
Total Compressor Power (MW)	
Expected Load Factor	+0.30
Diameter (range) (mm)	DN 750
Diameter (range) (inches)	30"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Alexandropolis LNG	Yes	exit	268.00	LNG Terminals Greece	Hub Greece

DESCRIPTION OF THE PROJECT

The project is a 29 km gas transmission pipeline connecting the Alexandroupolis LNG import terminal (Project LNG-N-062) to the Greek Natural Gas Transmission System. The pipeline has a 25 km subsea and a 4 km onshore sections.

EXPECTED BENEFITS

Security of Supply, Market integration (SEE+Serbia+FYROM), Diversification of sources, Diversification of routes, N-1 National (Greece), N-1 Regional (SEE+Serbia+FYROM), Back-up for renewables, Power-to-gas.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-066	Interconnection Croatia/Bosnia & Herzegovina (Slobodnica- Bosanski Brod-Zenica)	Non-FID

Pipeline including CS

SPONSORS	
Promoter	Plinacro Ltd
Operator	Plinacro Ltd

GENERAL INFORMATION	
TEN-E Project ?	Not part of TEN-E
In PCI list ?	No
IGAs	2
Web Link	www.plinacro.hr

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	
FID	
Construction	2018
Commissioning	2019
Last completed Phase :	Planned

TECHNICAL INFORMATION	
# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	+6.00
Total Compressor Power (MW)	
Expected Load Factor	+0.90
Diameter (range) (mm)	DN 700
Diameter (range) (inches)	28"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Slobodnica- Bosanski Brod-Zenica	Yes	exit	44.00	Hub Croatia	Hub Bosnia & Herzegovina

DESCRIPTION OF THE PROJECT

This project is complementary to the project TRA-N-224. The two projects together have a length of 136 km. TRA-N-066, having a length of 6 km (from Slobodnica (HR) to Brod (BH) will be built and operated by Plinacro. TRA-N-223 with a length of 130 km (from Brod to Zenica) will be built and operated by BH Gas. The pipeline will be part of the Energy Community Ring. It goes from Slavonski Brod (Slobodnica) in Croatia, after crossing the Sava river to Bosanski Brod in Bosnia & Herzegovina with furter extension to Zenica in central Bosnia & Herzegovina.

EXPECTED BENEFITS

Market integration, Reverse Flows, N-1 Regional (for Bosnia & Herzegovina), Back-up for renewables, the project will establish a new interconnection as well as a new entry point and transmission route for the needs of BH, thus enhancing the security of supply and diversifying the supply routes for Bosnia & Herzegovina.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-068	Ionian Adriatic Pipeline	Non-FID

Pipeline including CS

SPONSORS	
Sponsors include (in addition to Plinacro) : the Albanian Ministry of Economy, Trade and Energy, the Montenegro Ministry of Economy, the Bosnia & Herzegovina Ministry of Foreign Trade and Economic Relations	
Promoter	Plinacro Ltd
Operator	Plinacro Ltd

GENERAL INFORMATION	
TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	2
Web Link	www.plinacro.hr

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	
FID	
Construction	2015
Commissioning	2020
Last completed Phase :	Planned
	Feasibility study to be completed in 2014

TECHNICAL INFORMATION	
# of Pipelines, nodes, CS	3
Total Pipeline Length (km)	+540
Total Compressor Power (MW)	
Expected Load Factor	
Diameter (range) (mm)	DN 800
Diameter (range) (inches)	32"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Ionic-Adriatic Pipeline - IAP / AB	Yes	exit	30.00	Ionic-Adriatic Pipeline (Croatia)	Hub Albania
Trans-Adriatic Pipeline - TAP / Ionic-Adriatic Pipeline - IAP	Yes	entry	150.00	Trans-Adriatic Pipeline (Greece)	Ionic-Adriatic Pipeline (Croatia)
Ionic-Adriatic Pipeline - IAP / Split - HR	Yes	entry	75.00	Ionic-Adriatic Pipeline (Croatia)	Hub Croatia
Ionic-Adriatic Pipeline - IAP / ME	Yes	exit	15.00	Ionic-Adriatic Pipeline (Croatia)	Hub Montenegro
Ionic-Adriatic Pipeline - IAP / BH	Yes	exit	30.00	Ionic-Adriatic Pipeline (Croatia)	Hub Bosnia & Herzegovina

DESCRIPTION OF THE PROJECT

The pipeline will cross the territory along the Adriatic coast from Fieri in Albania via Montenegro to Split in Croatia and will be linked to the existing Croatian gas transmission system (main direction Bosiljevo – Split).
The Ionian-Adriatic pipeline is considered a part of the Energy Community Gas Ring, which is the concept of gasification for the entire region, proposed by the WB Study and accepted by the Gas Fora of the Energy Community.

EXPECTED BENEFITS

Security of Supply, Market integration (Market Integration benefits for Croatia
and the region (Albania, Montenegro, Bosnia & Herzegovina and neighbouring countries), Reverse Flows, Diversification of sources, Diversification of routes, N-1 National, N-1 Regional (Balkan region), Back-up for renewables.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-070	Interconnection Croatia/Serbia Slobodnica - Sotin (Croatia) - Bačko Novo Selo (Serbia)	Non-FID

Pipeline including CS

SPONSORS	
Promoter	Plinacro Ltd
Operator	Plinacro Ltd

GENERAL INFORMATION	
TEN-E Project ?	Not part of TEN-E
In PCI list ?	No
IGAs	None
Web Link	www.plinacro.hr

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	
FID	
Construction	2018
Commissioning	2023
Last completed Phase :	Planned

TECHNICAL INFORMATION	
# of Pipelines, nodes, CS	2
Total Pipeline Length (km)	+102
Total Compressor Power (MW)	
Expected Load Factor	
Diameter (range) (mm)	DN 800
Diameter (range) (inches)	32"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Slobodnica - Sotin (HR) / Bačko Novo Selo (RS)	Yes	exit	176.00	Hub Croatia	Hub Serbia

DESCRIPTION OF THE PROJECT

Covering Croatia and Serbia, connecting the Croatian gas transmission system to the Serbian gas transmission system Slobodnica - Sotin (Croatia) - Bačko Novo Selo (Serbia).

EXPECTED BENEFITS

Market integration, Reverse Flows, Diversification of routes, N-1 Regional (For Serbia), Back-up for renewables, It will be new entry point and transmission route for the needs of Serbia.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-075	LNG main gas transit pipeline (Part of North-South Gas Corridor) Zlobin-Bosiljevo-Sisak-Kozarac-Slobodnica	Non-FID

Pipeline including CS

SPONSORS

Promoter	Plinacro Ltd
Operator	Plinacro Ltd

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	None
Web Link	www.plinacro.hr

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	
Construction	2017
Commissioning	2019
Last completed Phase :	Planned

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	5
Total Pipeline Length (km)	+308
Total Compressor Power (MW)	
Expected Load Factor	+0.90
Diameter (range) (mm)	DN 800 - 1000
Diameter (range) (inches)	32" - 40"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone

DESCRIPTION OF THE PROJECT

The pipeline will be construted on the territory of Croatia from the gas node Zlobin via Bosiljevo, Sisak, the gas node Kozarac to Slobodnica. It will be the "backbone" of the Croatian gas system.

EXPECTED BENEFITS

Security of Supply, Market integration (Croatia, Hungary, Bosnia & Herzegovina, Serbia), Reverse Flows, Diversification of routes, N-1 National (for Croatia), Back-up for renewables.
This main transit gas pipeline is the future strategic gas transmission connector of great significance and is an integral part of the North – South European Corridor designated the North-South (Baltic – Adriatic) Gas Connection.
Its purpose is linking the Polish and Croatian LNG (Liquefied Natural Gas) solutions under the umbrella of the European Commission (EC). This project is foreseen under the Gas Forum administered by the Energy Community Secretariat, and although in Croatia, is regionally significant. The main transit gas pipeline Zlobin-Bosiljevo-Sisak-Kozarac-Slobodnica:

- is a continuation of the existing Hungarian – Croatian interconnection (gas pipeline Varosföld-Dravaszerdahely-Donji Miholjac-Slobodnica)
- will be connected to the future Ionian Adriatic Pipeline (IAP)
- will be connected to the future LNG installation in Omišalj.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-083	International Pipeline Omišalj - Casal Borsetti	Non-FID

Pipeline including CS

SPONSORS

Promoter	Plinacro Ltd
Operator	Plinacro Ltd

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	None
Web Link	www.plinacro.hr

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	
Construction	
Commissioning	2027
Last completed Phase :	Planned

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	2
Total Pipeline Length (km)	+220
Total Compressor Power (MW)	
Expected Load Factor	+0.90
Diameter (range) (mm)	DN 1000
Diameter (range) (inches)	40"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Casalborsetti	No	entry	506.00	Hub Italia	Hub Croatia
	No	exit	506.00	Hub Croatia	Hub Italia

DESCRIPTION OF THE PROJECT

Covering the therritory from the gas node Omišalj on the island of Krk (Croatian Gas Transmission System) via Adriatic Sea to Casal Borsetti (Italian Gas Transmission System).
The project is at its prefeasibility phase and is not expected to be completed within the time covered by the present GRIP.

EXPECTED BENEFITS

Security of Supply, Market integration, Reverse Flows, Diversification of sources, Diversification of routes, N-1 National (For Croatia), N-1 Regional, Back-up for renewables, It will be new cross border transmission between Croatia and Italy; fits in the idea of Adriatic Gas Ring.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-086	Interconnection Croatia/Slovenia (Bosiljevo - Karlovac - Lučko - Zabok - Rogatec)	Non-FID

Pipeline including CS

SPONSORS

Promoter	Plinacro Ltd
Operator	Plinacro Ltd

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	None
Web Link	www.plinacro.hr

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	2017
Construction	
Commissioning	2018
Last completed Phase :	Planned

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	5
Total Pipeline Length (km)	+296
Total Compressor Power (MW)	
Expected Load Factor	+0.90
Diameter (range) (mm)	DN 500 - 700
Diameter (range) (inches)	20" - 28"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Rogatec	No	exit	165.00		
	Yes	entry	165.00	Hub Slovenia	Hub Croatia

DESCRIPTION OF THE PROJECT

Upgrading of the existing interconnection Croatia/Slovenia

EXPECTED BENEFITS

Security of Supply, Market integration (croatian market and the markets in CEE region), Reverse Flows, Diversification of sources, Diversification of routes, N-1 National (for Croatia and Slovenia), N-1 Regional, Back-up for renewables, It will significantly increase the capacity of the interconnection of the Croatian and Slovenian gas transmission systems in this direction. It will increase the capacity along the route, providing enhanced access to Baumgarten and to the Italian gas market, for gas supplied through LNG terminals on the Croatian coast or through IAP.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-090	LNG evacuation pipeline Omišalj - Zlobin - Rupa (Croatia) / Jelšane (Slovenia)	Non-FID

Pipeline including CS

SPONSORS

Promoter	Plinacro Ltd
Operator	Plinacro Ltd

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	1
Web Link	www.plinacro.hr

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	
Construction	2017
Commissioning	2018
Last completed Phase :	Planned

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	3
Total Pipeline Length (km)	+103.60
Total Compressor Power (MW)	
Expected Load Factor	+0.90
Diameter (range) (mm)	DN 1000
Diameter (range) (inches)	42"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Rupa (HR) / Jelšane (SI)	Yes	exit	506.00	Hub Croatia	Hub Slovenia

DESCRIPTION OF THE PROJECT

The pipeline will cross the territory from the LNG installation in Omišalj, on the island of Krk, to Rupa in Slovenia and will be linked to the Slovenian gas transmission system.

EXPECTED BENEFITS

Security of Supply, Market integration (croatian market, slovenian market and the markets in CEE region and Italy), Reverse Flows, Diversification of sources, Diversification of routes, N-1 National (for Croatia and Slovenia), N-1 Regional, Back-up for renewables, It will be significantly increase the capacity of the interconnection of the Croatian and Slovenian gas transmission systems in this direction. It will increase the capacity along the route, provide enhanced access to Baumgarten and Italian gas market. The project will significantly increase the flexibillity of the system for Croatia.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-123	Városföld CS	Non-FID

Pipeline including CS

SPONSORS

Promoter	FGSZ Ltd.
Operator	FGSZ Ltd.

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	None
Web Link	www.fgsz.hu

FINANCING

Public Financing	–
Private Financing	100%
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2022 Q1
FID	2020 Q4
Construction	2022 Q1
Commissioning	2023 Q4
Last completed Phase :	Planned

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	
Total Compressor Power (MW)	+5.70
Expected Load Factor	

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Mosonmagyarovar	Yes	exit	153.00	Hub Hungary	Hub Austria
	Yes	entry	153.00	Hub Austria	Hub Hungary

DESCRIPTION OF THE PROJECT

Compressor station extension by 5.7 MW

EXPECTED BENEFITS

Market integration (Increase AT/HU border capacity, Security of Supply of Western Hungary, New power plant supply in Budapest region, Reverse fllow HU>AT, Create capacity RO>AT).

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-126	Reverse flow on the interconnector Romania - Hungary	Non-FID

Pipeline including CS

SPONSORS

Promoter	Transgaz
Operator	Transgaz

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	None
Web Link	www.transgaz.ro

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	
Construction	
Commissioning	2016
Last completed Phase :	Planned

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	+167.00
Total Compressor Power (MV	+22.00
Expected Load Factor	
Diameter (range) (mm)	
Diameter (range) (inches)	

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Csanadpalota	Yes	exit	12.60	Hub Romania	Hub Hungary

DESCRIPTION OF THE PROJECT

The project will provide a supply capacity from Romania to Hungary of 1.75 bcm/y at a pressure of 40 bar. The project will comprise two compressor stations at Hateg an Horia and a pipeline section, from Bacia to Recas via Hateg and Jupa. The project is now part of a larger project named "Development on the Romanian territory of the National Transmission System along the corridor Bulgaria-Romania-Hungary-Austria".

EXPECTED BENEFITS

Security of Supply, Market integration (RO and HU markets), Reverse Flows, Diversification of sources, Power-to-gas, Biogas.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-128	Compressor Station Kipi	Non-FID

Pipeline including CS

SPONSORS

Promoter	DESFA S.A.
Operator	DESFA S.A.

GENERAL INFORMATION

TEN-E Project ?	Project of Common Interest	
In PCI list ?	Yes	
IGAs	None	
Web Link	www.desfa.gr	
TEN-E Requests	Date of Request	Year Funding Granted
	01.04.2005	2013

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2014
FID	2014
Construction	2015
Commissioning	2019
Last completed Phase :	FEED

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	3
Total Pipeline Length (km)	
Total Compressor Power (MV	+56.10
Expected Load Factor	+0.90
Diameter (range) (mm)	
Diameter (range) (inches)	

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Kipi (TR) / Kipi (GR)	No	entry	374.00	Hub Turkey (Imports)	Hub Greece
	No	entry	204.00	Hub Turkey (Imports)	Hub Greece
	Yes	entry	102.00	Hub Turkey (Imports)	Hub Greece

DESCRIPTION OF THE PROJECT

The project aims at increasing the Transported Capacity of the Greek gas 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 of natural gas.

The compressor power has three possible values depending on the pipeline systems that will be connected to the Greek transmission system.

EXPECTED BENEFITS

Security of Supply, Market integration (GR-IT-BG-RO), Diversification of sources, Diversification of routes, N-1 National (GR), N-1 Regional (GR-IT-BG-RO).

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-132	AGRI Pipeline - Romanian section (East-West Pipeline)	Non-FID

Pipeline including CS

SPONSORS

Promoter	Transgaz
Operator	Transgaz

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	None
Web Link	www.transgaz.ro

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	
Construction	
Commissioning	2019
Last completed Phase :	Planned

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	+850
Total Compressor Power (MW)	+42.00
Expected Load Factor	
Diameter (range) (mm)	DN 800
Diameter (range) (inches)	32

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
East-West Pipeline RO-HU (AGRI)	Yes	exit	168.00	Hub Romania	Hub Hungary

DESCRIPTION OF THE PROJECT

Not available at present, since the project is in a reassessment phase. New data are expected to be available within the next edition of the TYNDP (2015-2024).

EXPECTED BENEFITS

Security of Supply, Market integration (RO, HU and HU neighbours), Diversification of sources, Diversification of routes, N-1 National (For RO, N-1 inrcreases from 1.65 to 1.73), Power-to-gas, Biogas.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-137	Interconnection Bulgaria - Serbia	Non-FID

Pipeline including CS

SPONSORS

Promoter	Bulgarian Ministry of Economy and Energy (MEE)
Operator	Bulgartransgaz EAD

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	3
Web Link	www.bulgartransgaz.bg

FINANCING

Public Financing	99%
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2014
FID	2014
Construction	2015
Commissioning	2015
Last completed Phase :	Planned

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	2
Total Pipeline Length (km)	+155
Total Compressor Power (MW)	
Expected Load Factor	
Diameter (range) (mm)	DN 700
Diameter (range) (inches)	28"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Interconnector BG RS	Yes	entry	51.00	Hub Serbia	Hub Bulgaria (NGTS)
	Yes	exit	51.00	Hub Bulgaria (NGTS)	Hub Serbia

DESCRIPTION OF THE PROJECT

This is the first interconnection between the gas transmission systems of Serbia and Bulgaria. The project establishes a connection between the Bulgarian and Serbian gas markets that currently are not connected.

EXPECTED BENEFITS

Security of Supply, Market integration, Reverse Flows, Diversification of sources, Diversification of routes, N-1 National, N-1 Regional, The projects listed above should enhance the system flexibility and contribute to the security of supply within the region (increased interconnection between Bulgaria and Serbia).

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing
Competitiveness of the Bulgarian Economy Operational Programme		

TRA-N-140	Interconnection Turkey-Bulgaria	Non-FID

Pipeline including CS

SPONSORS	
Promoter	Bulgartransgaz EAD
Operator	Bulgartransgaz EAD

GENERAL INFORMATION	
TEN-E Project ?	Project of Common Interest
In PCI list ?	Yes
IGAs	2
Web Link	http://www.bulgartransgaz.bg/en/index.php

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Not applicable
Considered Tariff Regime	Not applicable
Applied for Exemption ?	Not relevant
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	
FID	
Construction	
Commissioning	2016
Last completed Phase :	Planned

TECHNICAL INFORMATION	
# of Pipelines, nodes, CS	2
Total Pipeline Length (km)	+205
Total Compressor Power (MW)	
Expected Load Factor	
Diameter (range) (mm)	DN 1000
Diameter (range) (inches)	40"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Interconnector ITB (Turkey - Bulgaria)	**Yes**	**entry**	**92.00**	**Hub Turkey (Imports)**	**Hub Bulgaria**

DESCRIPTION OF THE PROJECT

The interconnection is foreseen to be built as a development to the existing connection of Bulgartransgaz EAD and Botas S.A. – Turkey systems by creating the technical opportunity for enabling bi-directional physical flow of natural gas between both systems. Thus a significantly greater security of gas supply to Bulgaria can be achieved, meeting the N-1 security standard and diversification of natural gas supply sources. **P**reliminary plans are for a staged project development.

Currently design activities for the 20 km pipeline section, from CS Lozenets to Nedialsko are underway.

EXPECTED BENEFITS

Security of Supply, Market integration, Reverse Flows, Diversification of sources, Diversification of routes, N-1 National, N-1 Regional (Central and Eastern Europe, South Eastern Europe, Balkan Region), The interconnection Turkey-Bulgaria is a key project whose realization shall lead to the increase of the security of supply and the opportunity for diversification of gas supply not only to Bulgaria, but to the Central and South-Eastern Europe region as well. The project contributes directly to the diversification of gas sources: alternative gas producers - countries from the Caspian region, Turkish LNG terminals and Middle East.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-149	Interconnector Greece Bulgaria - IGB	Non-FID

Pipeline including CS

SPONSORS	
Promoter	ICGB a.d.
Operator	ICGB a.d.

GENERAL INFORMATION	
TEN-E Project ?	Not part of TEN-E
In PCI list?	Yes
IGAs	None
Web Link	www.icgb.eu

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Negotiated (e.g. Exemption)
Considered Tariff Regime	Negotiated (e.g. Exemption)
Applied for Exemption ?	Yes
Exemption granted ?	Not yet
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	2014 Q3
FID	2014 Q3
Construction	2015 Q1
Commissioning	2016 Q3
Last completed Phase :	Planned

TECHNICAL INFORMATION	
# of Pipelines, nodes, CS	2
Total Pipeline Length (km)	+182
Total Compressor Power (MW)	+10.00
Expected Load Factor	
Diameter (range) (mm)	DN 800
Diameter (range) (inches)	32"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Stara Zagora - IGB / BG	Yes	entry	82.00	Hub Bulgaria (NGTS)	Interconnector Greece-Bulgaria (Bulgaria)
	Yes	exit	82.00	Interconnector Greece-Bulgaria	Hub Bulgaria (NGTS)
Komotini - TAP / IGB	Yes	exit	82.00	Interconnector Greece-Bulgaria	Trans-Adriatic Pipeline (Greece)
	Yes	entry	82.00	Trans-Adriatic Pipeline (Greece)	Interconnector Greece-Bulgaria (Bulgaria)

DESCRIPTION OF THE PROJECT

An onshore natural gas pipeline that will connect Komotini in Greece to Stara Zagora in Bulgaria. The IGB pipeline is being developed by ICGB AD, with shareholders IGI-Poseidon S.A. and Bulgarian Energy Holding EAD.

EXPECTED BENEFITS

Security of Supply, Market integration (Greece, Bulgaria, Romania, Hungary, FYROM, Serbia), Reverse Flows, Diversification of sources, Diversification of routes, N-1 National (Greece, Bulgaria), N-1 Regional (NSI East Gas), Back-up for renewables, Power-to-gas, The project will contribute significantly in the itegration of the market area, specifically the South Eastern Europe, and will allow to alleviate to a great extend the dependency of countries in the area to a single source/counterpart.Taking into account that the objective of the project is to bring additional import quantities of natural gas in Bulgaria and South Eastern Europe it significantly improves the resilience of the system in both short (the additional quantities will be able to cover daily peak demands) and long term.

Specifically for the long term, the diversification in route, supply source as well as counterparts will have a great positive impact on the resilience of the system and will be able to cater to any forecasted increase in demand over the coming years.

The impact of the project in the systems flexibility under disruption (n-1 rule) will be significant taking into account that it will create a new interconnections carrying gas from a new source allowing new counterparts to enter the market.

A possible disruption in any of the other import sources (including the regional disruption of Russian gas) will not affect this one having a great positive impact on the remaining flexibility of the system.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-187	South Stream Project (Onshore Section)	FID

Pipeline including CS	Includes projects TRA-F196, TRA-N-308, TRA-N-309 and TRA-N-310

SPONSORS

The project is sponsored by 6 Joint Ventures established in Bulgaria, Serbia, Croatia, Slovenia, Hungary and Austria by Gazprom (51% in Serbia and 50% elsewhere) and the local TSO or the State or a State company. A 7th JV established in Greece concerns the southern branch of the project that is presently on hold.

Promoter	Gazprom
Operator	See" Description of the Project"

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	No
IGAs	7
Web Link	http://www.south-stream.info/

FINANCING

Public Financing	–
Private Financing	100%
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Negotiated (e.g. Exemption)
Considered Tariff Regime	Negotiated (e.g. Exemption)
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	100%
% Exemption in exit direction	100%

SCHEDULE

End of permitting phase	2013 Q4
FID	2012 Q4
Construction	2012 Q4
Commissioning	2015 Q4
Last completed Phase :	FID in Bulgaria & Serbia Planned elsewhere

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	8
Total Pipeline Length (km)	+1,924.90
Total Compressor Power (MW)	+828
Expected Load Factor	+0.90
Diameter (range) (mm)	DN 1400
Diameter (range) (inches)	56"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
South Stream into Slovenia (SI)	Yes	exit	104.00	South Stream (Russia)	Hub Slovenia
South Stream into Croatia (HR)	Yes	exit	90.00	South Stream (Russia)	Hub Croatia
South Stream from Russia (RU)	Yes	entry	2,109.00	Supplier Russia (Mainland)	South Stream (Russia)
South Stream into Bosnia (BH)	Yes	exit	18.00	South Stream (Russia)	Hub Bosnia & Herzegovina
South Stream into Bulgaria (BG)	Yes	exit	563.00	South Stream (Russia)	Hub Bulgaria (NGTS)
South Stream into Serbia (RS)	Yes	exit	251.00	South Stream (Russia)	Hub Serbia
South Stream (Bata, Nagykanizsa) (HU)	Yes	exit	224.00	South Stream (Russia)	Hub Hungary
South Stream into Austria (AT)	Yes	exit	670.00	South Stream (Russia)	Hub Austria

DESCRIPTION OF THE PROJECT

Major infrastructure project (pipeline incl. compressor stations). Project operators are:
• South Stream Bulgaria AD
• South Stream d.o.o.
• South Stream Hungary Zrt.
• South Stream Slovenia LLC
• South Stream Austria GmbH
• South Stream Greece S.A.
• South Stream Croatia LLC - to be incorporated

EXPECTED BENEFITS

Security of Supply, Market integration, Diversification of routes, Power-to-gas, o Interruptible supplies during peak demands.
o Contribution to satisfaction of natural gas demand in Europe
o Considerable number of EU Member States involved
o Significant cross-border importance
o Contribution to the economies of the countries involved

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-188	Reverse flow at GR-BG border (Greek part)	FID

Pipeline including CS

SPONSORS

Promoter	DESFA S.A.
Operator	DESFA S.A.

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list?	Yes
IGAs	None
Web Link	wwwdesfa.gr

FINANCING

Public Financing	–
Private Financing	100%
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	Not relevant
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	2013 Q3
Construction	2013 Q3
Commissioning	2014 Q2 *
Last completed Phase :	Construction

* This date refers to the 1st phase of the project.

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	
Total Compressor Power (MV	
Expected Load Factor	+0.80
Diameter (range) (mm)	
Diameter (range) (inches)	

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Kulata (BG) / Sidirokastron (GR)	Yes	exit	33.50	Hub Greece	Bulgarian Transit (Bulgaria GTNTT)

DESCRIPTION OF THE PROJECT

The project consists, in its first phase, of interventions at the Sidirokastro Border Metering Station to allow the reverse flow and metering of gas. Similar (and more extended) interventions have taken place at various points of the Bulgarian network that were completed before end 2013. In a second phase, scheduled for 2017, the reverse flow capacity will increase to approximately 70 GWh/d when the compressor station of Nea Messimvria (GR) will become bidirectional.

EXPECTED BENEFITS

Security of Supply, Market integration (BG-RO), Reverse Flows, Diversification of sources, Diversification of routes, N-1 Regional (BG-RO).

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-189	East Med	Non-FID

Pipeline including CS	expected to be merged with project TRA-N-054

SPONSORS

Promoter	DEPA S.A.
Operator	DEPA S.A.

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	None
Web Link	

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Negotiated (e.g. Exemption)
Considered Tariff Regime	Negotiated (e.g. Exemption)
Applied for Exemption ?	Not yet
Exemption granted ?	Not yet
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2016 Q2
FID	2016 Q2
Construction	2016 Q4
Commissioning	2019 Q1
Last completed Phase :	Planned

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	2
Total Pipeline Length (km)	+3,250
Total Compressor Power (MW)	+780
Expected Load Factor	+1.00
Diameter (range) (mm)	DN 1050
Diameter (range) (inches)	42"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Interconnector CY-GR (Trans-Med)	Yes	exit	29.00	Hub Greece	Hub Cyprus
	Yes	entry	237.00	Hub Cyprus	Hub Greece

DESCRIPTION OF THE PROJECT

An offshore natural gas pipeline connecting the offshore natural gas fields in Levantine Basin (Cyprus, Israel) to South Eastern Europe (Bulgaria) or to Italy via Greece. Same project as TRA-N-054 sponsored by the Government of Cyprus.

EXPECTED BENEFITS

Security of Supply, Market integration (Cyprus, Greece, Italy, Bulgaria, Romania, Hungary, FYROM, Serbia, Albania, BiH, Montenegro), Reverse Flows, Diversification of sources, Diversification of routes, N-1 National (Cyprus, Greece, Italy, Bulgaria), N-1 Regional (NSI East Gas), Back-up for renewables.

The main objective of the project is to capitalise on the recent offshore discoveries of natural gas in the Eastern Mediterranean. As a direct result the pipeline will constitute a new source for Europe which diversifies the supply source, the supply route and the counterparts to Europe with a capacity of around 8-9bcm/y. Furthermore, the project aims to avoid other transit countries which are part of the current Southern Gas Corridor options and further minimise the security of supply risk. The diversification of supply source and route will enhance significantly the security of supply of Europe, specifically affecting the Southern Gas Corridor Group, the NSI South Eastern and Central Europe Group and the NSI Western Europe Group.

The project will promote the integration of the market and gas to gas competition and will complement the existing options of the Southern Gas Corridor.

Furthermore the project will alleviate the isolation of at least one MS (i.e. Cyprus) as well as possibly contribute to the alleviation of isolations within a MS (as an example the pipeline may allow the opportunity to alleviate the isolation of Crete from the rest of the Greek national gas grid).

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-190	Poland - Slovakia interconnection	Non-FID

Pipeline including CS

SPONSORS

Promoter	eustream, a.s.
Operator	eustream, a.s.

GENERAL INFORMATION

TEN-E Project ?	Project of Common Interest	
In PCI list ?	Yes	
IGAs	None	
Web Link	www.eustream.sk/en_transmission-system/en_pl-sk-interconnector	
TEN-E Requests	Date of Request	Year Funding Granted
	28.02.2011	2012

FINANCING

Public Financing	
Private Financing	
Multilateral Financing	

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2015 Q3
FID	2015 Q2
Construction	2016 Q3
Commissioning	2019 Q1
Last completed Phase :	Planned

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	2
Total Pipeline Length (km)	+106
Total Compressor Power (MW)	
Expected Load Factor	
Diameter (range) (mm)	DN 1000
Diameter (range) (inches)	40"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Interconnector PL - SK	Yes	entry	143.70	Hub Poland	Hub Slovakia
	Yes	exit	290.50	Hub Slovakia	Hub Poland

DESCRIPTION OF THE PROJECT

Interconnection between Slovak and Polish transmission systems increasing the Security of Supply in CEE region & contributing to establishing a well-functioning internal gas market.

EXPECTED BENEFITS

Security of Supply, Market integration (CEE region), Reverse Flows, Diversification of sources, Diversification of routes, N-1 National (Poland, Slovakia, Hungary), N-1 Regional (CEE region), Back-up for renewables, Power-to-gas.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-221	TANAP - Trans Anatolian Natural Gas Pipeline Project	Non-FID

Pipeline including CS

SPONSORS

Sponsors are:
Socar (68%), BP (12%) and BOTAŞ (15%)

Promoter	Socar
Operator	TANAP TSO

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	1
Web Link	www.tanap.com

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Negotiated (e.g. Exemption)
Considered Tariff Regime	Negotiated (e.g. Exemption)
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	2013 Q2
Construction	2017 Q3
Commissioning	2018 Q1
Last completed Phase :	Planned

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	+1,900
Total Compressor Power (MW)	+650.00
Expected Load Factor	+0.95
Diameter (range) (mm)	DN 1200 or 1400
Diameter (range) (inches)	48" or 56"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Türkgözü	Yes	entry	536.00	Supplier Azerbaijan	Trans-Anatolian Pipeline (Turkey)
Esksisehir and Thracian region	No	exit	201.00		
Kipi (TR) / Kipi (TAP)	Yes	exit	335.00	Trans-Anatolian Pipeline (Turkey)	Trans-Adriatic Pipeline (Greece)

DESCRIPTION OF THE PROJECT

TANAP intends to transport the natural gas to be produced in Shah Deniz-2 field and other fields of Azerbaijan (and possibly other countries) through Turkey to Europe.

EXPECTED BENEFITS

Security of Supply, Market integration, Diversification of sources, Diversification of routes.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-224	Gaspipeline Zenica - Brod	Non-FID

Pipeline including CS

SPONSORS	
Promoter	BH Gas d.o.o.
Operator	BH Gas d.o.o.

GENERAL INFORMATION	
TEN-E Project ?	Not part of TEN-E
In PCI list?	No
IGAs	None
Web Link	

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Negotiated (e.g. Exemption)
Considered Tariff Regime	Negotiated (e.g. Exemption)
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	
FID	
Construction	
Commissioning	2023
Last completed Phase :	Planned

TECHNICAL INFORMATION	
# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	+130.00
Total Compressor Power (MW)	
Expected Load Factor	
Diameter (range) (mm)	DN 500
Diameter (range) (inches)	20"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone

DESCRIPTION OF THE PROJECT

The starting point of the Bosanski Brod – Zenica gas pipeline is in close vicinity of Bosanski Brod where it should be connected to the high-pressure gas pipeline leading from Zagreb via Kutina to Slavonski Brod (TSO – Plinacro) in the Republic of Croatia and further, with project TRA-N-066 to be implemented by Plinacro, the pipeline will cross the Sava river and will arrive to Bosanski Brod.

EXPECTED BENEFITS

Security of Supply, Market integration, Reverse Flows, Diversification of sources, Diversification of routes, N-1 Regional, Power-to-gas.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-286	Romanian-Hungarian reverse flow Hungarian section	Non-FID

Pipeline including CS

SPONSORS	
Promoter	FGSZ Ltd.
Operator	FGSZ Ltd.

GENERAL INFORMATION	
TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	None
Web Link	

FINANCING	
Public Financing	–
Private Financing	100%
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	2015 Q2
FID	2015 Q1
Construction	2015 Q3
Commissioning	2017 Q2
Last completed Phase :	Planned

TECHNICAL INFORMATION	
# of Pipelines, nodes, CS	3
Total Pipeline Length (km)	
Total Compressor Power (MW)	+13.50
Expected Load Factor	
Diameter (range) (mm)	
Diameter (range) (inches)	

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Csanadpalota	Yes	entry	51.20	Hub Romania	Hub Hungary
	Yes	entry	12.60	Hub Romania	Hub Hungary
	No	entry	76.85	Hub Romania	Hub Hungary
	No	exit	76.85	Hub Hungary	Hub Romania

DESCRIPTION OF THE PROJECT

New compressor station at Csanádpalota, with three compressor units of 4.5 MW each, to increase the capacity of the IP Csanádpalota in the direction RO->HU. There is a complementarity of this project with the project TRA-N-126 at the Romanian side.

EXPECTED BENEFITS

Security of Supply, Market integration (RO and HU markets), Reverse Flows, Diversification of sources, Diversification of routes, N-1 National.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-298	Rehabilitation, Modernization and Expansion of the National Transmission System	Non-FID

Pipeline including CS

SPONSORS	
Promoter	Bulgartransgaz EAD
Operator	Bulgartransgaz EAD

GENERAL INFORMATION	
TEN-E Project ?	Project of Common Interest
In PCI list ?	Yes
IGAs	None
Web Link	http://www.bulgartransgaz.bg/en/index.php

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Not applicable
Considered Tariff Regime	Not applicable
Applied for Exemption ?	Not relevant
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	
FID	2015
Construction	
Commissioning	2017
Last completed Phase :	

TECHNICAL INFORMATION	
# of Pipelines, nodes, CS	
Total Pipeline Length (km)	
Total Compressor Power (MW)	
Expected Load Factor	
Diameter (range) (mm)	
Diameter (range) (inches)	

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone

DESCRIPTION OF THE PROJECT

A set of activities involving rehabilitation, modernisation and expansion of the existing national gas transmission infrastructure with a view to guaranteeing the possibility of the national gas transmission system to ensure the transport of sufficient natural gas volumes through the territory of the country using the planned new interconnections to other countries from the region of South Eastern, Central and Eastern Europe and in the context of the large cross-border gas projects in the region. The project mostly include compressor stations modernisation (CS Valchi Dol and CS Polski Senovets) as well as in-line inspections, complete overhauls and replacement of gas pipeline sections of the main gas pipelines that are part of the annularly built gas transmission system and construction regulating lines at the exits of gas pipeline branches off the main and transit gas pipeline to enhance its reliability, security and capacity.

EXPECTED BENEFITS

Security of Supply, Market integration, Reverse Flows, Diversification of sources, Diversification of routes, N-1 National, N-1 Regional (Central and Eastern Europe, South Eastern Europe, Balkan Region), The modernisation, rehabilitation and expansion of the existing gas transmission network are directly linked to the planned new interconnections with Greece (IGB), Romania (IBR), Turkey (ITB) and Serbia (IBS), the integration of the national and the transit gas transmission system on the territory of Bulgaria and the development of the large cross-border gas projects in the region. The efficient use of the new entry and exit points from/to Bulgartransgaz gas transmission networks is directly linked to the technical possibilities of the existing gas transmission infrastructure on the territory of Bulgaria to ensure sufficient capacity and suitable technical conditions to accommodate the transport of the planned new natural gas quantities and to the available storage capacity and the expansion of the gas storage facility in Chiren unique on the territory of the country.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-302	Interconnection Croatia-Bosnia & Herzegovina (South)	Non-FID

Pipeline including CS

SPONSORS

Promoter	Plinacro Ltd
Operator	Plinacro Ltd

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	No
IGAs	None
Web Link	www.plinacro.hr

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	
Construction	
Commissioning	2018
Last completed Phase :	Planned

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	3
Total Pipeline Length (km)	+29.00
Total Compressor Power (MW)	
Expected Load Factor	
Diameter (range) (mm)	DN 500
Diameter (range) (inches)	20"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Posušje	Yes	exit	45.00	Ionic-Adriatic Pipeline (Croatia)	Hub Bosnia & Herzegovina

DESCRIPTION OF THE PROJECT

South Interconnection of Croatia and Bosnia & Herzegovina. The pipeline will be a branch from the planned regional Ionic Adriatic Pipeline - IAP along the routing: Zagvorzd-Imotski.

EXPECTED BENEFITS

Security of Supply, Market integration, Diversification of sources, N-1 National (for BH), N-1 Regional, The aim of the project is to establish a new supply route for BH providing a diversified and reliable natural gas supply.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-303	Interconnection Croatia-Bosnia and Herzegovina (Licka Jesenica-Rakovica-Trzac-Bosanska Krupa with branches to Bihać and Velika Kladuša)	Non-FID

Pipeline including CS

SPONSORS

Promoter	Plinacro Ltd
Operator	Plinacro Ltd

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	No
IGAs	None
Web Link	www.plinacro.hr

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	
Construction	
Commissioning	2023
Last completed Phase :	Planned

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	2
Total Pipeline Length (km)	+30.00
Total Compressor Power (MW)	
Expected Load Factor	
Diameter (range) (mm)	DN 500
Diameter (range) (inches)	20"

PROJECTED CAPACITY INCREASES					
Interconnection	**Modelled**	**Direction**	**Capacity (GWh/d)**	**From Zone**	**To Zone**
Rakovica (HR) / Trzac (BH)	**Yes**	**exit**	**45.00**	**Hub Croatia**	**Hub Bosnia & Herzegovina**

DESCRIPTION OF THE PROJECT

Interconnection Croatia-Bosnia & Herzegovina on route Licka Jesenica-Rakovica in Croatia to border with Bosnia & Herzegovina. Bosnian part is from Trzac to Bosanska Krupa with branches to Bihać and Velika Kladuša.

EXPECTED BENEFITS

Security of Supply, Market integration, Diversification of sources, N-1 National (for BH), N-1 Regional, The aim of the project is to assess the feasibility of providing gas supply to the Una-Sana Canton in BH from the Croatian gas supply network. This supply network will be from the Lička Jesenica gas transmission node in Croatia via Lika to the HR/BH border and from there to Bosanska Krupa with brances to Bihać and velika Kladuša in Una-Sana Canton. The extension of the gas transmission in Croatia to the border with BH will allow additional gasification in the part of Croatia along the pipeline route.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

TRA-N-325	Slovenian-Hungarian interconnector	Non-FID

Pipeline including CS

SPONSORS

Promoter	FGSZ Natural Gas Transmission
Operator	FGSZ Natural Gas Transmission

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	None
Web Link	www.fgsz.hu

FINANCING

Public Financing	–
Private Financing	100%
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2016 Q3
FID	2015 Q2
Construction	2016 Q3
Commissioning	2017 Q4
Last completed Phase :	Planned

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	+41.00
Total Compressor Power (MV	+7.50
Expected Load Factor	
Diameter (range) (mm)	DN 500
Diameter (range) (inches)	20"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Interconnector SI-HU	Yes	exit	45.25	Hub Hungary	Hub Slovenia
	Yes	entry	45.25	Hub Slovenia	Hub Hungary

DESCRIPTION OF THE PROJECT

Establishment of the first pipeline connection between Hungary and Slovenia.

EXPECTED BENEFITS

Security of Supply, Market integration (Establish SI/HU border capacity, Security of Supply of Western Hungary and Slovenia), Reverse Flows, Diversification of sources.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

Plinovodi projects cluster 1

Code	Name	Technical information	FID status	Commissioning	TEN-E	PCI project
TRA-F-097	M2/1 Trojane Vodice	Pipeline 34 km	FID	2014	Not part of TEN-E	No
TRA-F-096	CS Kidričevo (3rd unit)	Compressor station 3.50 MW	FID	2014	Not part of TEN-E	No
TRA-N-094	CS Kidričevo (2nd phase)	Compressor station 30 MW	non-FID	2016	Not part of TEN-E	No
TRA-N-102	CS Vodice II	Compressor station 30 MW	non-FID	2023	TEN-E 2013	No
TRA-N-109	M1/3 Slovenian - Austrian border crossing	Pipeline 0.2 km	non-FID	2023	Not part of TEN-E	No

GENERAL INFORMATION

Promoter	Plinovodi
Operator	Plinovodi
Web Link	www.plinovodi.si/wp-content/uploads/2011/09/RN-2014-2023.pdf

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No

DESCRIPTION AND BENEFITS OF THE PROJECT

These projects aim at increasing the import capacity from Austria by removing bottlenecks in the central east-west corridor of Slovenia's transmission system.
- The first phase, comprising 3 FID projects to be commissioned in 2014, consists in extending the C/S at Kidričevo for the purpose of existing pipelines M1 and M2 and increase of capacity to direction Vodice with a new parallel pipeline M2/1.
- The second phase comprises a non-FID project, the further extension of the C/S at Kidričevo for the purpose of increasing capacity of M1/1 and M2/1 to Vodice, planned to be commissioned in 2016. The third phase, comprising 2 non-FID projects to be commissioned in 2023, consists in the addition of a new C/S at Vodice and additional border crossing at Murfeld/Ceršak to ensure adjustment to the operating parameters of the transmission system of the Austrian TSO.

Plinovodi projects cluster 2

Code	Name	Technical information	FID status	Commissioning	TEN-E	PCI project
TRA-F-110	MRS Šempeter - reconstruction	Border metering station	FID	2014	Not part of TEN-E	No
TRA-N-092	CS Ajdovščina (3rd unit)	Compressor station 5 MW	non-FID	2016	Not part of TEN-E	No
TRA-N-108	M3 reconstruction (Ajdovščina - Šempeter / Gorizia)	Pipeline 31 km	non-FID	2023	TEN-E 2010, 2013	No

GENERAL INFORMATION

Promoter	Plinovodi
Operator	Plinovodi
Web Link	www.plinovodi.si/wp-content/uploads/2011/09/RN-2014-2023.pdf

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No

DESCRIPTION AND BENEFITS OF THE PROJECT

These projects aim at increasing the cross-border capacity of the connection with Italy and adjusting the operating parametres to the ones of the Italian transmission system.
- The first phase comprises the FID project of the reconstruction of the Border metering station (for reverse flow), to be commissioned in 2014.
- The second phase comprises a non-FID project, the extension of the C/S at Ajdovščina for the increase of capacity of the existing pipeline to Italy, planned to be commissioned in 2016.
- The third phase comprises the non-FID project of the pipeline increasing the capacity of the existing M3 pipeline to Italy on the section from Ajdovščina to šempeter looping between Ajdovščina and Šempeter, planned to be commissioned in 2023.

Plinovodi projects cluster 3

Code	Name	Technical information	FID status	Commissioning	TEN-E	PCI project
TRA-N-107	M6 Ajdovščina - Lucija (section Osp-Koper)	Pipeline 73 km (section length 12,5 km)	non-FID	2023 (2016)	TEN-E 2011	No
TRA-N-114	R61 Lucija - Sečovlje	Pipeline 10 km	non-FID	2021	Not part of TEN-E	No

GENERAL INFORMATION

Promoter	Plinovodi
Operator	Plinovodi
Web Link	www.plinovodi.si/wp-content/uploads/2011/09/RN-2014-2023.pdf

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No

DESCRIPTION AND BENEFITS OF THE PROJECT

These projects aim at providing gas supply capacity to the coastal region (all municipalities in the region) and by the same opportunity establish two new interconnection points:
- one with the Italian TSO at Osp (SI) / San Dorligo della Valle (IT) with an import capacity of 6,10 GWh/d,
- one with the Croatian TSO at Sečovlje with an import capacity of 2,31 GWh/d, possibly upgraded later to 5,08 GWh/d (the lower capacity was taken into account for the network modeling)

The implementation of these projects depends on whether there will be an expression of interest by potential users of the system.

Plinovodi projects cluster 4

Code	Name	Technical information	FID status	Commissioning	TEN-E	PCI project
TRA-N-099	M3/1a Gorizia/Šempeter - Ajdovščina	Pipeline 29 km	non-FID	2017	TEN-E 2011	Yes
TRA-N-262	M3/1b Ajdovščina - Kalce	Pipeline 24 km	non-FID	2017	TEN-E 2011	Yes
TRA-N-261	M3/1c Kalce - Vodice	Pipeline 47 km	non-FID	2017	TEN-E 2011	Yes
TRA-N-093	CS Ajdovščina (2nd phase)	Compressor station 20 MW	non-FID	2023	Not part of TEN-E	No
TRA-N-101	M8 Kalce - Jelšane	Pipeline 51 km	non-FID	2023	TEN-E 2012	Yes

GENERAL INFORMATION

Promoter	Plinovodi
Operator	Plinovodi
Web Link	www.plinovodi.si/wp-content/uploads/2011/09/RN-2014-2023.pdf

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Negotiated with the exception of the CS Ajdovščina
Considered Tariff Regime	Negotiated with the exception of the CS Ajdovščina
Applied for Exemption ?	Not yet

DESCRIPTION AND BENEFITS OF THE PROJECT

These projects aim at providing the necessary capacity to the Slovenian transmission system for the transportation of gas delivered either from the planned Krk terminal in Croatia or through the planned IAP pipeline, to Slovenia and Italy.
The cross-border capacity at Šempeter/Gorizia would increase by 102 GWh/d or (with the addition of the 2nd phase C/S) by 340 GWh/d.
Their implementation depends on the implementation of either of the above upstream projects.

TRA-N-112	Plinovodi projects cluster 5: R15/1 Lendava - Kidričevo	Non-FID

Pipeline including CS

SPONSORS

Promoter	Plinovodi d.o.o.
Operator	Plinovodi d.o.o.

GENERAL INFORMATION

TEN-E Project ?	Project of Common Interest
In PCI list ?	Yes
IGAs	1
Web Link	www.plinovodi.si/wp-content/uploads/2011/09/RN-2014-2023.pdf

TEN-E Requests	Date of Request	Year Funding Granted
	01.04.2010	Not yet
	27.02.2012	Not yet

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	
Construction	
Commissioning	2018
Last completed Phase :	Planned

TECHNICAL INFORMATION

# of Pipelines, nodes, CS	1
Total Pipeline Length (km)	+70.00
Total Compressor Power (MW)	
Expected Load Factor	+0.70
Diameter (range) (mm)	DN 500
Diameter (range) (inches)	20"

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Interconnector SI-HU	**Yes**	**entry**	**38.00**	**Hub Hungary**	**Hub Slovenia**

DESCRIPTION OF THE PROJECT

Interconnector with the transmission system of the Hungarian TSO.

EXPECTED BENEFITS

Security of Supply, Market integration, Reverse Flows, Diversification of sources, Diversification of routes, N-1 National, N-1 Regional.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

Plinovodi projects cluster 6

Code	Name	Technical information	FID status	Commissioning	TEN-E	PCI project
TRA-N-098	M9a Lendava - Kidričevo	Pipeline 72 km and Compressor station 80 MW	non-FID	2016	TEN-E 2011	No
TRA-N-100	M10 Vodice - Rateče	Pipeline 79 km	non-FID	2017	TEN-E 2010, 2011	No
TRA-N-263	M9b Kidričevo - Vodice	Pipeline 115 km and Compressor station 60 MW	non-FID	2018	TEN-E 2012	No

GENERAL INFORMATION

Promoter	Plinovodi	THIRD-PARTY ACCESS REGIME	
Operator	Plinovodi	Considered TPA Regime	Negotiated
		Considered Tariff Regime	Negotiated
Web Link	www.plinovodi.si/wp-content/uploads/2011/09/RN-2014-2023.pdf	Applied for Exemption ?	Not yet

DESCRIPTION AND BENEFITS OF THE PROJECT

These projects aim at providing additional supply to the Slovenian gas market, but mainly represent a substantial transit capacity to the Slovenian transmission system from Hungary to Italy, establishing two new Interconnection Points:
- one at the Slovenian-Hungarian border (Lendava) with an entry capacity of 288 GWh/d, possibly increasing to 819 GWh/d and
- one at the Slovenian-Italian border (Tarvisio) with an exit capacity of 819 Gwh/d.

The implementation of the project depends on the existence of corresponding upstream (within Hungary) transmission capacity.

5 UGS projects

FID

UGS-F-236	San Potito e Cotignola	FID

Storage Facility

SPONSORS	
Promoter	Edison Stoccagio S.p.A.
Operator	Edison Stoccagio S.p.A.

GENERAL INFORMATION	
TEN-E Project ?	Not part of TEN-E
In PCI list ?	No
IGAs	None
Web Link	

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	2009 Q2
FID	2006 Q3
Construction	2010 Q2
Commissioning	2013 Q2
Last completed Phase :	Commissioning

TECHNICAL INFORMATION	
Storage facility	San Potito e Cotignola
Working volume (mcm)	+868
Injectability (mcm/d)	+6.80
Deliverability (mcm/d)	+6.80

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
UGS - IT - Snam Rete Gas/Edison	Yes	entry	74.80	Hub Italia	Storage Italia
	Yes	exit	74.80	Storage Italia	Hub Italia

DESCRIPTION OF THE PROJECT

New storage installation east of Bologna.

EXPECTED BENEFITS

Security of Supply, Market integration, (Increase of competition).
The Italian Storage facilities is a market characterized by absence of a different operators, low level of development new storage capacity by the major operator (with the 97% market share). The Italian UGS projects will enhance the level of competition and security of supply at national level.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

UGS-F-259	Bordolano	FID

Storage Facility

SPONSORS	
Promoter	STOGIT
Operator	STOGIT

GENERAL INFORMATION	
TEN-E Project ?	Not part of TEN-E
In PCI list ?	No
IGAs	None
Web Link	www.stogit.it/en/activities/Innovation-and-research/Progetto_Bordolano.html

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	2013 Q4
FID	2006 Q2
Construction	2013 Q4
Commissioning	2015 Q4
Last completed Phase :	FID

TECHNICAL INFORMATION	
Storage facility	Bordolano
Working volume (mcm)	+1,136
Injectability (mcm/d)	+14.20
Deliverability (mcm/d)	+18.90

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone

DESCRIPTION OF THE PROJECT

Depleted gas fields on-shore (new fied) in Northern Italy.

EXPECTED BENEFITS

Security of Supply, Market integration, Reverse Flows, Diversification of sources, Diversification of routes, N-1 National, N-1 Regional, Back-up for renewables, Power-to-gas, Market Integration (increase of competition and market liquidity),Increased flexibility of the system.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

UGS-F-260	System Enhancements - Stogit - on-shore gas fields	FID

Storage Facility

SPONSORS

Promoter	STOGIT
Operator	STOGIT

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	No
IGAs	None
Web Link	

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2014 Q2
FID	2006 Q2
Construction	2012 Q4
Commissioning	2016 Q4
Last completed Phase :	FID

TECHNICAL INFORMATION

Storage facility	Stogit Enhancements and New Developments
Working volume (mcm)	+2,003.70
Injectability (mcm/d)	
Deliverability (mcm/d)	+22.20

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone

DESCRIPTION OF THE PROJECT

The project envisages the development of the following depleted on-shore gas fields (all of them in Northern Italy with one exception - in Central Italy):
- Settala
- Fiume Treste
- Minerbio
- Ripalta
- Ex strategic storage

EXPECTED BENEFITS

Security of Supply, Market integration, Reverse Flows, Diversification of sources, Diversification of routes, N-1 National, N-1 Regional, Back-up for renewables, Power-to-gas, Market Integration (increase of competition and market liquidity), Increased flexibility of the system.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

6 UGS projects

non-FID

UGS-N-076	Underground Gas Storage at South Kavala	Non-FID

Storage Facility

SPONSORS

Promoter	Hellenic Republic Asset Development Fund (HRADF)
Operator	To be defined

GENERAL INFORMATION

TEN-E Project ?	Project of Common Interest
In PCI list ?	Yes
IGAs	None
Web Link	

TEN-E Requests	Date of Request	Year Funding Granted
	29.02.2012	Not yet
	28.02.2011	Not yet

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	–
Considered Tariff Regime	–
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	2015 Q2
Construction	2016 Q1
Commissioning	2018
Last completed Phase :	Planned

TECHNICAL INFORMATION

Storage facility	Underground Gas Storage at South Kavala
Working volume (mcm)	+360
Injectability (mcm/d)	+5.00
Deliverability (mcm/d)	+4.00

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
UGS - GR - DESFA/South Kavala	Yes	entry	55.00	Hub Greece	Storage Greece
	Yes	exit	44.00	Storage Greece	Hub Greece

DESCRIPTION OF THE PROJECT

The project is aiming to the conversion of the South Kavala offshore natural gas reservoir to an Underground Gas Storage facility.

- The South Kavala field is an almost depleted reservoir, which is a turbistic sand package at a depth of 1,720 m, contained between a sequence of evaporites.
- The license for the development and operation of the UGS of South Kavala will be attributed through a tender procedure, expected to be launched by the Hellenic Republic Asset Development Fund (HRADF) to which the rights over the field have been transferred by the State. The right to exploit the nearly depleted gas field of South Kavala is held, until 2014, by Energean Oil & Gas S.A.

EXPECTED BENEFITS

Security of Supply, Diversification of sources, N-1 National (GR), N-1 Regional (GR-BG-RO).

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

UGS-N-138	UGS Chiren Expansion	Non-FID

Storage Facility

SPONSORS	
Promoter	Bulgartransgaz EAD
Operator	Bulgartransgaz EAD

GENERAL INFORMATION	
TEN-E Project ?	Project of Common Interest
In PCI list ?	Yes
IGAs	None
Web Link	http://www.bulgartransgaz.bg/en/index.php

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	Not relevant
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	
FID	2014
Construction	
Commissioning	2017
Last completed Phase :	Planned

TECHNICAL INFORMATION	
Storage facility	UGS Chiren
Working volume (mcm)	+450
Injectability (mcm/d)	+5.80
Deliverability (mcm/d)	+5.80

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
UGS - BG - Chiren - Bulgartransgaz	Yes	exit	65.00	Hub Bulgaria (NGTS)	Storage Bulgaria (NGTS)
	Yes	entry	65.00	Storage Bulgaria (NGTS)	Hub Bulgaria (NGTS)
	Yes	entry	65.00	Storage Bulgaria (NGTS)	Hub Bulgaria (NGTS)
	Yes	exit	65.00	Hub Bulgaria (NGTS)	Storage Bulgaria (NGTS)

DESCRIPTION OF THE PROJECT

The project for expansion of the existing gas storage facility Chiren consists of staged capacity increse of the gas storage facility – higher stored gas volumes, higher pressures in the gas reservoir and reaching higher average daily withdrawal and injection flow rates.
Two options of reaching maximum capacities are mainly under consideration:
– up to 130 bar fomation pressure, active gas 720 mcm and daily production and withdrawal flow 10 mcm.
– up to 150 bar formation pressure, active gas 1,000 mcm and daily production and withdrawal flow 10 mcm.

EXPECTED BENEFITS

Description of the benefits: Chiren UGS is the only storage facility on the territory of Bulgaria and it plays a key role in ensuring the security of gas supply as well as compensating the seasonal swings in gas consumption in the region.
The expansion of Chiren UGS will secure additional natural gas storage capacity and increase the injection and withdrawal flow rate, thus improving on one hand the security of gas supply in the region and compliance with the N-1 standard and contributing to developing the natural gas trade in the region on the other.
The realization of the gas interconnections projects and the improvement of market integration in the region will create the opportunity for different traders to use the storage capacity thus increasing market competition on one hand and the benefits for natural gas customers.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

UGS-N-141	Construction of new gas storage facility on the territory of Bulgaria	Non-FID

Storage Facility

SPONSORS	
Promoter	Bulgartransgaz EAD
Operator	Bulgartransgaz EAD

GENERAL INFORMATION	
TEN-E Project ?	Project of Common Interest
In PCI list ?	Yes
IGAs	None
Web Link	http://www.bulgartransgaz.bg/en/index.php

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	Not relevant
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	
FID	
Construction	
Commissioning	2020
Last completed Phase :	Planned

TECHNICAL INFORMATION	
Storage facility	Not defined yet
Working volume (mcm)	
Injectability (mcm/d)	
Deliverability (mcm/d)	

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone

DESCRIPTION OF THE PROJECT

Provision is made for the construction of new gas storage facility on the territory of Bulgaria with a view to ensuring security of supply and a stimulus to gas market liberalisation. The project is in an early phase therefore different opportunities for the construction of a new gas storage in suitable geological structures are considered - in salt caverns, depleted gas field (inland or offshore) or aquifer.

EXPECTED BENEFITS

Security of Supply, Market integration, N-1 National, N-1 Regional, (Central Eastern Europe, South Eastern Europe, Balkan Region).

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

UGS-N-209	Pusztaederics - Compressor System Reconstruction	FID

Storage Facility

SPONSORS	
Promoter	Hungarian Gas Storage Ltd.
Operator	Hungarian Gas Storage Ltd.

GENERAL INFORMATION	
TEN-E Project ?	Project of Common Interest
In PCI list ?	No
IGAs	None
Web Link	

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	2013 Q1
FID	2012 Q4
Construction	2013 Q2
Commissioning	2014-16
Last completed Phase :	Construction

TECHNICAL INFORMATION	
Storage facility	Pusztaederics
Working volume (mcm)	+340
Injectability (mcm/d)	+2.50
Deliverability (mcm/d)	+2.90

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
UGS - HU - FGSZ/E.ON Hungary	Yes	exit	31.90	Storage Hungary	Hub Hungary
	Yes	entry	27.50	Hub Hungary	Storage Hungary

DESCRIPTION OF THE PROJECT

To significantly increase the operational reliability and flexibility of storage services in the very crucial part of the North/South Corridor in the Region towards Slovenia, Croatia and Serbia.
Also to generate ~20% increased daily injection peak (0.5 Mm3/d) and off season operation.

EXPECTED BENEFITS

Market integration, Diversification of routes.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

UGS-N-233	Depomures Storage Project	Non-FID

Storage Facility

SPONSORS

Promoter	Depomures S.A.
Operator	Depomures S.A.
	(59% subsidiary of GDF-Suez)

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	Yes
IGAs	None
Web Link	

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2014 Q2
FID	2014 Q2
Construction	2014 Q3
Commissioning	2016 Q2
Last completed Phase :	FEED

TECHNICAL INFORMATION

Storage facility	Depomures
Working volume (mcm)	+300
Injectability (mcm/d)	+2.30
Deliverability (mcm/d)	+2.30

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone

DESCRIPTION OF THE PROJECT

Revamping of an existing underground gas storage. Construction of own compression facilities in order to be able to perform independent and "best-in-class" storage activities, together with an increase of the storafe capacity from 300 to 400 mcm, (and further to 600 mcm during a second phase) and of the withdrawal rates.

EXPECTED BENEFITS

Security of Supply, Market integration (The project will contribute to improve seasonal and peak flexibility in Romania and the neighbouring ountries), N-1 National (The storage extension will increase deliverability by 4 mcm/day. This could be used by Romania, Bulgaria or Greece).

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

UGS-N-234	Zsana UGS - Decrease of the minimum injection capacity	Non-FID

Storage Facility

SPONSORS	
Promoter	Hungarian Gas Storage Ltd.
Operator	Hungarian Gas Storage Ltd.

GENERAL INFORMATION	
TEN-E Project ?	Project of Common Interest
In PCI list ?	No
IGAs	None
Web Link	

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	2015 Q3
FID	2015 Q4
Construction	2016 Q1
Commissioning	2017 Q1
Last completed Phase :	Market test

TECHNICAL INFORMATION	
Storage facility	Zsana
Working volume (mcm)	+2,140
Injectability (mcm/d)	+17.20
Deliverability (mcm/d)	+28.00

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
UGS - HU - FGSZ/E.ON Hungary	Yes	entry	189.20	Hub Hungary	Storage Hungary
	Yes	exit	308.00	Storage Hungary	Hub Hungary

DESCRIPTION OF THE PROJECT

The project aims at enabling a more flexible operation enabling the injectability to be as low as 0.24 Mm3/d.

EXPECTED BENEFITS

Market integration, Diversification of routes.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

UGS-N-235	Nuovi Sviluppi Edison Stoccaggio	Non-FID

Storage Facility

SPONSORS	
Promoter	Edison Stoccagio S.p.A.
Operator	Edison Stoccagio S.p.A.

GENERAL INFORMATION	
TEN-E Project ?	Not part of TEN-E
In PCI list ?	No
IGAs	None
Web Link	

FINANCING	
Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE	
End of permitting phase	
FID	
Construction	
Commissioning	2018 Q4
Last completed Phase :	Planned

TECHNICAL INFORMATION	
Storage facility	Nuovi Sviluppi Edison Stoccaggio
Working volume (mcm)	+1,000
Injectability (mcm/d)	+10.00
Deliverability (mcm/d)	+10.00

PROJECTED CAPACITY INCREASES					
Interconnection	**Modelled**	**Direction**	**Capacity (GWh/d)**	**From Zone**	**To Zone**
UGS - IT - Snam Rete Gas/Edison	**Yes**	**entry**	**110.00**	**Hub Italia**	**Storage Italia**
	Yes	**exit**	**110.00**	**Storage Italia**	**Hub Italia**

DESCRIPTION OF THE PROJECT

The project consists mainly of a number of wells infilling and repowering activities in the existing plants of Cellino (Central Italy) and Collalto (Northern Italy).

EXPECTED BENEFITS

Security of Supply, Market integration, (Increase of competition):
The Italian Storage facilities is a market characterized by absence of a different operators, low level of development new storage capacity by the major operator (with the 97% market share). The Italian UGS projects will enhance the level of competition and security of supply at national level.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

UGS-N-237	Palazzo Moroni	Non-FID

Storage Facility

SPONSORS

Promoter	Edison Stoccagio S.p.A.
Operator	Edison Stoccagio S.p.A.

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	No
IGAs	None
Web Link	

FINANCING

Public Financing	–
Private Financing	–
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	
Construction	
Commissioning	2016 Q2
Last completed Phase :	FEED

TECHNICAL INFORMATION

Storage facility	Palazzo Moroni
Working volume (mcm)	+66.00
Injectability (mcm/d)	+1.00
Deliverability (mcm/d)	+1.00

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
UGS - IT - Snam Rete Gas/Edison	Yes	entry	11.00	Hub Italia	Storage Italia
	Yes	exit	11.00	Storage Italia	Hub Italia

DESCRIPTION OF THE PROJECT

The project consists mainly of a number of wells infilling and repowering activities in the existing plants of Cellino (Central Italy) and Collalto (Northern Italy).

EXPECTED BENEFITS

Security of Supply, Market integration, (Increase of competition):
The Italian Storage facilities is a market characterized by absence of a different operators, low level of development new storage capacity by the major operator (with the 97% market share). The Italian UGS projects will enhance the level of competition and security of supply at national level.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

UGS-N-242	Cornegliano UGS	Non-FID

Storage Facility

SPONSORS

Promoter	ITAL Gas Storage S.r.l.
Operator	ITAL Gas Storage S.r.l.

GENERAL INFORMATION

TEN-E Project ?	Project of European Interest
In PCI list ?	Yes
IGAs	None
Web Link	www.italgasstorage.it

FINANCING

Public Financing	–
Private Financing	100%
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	No
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	2012 Q1
FID	2014 Q3
Construction	2015 Q3
Commissioning	2018 Q1
Last completed Phase :	Permitting

TECHNICAL INFORMATION

Storage facility	Cornegliano UGS
Working volume (mcm)	+1,300
Injectability (mcm/d)	+27.00
Deliverability (mcm/d)	+27.00

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone
Cornegliano	Yes	exit	297.00	Storage Italia	Hub Italia
	Yes	entry	297.00	Hub Italia	Storage Italia

DESCRIPTION OF THE PROJECT

Ital Gas Storage will construct a new gas storage facility located in Lombardy (Italy). The facility will have a working gas volume of 1.3 billion cubic meters (+10% of actual Italian capacity). The maximum injection and withdrawal rate from the facility will be 27 million cubic meters per day (+10% of actual capacity).

EXPECTED BENEFITS

Security of Supply, Market integration (Italy, Southern Europe, Central Europe), Reverse Flows, Diversification of sources, Diversification of routes, N-1 National (Italy), N-1 Regional (West), Back-up for renewables, Cornegliano UGS will contribute to the development of reverse gas flow from South Europe to Central Europe and North Europe by providing shippers with an important source of flexibility and gas modulation at relatively low cost (the national tariff in Italy is the lowest in Europe).

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

UGS-N-288	Grottole-Ferrandina Gas Storage	Non-FID

Storage Facility

SPONSORS

Promoter	Geogastock
Operator	Geogastock S.p.A.

GENERAL INFORMATION

TEN-E Project ?	Not part of TEN-E
In PCI list ?	No
IGAs	None
Web Link	www.geogastock.it

FINANCING

Public Financing	–
Private Financing	80%
Multilateral Financing	–

THIRD-PARTY ACCESS REGIME

Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption ?	No
Exemption granted ?	Not relevant
% Exemption in entry direction	–
% Exemption in exit direction	–

SCHEDULE

End of permitting phase	
FID	
Construction	2014 Q2
Commissioning	2016 Q1
Last completed Phase :	Permitting

TECHNICAL INFORMATION

Storage facility	Grottole-Ferrandina
Working volume (mcm)	+1,000
Injectability (mcm/d)	+10.00
Deliverability (mcm/d)	+10.00

PROJECTED CAPACITY INCREASES

Interconnection	Modelled	Direction	Capacity (GWh/d)	From Zone	To Zone

DESCRIPTION OF THE PROJECT

Depleted gas field in Southern Italy. Phase 1 (already authorized): workover of 14 existing wells, construction of a new compressor station, revamping the pipelines network. Phase 2 (not yet approved): drilling of 10 new wells.

EXPECTED BENEFITS

Security of Supply.

COMMENTS ABOUT THE PROJECT FINANCING

Public financing	Private financing	Multilateral financing

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