



Southern Corridor

GRIP

ANNEX B: PROJECT INFORMATION





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Austria

GCA 2015/08: Entry/Exit Murfeld

TRA-N-361	Project	Pipeline including CS	Non-FID
Update Date	06/05/2016		Advanced
Description	The Project enables incremental capacity at the IP Murfeld in both directions (AT->SI, SI->AT). Moreover, physical RF capacity at the Entry Point Murfeld is achieved.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Murfeld (AT) / Ceršak (SI)	Gas Connect Austria GmbH	2019	AT	SI	53.7 GWh/d
	<i>Comment: conversion from Nm³/h to kwh/h with a GCV of 11.19</i>				
	Gas Connect Austria GmbH	2019	SI	AT	166.5 GWh/d
<i>Comment: conversion from Nm³/h to kwh/h with a GCV of 11.19</i>					

Sponsors	General Information	No Barriers Defined	Barriers (Count)
	Promoter	GAS CONNECT AUSTRIA GmbH	
	Operator	Gas Connect Austria GmbH	
	Host Country	Austria	
	Status	Planned	
	Website		
	Publication Approval Status	Approved	

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (NDP 2016 - 2025)	Pre-Feasibility			Considered TPA Regime	Regulated
NDP Number	GCA 2015/08	Feasibility			Considered Tariff Regime	Regulated
		FEED			Applied for Exemption	No
Currently PCI	Yes (6.26.4)	Market Test			Exemption Granted	No
		Permitting	10/2015	07/2017		
CBCA Decision	No	Supply Contracts			Exemption in entry direction	0.00%
Market Survey	Not Relevant (no CBCA decision)	FID			Exemption in exit direction	0.00%
		Construction		11/2019		
		Commissioning	2019	2019		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Murfeld	The technical load factor of the pipeline is confidential and must not be published in the TYNDP.				
Total					

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Benefits	
Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	

Bidirectional Austrian-Czech Interconnector (BACI, formerly LBL project)

TRA-N-021	Project	Pipeline including CS	Non-FID
Update Date	06/05/2016		Advanced
Description	<p>The Bidirectional Austrian Czech Interconnection (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 project BACI will enable capacity transmission for the first time between these two EU member states and it will facilitate better market integration between Austria and the Czech Republic. The project BACI will also increase the overall flexibility of the Czech, Austrian and also Polish system by diversification of gas supply routes and by connecting UGSs in the Czech Republic and Austria.</p>		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
	Gas Connect Austria GmbH	2020	AT	CZ	201.4 GWh/d
	<i>Comment: New bidirectional IP connecting the Czech and the Austrian Virtual Trading Point . Maximum capacity will be between 750,000Nm³/h and 1,480,000Nm³/h; conversion from Nm³/h to kwh/h with a GCV of 11.19.</i>				
Poštorná / Reintal	Gas Connect Austria GmbH	2020	CZ	AT	201.4 GWh/d
	<i>Comment: New bidirectional IP connecting the Czech and the Austrian Virtual Trading Point . Maximum capacity will be between 750,000Nm³/h and 1,480,000Nm³/h; conversion from Nm³/h to kwh/h with a GCV of 11.19.</i>				

Sponsors	General Information	No Barriers Defined	Barriers (Count)
Pipeline on Austrian territory GAS CONNECT AUSTRIA GmbH 100%	Promoter <i>GAS CONNECT AUSTRIA GmbH</i>		
Pipeline on Czech territory NET4GAS, s.r.o 100%	Operator <i>Gas Connect Austria GmbH</i>		
	Host Country <i>Austria</i>		
	Status <i>Planned</i>		
	Website		
	Publication Approval Status <i>Approved</i>		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (NDP 2016-2025)	Pre-Feasibility			Considered TPA Regime	Regulated
NDP Number	GCA 2015/01a	Feasibility			Considered Tariff Regime	Regulated
		FEED			Applied for Exemption	No
Currently PCI	Yes (6.4)	Market Test		06/2016	Exemption Granted	Not Relevant
		Permitting	10/2015			
CBCA Decision	No	Supply Contracts			Exemption in entry direction	0.00%
Market Survey	Not Relevant (no CBCA decision)	FID			Exemption in exit direction	0.00%
		Construction		10/2020		
		Commissioning	2020	2020		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Austrian Side	The technical load factor of the pipeline is confidential and must not be published in the TYNDP.				
Czech Side		800	12	0	
Total			12	0	

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Benefits	
Main Driver	Others
Main Driver Explanation	Market Integration



Benefit Description

The project BACI will ensure transmission capacity between the two member states and will facilitate better market integration and security of gas supply also for adjacent countries. It contributes to the diversification of gas supply and the increased transportation opportunities to and from countries like Hungary, Poland, Germany, Italy, France, Slovenia, Croatia and Slovakia and access to new and existing trading markets. The project BACI will enhance the market development due to access to underground gas storages both on the Austrian and Czech side and therefore will enhance the market development by providing peak regulation and the flexibility of gas flow. The project BACI is a key element in creating a well-functioning internal market in the CEE region due to access to existing and new import infrastructures such as a new LNG terminal in Poland and Croatia, Nord Stream and unconventional gas sources. With the project BACI the CEE region would become less vulnerable to a supply



GCA Mosonmagyaróvár

TRA-N-423	Project	Pipeline including CS	Non-FID
Update Date	06/05/2016		Advanced
Description	Current planning based on market indications. Potential connection to projects for the potential establishment of a Southern Corridor.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Mosonmagyarovar	Gas Connect Austria GmbH	2020	HU	AT	153.1 GWh/d
Comment: 5 bcma. Further upgrade potential up to development of market demand. Conversion from Nm ³ /h to kwh/h with a GCV of 11.19					

Sponsors	General Information	No Barriers Defined	Barriers (Count)
	Promoter		
	Operator		
	Host Country		
	Status		
	Website		
	Publication Approval Status		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (NDP 2016 - 2025)	Pre-Feasibility			Considered TPA Regime	Regulated
NDP Number	GCA 2015/05	Feasibility			Considered Tariff Regime	Regulated
		FEED			Applied for Exemption	Yes
Currently PCI	Yes (6.24.3)	Market Test			Exemption Granted	Yes
		Permitting	10/2015	07/2017		
CBCA Decision	No	Supply Contracts			Exemption in entry direction	0.00%
Market Survey	Not Relevant (no CBCA decision)	FID			Exemption in exit direction	0.00%
		Construction		10/2020		
		Commissioning	2020	2020		

Pipelines and Compressor Stations						
Pipeline Section	Pipeline Comment			Diameter (mm)	Length (km)	Compressor Power (MW)
Mosonmagyaróvár	The technical load factor of the pipeline is confidential and must not be published in the TYNDP.					
Total						

PCI Details	
PCI Benefits	
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Benefits	
Main Driver	Market Demand
Main Driver Explanation	Pipeline projects are planned according to market demand. Current planning is based on market indications.
Benefit Description	Strengthening the establishment of a potential Southern Corridor and contribution to a diversification of sources e.g. Black Sea Gas.

Břeclav-Baumgarten Interconnection (BBI) AT

TRA-N-801	Project	Pipeline including CS	Non-FID
Update Date	04/05/2016		Advanced
Description	The project will be a new infrastructure directly connecting the Austrian and Czech market and is connected to the project C4G of N4G at the AT/CZ border.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
	Gas Connect Austria GmbH	2020	CZ	AT	1,118.1 GWh/d
Poštorná / Reintal	<i>Comment: The incremental capacity represents an entry capacity extension above planned exit capacity at CZ/AT border. GCV:11.19</i>				

Sponsors	General Information	No Barriers Defined	Barriers (Count)
	Promoter	<i>GAS CONNECT AUSTRIA GmbH</i>	
	Operator	<i>Gas Connect Austria GmbH</i>	
	Host Country	<i>Austria</i>	
	Status	<i>Planned</i>	
	Website		
	Publication Approval Status	<i>Approved</i>	

Enabled Projects

Project Code	Project Name
TRA-N-021	Bidirectional Austrian-Czech Interconnector (BACI, formerly LBL project)

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>No (The BBI project is a new project and will be part of the NDP 2017-2026.)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number		Feasibility			Considered Tariff Regime	<i>Regulated</i>
	<i>GCA2015/01</i>	FEED			Applied for Exemption	<i>No</i>
Currently PCI		Market Test		<i>04/2016</i>	Exemption Granted	<i>Not Relevant</i>
	<i>No</i>	Permitting	<i>03/2016</i>			
CBCA Decision		Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction		<i>10/2020</i>		
		Commissioning	<i>2020</i>	<i>2020</i>		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Břeclav-Baumgarten Interconnection (BBI) AT	The incremental capacity represents an entry capacity extension between the market areas of CZ and AT	1,400	49	10	
Total			49	10	

Benefits	
Main Driver	<u>Market Demand</u>
Main Driver Explanation	
Benefit Description	

TAG Reverse Flow

TRA-N-954	Project	Pipeline including CS	Non-FID
Update Date	25/05/2016		Non-Advanced
Description	<p>The objective of the planning project "TAG Reverse Flow" is to create a reverse flow on the TAG GmbH pipeline system with three project variations: 1a Reverse Flow by upgrading existing entry DZK capacity to entry FZK capacity at the IP Arnoldstein/Tarvisio and additionally by allowing potential entry FZK capacity at the IP Ceršak/Murfeld. Physical interconnection capacity via an exit from the TAG GmbH pipeline system to the Gas Connect Austria GmbH subsystem PVS-AZ1. 1b Reverse Flow by upgrading existing entry DZK capacity to entry FZK capacity at the IP Arnoldstein/Tarvisio. Physical interconnection between the TAG pipeline system to the Gas Connect Austria subsystem PVS-AZ1. Further, the project shall also enable a physical connection at the IP Baumgarten at the Austrian/Slovakian boarder by upgrading existing backhaul capacity "Exit Baumgarten" to FZK capacity "Exit Baumgarten" of TAG GmbH. 1c This variation of the project is a combination of project variation 1a and 1b.</p>		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Baumgarten	TAG GmbH	2018	AT	SK	268.6 GWh/d
	<p><i>Comment: The project enable a physical connection at the IP Baumgarten (TAG GmbH/eustream a.s.) at the Austrian/Slovakian boarder by upgrading existing backhaul capacity "Exit Baumgarten" to FZK capacity "Exit Baumgarten" of TAG GmbH</i></p>				
Tarvisio (IT) / Arnoldstein (AT)	TAG GmbH	2018	IB-ITe	AT	0.0 GWh/d
	<p><i>Comment: Reverse Flow by upgrading existing entry DZK capacity to entry FZK capacity at the IP Arnoldstein/Tarvisio and additionally by allowing potential entry FZK capacity at the IP Ceršak/Murfeld.</i></p>				

Sponsors	General Information	No Barriers Defined	Barriers (Count)
Trans Austria Gasleitung GmbH 100%	<p>Promoter <i>Trans Austria Gasleitung GmbH</i></p> <p>Operator <i>TAG GmbH</i></p> <p>Host Country <i>Austria</i></p> <p>Status <i>Planned</i></p> <p>Website</p> <p>Publication Approval Status <i>Approved</i></p>		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (Coordinated Network Development Plan 2017-2026)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number		Feasibility			Considered Tariff Regime	<i>Regulated</i>
	<i>TAG 2016/03</i>	FEED			Applied for Exemption	<i>No</i>
Currently PCI		Market Test			Exemption Granted	<i>Not Relevant</i>
	<i>No</i>	Permitting				
CBCA Decision		Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning	<i>2018</i>	<i>2018</i>		

PCI Details

PCI Benefits	Project concerns investment in reverse flow capacity
General Criteria Fulfilled	No
Specific Criteria Fulfilled	Market Integration, Security of Supply
Specific Criteria Fulfilled Comments	

Benefits

Main Driver	Others
Main Driver Explanation	The planning project was triggered by an obligation arising out of the decree of the Austrian regulatory authority, E-Control related to the Coordinated Network Development Plan 2016-2025, whereas a reverse flow of the TAG pipeline system shall be assessed by also taking into consideration potential entry FZK capacity at the IP Ceršak/Murfeld. As a consequence, TAG GmbH also assesses an upgrade of existing entry DZK capacity to entry FZK capacity at the IP Arnoldstein/Tarvisio and, correspondingly, an upgrade of existing backhaul capacity "Exit Baumgarten" to FZK capacity "Exit Baumgarten" of TAG GmbH in its projects variations.
Benefit Description	

2 Bulgaria

A project for the construction of a gas pipeline BG-RO

TRA-N-379	Project	Pipeline including CS	Non-FID
Update Date	22/06/2016		Non-Advanced
Description	<p>The project is part of the concept for coordinated development of gas transmission networks of Bulgaria, Romania and Hungary (transport corridor Bulgaria-Romania-Hungary-Austria), designed for the bi-lateral natural gas transport between the countries. The project on the territory of Bulgaria includes the construction of a new infrastructure and modernization and expansion of the existing network in order to increase the capacity of interconnectivity of the northern semi-ring of the national gas transmission network of Bulgartransgaz EAD and the gas transmission network of Transgaz S.A., Romania. The implementation of the Bulgarian section together with the existing gas transmission infrastructure is expected to ensure the technical possibilities for supply of natural gas between 3 - 5 bcm/y between the planned entry points on Bulgaria's southern border and between Romania and Hungary, with an opportunity for access to the Central European gas market.</p>		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
New IP Bulgaria (BG) / Romania (RO) (3)	Bulgartransgaz EAD	2018	BGn	RO	85.0 GWh/d
	Bulgartransgaz EAD	2018	RO	BGn	85.0 GWh/d

Sponsors	General Information		No Barriers Defined	Barriers (Count)
Bulgartransgaz EAD	100%	Promoter	<i>Bulgartransgaz EAD</i>	
		Operator	<i>Bulgartransgaz EAD</i>	
		Host Country	<i>Bulgaria</i>	
		Status	<i>Planned</i>	
		Website	<i>Project's URL</i>	
		Publication Approval Status	<i>Approved</i>	

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (2016-2025 Ten-year network development plan of BTG)</i>	Pre-Feasibility		01/2017	Considered TPA Regime	<i>Regulated</i>
NDP Number		Feasibility			Considered Tariff Regime	<i>Regulated</i>
	<i>Section 5 (5.1.3.)</i>	FEED			Applied for Exemption	<i>Not Relevant</i>
Currently PCI		Market Test			Exemption Granted	<i>Not Relevant</i>
	<i>Yes (6.8.4.)</i>	Permitting				
CBCA Decision		Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	<i>No</i> FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning		2018	2018	

Pipelines and Compressor Stations

Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)
A project for the construction of a gas pipeline (pipelines) aiming at exp				
Total				

PCI Details

PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Time Schedule

Grant Obtention Date	
Delay Since Last TYNDP	yes
Delay Explanation	The project is under consideration.

Expected Gas Sourcing

Algeria, Caspian Region, LNG (?), Southern gas corridor gas sources

Benefits

Main Driver	Others
Main Driver Explanation	Market integration; Security of supply, Competition.
Benefit Description	The project is part of the concept for coordinated development of the gas transmission networks of Bulgaria, Romania and Hungary (transmission corridor Bulgaria-Romania-Hungary-Austria) designed for a bi-direction natural gas transport. The realization of the Bulgarian section together with the existing gas transmission system is expected to secure the technical possibility for natural gas supplies between 3-5 bcm/y between the planned entry points on the Bulgarian southern border and Romania and Hungary providing an opportunity to access the Central European Gas market. The project will enhance market integration and competition and guarantee the SoS at regional level.

Interconnection Turkey-Bulgaria

TRA-N-140	Project	Pipeline including CS	Non-FID
Update Date	29/06/2016		Non-Advanced
Description	Construction of new onshore gas pipeline in the section between the village of Losenets and the Bulgarian-Turkish border in the region of the village of Strandja in parallel to the existing transit gas pipeline of about 76 km length on Bulgarian territory, diameter of the pipe 700 mm and capacity of about 3 bcm/y at operating pressure 64 bar. A compressor station Losenets – 2 near the existing compressor station in the region of the village of Losenets is also envisaged to be built. The project, as part of the priority Southern Gas Corridor is crucial in terms of security and diversification of the sources and routes of natural gas supply to/through Bulgaria and the region. Its implementation is directly related to achievement of the conditions required for creation of a competitive gas market, increase of systems' flexibility and market integration.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Interconnector ITB (Turkey - Bulgaria) (BG>TR)	Bulgartransgaz EAD	2020	BGn	BG/ITB	97.0 GWh/d
Interconnector ITB (Turkey - Bulgaria) (TR>BG)	Bulgartransgaz EAD	2020	BG/ITB	BGn	97.0 GWh/d

Sponsors	General Information		No Barriers Defined	Barriers (Count)
Bulgartransgaz EAD for the gas pipeline section on the territory of Bulgaria	100%	Promoter <i>Bulgartransgaz EAD</i> Operator <i>Bulgartransgaz EAD</i> Host Country <i>Bulgaria</i> Status <i>Planned</i> Website <i>Project's URL</i> Publication Approval Status <i>Approved</i>		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (2016-2025 Ten-year network development plan of BTG)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number		Feasibility	<i>08/2015</i>	<i>02/2016</i>	Considered Tariff Regime	<i>Regulated</i>
	<i>ITB</i>	FEED			Applied for Exemption	<i>No</i>
Currently PCI		Market Test		<i>05/2017</i>	Exemption Granted	<i>Not Relevant</i>
		Permitting	<i>08/2017</i>	<i>11/2017</i>		
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey		FID			Exemption in exit direction	<i>0.00%</i>
	<i>Not Relevant (no CBCA decision)</i>	Construction	<i>12/2018</i>	<i>07/2020</i>		
		Commissioning	<i>2020</i>	<i>2020</i>		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
ITB Bulgarian Section		700	76	13	
ITB Turkish Section			130		
Total			206	13	

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	ITB is a pivotal part of a larger gas markets integration strategy that includes interconnection projects Bulgaria-Romania, Bulgaria-Serbia, Romania-Hungary. The implementation of the project and the addition of alternative sources of gas in the region will promote the market integration of the region and the development of more infrastructures in the area and specifically in the countries mentioned above. The project will allow to alleviate to a great extent the dependency of countries in the area in a single import source/counterpart. ITB will definitely provide additional capacity in relation to national and regional N-1, considering that it will supply additional quantities of gas from an alternative route for alternative sources and counterparts to an area in urgent need of diversification. Considering that Bulgaria and the region are heavily dependent on gas imports from a single source, the diversification that ITB provides in all three (route, source and counterparts) will p

Time Schedule

Grant Obtention Date	
Delay Since Last TYNDP	yes
Delay Explanation	As a result of the Feasibility Study conducted in 2015 the preliminary project data such as route, length, diameter, capacity, pressure, above ground equipment, investment costs and time schedule have been precised.

Expected Gas Sourcing

Caspian Region, LNG (), SGC, Azerbaijan, LNG, Iran, Turkmenistan and other entering Turkish system which has 6 entry points.

Benefits

Main Driver	Others
Main Driver Explanation	
Benefit Description	The implementation of the project will considerably contribute for the achievement of the broad EU energy objectives and priorities such as: • Diversification of gas supply • Enhancing security of supply (by reducing the dependency on one source of gas supply) • Promoting further integration of the EU internal energy market • Encouraging and increasing market competitiveness • Contributing to the gas market liberalization

Intergovernmental Agreements

Agreement	Agreement Description	Is Signed	Agreement Signature Date
Joint Declaration of the Minister of Energy and Natural Resources of the Republic of Turkey and the Minister of Economy, Energy and Tourism of the Republic of Bulgaria on Energy Cooperation	Declarationon Energy Cooperation	Yes	20/03/2012
Memorandum of Understanding	a Memorandum of Understanding between the Ministry of Economy and Energy of the Republic of Bulgaria and the Ministry of Energy and Natural Resources of the Republic of Turkey, concerning ITB project	Yes	28/03/2014
Memorandum of Understanding between the Ministry of Economy, Energy and Tourism of the Republic of Bulgaria and the Ministry of Energy and Natural Resources of the Republic of Turkey on Comprehensive Cooperation in the Field of Energy	Memorandum of Understandingon Comprehensive Cooperation in the Field of Energy	Yes	29/01/2010

Rehabilitation, Modernization and Expansion of the NTS

TRA-N-298	Project	Pipeline including CS	Non-FID
Update Date	22/06/2016		Non-Advanced
Description	<p>A multicomponent project which consists of different actions for rehabilitation, modernization and expansion of the existing gas transmission infrastructure in Bulgaria and includes activities on: CSs modernization, inspections, repair and replacement of pipeline sections, expansion of the existing network and implementation of systems for optimization of the management process of the network technical condition. Taking into account the complex nature of the project, a 3 phases implementation is envisaged: Phase 1: Unifies the actions undertaken in the period 2013-2015, planned to be finalized in a short term and funded with BTG own resources. Phase 2: Includes actions planned to be initiated in 2016. They represent logic continuation of the overall realization of the project following the implementation of Phase 1. Phase 3: Conditional infrastructure necessary after taking the FID for stage 2 of the Interconnection Bulgaria – Serbia.</p>		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Interconnector BG RS	IBS Future Operator	2020	BGn	RS	19.4 GWh/d
	<i>Comment: infrastructure necessary for stage 2 of the Interconnection Bulgaria – Serbia.</i>				
Kulata (BG) / Sidirokastron (GR)	IBS Future Operator	2020	RS	BGn	19.4 GWh/d
	<i>Comment: infrastructure necessary for stage 2 of the Interconnection Bulgaria – Serbia.</i>				
Kulata (BG) / Sidirokastron (GR)	Bulgartransgaz EAD	2020	BGg/BGT	GR	13.8 GWh/d
Strandzha (BG) / Malkoclar (TR)	Bulgartransgaz EAD	2020	BGg/BGT	TRe	58.1 GWh/d

Sponsors	General Information	No Barriers Defined	Barriers (Count)
Bulgartransgaz EAD 100%	Promoter <i>Bulgartransgaz EAD</i>		
	Operator <i>Bulgartransgaz EAD</i>		
	Host Country <i>Bulgaria</i>		
	Status <i>Planned</i>		
	Website <i>Project's URL</i>		
	Publication Approval Status <i>Approved</i>		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (2016-2025 Ten-year network development plan of BTG)</i>	Pre-Feasibility		12/2016	Considered TPA Regime	<i>Not Applicable</i>
NDP Number		Feasibility		08/2017	Considered Tariff Regime	<i>Not Applicable</i>
	<i>Section 5.5.</i>	FEED			Applied for Exemption	<i>Not Relevant</i>
Currently PCI		Market Test		05/2017	Exemption Granted	<i>Not Relevant</i>
	<i>Yes (6.8.2.)</i>	Permitting		11/2018		
CBCA Decision		Supply Contracts		11/2018	Exemption in entry direction	0.00%
Market Survey	<i>Not Relevant (no CBCA decision)</i>	<i>No</i> FID			Exemption in exit direction	0.00%
		Construction		11/2020		
		Commissioning	2020	2020		

Pipelines and Compressor Stations

Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)
Gorni Bogrov - Novi Iskar	Conditional infrastructure required after the final investment decision on the realization of IBS Stage 2 related to a capacity increase of 1.8 to 3.2 bcm/y.	700	19	20
Lozenets-Nedyalsko		1,000	20	
PF Beglej - VA Dermantsi - VA Batultsi - VA Kalugerovo		700	58	
Valchi Dol - Preselka		700	23	
Total			120	20

PCI Details

PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	No
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	The modernization, rehabilitation and expansion of the existing gas transmission infrastructure will guarantee secure and reliable natural gas transmission, enhance the efficiency, reliability and flexibility of the transmission system and provide the required capacities and pressures. The implementation of the activities planned will secure the technical capabilities for transmission of additional natural gas quantities through the territory of the country, coming in through the existing and new entry and exit points, and opportunities for diversification of the directions of transmission depending on the market interest.

Time Schedule

Grant Obtention Date
 Delay Since Last TYNDP yes
 Delay Explanation Change in the projects scope.

Expected Gas Sourcing

Algeria, Caspian Region, Russia, LNG (), Southern gas corridor gas sources; European gas hubs;

Benefits

Main Driver Others

Main Driver Explanation

With the implementation of the project improvement of the transmission system’s efficiency, reliability and flexibility will be achieved, ensuring the necessary capacities and pressures including pressure recovery, bottlenecks removal, providing technical capabilities for transmission of additional natural gas quantities through the territory of the country, in relation to the planned new entry and exit points and opportunities for diversification of the transmission directions depending on the market interest and last but not least management optimization of the gas flows and setting the facilities meeting the ecologic requirements. Thus the technical and economic parameters of the existing gas infrastructure which has been in operation for forty years now will be improved.

Benefit Description

The project implementation will contribute to increasing the degree of market integration, creating a competitive gas market, encouraging the trade development, ensuring greater systems’ flexibility, risk management optimization. It is directly related to the planned new interconnections with Greece (IGB), Romania (IBR), Turkey (ITB) and Serbia (IBS) and with the use of the UGS Chiren’s capacity in relation to the project for its expansion, most of them labeled as PCIs, and with the development of the significant cross-border gas projects in the region. Their efficient use is related to the technical capacities of the existing gas transmission infrastructure on the territory of Bulgaria to ensure sufficient capacity and adequate technical conditions for the transport of the planned new natural gas quantities. The project was supported at the highest political level, as well as at regional level – it is a priority CESEC project.

Eastring - Bulgaria

TRA-N-654	Project	Pipeline including CS	Non-FID
Update Date	31/05/2016		Non-Advanced
Description	<p>Project Description: Eastring-SK is subproject located in Slovakia/Ukraine and is essential part of the Eastring project, which connects IP Velké Kapušany at the SK-UA border, with a new entry IP at an external border of the EU on the territory of Bulgaria in the following routing options: – from SK to RO – via UA, (exist. pipeline) – via HU, (new pipeline). – from RO to TR – Option A – new pipeline passing production & storage area and continuing to IP Isaccea and to BG/TR border by utilizing existing RO-BG transit assets – Option B – new pipeline, passing 2 production & storage areas and continuing to an external border of the EU on the territory of Bulgaria. The project would (i) secure supplies in case of RU disruption and therefore it will increase gas SoS in the broader Central-South-East EU region, (ii) allow access to alternative gas sources for Central, Western & Southern Europe and (iii) mean step towards EU single gas market.</p>		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Variant : Eastring - BG-2					
High capacity scenario, starting at new IP at RO-BG border, passing through BG using new pipeline to a new IP at BG-TR border					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Eastring BG Domestic Point	Bulgartransgaz EAD	2021	BGn	BG/EAR	200.0 GWh/d
	<i>Comment: Entry/Exit capacity at domestic points may go up to the level of 200 GWh/d if sum of all Exit capacities from domestic system to adjacent networks (or vice versa) is able to reach this level.</i>				
Eastring Cross-Border BG/EAR <> RO/EAR	Bulgartransgaz EAD	2021	BG/EAR	BGn	200.0 GWh/d
	<i>Comment: Entry/Exit capacity at domestic points may go up to the level of 200 GWh/d if sum of all Exit capacities from domestic system to adjacent networks (or vice versa) is able to reach this level.</i>				
Eastring Cross-Border BG/EAR <> RO/EAR	Bulgartransgaz EAD	2021	BG/EAR	RO/EAR	570.0 GWh/d
	<i>Comment: New interconnection point, New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>				
	Bulgartransgaz EAD	2025	BG/EAR	RO/EAR	570.0 GWh/d

Eastring Cross-Border BG/EAR <> RO/EAR	Bulgartransgaz EAD	2025	RO/EAR	BG/EAR	570.0 GWh/d
	Bulgartransgaz EAD	2021	BG/EAR	TRe	570.0 GWh/d
Eastring Cross-Border BG/EAR>TR	<i>Comment: Transmission between Eastring - Bulgaria and Turkey via a new IP at BG/TR border, New capacity increment from 4Q 2023 to the level of 1140 GWh/d.</i>				
	Bulgartransgaz EAD	2025	BG/EAR	TRe	570.0 GWh/d
	Bulgartransgaz EAD	2021	TRr	BG/EAR	570.0 GWh/d
Eastring Cross-Border TR>BG/EAR	<i>Comment: Transmission between Eastring - Bulgaria and Turkey via a new IP at BG/TR border New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>				
	Bulgartransgaz EAD	2025	TRr	BG/EAR	570.0 GWh/d
Capacity Increments Variant(s) For Information Only					
Variant : Eastring - BG-4					
Low capacity scenario (low in direction N->S), starting at new IP at RO-BG border, passing through BG using new pipeline to new IP at BG-TR border					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	Bulgartransgaz EAD	2021	BGn	BG/EAR	200.0 GWh/d
Eastring BG Domestic Point	<i>Comment: Entry/Exit capacity at domestic points may go up to the level of 200GWh/d if sum of all Exit capacities from domestic system to adjacent networks (or vice versa) is able to reach this level.</i>				
	Bulgartransgaz EAD	2021	BG/EAR	BGn	200.0 GWh/d
	<i>Comment: Entry/Exit capacity at domestic points may go up to the level of 200 GWh/d if sum of all Exit capacities from domestic system to adjacent networks (or vice versa) is able to reach this level.</i>				
	Bulgartransgaz EAD	2021	BG/EAR	RO/EAR	342.0 GWh/d
Eastring Cross-Border BG/EAR <> RO/EAR	<i>Comment: New interconnection point, New capacity increment from 4Q 2025 to the level of 712 GWh/d. Exit means direction RO->BG.</i>				
	Bulgartransgaz EAD	2021	RO/EAR	BG/EAR	570.0 GWh/d
	<i>Comment: New interconnection point, New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>				
	Bulgartransgaz EAD	2025	BG/EAR	RO/EAR	712.0 GWh/d
	Bulgartransgaz EAD	2025	RO/EAR	BG/EAR	570.0 GWh/d
Eastring Cross-Border BG/EAR>TR	Bulgartransgaz EAD	2021	BG/EAR	TRe	342.0 GWh/d
	<i>Comment: Transmission between Eastring - Bulgaria and Turkey via a new IP at BG/TR border; New capacity increment from 4Q 2023 to the level of 712 GWh/d. Exit means direction BG->TR.</i>				

Eastring Cross-Border BG/EAR>TR	Bulgartransgaz EAD	2025	BG/EAR	TRe	712.0 GWh/d
				<i>Comment: Exit means direction BG->TR.</i>	
Eastring Cross-Border TR>BG/EAR	Bulgartransgaz EAD	2021	TRr	BG/EAR	570.0 GWh/d
				<i>Comment: Transmission between Eastring - Bulgaria and Turkey via a new IP at BG/TR border, New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>	
	Bulgartransgaz EAD	2025	TRr	BG/EAR	570.0 GWh/d
Capacity Increments Variant(s) For Information Only					
Variant : Eastring - BG-1					
High capacity scenario, starting at Negru-Voda IP at RO-BG border, passing through BG using upgraded existing pipelines to Malkoclar IP at BG-TR border					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Eastring BG Domestic Point	Bulgartransgaz EAD	2021	BGn	BG/EAR	200.0 GWh/d
				<i>Comment: Connection of Eastring at Negru-Voda IP, with domestic market, Entry/Exit capacity at domestic points may go up to the level of 200 GWh/d if sum of all Exit capacities from domestic system to adjacent networks (or vice versa) is able to reach this level.</i>	
	Bulgartransgaz EAD	2021	BG/EAR	BGn	200.0 GWh/d
				<i>Comment: Connection of Eastring at Negru-Voda IP, with domestic market, Entry/Exit capacity at domestic points may go up to the level of 200 GWh/d if sum of all Exit capacities from domestic system to adjacent networks (or vice versa) is able to reach this level.</i>	
Malkoclar (TR) > Strandzha (BG)	Bulgartransgaz EAD	2021	TRi	BGg/BGT	570.0 GWh/d
				<i>Comment: Transmission between Bulgaria and Turkey via existing transmission system at IP Malkoclar, New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>	
	Bulgartransgaz EAD	2025	TRi	BGg/BGT	570.0 GWh/d
Negru Voda II, III (RO) / Kardam (BG)	Bulgartransgaz EAD	2021	BGg/BGT	RO/TBP	570.0 GWh/d
				<i>Comment: Transmission via existing IP Negru-Voda with increase of capacity at level of 570 GWh/d, New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>	
	Bulgartransgaz EAD	2025	BGg/BGT	RO/TBP	570.0 GWh/d
	Bulgartransgaz EAD	2025	RO/TBP	BGg/BGT	570.0 GWh/d
Strandzha (BG) / Malkoclar (TR)	Bulgartransgaz EAD	2021	BGg/BGT	TRe	570.0 GWh/d

Capacity Increments Variant(s) For Information Only					
Variant : Eastring - BG-3					
Point	Operator	Year	From Gas System	To Gas System	Capacity
<i>Comment: Transmission between Bulgaria and Turkey via existing transmission system at IP Malkoclar, New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>					
Strandzha (BG) / Malkoclar (TR)	Bulgartransgaz EAD	2025	BGg/BGT	TRe	570.0 GWh/d
Low capacity scenario (low in direction N->S), starting at Negru-Voda IP at RO-BG border, passing through BG using upgraded existing pipelines to Malkoclar IP at BG-TR border					
Eastring BG Domestic Point	Bulgartransgaz EAD	2021	BGn	BG/EAR	200.0 GWh/d
<i>Comment: Connection of Eastring at Negru-Voda IP, with domestic market, Entry/Exit capacity at domestic points may go up to the level of 200GWh/d if sum of all Exit capacities from domestic system to adjacent networks (or vice versa) is able to reach this level.</i>					
Eastring BG Domestic Point	Bulgartransgaz EAD	2021	BG/EAR	BGn	200.0 GWh/d
<i>Comment: Connection of Eastring at Negru-Voda IP, with domestic market, Entry/Exit capacity at domestic points may go up to the level of 200 GWh/d if sum of all Exit capacities from domestic system to adjacent networks (or vice versa) is able to reach this level.</i>					
Malkoclar (TR) > Strandzha (BG)	Bulgartransgaz EAD	2021	TRi	BGg/BGT	570.0 GWh/d
<i>Comment: Transmission between Eastring - Bulgaria and Turkey via existing IP Malkoclar, New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>					
	Bulgartransgaz EAD	2025	TRi	BGg/BGT	570.0 GWh/d
	Bulgartransgaz EAD	2021	BGg/BGT	RO/TBP	342.0 GWh/d
<i>Comment: Transmission via existing IP Negru-Voda with increase of capacity at level of 342 GWh/d, New capacity increment from 4Q 2025 to the level of 712 GWh/d. Exit means direction RO->BG.</i>					
Negru Voda II, III (RO) / Kardam (BG)	Bulgartransgaz EAD	2021	RO/TBP	BGg/BGT	570.0 GWh/d
<i>Comment: Transmission via existing IP Negru-Voda with increase of capacity at level of 570 GWh/d, New capacity increment from 4Q 2023 to the level of 1140 GWh/d.</i>					
	Bulgartransgaz EAD	2025	BGg/BGT	RO/TBP	712.0 GWh/d
<i>Comment: Exit means direction RO->BG.</i>					
	Bulgartransgaz EAD	2025	RO/TBP	BGg/BGT	570.0 GWh/d
Strandzha (BG) / Malkoclar (TR)	Bulgartransgaz EAD	2021	BGg/BGT	TRe	342.0 GWh/d
<i>Comment: Transmission between Eastring - Bulgaria and Turkey via existing IP Malkoclar, New capacity increment from 4Q 2023 to the level of 712 GWh/d. Exit means direction BG->TR.</i>					

Strandzha (BG) / Malkoclar (TR) Bulgartransgaz EAD 2025 BGg/BGT TRe 712.0 GWh/d

Sponsors		General Information		No Barriers Defined	Barriers (Count)
Bulgartransgaz EAD	100%	Promoter	Bulgartransgaz EAD		
		Operator	Bulgartransgaz EAD		
		Host Country	Bulgaria		
		Status	Planned		
		Website	Project's URL		
		Publication Approval Status	Approved		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (2016-2025 Ten-year network development plan of BTG)	Pre-Feasibility			Considered TPA Regime	Not Applicable
NDP Number	Section 5.1(5.1,2)	Feasibility	05/2016	04/2017	Considered Tariff Regime	Not Applicable
		FEED			Applied for Exemption	Not Relevant
Currently PCI	Yes (6.25.1)	Market Test			Exemption Granted	Not Relevant
		Permitting				
CBCA Decision	No	Supply Contracts			Exemption in entry direction	0.00%
Market Survey	Not Relevant (no CBCA decision)	FID			Exemption in exit direction	0.00%
		Construction				
		Commissioning	2021	2025		

Pipelines and Compressor Stations					
Eastring - BG-2		High capacity scenario, starting at new IP at RO-BG border, passing through BG using new pipeline to a new IP at BG-TR border			
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Eastring-BG-2	Data refers to the first stage - capacity 570 GWh/d, in case of increase of capacity up to 1140 GWh/d in 2025, compressor power at level of 374 MW will be needed	1,400	257	88	
Total			257	88	

Pipelines and Compressor Stations - Alternative Variant					
Eastring - BG-1		High capacity scenario, starting at Negru-Voda IP at RO-BG border, passing through BG using upgraded existing pipelines to Malkoclur IP at BG-TR border			
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Eastring-BG-1	Length of used existing pipeline - 259 km	1,200	0	0	
Total			0	0	

Pipelines and Compressor Stations - Alternative Variant					
Eastring - BG-3		Low capacity scenario (low in direction N->S), starting at Negru-Voda IP at RO-BG border, passing through BG using upgraded existing pipelines to Malkoclur IP at BG-TR border			
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Eastring-BG-3	Length of used existing pipeline - 259 km	1,200	0	0	
Total			0	0	

Pipelines and Compressor Stations - Alternative Variant					
Eastring - BG-4		Low capacity scenario (low in direction N->S), starting at new IP at RO-BG border, passing through BG using new pipeline to new IP at BG-TR border			
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Eastring-BG-4	Data refers to the first stage - capacity 570 GWh/d, in case of increase of capacity up to 1140 GWh/d in 2025, compressor power at level of 374 MW will be needed	1,400	257	90	
Total			257	90	

PCI Details

PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Expected Gas Sourcing

Caspian Region, Norway, Russia, LNG (), Iraq, Iran, Egypt, Israel, Turkmenistan, Kazakhstan, Cyprus, Azerbaijan, Any gas available at Turkish/European HUBs. For dire



Benefits

Main Driver	Others
Main Driver Explanation	The project brings significant benefits to the SoS of Europe bringing the increasing new sources of gas supply in South Eastern Europe to the markets of Central and Western Europe, while further enhancing the market integration of the affected countries.
Benefit Description	Comments Benefits: - Physical alternative for providing 100% of all Balkan countries' consumption; - Providing security of supply for 100% of all Balkan countries' consumption; - Additional utilization for CZ, SK, PL, UA, RO, BG transit and storage assets; - Providing Western shippers with possibility to supply Balkan countries and even Turkey from NCG/Gaspool/Baumgarten; - Corridor ready for future gas imports to Europe from alternative sources – AGRI, TANAP, Caspian, Iran, Iraq, Egypt, Israel, Cyprus, Turkey etc.



UGS Chiren Expansion

UGS-N-138	Project	Storage Facility	Non-FID
Update Date	26/05/2016		Non-Advanced
Description	Capacity increase of the only gas storage facility on the territory of Bulgaria in order to achieve larger gas volumes stored, increased gas reservoir pressures and higher daily average injection and withdrawal flowrates. The project provides for the increase in the working gas volume up to 1 bcm and increase in the injection and withdrawal rate up to 8 – 10 mcm/day.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
GMS Chiren	Bulgartransgaz EAD	2022	STcBn	BGn	61.5 GWh/d
	Bulgartransgaz EAD	2022	BGn	STcBn	61.5 GWh/d

Sponsors	General Information	Barriers (Count)
Bulgartransgaz EAD 100%	Promoter <i>Bulgartransgaz EAD</i> Operator <i>Bulgartransgaz EAD</i> Host Country <i>Bulgaria</i> Status <i>Planned</i> Website <i>Project's URL</i> Publication Approval Status <i>Approved</i>	No Barriers Defined

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (2016-2025 Ten-year network development plan of BTG)</i>	Pre-Feasibility		<i>06/2011</i>	Considered TPA Regime	<i>Regulated</i>
NDP Number		Feasibility	<i>01/2015</i>	<i>01/2017</i>	Considered Tariff Regime	<i>Regulated</i>
Currently PCI	<i>Yes (6.20.2.)</i>	Section 5.3 (5.3.1)	FEED	<i>01/2017</i>	Applied for Exemption	<i>Not Relevant</i>
CBCA Decision		Market Test	Permitting		<i>05/2017</i>	Exemption Granted
Market Survey	<i>Not Relevant (no CBCA decision)</i>	No	Supply Contracts		Exemption in entry direction	<i>0.00%</i>
		FID		<i>01/2019</i>	Exemption in exit direction	<i>0.00%</i>
		Construction		<i>01/2020</i>		
		Commissioning		<i>2022</i>	<i>2022</i>	

Technical Information (UGS)

Storage Facility	<i>UGS Chiren</i>
Storage Facility Type	<i>Aquifer</i>
Multiple-Cycle	<i>No</i>
Working Volume (mcm)	<i>450.00</i> <i>450</i>

PCI Details

PCI Benefits	Project aims at fulfilling the infrastructure standard (N-1) rule at regional level in accordance with Article 6(3) of Regulation EU, Project aims at supplying directly or indirectly at least two Member States
General Criteria Fulfilled	No
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply
Specific Criteria Fulfilled Comments	The project for its expansion aims on one hand at creating conditions to ensure security of supplies to Bulgarian users and users in the countries from the region, and on the other - UGS Chiren development as commercial gas storage in an interconnected regional and Europe-wide market, as UGS Chiren is an integral part of the plans for development of the regional gas system consisting of interconnections, LNG terminals, storage facilities. In the medium term UGS Chiren promises to become a commercial facility with a significant role in competition development in the regional gas market and in provision of additional flexibility of the gas transmission systems at regional level, with a significant contribution to congestion management and seasonal optimization of use of the gas transmission systems.

Time Schedule

Grant Obtention Date	
Delay Since Last TYNDP	<i>yes</i>



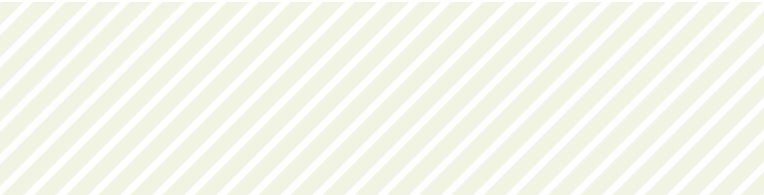
Delay Explanation Comissioning: 2022 Delays due to postponement of some tender procedures for selection of contractors for the studies.

Expected Gas Sourcing

Caspian Region, Russia, LNG (), Southern gas corridor gas sources; European gas hubs;

Benefits

Main Driver	Regulation SoS
Main Driver Explanation	UGS Chiren has been the only gas storage on the territory of Bulgaria for 40 years. It is a key instrument for the functioning of the gas market in Bulgaria, covering seasonal fluctuations in natural gas consumption in the country by securing the necessary flexibility caused by the differences between the supplies and consumption and ensures emergency reserve. UGS Chiren is a crucial instrument ensuring the security of gas supplies. In the medium term UGS Chiren promises to become a commercial facility with a significant role in competition development in the regional gas market and in provision of additional flexibility of the gas transmission systems at regional level, with a significant contribution to congestion management and seasonal optimization of use of the gas transmission systems.
Benefit Description	The project for its expansion aims on one hand at creating conditions to ensure security of supplies to Bulgarian users and users in the countries from the region, and on the other - UGS Chiren development as commercial gas storage in an interconnected regional and Europe-wide market, as UGS Chiren is an integral part of the plans for development of the regional gas system consisting of interconnections, LNG terminals, storage facilities.



Looping CS Valchi Dol - Line valve Novi Iskar

TRA-N-592	Project	Pipeline including CS	Non-FID
Update Date	27/05/2016		Non-Advanced
Description	Looping to CS Valchi dol – line valve Novi Iskar: Modernisation of the national gas transmission network norther semi-ring with the construction of 383 km looping with a diameter of Dn 700 from CS Valchi dol to line valve Novi Iskar. The realization of the project will ensure new exit capacity of 4 bcm/y (128,3 GWh/d) in the direction to Romania (through IBR) and Chiren UGS (for transmission during injection and withdrawal amounting to 500 mcm/y). In the context of the European objectives to build an interconnected and single pan-European marker, the realization of the presented projects, forming the gas hub concept, is in line with the projects for the development of the Southern gas corridor and in full compliance with the plans for development of gas infrastructure in Europe to enhance the security of supply and the diversification of natural gas supply sources.		
Regulatory Decisions and similar material conditions			

Sponsors		General Information		No Barriers Defined	Barriers (Count)
Bulgartransgaz EAD	100%	Promoter	<i>Bulgartransgaz EAD</i>		
		Operator	<i>Bulgartransgaz EAD</i>		
		Host Country	<i>Bulgaria</i>		
		Status	<i>Planned</i>		
		Website	<i>Project's URL</i>		
		Publication Approval Status	<i>Approved</i>		

Enabled Projects

Project Code	Project Name
UGS-N-138	UGS Chiren Expansion
TRA-F-057	Interconnection Bulgaria–Romania
TRA-N-593	Varna-Oryahovo gas pipeline
TRA-N-594	Construction of a Looping CS Provadia – Rupcha village

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (2016-2025 Ten-year network development plan of BTG)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number		Feasibility			Considered Tariff Regime	<i>Regulated</i>
	<i>Section 5.1. (5.1.1)</i>	FEED			Applied for Exemption	<i>No</i>
Currently PCI		Market Test		<i>05/2017</i>	Exemption Granted	<i>No</i>
	<i>Yes (6.25.4)</i>	Permitting				
CBCA Decision		Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	<i>No</i> FID			Exemption in exit direction	<i>0.00%</i>
		Construction		<i>06/2022</i>		
		Commissioning	<i>2022</i>	<i>2022</i>		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Looping CS Valchi Dol - Line valve Novi Iskar	a new looping	700	383		
Total			383		

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	The concept for the creation of gas hub on the territory of Bulgaria is based on the idea significant quantities of natural gas from different sources to enter into a given real physical point in the region of Varna for their further transport and a venue for gas trade is organized at the same time at this point – a hub where every market participant could trade in gas. The idea of building the gas hub is supported by the strategic geographic location of Bulgaria, the well-developed existing gas infrastructure for transmission and storage and the projects for the construction of interconnections with Romania, Turkey, Greece and Serbia.

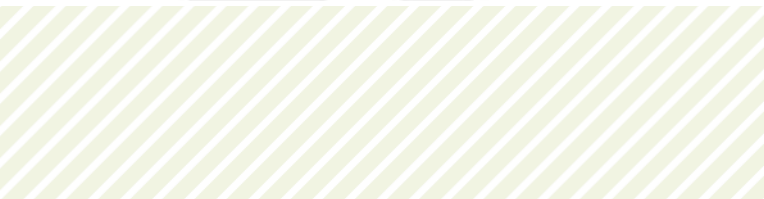
Expected Gas Sourcing
Caspian Region, Russia, LNG (), Southern gas corridor gas sources; European gas hubs; Black sea shelf gas; Domestic production;

Benefits
Main Driver Regulation SoS



Main Driver Explanation The concept for the creation of gas hub on the territory of Bulgaria is based on the idea significant quantities of natural gas from different sources to enter into a given real physical point in the region of Varna for their further transport and a venue for gas trade is organized at the same time at this point – a hub where every market participant could trade in gas. The idea of building the gas hub is supported by the strategic geographic location of Bulgaria, the well-developed existing gas infrastructure for transmission and storage and the projects for the construction of interconnections with Romania, Turkey, Greece and Serbia.

Benefit Description The creation of a gas hub aims at building the gas transmission infrastructure required to link the natural gas markets for the EU members states in the region - Bulgaria, Greece, Romania, Hungary, Croatia, Slovenia and through them to the members states from Central and Western Europe and to the countries from the Energy Community - Serbia, Macedonia, Bosna and Herzegovina and others, thus contributing to achieving the main priorities of the European energy policy. In the context of the European objectives to build an interconnected and single pan-European market, the realization of the projects, forming the gas hub concept, is in line with the projects for the development of the Southern gas corridor and in full compliance with the plans for development of gas infrastructure in Europe to enhance the security of supply and the diversification of natural gas supply sources.



Varna-Oryahovo gas pipeline

TRA-N-593	Project	Pipeline including CS	Non-FID
Update Date	20/05/2016		Non-Advanced
Description	Construction of new infrastructure, consisting of 844 km of gas pipeline with prevailing diameter Dn 1200 from Varna to Oryahovo (starting at a new IP at Varna to a new IP at Bulgaria/Romanian border near Oryahovo city), ensuring an additional capacity of 42,6 bcm/y (1366 GWh/d) and two new compressor stations with a total installed capacity of 265 MW securing the pressure required for transmission.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Oryahovo	Bulgartransgaz EAD	2022	BG/VAR	RO	1,366.0 GWh/d

Sponsors	General Information	Barriers (Count)
Bulgartransgaz EAD 100%	Promoter <i>Bulgartransgaz EAD</i> Operator <i>Bulgartransgaz EAD</i> Host Country <i>Bulgaria</i> Status <i>Planned</i> Website <i>Project's URL</i> Publication Approval Status <i>Approved</i>	No Barriers Defined

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (2016-2025 Ten-year network development plan of BTG)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number		Feasibility			Considered Tariff Regime	<i>Regulated</i>
	<i>Section 5.1. (5.1.1)</i>	FEED			Applied for Exemption	<i>No</i>
Currently PCI		Market Test		<i>05/2017</i>	Exemption Granted	<i>No</i>
	<i>Yes (6.25.4)</i>	Permitting				
CBCA Decision		Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	<i>No</i> FID			Exemption in exit direction	<i>0.00%</i>
		Construction		<i>06/2022</i>		
		Commissioning	<i>2022</i>	<i>2022</i>		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Varna-Oryahovo gas pipeline	a new pipeline incl. 2 CS	1,200	844	265	
Total			844	265	

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	The concept for the creation of gas hub on the territory of Bulgaria is based on the idea significant quantities of natural gas from different sources to enter into a given real physical point in the region of Varna for their further transport and a venue for gas trade is organized at the same time at this point – a hub where every market participant could trade in gas. The idea of building the gas hub is supported by the strategic geographic location of Bulgaria, the well-developed existing gas infrastructure for transmission and storage and the projects for the construction of interconnections with Romania, Turkey, Greece and Serbia.

Expected Gas Sourcing
Caspian Region, Russia, LNG (), Southern gas corridor gas sources; European gas hubs; Black sea shelf gas; Domestic production;

Benefits
Main Driver Regulation SoS



Main Driver Explanation The concept for the creation of gas hub on the territory of Bulgaria is based on the idea significant quantities of natural gas from different sources to enter into a given real physical point in the region of Varna for their further transport and a venue for gas trade is organized at the same time at this point – a hub where every market participant could trade in gas. The idea of building the gas hub is supported by the strategic geographic location of Bulgaria, the well-developed existing gas infrastructure for transmission and storage and the projects for the construction of interconnections with Romania, Turkey, Greece and Serbia.

Benefit Description The creation of a gas hub aims at building the gas transmission infrastructure required to link the natural gas markets for the EU members states in the region - Bulgaria, Greece, Romania, Hungary, Croatia, Slovenia and through them to the members states from Central and Western Europe and to the countries from the Energy Community - Serbia, Macedonia, Bosna and Herzegovina and others, thus contributing to achieving the main priorities of the European energy policy. In the context of the European objectives to build an interconnected and single pan-European market, the realization of the projects, forming the gas hub concept, is in line with the projects for the development of the Southern gas corridor and in full compliance with the plans for development of gas infrastructure in Europe to enhance the security of supply and the diversification of natural gas supply sources.



Construction of a Looping CS Provadia – Rupcha village

TRA-N-594	Project	Pipeline including CS	Non-FID
Update Date	27/05/2016		Non-Advanced
Description	Modernisation of the existing network for transit transmission with the construction of 50 km looping with prevailing diameter Dn 1200 from Provadia to the village of Rupcha, replacement of 20 km (2x10 km) 12 of existing gas pipelines with diameter of Dn 1000 from CS Strandja to the border with Turkey and increase in the capacity of CS Strandja with 10 MW. The realization of the project will ensure new capacity of 6 bcm/y (192,5 GWh/d) to Turkey.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Strandzha (BG) / Malkoclar (TR)	Bulgartransgaz EAD	2022	BGg/BGT	TRe	192.5 GWh/d
<i>Comment: a new looping</i>					

Sponsors		General Information		No Barriers Defined	Barriers (Count)
Provadia - Rupcha		Promoter	<i>Bulgartransgaz EAD</i>		
Bulgartrasngaz EAD	100%	Operator	<i>Bulgartransgaz EAD</i>		
Strandja-IP BG/TR		Host Country	<i>Bulgaria</i>		
Bulgartrasngaz EAD	100%	Status	<i>Planned</i>		
		Website	<i>Project's URL</i>		
		Publication Approval Status	<i>Approved</i>		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (2016-2025 Ten-year network development plan of BTG)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number		Feasibility			Considered Tariff Regime	<i>Regulated</i>
	<i>Section 5.1. (5.1.1)</i>	FEED			Applied for Exemption	<i>No</i>
Currently PCI		Market Test		<i>05/2017</i>	Exemption Granted	<i>No</i>
	<i>Yes (6.25.4)</i>	Permitting				
CBCA Decision		Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	<i>No</i> FID			Exemption in exit direction	<i>0.00%</i>
		Construction		<i>06/2022</i>		
		Commissioning	<i>2022</i>	<i>2022</i>		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
CS Strandja – a new IP with Turkey.	Replacement of 20 km of gas pipelines (2x10km), DN 1000 in the section CS Strandja – a new IP with Turkey.	1,000	20		
Looping CS Provadia – Rupcha village	new looping and additional power to existing compressor station	1,200	50	10	
Total			70	10	

PCI Details	
PCI Benefits	
General Criteria Fulfilled	<i>Yes</i>
Specific Criteria Fulfilled	<i>Competition, Market Integration, Security of Supply, Sustainability</i>
Specific Criteria Fulfilled Comments	

Expected Gas Sourcing
Caspian Region, Russia, LNG (), Southern gas corridor gas sources; European gas hubs; Black sea shelf gas; Domestic production;

Benefits	
Main Driver	<i>Others</i>



Main Driver Explanation The concept for the creation of gas hub on the territory of Bulgaria is based on the idea significant quantities of natural gas from different sources to enter into a given real physical point in the region of Varna for their further transport and a venue for gas trade is organized at the same time at this point – a hub where every market participant could trade in gas. The idea of building the gas hub is supported by the strategic geographic location of Bulgaria, the well-developed existing gas infrastructure for transmission and storage and the projects for the construction of interconnections with Romania, Turkey, Greece and Serbia.

Benefit Description The creation of a gas hub aims at building the gas transmission infrastructure required to link the natural gas markets for the EU members states in the region - Bulgaria, Greece, Romania, Hungary, Croatia, Slovenia and through them to the members states from Central and Western Europe and to the countries from the Energy Community - Serbia, Macedonia, Bosna and Herzegovina and others, thus contributing to achieving the main priorities of the European energy policy. In the context of the European objectives to build an interconnected and single pan-European market, the realization of the projects, forming the gas hub concept, is in line with the projects for the development of the Southern gas corridor and in full compliance with the plans for development of gas infrastructure in Europe to enhance the security of supply and the diversification of natural gas supply sources.



Construction of new gas storage facility on the territory of Bulgaria

UGS-N-141	Project	Storage Facility	Non-FID
Update Date	04/05/2016		Non-Advanced
Description	The construction of a new (second) gas storage is envisaged on the territory of Bulgaria. It could be constructed in suitable geological structure –depleted gas fields (onshore or offshore), salt caverns or aquifer. It must however be kept in mind that the construction of a new underground gas storage from the start of the geological and research activities to its commissioning could take not less than 7-8 years.		
Regulatory Decisions and similar material conditions			

Sponsors	General Information		No Barriers Defined	Barriers (Count)
Bulgartransgaz EAD	100%	Promoter	<i>Bulgartransgaz EAD</i>	
		Operator	<i>Bulgartransgaz EAD</i>	
		Host Country	<i>Bulgaria</i>	
		Status	<i>Planned</i>	
		Website		
		Publication Approval Status	<i>Approved</i>	

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (2016-2025 Ten-year network development plan of BTG) section 5.3.2.</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number		Feasibility			Considered Tariff Regime	<i>Not Applicable</i>
Currently PCI	<i>No</i>	FEED			Applied for Exemption	<i>Not Relevant</i>
CBCA Decision		Market Test			Exemption Granted	<i>Not Relevant</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	Permitting			Exemption in entry direction	<i>0.00%</i>
		Supply Contracts			Exemption in exit direction	<i>0.00%</i>
		FID				
		Construction				
		Commissioning				

Technical Information (UGS)

Storage Facility	<i>Not defined yet</i>
Storage Facility Type	<i>Aquifer</i>
Multiple-Cycle	<i>No</i>
Working Volume (mcm)	<i>0.00</i>

Time Schedule

Grant Obtention Date	
Delay Since Last TYNDP	<i>n/a</i>
Delay Explanation	

Benefits

Main Driver	<u>Others</u>
Main Driver Explanation	<u>The construction of a new gas storage on the territory of Bulgaria is one of the stages of the concept for expansion of storage capacity in our region (PCI Cluster 6.20 Increase storage capacity in South-East Europe) - the Balkans, East and South-East Europe, aimed to increase storage capacity, ensure gas transmission systems' flexibility, enhance market integration and guarantee the security of supply to the Bulgarian and regional natural gas market. Ensuring additional storage capacity is important in terms of the expected additional natural gas quantities in the context of the gas infrastructure development in the country and the region. The new gas storage would serve not only the national, but also the regional gas market after the planned construction of the new interconnections with the neighbouring countries and will serve as a tool to enhance security of gas supply.</u>
Benefit Description	The construction of a new gas storage on the territory of Bulgaria is one of the stages of the concept for expansion of storage capacity in our region (Cluster 6.20 Increase storage capacity in South-East Europe), aimed to increase storage capacity, ensure gas transmission systems' flexibility, enhance market integration and guarantee the security of supply to the Bulgarian, Greek, Turkish, Macedonian and Romanian as well as the rest of the regional natural gas market - the Balkan peninsula and Central-East Europe and South-East Europe.

Interconnection Bulgaria - Serbia

TRA-F-137	Project	Pipeline including CS	FID
Update Date	27/05/2016		Advanced
Description	<p>IBS aims at connecting the national gas transmission networks of Bulgaria and Serbia. It will be implemented in 3 stages. 1st: a pipe will be built from Novi Iskar to Kalotina, BG (62.2 km) and from Nis to Dimitrovgrad, SR (108 km), with capacity from BG to SRB - 1,0 bcm/year, and from SRB to BG - 0.15 bcm/year. 2nd: the capacity will be increased from BG to SRB to 2,4 bcm/year, and from SRB to BG to 0,95 bcm/year, and later to 1,5 bcm/year, by construction of 2 CSs (20 MW each) and 2 new gas pipeline sections (from G Bogrov CS to N Iskar – 19 km and from V. Orašje to Nis – 161 km). 3rd: by construction of the looping VS Batulsi - G Bogrov CS (62 km) the capacity from BG to SRB will be increased to 3,2 bcm/year. In the direction from SRB to BG the construction of the pipeline Batajnica - V Orašje (116 km) will ensure transmission of 2 bcm/ year, and the construction of CS Batočina (20 MW) will increase the capacity from 2.0 bcm/year to up to 2.5 bcm/y.</p>		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Interconnector BG RS	IBS Future Operator	2018	BGn	RS	51.0 GWh/d
	<i>Comment: Opeartor to be defined</i>				
	IBS Future Operator	2018	RS	BGn	51.0 GWh/d
	<i>Comment: Operator to be defined</i>				

Sponsors	General Information	No Barriers Defined	Barriers (Count)
Bulgarian section	Promoter <i>Ministry of Energy</i>		
Ministry of Energy of Bulgaria 100%	Operator <i>IBS Future Operator</i>		
Serbian section	Host Country <i>Bulgaria</i>		
Serbijagas 100%	Status <i>Planned</i>		
	Website <i>Project's URL</i>		
	Publication Approval Status <i>Approved</i>		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (2016-2025 Ten-year network development plan of BTG)</i>	Pre-Feasibility		02/2011	Considered TPA Regime	<i>Regulated</i>
NDP Number		Feasibility	12/2011	12/2012	Considered Tariff Regime	<i>Regulated</i>
	<i>Sectin 5.2 (5.2.3)</i>	FEED			Applied for Exemption	<i>No</i>
Currently PCI		Market Test		05/2017	Exemption Granted	<i>No</i>
	<i>Yes (6.10.)</i>	Permitting		08/2016		
CBCA Decision		Supply Contracts		04/2017	Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	<i>No</i> FID		12/2012	Exemption in exit direction	<i>0.00%</i>
		Construction	05/2017	12/2018		
		Commissioning	2018	2018		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Bulgarian territory	1.8 bcm/y maximum capacity	700	62		
Serbian territory	1.8 bcm/y maximum capacity	700	108		
Total			170		

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project aims at fulfilling the infrastructure standard (N-1) rule at regional level in accordance with Article 6(3) of Regulation EU, Project concerns investment in reverse flow capacity, Project aims at supplying directly or indirectly at least two Member States
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Expected Gas Sourcing	
Caspian Region, LNG (GR)	

Benefits	
Main Driver	Others



Main Driver Explanation

Benefit Description

The project should enhance the system flexibility and contribute to the security of supply within the region (increased interconnection between Bulgaria and Serbia)

Intergovernmental Agreements

Agreement	Agreement Description	Is Signed	Agreement Signature Date
Joint statement by Bulgaria and Serbia	Joint statement signed in Brussels by Bulgaria and Serbia in 2010	Yes	05/03/2010
Memorandum of Understanding between Bulgaria and Serbia	Memorandum of Understanding signed in Sofia between Bulgaria and Serbia in 2005	Yes	08/04/2005



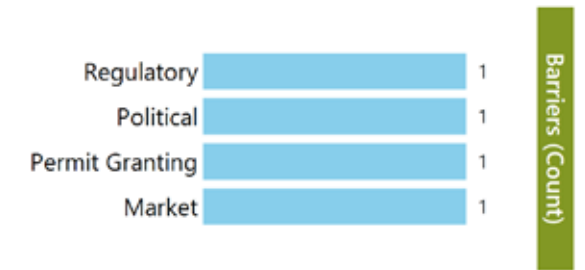
Interconnector Greece-Bulgaria (IGB Project)

TRA-F-378	Project	Pipeline including CS	FID
Update Date	06/05/2016		Advanced
Description	Construction of a bi-directional gas interconnector between the high pressure natural gas systems of Greece and Bulgaria with a technical forward capacity of 3bcm/y, capable to be increased to 5 bcm/y with the installation of a Compressor Station		
Regulatory Decisions and similar material conditions	The current market test is conducted under guidelines and notice approved and issued by the National Regulatory Authorities in accordance to art. 36 of the 2009/73/EC gas directive: RAE decision No.438/23.11.2015 , EWRC decision No.y-2/27.11.2015 : "Updated Guidelines for management and allocation of capacity on the IGB INTERCONNECTOR according to paragraph 6 of article 36 of Directive 2009/73/EC – PHASE I: Invitation of interested parties to express their interest in reserving capacity). RAE decision No.472/1.12.2015, EWRC decision No.y-3/10.12.2015): "Eol Notice"		

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Komotini - TAP / IGB	ICGB a.d.	2018	GR/TAP	BG/IGB	90.0 GWh/d
	<i>Comment: Initial capacity of 3 bcm/y</i>				
Komotini (DESFA) - GR / IGB	ICGB a.d.	2021	GR/TAP	BG/IGB	60.5 GWh/d
	<i>Comment: Added by ENTSOG to match the exit at Stara Zagora</i>				
Komotini (DESFA) - GR / IGB	ICGB a.d.	2018	IB-GRk	BG/IGB	90.0 GWh/d
	<i>Comment: Increment could also be done in correlation with DESFA</i>				
Stara Zagora - IGB / BG	ICGB a.d.	2021	IB-GRk	BG/IGB	60.5 GWh/d
	<i>Comment: With relevant committmens from the market and necessary upgrades in the TSOs to be interconnected with IGB, the IGB transportation capacity could be increased from up to 3bcm/y to up to 5 bcm/y forward capacity by installing a Compressor Station.</i>				
Stara Zagora - IGB / BG	ICGB a.d.	2018	BG/IGB	BGn	90.0 GWh/d
	<i>Comment: Initial capacity of 3 bcm/y</i>				
Stara Zagora - IGB / BG	ICGB a.d.	2021	BG/IGB	BGn	60.5 GWh/d
	<i>Comment: With relevant committmens from the market and necessary upgrades in the TSOs to be interconnected with IGB, the IGB transportation capacity could be increased from up to 3bcm/y to up to 5 bcm/y forward capacity by installing a Compressor Station.</i>				

Sponsors		General Information	
BEH EAD	50%	Promoter	ICGB a.d.
IGI Poseidon	50%	Operator	ICGB a.d.
		Host Country	Bulgaria
		Status	Planned
		Website	Project's URL
		Publication Approval Status	Approved



NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (Included in both the TYNDPs of Greece and Bulgaria)</i>	Pre-Feasibility		12/2009	Considered TPA Regime	<i>Not Applicable</i>
NDP Number		Feasibility		05/2009	Considered Tariff Regime	<i>Not Applicable</i>
Currently PCI	<i>Yes (6.8.1)</i>	FEED		08/2008	Applied for Exemption	Yes
CBCA Decision		Market Test		09/2016	Exemption Granted	<i>Not Yet</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	Permitting		08/2010	Exemption in entry direction	0.00%
		Supply Contracts		12/2016	Exemption in exit direction	0.00%
		FID		12/2015		
		Construction		03/2017		
		Commissioning		2018		
				2021		

PCI Details

PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	As regional gas interconnector, IGB will bring benefits on all criteria, an in particular will secure new gas sources and market integration in a SEE region, suffering from a high level of dependency on single source of imports and lack of regional cross-border gas interconnections.

Time Schedule

Grant Obtention Date	
Delay Since Last TYNDP	2 years



Delay Explanation Extension in permitting procedures for authorization of construction and of regulatory TPA procedure for new gas infrastructure

Expected Gas Sourcing

Algeria, Caspian Region, LNG (QA,US)

Benefits

Main Driver Market Demand

Main Driver Explanation Schedule towards commissioning will be affected by binding requests from shippers

Benefit Description IGB development is not associated with a specific supply source. The pipeline can interact with alternative supply sources - such as, Southern Corridor pipeline gas, LNG through Greece/ Turkey.

Barriers

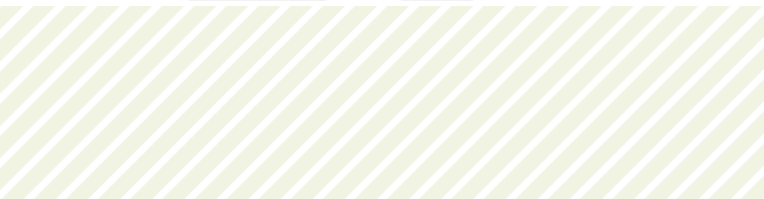
Barrier Type Description

Regulatory The regulatory framework has to provide more streamlined process for decisions on TPA regime and licencing, and ensure a viable rate of financial return from the investment.

Permit Granting Affected by delays

Political Government support expected on issues such as streamlined permitting and regulatory decisions on commercial development, availability of financial incentives

Market Development of the networks of neighboring gas TSOs to be interconnected with IGB should be incentivised to ensure proper technical conditions for expected additional flows. Better integration of the gas transmission networks in the overall region affected by IGB must also be achieved in order to supply gas from IGB to the wider SEE region.



3 Croatia

Compressor station 1 at the Croatian gas transmission system

TRA-F-334	Project	Pipeline including CS	FID
Update Date	25/05/2016		Advanced
Description	<p>Construction of such facilities is necessary due to the opening of the gas market, as well as providing sufficient transmission capacities and natural gas delivery pressure conditions and for development of the gas market in Croatia and the neighbouring countries. Compressor stations will significantly increase efficiency of the Croatian gas transmission system. Compressor stations are integral part of the transmission system, integrated in the system, primarily in a manner to increase the flexibility of managing the existing transmission capacities of the system, and to provide rational increase of transmission capacities according to user needs, that is, the requirements of the market and to satisfy market conditions arising from the application of new legal regulation.</p>		
Regulatory Decisions and similar material conditions			

Sponsors	General Information	No Barriers Defined	Barriers (Count)														
<table border="1"> <tr> <td>Plinacro</td> <td>100%</td> </tr> </table>	Plinacro	100%	<table border="1"> <tr> <td>Promoter</td> <td><i>Plinacro Ltd</i></td> </tr> <tr> <td>Operator</td> <td><i>Plinacro Ltd</i></td> </tr> <tr> <td>Host Country</td> <td><i>Croatia</i></td> </tr> <tr> <td>Status</td> <td><i>Planned</i></td> </tr> <tr> <td>Website</td> <td><u>Project's URL</u></td> </tr> <tr> <td>Publication Approval Status</td> <td><i>Approved</i></td> </tr> </table>	Promoter	<i>Plinacro Ltd</i>	Operator	<i>Plinacro Ltd</i>	Host Country	<i>Croatia</i>	Status	<i>Planned</i>	Website	<u>Project's URL</u>	Publication Approval Status	<i>Approved</i>		0
Plinacro	100%																
Promoter	<i>Plinacro Ltd</i>																
Operator	<i>Plinacro Ltd</i>																
Host Country	<i>Croatia</i>																
Status	<i>Planned</i>																
Website	<u>Project's URL</u>																
Publication Approval Status	<i>Approved</i>																

Enabled Projects

Project Code	Project Name
TRA-N-066	Interconnection Croatia -Bosnia and Herzegovina (Slobodnica- Bosanski Brod)
TRA-N-075	LNG evacuation pipeline Zlobin-Bosiljevo-Sisak-Kozarac
TRA-N-070	Interconnection Croatia/Serbia (Slobdnica-Sotin-Bačko Novo Selo)
TRA-F-86	Interconnection Croatia/Slovenia (Lučko - Zabok - Rogatec)
TRA-N-1058	LNG Evacuation Pipeline Kozarac-Slobodnica
TRA-N-90	LNG evacuation pipeline Omišalj - Zlobin (Croatia)

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (2017-2026)	Pre-Feasibility			Considered TPA Regime	Not Applicable
NDP Number	5.1,	Feasibility	11/2014	03/2015	Considered Tariff Regime	Not Applicable
		FEED			Applied for Exemption	No
Currently PCI	Yes (6.26.3)	Market Test		08/2016	Exemption Granted	No
		Permitting	06/2015	12/2017		
CBCA Decision	No	Supply Contracts		01/2017	Exemption in entry direction	0.00%
Market Survey	Not Relevant (no CBCA decision)	FID		04/2015	Exemption in exit direction	0.00%
		Construction	01/2017	12/2017		
		Commissioning	2017	2017		

PCI Details

PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Benefits

Main Driver	Regulation SoS
Main Driver Explanation	Project will enable the reverse flow in all interconnection points.
Benefit Description	Construction of such facilities is necessary due to the opening of the gas market, as well as providing sufficient transmission capacities and natural gas delivery pressure conditions and for development of the gas market in Croatia and the neighbouring countries. Compressor stations will significantly increase efficiency of the Croatian gas transmission system.

Interconnection Croatia/Slovenia (Lučko - Zabok - Rogatec)

TRA-F-86	Project	Pipeline including CS	FID
Update Date	13/07/2016		Advanced
Description	New pipeline which will upgrade the existing interconnection Croatia/Slovenia. Along with the existing interconnection Karlovac-Lučko-Zabok-Rogatec, a new gas pipeline system has been planned which would significantly increase the capacity of the interconnection of the Croatian and the Slovenian gas transmission systems in this direction. Considering almost all existing and new supply directions in the surrounding region and the Croatian storage potentials this opens significant transit potentials in both directions. Along this transit route, it is planned to upgrade the capacity to 5 bcm/y.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Rogatec	Plinacro Ltd	2019	HR	SI	162.0 GWh/d
	Plinacro Ltd	2019	SI	HR	162.0 GWh/d

Sponsors	General Information		Financing	Barriers (Count)
Plinacro	100%	Promoter	1	1
		Operator		
		Host Country		
		Status		
		Website		
		Publication Approval Status		

Enabled Projects

Project Code	Project Name
TRA-N-1057	Compressor stations 2 and 3 at the Croatian gas transmission system

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (2017-2026)	Pre-Feasibility			Considered TPA Regime	Regulated
NDP Number	1.24, 1.25	Feasibility	09/2014	12/2014	Considered Tariff Regime	Regulated
		FEED			Applied for Exemption	No
Currently PCI	Yes (6.26.1)	Market Test		06/2015	Exemption Granted	No
		Permitting	10/2015	01/2019		
CBCA Decision	No	Supply Contracts			Exemption in entry direction	70.00%
Market Survey	Not Relevant (no CBCA decision)	FID		01/2016	Exemption in exit direction	30.00%
		Construction	01/2017	01/2019		
		Commissioning	2019	2019		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Lučko-Zabok		700	33		
Zabok-Rogatec		700	36		
Total			69		

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	The project increases the integration of the Croatian gas market with the European gas market, the current interconnection capacity is limited to 1.5 bcm/y. The pipeline will have the reverse flow, so gas can flow from LNG Krk or IAP to Slovenia and further to Central Europe expected to result in reduced end-user energy prices providing the security of supply increasing the capacity along the route providing enhanced access to Baumgarten and the Italian gas market providing an additional import of gas achievement of benefits of the open gas market This project is expected to contribute to the provision of gas supply to potential customers in the Central Europe countries

Time Schedule	
Grant Obtention Date	25/04/2016
Delay Since Last TYNDP	
Delay Explanation	

Expected Gas Sourcing

Caspian Region, LNG (HR,QA), IAP project, Baumgarten

Comments about the Third-Party Access Regime

TPA regime is not defined yet

Benefits

Main Driver	Market Demand
Main Driver Explanation	The current capacity is limited;the section from Lučko to Rogatec up to 1.5 bcm/y.Increasing capacity by 5 bcm opens the possibility for importing more gas from the Baumgarten. In addition, the source of the gas, in the near future) is going to be the gas from the LNG solution on the island of Krk as well as from the Ionian – Adriatic Pipeline toward Slovenia and the neighbouring countries. In this case the current pipeline capacity would not be sufficient; therefore it is envisaged to be increased. By doubling the pipeline, it is possible to use both the existing and future Croatian UGSs. The construction of this interconnection is vital for the security of supply of both the Croatian market and other markets in the SE region.
Benefit Description	It will be significantly increase the capacity of the interconnection of the Croatian and Slovenian gas transmission systems in both directions. It will increase the capacity along the route, provide enhanced access to Baumgarten and Italien gas market. The most important impacts and benefits of this project: 1. It provides security of supply for Croatia (N-1 criterion has not been met!) and a reverse flow (from Croatia to Slovenia) 2. It provides access to the gas markets of Austria and Italy via the Slovenian system 3. It provides import and significant transit of gas from the direction of Italy and Austria to CEE and SEE countries (Hungary, Bosnia and Herzegovina, Serbia...) 4. It provides significant transit of gas from LNG terminal, Ionian-Adriatic Pipeline or other sources towards Slovenia, Austria and Italy as well as the countries in their surrounding 5. It facilitates market integration

Barriers

Barrier Type	Description
Financing	Availability of funds and associated conditions

Intergovernmental Agreements

Agreement	Agreement Description	Is Signed	Agreement Signature Date
Letter of Intent	Signed between Plinacro and Plinovodi	Yes	22/05/2014
Memorandum of Understanding	Signed among Plinacro, Plinovodi and Gas Connect Austria	Yes	28/12/2014

LNG evacuation pipeline Omišalj - Zlobin (Croatia)

TRA-N-90	Project	Pipeline including CS	Non-FID
Update Date	13/07/2016		Advanced
Description	The pipeline is the connection of the LNG on the Krk island with the Croatian gas transmission system. Gas pipeline Omišalj-Zlobin jointly with gas pipeline system Zlobin - Bosiljevo - Sisak-Kozarac and with gas pipeline Kozarac-Slobodnica makes LNG Main Evacuation Pipeline connecting LNG from the LNG solution on the island of Krk with Central Eastern European counties. The pipeline is a continuation of the existing Hungary – Croatia 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 solution in Omišalj It will be the "backbone" of the Croatian gas system.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Croatia LNG	Plinacro Ltd	2018	LNG_Tk_HR	HR	52.2 GWh/d
Dravaszerdahely	Plinacro Ltd	2018	HR	HU	52.2 GWh/d

Comment: It is necessary to use and CS1

Sponsors	General Information	Barriers (Count)
Plinacro 100%	Promoter <i>Plinacro Ltd</i>	Others [] 1
	Operator <i>Plinacro Ltd</i>	
	Host Country <i>Croatia</i>	
	Status <i>Planned</i>	
	Website <i>Project's URL</i>	
	Publication Approval Status <i>Approved</i>	

Enabled Projects

Project Code	Project Name
TRA-N-1058	LNG Evacuation Pipeline Kozarac-Slobodnica
TRA-N-075	LNG evacuation pipeline Zlobin-Bosiljevo-Sisak-Kozarac

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (2017-2026)	Pre-Feasibility			Considered TPA Regime	Regulated
NDP Number	1.17	Feasibility			Considered Tariff Regime	Regulated
		FEED			Applied for Exemption	No
Currently PCI	No	Market Test		08/2016	Exemption Granted	No
		Permitting	07/2009	01/2018		
CBCA Decision	No	Supply Contracts			Exemption in entry direction	70.00%
Market Survey	Not Relevant (no CBCA decision)	FID		01/2017	Exemption in exit direction	30.00%
		Construction	01/2017	05/2018		
		Commissioning	2018	2018		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Omišalj-Zlobin		1,000	18		
Total			18		

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity, Project aims at supplying directly or indirectly at least two Member States
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	Project will connect several, in the future exceptionally important, points of the Croatian gas transmission system. It is the future strategic gas transmission connector of great significance and is an integral part of the North – South European Corridor named as the North-South (Baltic – Adriatic) Gas Connection. Its purpose is linking the Polish and the Croatian LNG (Liquefied Natural Gas) solutions. This gas pipeline (as well as all the pipelines to which it connects and the associated gas nodes) will provide gas transmission in all directions, i.e. it will satisfy all transmission requirements and will maximise the value of the IAP and LNG projects in Croatia and the region. In addition, it will increase the use of the existing system and the new interconnection with Hungary.

Time Schedule	
Grant Obtention Date	
Delay Since Last TYNDP	



Delay Explanation This project completely depends on LNG terminal project on island of Krk

Expected Gas Sourcing

LNG (?), it will be gas from Croatia transport system, Croatian UGS and all import routes (LNG and IAP)

Benefits

Main Driver Market Demand

Main Driver Explanation This gas pipeline passes only through the territory of the Republic of Croatia. However, it has regional significance since it is the main evacuation gas pipeline from the LNG solution on the island of Krk towards Hungary and it is its main role. This gas pipeline increases utilisation of the interconnection with Hungary so it has influence on Hungary but also further on Slovakia and Ukraine. The gas pipeline shall be also significant for third countries; Serbia, Bosnia and Herzegovina by constructing interconnection with these countries.

Benefit Description The project is the main gas pipeline for transport of LNG from the terminal on the island of Krk as well as from other possible sources, such as gas from the Ionian-Adriatic Pipeline , towards CEE and SEE countries. At the same time, in addition to already constructed interconnection gas pipeline with Hungary, Slobodnica-Donji Miholjac-Dravaszerdahely, it presents the Croatian part of the strategic transregional gas pipeline connection Adriatic-Baltic the aim of which is to connect the Polish and Croatian LNG terminal. The most important impacts and benefits of this project: 1. It provides viable and secure supply of CEE and SEE countries, which are heavily dependent on the Russian gas and jeopardized by the Russian giving up on the South Stream project and the announcement regarding termination of gas transmission via Ukraine after 2019. 2. It provides diversification of supply (also in case the previously mentioned threats fail to occur) and thereby competitiveness and lower price

Barriers

Barrier Type Description

Others The project completely depends on the realisation of the Krk LNG project



Interconnection Croatia -Bosnia and Herzegovina (Slobodnica- Bosanski Brod)

TRA-N-066	Project	Pipeline including CS	Non-FID
Update Date	14/07/2016		Advanced
Description	The pipeline covers the countries Croatia and Bosnia and Herzegovina and it will be the part of Energy Community Ring. The pipeline goes from Slavonski Brod (Slobodnica) in Croatia, it will cross the Sava river to Bosanski Brod in Bosnia and Herzegovina with further extension to Zenica.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Slobodnica- Bosanski Brod-Zenica	Plinacro Ltd	2019	BA	HR	162.0 GWh/d
	Plinacro Ltd	2019	HR	BA	162.0 GWh/d

Sponsors	General Information	
B&H, Bosanski Brod - Zenica	Promoter	<i>Plinacro Ltd</i>
BH Gas 100%	Operator	<i>Plinacro Ltd</i>
Croatia, Slobodnica-Bosanski Brod (border)	Host Country	<i>Croatia</i>
Plinacro 100%	Status	<i>Planned</i>
	Website	<i>Project's URL</i>
	Publication Approval Status	<i>Approved</i>



NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (2017-2026)	Pre-Feasibility			Considered TPA Regime	Regulated
NDP Number	1.13	Feasibility			Considered Tariff Regime	Regulated
		FEED			Applied for Exemption	No
Currently PCI	No	Market Test		08/2016	Exemption Granted	No
		Permitting	01/2011	01/2019		
CBCA Decision	No	Supply Contracts			Exemption in entry direction	70.00%
Market Survey	Not Relevant (no CBCA decision)	FID		12/2017	Exemption in exit direction	30.00%
		Construction	01/2018	01/2019		
		Commissioning	2019	2019		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Slobodnica - Bosanski Brod	4 million m3 daily	700	6		
Total			6		

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	No
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	The project is fullfilling and the following criteria: Lifting isolation for Bosnia and Herzegovina, reducing bottlenecks, will improve remaining flexibility, will enable source and route diversification

Time Schedule	
Grant Obtention Date	
Delay Since Last TYNDP	The start of the construction has been postponed until 2020.
Delay Explanation	It depends on the agreement with Republika Srpska (B&H)

Expected Gas Sourcing	
LNG (HR), It will be gas from Croatia transport system, Croatian UGS and	Croatian planned LNG terminaland Baumgarten via Slovenia

Benefits

Main Driver	Market Demand
Main Driver Explanation	This project is of great interest for the development of the natural gas sector in B&H, as its implementation would provide new route of supply B&H with gas, with a possibility of diversification of supply sources and increase in security of supply of the existing transportation system of B&H, and especially in the circumstances of the natural gas supply of the refineries Brod and Modrica and planned power plant (PP) Zenica and CCGT Kakanj, as well as the expansion of the market and increase in the competitiveness of natural gas. The construction of this gas pipeline would enable the B&H gas transmission system to connect with the Croatian gas transmission system through the pipeline from Slavonski Brod to Donji Miholjac, and then with the Hungarian pipeline. It will connect BH market to the new LNG in Croatia and Baumgarten via Slovenia.
Benefit Description	It will be new interconnection, new entry point and transmission route for the needs of BH; it will be SoS and diversification of supply route for Bosnia and Herzegovina. It will enable BH access to Croatian UGS. This project is an interconnection of the gas systems of Croatia and Bosnia and Herzegovina on the route Slobodnica-Brod-Zenica. The most important impacts and benefits of this project: 1. It provides viability and security of supply of Bosnia and Herzegovina; 2. It provides diversification of supply routes and sources for the market of Bosnia and Herzegovina; 3. It provides development of the gas market in Bosnia and Herzegovina; 4. Introducing an environmentally more acceptable energy source (replacement for firewood, coal, fuel oil and complementary generation to renewable energy, and the potential for new CCGT and PP); 5. Reducing CO2 and SO2 emissions in the B&H and region and facilitating economic development.

Barriers

Barrier Type	Description
Political	This project is politically very sensitive and depends on the agreement with Republika Srpska and agreements within B&H and its TSOs (BH Gas and GasRES)

Intergovernmental Agreements

Agreement	Agreement Description	Is Signed	Agreement Signature Date
Letter of Intent	between Plinacro and BH Gas for all projects of interconnection	Yes	06/04/2011
Memorandum of understanding	signed between Plinacro and BH Gas	Yes	26/06/2006

LNG evacuation pipeline Zlobin-Bosiljevo-Sisak-Kozarac

TRA-N-075	Project	Pipeline including CS	Non-FID
Update Date	13/07/2016		Advanced
Description	Gas pipeline Zlobin - Bosiljevo - Sisak – Kozarac jointly with gas pipeline Omišalj-Zlobin and gas pipeline Kozarac-Slobodnica makes LNG Main Evacuation Pipeline connecting LNG from the LNG solution on the island of Krk with Central Eastern European counties. The pipeline is a continuation of the existing Hungary – Croatia 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 solution in Omišalj It will be the "backbone" of the Croatian gas system.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Croatia LNG	Plinacro Ltd	2020	LNG_Tk_HR	HR	50.0 GWh/d
Dravaszerdahely	Plinacro Ltd	2020	HR	HU	50.0 GWh/d

Sponsors	General Information		Barriers (Count)	
Plinacro	100%	Promoter	Plinacro Ltd	
		Operator	Plinacro Ltd	Others 1
		Host Country	Croatia	
		Status	Planned	Financing 1
		Website	Project's URL	
		Publication Approval Status	Approved	

Enabled Projects

Project Code	Project Name
TRA-N-1058	LNG Evacuation Pipeline Kozarac-Slobodnica
TRA-N-90	LNG evacuation pipeline Omišalj - Zlobin (Croatia)

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (2017-2026)	Pre-Feasibility			Considered TPA Regime	Regulated
NDP Number	1.18, 1.19, 1.20	Feasibility	09/2015	10/2016	Considered Tariff Regime	Regulated
		FEED			Applied for Exemption	No
Currently PCI	Yes (6.5.2.)	Market Test		08/2016	Exemption Granted	No
		Permitting	07/2009	01/2020		
CBCA Decision	No	Supply Contracts			Exemption in entry direction	70.00%
Market Survey	Not Relevant (no CBCA decision)	FID		01/2017	Exemption in exit direction	30.00%
		Construction	01/2017	01/2020		
		Commissioning	2020	2020		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Bosiljevo - Sisak		1,000	102		
Kozarac - Sisak		1,000	20		
Zlobin - Bosiljevo		1,000	58		
Total			180		

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	Project will connect several, in the future exceptionally important, points of the Croatian gas transmission system. It is the future strategic gas transmission connector of great significance and is an integral part of the North – South European Corridor named as the North-South (Baltic – Adriatic) Gas Connection. Its purpose is linking the Polish and the Croatian LNG (Liquefied Natural Gas) solutions. This gas pipeline (as well as all the pipelines to which it connects and the associated gas nodes) will provide gas transmission in all directions, i.e. it will satisfy all transmission requirements and will maximise the value of the IAP and LNG projects in Croatia and the region. In addition, it will increase the use of the existing system and the new interconnection with Hungary.

Time Schedule	
Grant Obtention Date	24/11/2015



Delay Since Last TYNDP

Delay Explanation The preparatory work will be performed in phases, depending on the development of the LNG project,

Expected Gas Sourcing

Caspian Region, LNG (HR,QA), it will be gas from Croatia transport system, Croatian UGS and all import routes (LNG and IAP)

Comments about the Third-Party Access Regime

TPA regime is not defined yet, Exemption Regime possibly

Benefits

Main Driver Market Demand

Main Driver Explanation This gas pipeline passes only through the territory of the Republic of Croatia. However, it has regional significance since it is the main evacuation gas pipeline from the LNG solution on the island of Krk towards Hungary and it is its main role. This gas pipeline increases utilisation of the interconnection with Hungary so it has influence on Hungary but also further on Slovakia and Ukraine. The gas pipeline shall be also significant for third countries; Serbia, Bosnia and Herzegovina by constructing interconnection with these countries.

Benefit Description The project is the main gas pipeline for transport of LNG from the terminal on the island of Krk as well as from other possible sources, such as gas from the Ionian-Adriatic Pipeline , towards CEE and SEE countries. At the same time, in addition to already constructed interconnection gas pipeline with Hungary, Slobodnica-Donji Miholjac-Dravaszerdahely, it presents the Croatian part of the strategic transregional gas pipeline connection Adriatic-Baltic the aim of which is to connect the Polish and Croatian LNG terminal. The most important impacts and benefits of this project: 1. It provides viable and secure supply of CEE and SEE countries, which are heavily dependent on the Russian gas and jeopardized by the Russian giving up on the South Stream project and the announcement regarding termination of gas transmission via Ukraine after 2019. 2. It provides diversification of supply (also in case the previously mentioned threats fail to occur) and thereby competitiveness and lower pr

Barriers

Barrier Type Description

Others Directly connected and depening on the LNG project on the island of Krk

Financing Availability of funds and associated conditions



Interconnection Croatia-Bosnia and Herzegovina (South)

TRA-N-302	Project	Pipeline including CS	Non-FID
Update Date	13/07/2016		Advanced
Description	South Interconnection of Croatia and B&H - the pipeline is a new supply route for Bosnia and Herzegovina that will enable the reliable and diversified natural gas supply. The pipeline will enable the flow of IAP to Bosnia and Herzegovina		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Posušje	Plinacro Ltd	2021	BA	HR/IAP	81.0 GWh/d
	Plinacro Ltd	2021	HR/IAP	BA	81.0 GWh/d

Sponsors	General Information	No Barriers Defined	Barriers (Count)
Croatian part of both options	Promoter <i>Plinacro Ltd</i>		
Plinacro d.o.o. 100%	Operator <i>Plinacro Ltd</i>		
parts in B&H	Host Country <i>Croatia</i>		
BH Gas 100%	Status <i>Planned</i>		
	Website <u>Project's URL</u>		
	Publication Approval Status <i>Approved</i>		

Enabled Projects

Project Code	Project Name
TRA-N-068	Ionian Adriatic Pipeline

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (2017-2026)	Pre-Feasibility		09/2013	Considered TPA Regime	Regulated
NDP Number	1.3	Feasibility			Considered Tariff Regime	Regulated
		FEED			Applied for Exemption	No
Currently PCI	No	Market Test			Exemption Granted	No
		Permitting	08/2014	01/2021		
CBCA Decision	No	Supply Contracts			Exemption in entry direction	70.00%
Market Survey	Not Relevant (no CBCA decision)	FID		01/2019	Exemption in exit direction	30.00%
		Construction	01/2020	01/2021		
		Commissioning	2021	2021		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Zagvozd-Imotski-Posušje		500	22		
Total			22		

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

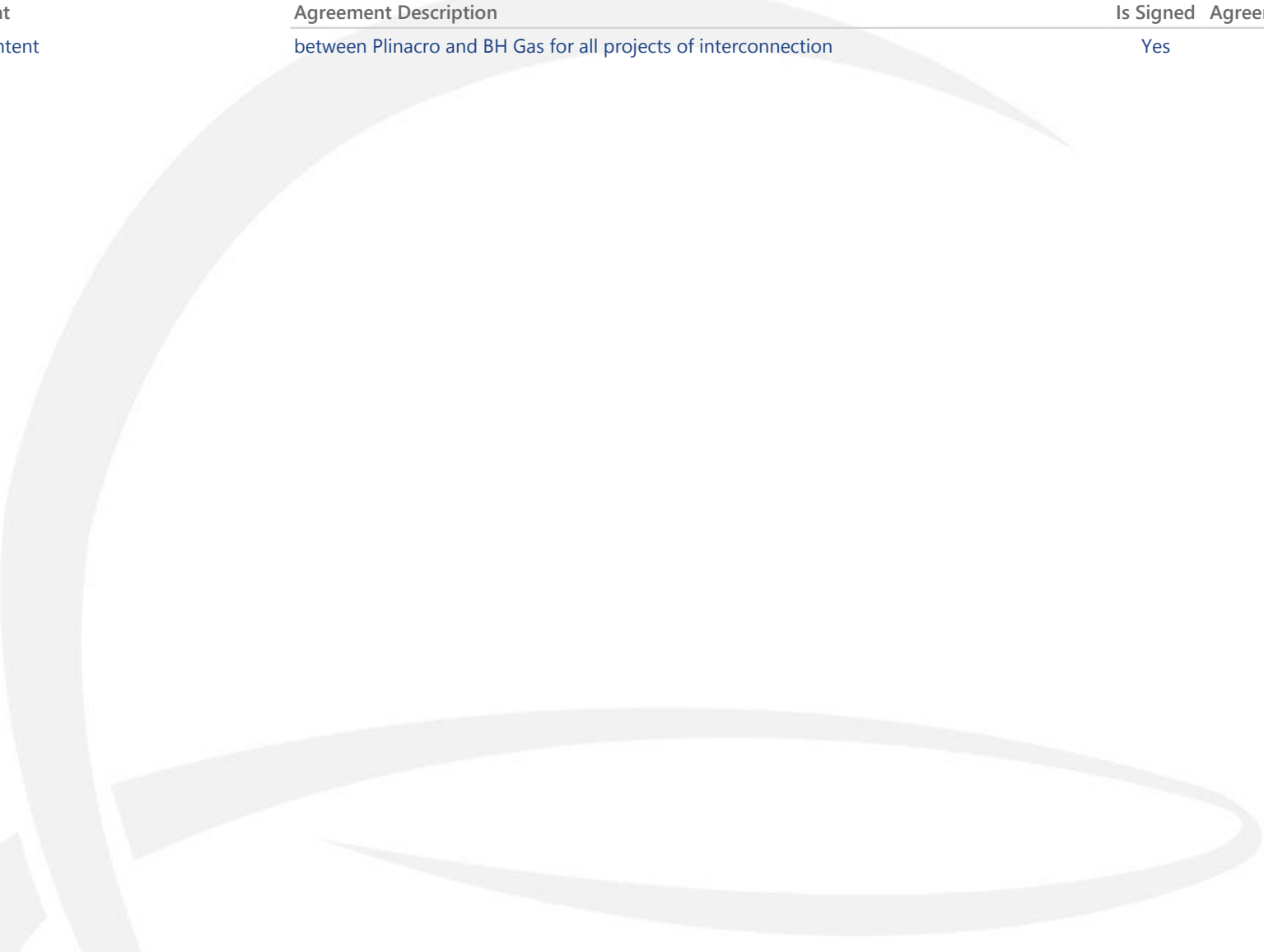
Expected Gas Sourcing
Caspian Region, LNG (), Baumgarten via Slovenia and Croatia

Benefits	
Main Driver	Market Demand
Main Driver Explanation	Market Demand and SoS for the Southern part of Bosnia and Herzegovina
Benefit Description	The aim of the project is to establish a new supply route for B&H providing a diversified and reliable natural gas supply.



Intergovernmental Agreements

Agreement	Agreement Description	Is Signed	Agreement Signature Date
Letter of Intent	between Plinacro and BH Gas for all projects of interconnection	Yes	06/04/2011



Ionian Adriatic Pipeline

TRA-N-068

Project

Pipeline including CS

Non-FID

Update Date

14/07/2016

Advanced

Description

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. IAP is the most important gas project in the Southeastern Europe supported by the Energy Community. The IAP project is based on the idea of connecting the existing Croatian gas transmission system, via Montenegro and Albania, with the TAP gas pipeline system (Trans Adriatic Pipeline) an exit Bosnia and Herzegovina is planned. Plinacro is the project promoter for submitting the project to TYNDP. In addition, Montenegrin and Albanian counterparts sent their approval.

Regulatory Decisions and similar material conditions

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Ionic-Adriatic Pipeline - IAP / AB	Plinacro Ltd	2023	HR/IAP	AL	33.3 GWh/d
Ionic-Adriatic Pipeline - IAP / ME	Plinacro Ltd	2023	HR/IAP	ME	16.6 GWh/d
	Plinacro Ltd	2022	HR	HR/IAP	83.2 GWh/d
Ionic-Adriatic Pipeline - IAP / Split - HR	Plinacro Ltd	2023	HR/IAP	HR	83.2 GWh/d
			<i>Comment: IT is Exit Croatia</i>		
Ionic-Adriatic Pipeline - IAP Entry	Plinacro Ltd	2023	IB-HRi/IAP	HR/IAP	166.5 GWh/d
			<i>Comment: The Entry point is from TAP in Fieri</i>		

Sponsors		General Information	
Bosnia and Herzegovina		Promoter	<i>Plinacro Ltd</i>
BH Gas (Bosnia and Herzegovina); Ministry of Foreign Trade and Economic Relations (BiH)	100%	Operator	<i>Plinacro Ltd</i>
Croatia (From Split to Montenegro border)		Host Country	<i>Croatia</i>
Plinacro Ltd; Ministry of Economy (Croatia)	100%	Status	<i>Planned</i>
Fieri to Montenegro border		Website	<i>Project's URL</i>
Ministry of Economy , Trade and Energy (Albania), Albpetrol	100%	Publication Approval Status	<i>Approved</i>
Montenegro			
Ministry of Economy (Montenegro), Montenegro Bonus Ltd	100%		



NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (2017-2026)</i>	Pre-Feasibility		<i>01/2008</i>	Considered TPA Regime	<i>Regulated</i>
NDP Number	<i>1.1, 1.2,1.4,1.5,5.4</i>	Feasibility		<i>05/2012</i>	Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test			Exemption Granted	<i>No</i>
		Permitting		<i>07/2009</i>		
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID		<i>01/2019</i>	Exemption in exit direction	<i>0.00%</i>
		Construction		<i>01/2020</i>		
		Commissioning		<i>2022</i>		<i>2023</i>

Pipelines and Compressor Stations						
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)		
IAP - Croatian part	2.5 billion m3 yearly	800	250	1		
IAP- Albanian part	1 billion m3 yearly	800	180			



IAP- Montenegro part	0.5 billion m3 yearly	800	110	
Total			540	1

PCI Details

PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	Expected Benefits: - gasification of southern part of Croatia; Bosnia and Herzegovina, Montenegro, Albania - Reverse flow capacity - introducing an environmentally acceptable energy source in the region (replacement for firewood, coal, fuel oil and complementary generation to renewable energy, and the potential for increased cogeneration and CHP) - providing diversified gas supply to the region - providing the access to Croatian and Albanian storage capacities - providing significant transit capacity and income to Albania, Montenegro and Croatia. - Reducing CO2 emissions in the region - Security of Supply, Reverse flow, Integration of market areas (market integration benefits for Croatia and region (Albania, Montenegro, Bosnia and Herzegovina and neighbouring countries), diversification of sources, diversification of routes, N-1 criteria completion on national and regional level, support back-up to renewables

Time Schedule

Grant Obtention Date	
Delay Since Last TYNDP	2 years delay
Delay Explanation	Dynamics of project implementation depends on the dynamics of TAP project implementation.

Expected Gas Sourcing

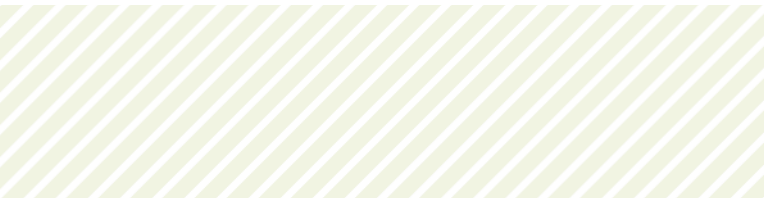
Caspian Region, LNG (HR)

Comments about the Third-Party Access Regime

TPA regime is not defined yet

Benefits

Main Driver	Others
Main Driver Explanation	Gasification of Albania and Montenegro and southern part of Croatia and Bosnia and Herzegovina. Diversification of supply, Security of Supply
Benefit Description	Security of Supply, Reverse flow, Integration of market areas (market integration benefits for Croatia and region (Albania, Montenegro, Bosnia and Herzegovina and neighbouring countries), diversification of sources, diversification of routes, N-1 criteria completion on national and regional level, support back-up to renewables



Barriers

Barrier Type	Description
Regulatory	Tarrifs which depends on the Business Model
Political	The pipeline passes by EU country and Non EU countries.
Financing	Availability of funds and associated conditions

Intergovernmental Agreements

Agreement	Agreement Description	Is Signed	Agreement Signature Date
Agreement to extend the Memorandum of Understanding	Signed between Plinacro and TAP	Yes	25/02/2014
Memorandum of Understanding	Signed between Plinacro and TAP	Yes	05/02/2011
Ministerial declaration	signed by the Ministries of enegy of Albania, Montenegro and Croatia, from dezember 2008, Bosnia and Herzegovina signed as well	Yes	27/09/2007

Compressor stations 2 and 3 at the Croatian gas transmission system

TRA-N-1057	Project	Pipeline including CS	Non-FID
Update Date	14/07/2016		Non-Advanced
Description	<p>Construction of such facilities is necessary due to the opening of the gas market, as well as providing sufficient transmission capacities and natural gas delivery pressure conditions and for development of the gas market in Croatia and the neighbouring countries. Compressor stations will significantly increase efficiency of the Croatian gas transmission system. Compressor stations are integral part of the transmission system, integrated in the system, primarily in a manner to increase the flexibility of managing the existing transmission capacities of the system, and to provide rational increase of transmission capacities according to user needs, that is, the requirements of the market and to satisfy market conditions arising from the application of new legal regulation.</p>		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Croatia LNG	Plinacro Ltd	2020	LNG_Tk_HR	HR	43.3 GWh/d
Dravaszerdahely	Plinacro Ltd	2020	HR	HU	43.3 GWh/d
	Plinacro Ltd	2020	HU	HR	62.5 GWh/d

Sponsors	General Information		No Barriers Defined
Plinacro	100%	Promoter	Barriers (Count)
		Operator	
		Host Country	
		Status	
		Website	
		Publication Approval Status	

Enabled Projects

Project Code	Project Name
TRA-N-066	Interconnection Croatia -Bosnia and Herzegovina (Slobodnica- Bosanski Brod)
TRA-N-070	Interconnection Croatia/Serbia (Slobdnica-Sotin-Bačko Novo Selo)
TRA-N-075	LNG evacuation pipeline Zlobin-Bosiljevo-Sisak-Kozarac

TRA-F-86 Interconnection Croatia/Slovenia (Lučko - Zabok - Rogatec)
 TRA-F-334 Compressor station 1 at the Croatian gas transmission system

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (2017-2026)	Pre-Feasibility			Considered TPA Regime	Not Applicable
NDP Number	5.2 and 5.3	Feasibility			Considered Tariff Regime	Not Applicable
		FEED			Applied for Exemption	Not Relevant
Currently PCI	Yes (6.26.3)	Market Test			Exemption Granted	Not Relevant
		Permitting	01/2017	01/2020		
CBCA Decision	No	Supply Contracts			Exemption in entry direction	0.00%
Market Survey	Not Relevant (no CBCA decision)	FID			Exemption in exit direction	0.00%
		Construction	01/2018	01/2020		
		Commissioning	2020	2020		

PCI Details

PCI Benefits Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity

General Criteria Fulfilled Yes

Specific Criteria Fulfilled Competition, Market Integration, Security of Supply, Sustainability

Specific Criteria Fulfilled Comments

Time Schedule

Grant Obtention Date 25/04/2016

Delay Since Last TYNDP

Delay Explanation

Benefits

Main Driver Market Demand

Main Driver Explanation Projects will enable the reverse flow in all interconnection point



Benefit Description

Construction of such facilities is necessary due to the opening of the gas market, as well as providing sufficient transmission capacities and natural gas delivery pressure conditions and for development of the gas market in Croatia and the neighbouring countries. Compressor stations will significantly increase efficiency of the Croatian gas transmission system.



Interconnection Croatia/Serbia (Slobdnica-Sotin-Bačko Novo Selo)

TRA-N-070	Project	Pipeline including CS	Non-FID
Update Date	13/07/2016		Non-Advanced
Description	Covering Croatia and Serbia, connecting the Croatian gas transmission system to the Serbian gas transmission system Slobdnica - Sotin (Croatia) - Bačko Novo Selo (Serbia). It will be new interconnection, new entry point and transmission route for the needs of Serbia; it will be SoS and diversification of supply route for Serbia. It will enable Serbia access to Croatian UGS and enable supply of gas from Austria, Slovenia and Italy by the Croatian gas transmission system.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Slobdnica - Sotin (HR) / Bačko Novo Selo (RS)	Plinacro Ltd	2023	HR	RS	227.5 GWh/d
	Plinacro Ltd	2023	RS	HR	227.5 GWh/d

Sponsors		General Information		No Barriers Defined	Barriers (Count)
Croatian section		Promoter	<i>Plinacro Ltd</i>		
Plinacro	100%	Operator	<i>Plinacro Ltd</i>		
Serbian section		Host Country	<i>Croatia</i>		
Srbijagas	100%	Status	<i>Planned</i>		
		Website	<u><i>Project's URL</i></u>		
		Publication Approval Status	<i>Approved</i>		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (2017-2026)	Pre-Feasibility			Considered TPA Regime	Regulated
NDP Number	1.11, 1.12	Feasibility			Considered Tariff Regime	Regulated
		FEED			Applied for Exemption	No
Currently PCI	No	Market Test		08/2016	Exemption Granted	No
		Permitting	01/2010	10/2023		
CBCA Decision	No	Supply Contracts			Exemption in entry direction	70.00%
Market Survey	Not Relevant (no CBCA decision)	FID		10/2021	Exemption in exit direction	30.00%
		Construction	01/2022	10/2023		
		Commissioning	2023	2023		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Slobodnica - Sotin	16 mcm daily-total capacity	800	97		
Sotin- Bačko Novo Selo	I section	800	5		
Total			102		

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	This project is an interconnection of the gas systems of Croatia and Serbia on the route Slobodnica-Sotin-Bačko Novo Selo and it is primarily intended for transport of LNG from the terminal on the island of Krk as well as from other possible routes and directions towards SEE countries. The most important impacts and benefits of the project: 1) It provides viable and secure supply of SEE countries, which are heavily dependent on the Russian gas and jeopardized by the Russian giving up on the South Stream project and the announcement regarding termination of gas transmission via Ukraine after 2019 2) It provides diversification of supply (also in case the previously mentioned threats fail to occur) and thereby competitiveness and lower prices for users 3) It facilitates market integration

Expected Gas Sourcing
Caspian Region, LNG (HR), it will be gas from Croatian transport system, Croatian UGS

Benefits	
Main Driver	Market Demand
Main Driver Explanation	will integrate Serbia with the new supply route receiving gas from Croatia gas transmission system which will enable it to be supplied from all other neighbouring markets (Hungary, Austria, Italy). This project is an interconnection of the gas systems of Croatia and Serbia on the route Slobodnica-Sotin-Bačko Novo Selo and it is primarily intended for transport of LNG from the terminal on the island of Krk as well as from other possible routes and directions towards SEE countries. The most important impacts and benefits of the project: 1) It provides viable and secure supply of SEE countries, which are heavily dependent on the Russian gas and jeopardized by the Russian giving up on the South Stream project and the announcement regarding termination of gas transmission via Ukraine after 2019 2) It provides diversification of supply (also in case the previously mentioned threats fail to occur) and thereby competitiveness and lower prices for users 3) It facilitates market integration
Benefit Description	It will be new entry point and transmission route for the needs of Serbia

LNG Evacuation Pipeline Kozarac-Slobodnica

TRA-N-1058	Project	Pipeline including CS	Non-FID
Update Date	13/07/2016		Non-Advanced
Description	Gas pipeline Kozarac - Slobodnica jointly with gas pipeline sytem Zlobin - Bosiljevo - Sisak-Kozarac and with gas pipeline Omišalj-Zlobin makes LNG Main Evacuation Pipeline connecting LNG from the LNG solution on the island of Krk with Central Eastern European counties. The pipeline system is a continuation of the existing Hungary – Croatia 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 solution in Omišalj It will be the "backbone" of the Croatian gas system.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Croatia LNG	Plinacro Ltd	2023	LNG_Tk_HR	HR	109.9 GWh/d
Dravaszerdahely	Plinacro Ltd	2023	HR	HU	58.8 GWh/d
	Plinacro Ltd	2023	HU	HR	56.6 GWh/d

Sponsors	General Information	No Barriers Defined	Barriers (Count)
Plinacro 100%	Promoter <i>Plinacro Ltd</i>		
	Operator <i>Plinacro Ltd</i>		
	Host Country <i>Croatia</i>		
	Status <i>Planned</i>		
	Website <i>Project's URL</i>		
	Publication Approval Status <i>Approved</i>		

Enabled Projects

Project Code	Project Name
TRA-N-075	LNG evacuation pipeline Zlobin-Bosiljevo-Sisak-Kozarac
TRA-N-90	LNG evacuation pipeline Omišalj - Zlobin (Croatia)
TRA-N-1057	Compressor stations 2 and 3 at the Croatian gas tranmission system

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (2017-2026)	Pre-Feasibility			Considered TPA Regime	Regulated
NDP Number	1.21	Feasibility	12/2015	10/2016	Considered Tariff Regime	Regulated
		FEED			Applied for Exemption	No
Currently PCI	Yes (6.5.2)	Market Test		08/2016	Exemption Granted	No
		Permitting	09/2014	01/2023		
CBCA Decision	No	Supply Contracts			Exemption in entry direction	70.00%
Market Survey	Not Relevant (no CBCA decision)	FID		01/2020	Exemption in exit direction	30.00%
		Construction	01/2021	01/2023		
		Commissioning	2023	2023		

Pipelines and Compressor Stations

Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)
Kozarac-Slobodnica		800	128	
Total			128	

PCI Details

PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	Project will connect several, in the future exceptionally important, points of the Croatian gas transmission system. It is the future strategic gas transmission connector of great significance and is an integral part of the North – South European Corridor named as the North-South (Baltic – Adriatic) Gas Connection. Its purpose is linking the Polish and the Croatian LNG (Liquefied Natural Gas) solutions. This gas pipeline (as well as all the pipelines to which it connects and the associated gas nodes) will provide gas transmission in all directions, i.e. it will satisfy all transmission requirements and will maximise the value of the IAP and LNG projects in Croatia and the region. In addition, it will increase the use of the existing system and the new interconnection with Hungary.

Time Schedule

Grant Obtention Date	24/11/2015
Delay Since Last TYNDP	
Delay Explanation	Project depend on LNG project

Expected Gas Sourcing

LNG (), it will be gas from Croatia transport system, Croatian UGS and all import routes (LNG and IAP)

Benefits

Main Driver Market Demand

Main Driver Explanation This gas pipeline passes only through the territory of the Republic of Croatia. However, it has regional significance since it is the main evacuation gas pipeline from the LNG solution on the island of Krk towards Hungary and it is its main role. This gas pipeline increases utilisation of the interconnection with Hungary so it has influence on Hungary but also further on Slovakia and Ukraine. The gas pipeline shall be also significant for third countries; Serbia, Bosnia and Herzegovina by constructing interconnection with these countries.

Benefit Description The project is the main gas pipeline for transport of LNG from the terminal on the island of Krk as well as from other possible sources, such as gas from the Ionian-Adriatic Pipeline , towards CEE and SEE countries. At the same time, in addition to already constructed interconnection gas pipeline with Hungary, Slobodnica-Donji Miholjac-Dravaszerdahely, it presents the Croatian part of the strategic transregional gas pipeline connection Adriatic-Baltic the aim of which is to connect the Polish and Croatian LNG terminal. The most important impacts and benefits of this project: 1. It provides viable and secure supply of CEE and SEE countries, which are heavily dependent on the Russian gas and jeopardized by the Russian giving up on the South Stream project and the announcement regarding termination of gas transmission via Ukraine after 2019 2. It provides diversification of supply (also in case the previously mentioned threats fail to occur) and thereby competitiveness and lower price

Interconnection Croatia-Bosnia and Herzegovina (west)

TRA-N-303	Project	Pipeline including CS	Non-FID
Update Date	13/07/2016		Non-Advanced
Description	Interconnection Croatia-Bosnia and Herzegovina on route Licka Jesenica-Rakovica in Croatia to border with Bosnia and Herzegovina. Bosnian part is from Trzac to Bosanska Krupa with branches to Bihać and Velika Kladusa.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Rakovica (HR) / Trzac (BA)	Plinacro Ltd	2026	BA	HR	81.0 GWh/d
	Plinacro Ltd	2026	HR	BA	81.0 GWh/d

Sponsors	General Information		Barriers (Count)	
Croatian part	Promoter	<i>Plinacro Ltd</i>		<div style="background-color: #4F7942; color: white; padding: 5px; display: inline-block;">Market</div> <div style="background-color: #4F7942; color: white; padding: 5px; display: inline-block; margin-left: 20px;">2</div>
Plinacro d.o.o. 100%	Operator	<i>Plinacro Ltd</i>		
part in B&H	Host Country	<i>Croatia</i>		
BH Gas 100%	Status	<i>Planned</i>		
	Website	<u><i>Project's URL</i></u>		
	Publication Approval Status	<i>Approved</i>		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (2017-2026)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number	<i>1.32 and 1.33</i>	Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test			Exemption Granted	<i>No</i>
		Permitting	<i>12/2012</i>	<i>09/2026</i>		
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>70.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>30.00%</i>
		Construction	<i>04/2025</i>	<i>11/2026</i>		
		Commissioning	<i>2026</i>	<i>2026</i>		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Lička Jesenica-Rakovica		500	20		
Rakovica-Bihać		500	10		
Total			30		

Expected Gas Sourcing

Caspian Region, LNG (HR,QA), it can be gas from Croatian transport system, Croatian UGS and all import routes

Benefits

Main Driver Market Demand

Main Driver Explanation For the western part of Bosnia and Herzegovina

Benefit Description The aim of the project is to assess the feasibility of providing gas supply to the Una-Sana Canton in BiH from the Croatian gas transmission system. It will be from the Lička Jesenica gas transmission node in Croatia via Lika to the HR/BiH border and from there to Bosanska Krupa with branches to Bihać and velika Kladuša in Una-Sana Canton. The extension of the gas transmission in Croatia to the border with BiH will allow additional gasification in the part of Croatia along the pipeline route.

Barriers

Barrier Type Description

Market Lack of market support



Market Lack of market maturity

Intergovernmental Agreements

Agreement	Agreement Description	Is Signed	Agreement Signature Date
Letter of Intent	between Plinacro and BH Gas for all projects of interconnection	Yes	06/04/2011



Interconnection Croatia/Slovenia (Umag-Koper)

TRA-N-336	Project	Pipeline including CS	Non-FID
Update Date	14/07/2016		Non-Advanced
Description	This pipeline is a regional link to Croatian and Slovenian system. Relevant gas pipeline is significant for the regional security of supply, especially in the light of the fact that these parts of Croatian and Slovenian markets are allocated at the ends of the associated gas transportation systems. It is also important for the competitiveness and market competition.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Sečovlje (SI) / Plovanija (HR)	Plinacro Ltd	2026	HR	SI	16.2 GWh/d
	Plinacro Ltd	2026	SI	HR	16.2 GWh/d

Sponsors	General Information	Barriers (Count)
Plinacro 100%	Promoter <i>Plinacro Ltd</i> Operator <i>Plinacro Ltd</i> Host Country <i>Croatia</i> Status <i>Planned</i> Website <i>Project's URL</i> Publication Approval Status <i>Approved</i>	No Barriers Defined

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (2017-2026)	Pre-Feasibility			Considered TPA Regime	Regulated
NDP Number	1.34	Feasibility			Considered Tariff Regime	Regulated
		FEED			Applied for Exemption	No
Currently PCI	No	Market Test			Exemption Granted	No
		Permitting				
CBCA Decision	No	Supply Contracts			Exemption in entry direction	70.00%
Market Survey	Not Relevant (no CBCA decision)	FID			Exemption in exit direction	30.00%
		Construction	04/2026	11/2026		
		Commissioning	2026	2026		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Umag - Plovanija (HR)- Koper (SI)	Croatian part is 8 km	300	8		
Total			8		

Expected Gas Sourcing	
LNG (HR), Croatian gas transmission system	

Benefits	
Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	

LNG terminal Krk

LNG-N-082	Project	LNG Terminal	Non-FID
Update Date	23/05/2016		Advanced
Description	<p>The import terminal for the liquefied natural gas (LNG) will be situated in Omišalj on the Island of Krk, Republic of Croatia. The project is planned as a stage development: with: 1st stage - FSRU with annual send-out capacity of 1- 4 bcm/y (according to FSRU ship and pipeline availability), 2nd stage - LNG onshore terminal with annual send-out capacity of 3.5 bcm/y, 3rd stage - LNG onshore terminal with annual send-out capacity of 5 bcm/y and 4th stage - LNG onshore terminal with annual send-out capacity of 8.75 bcm/y. Construction and the size of the onshore terminal will depend on the market need. Future LNG Terminal will be an important part for the security of supply for Central and South-Eastern European countries. Gas supply in the region is heavily dependent on one supply source and therefore LNG terminal in Croatia would represent a major diversification gas supply route in the region.</p>		
Regulatory Decisions and similar material conditions	<p>Croatian Energy Regulatory Agency has given to LNG Croatia LLC on 03.02.2016, a permit for performing energy activities which enables LNG Croatia LLC to operate the terminal.</p>		

Capacity Increments Variant For Modelling

Variant : 1. - FSRU	1st phase - FSRU with annual send-out capacity of 1- 4 bcm/y (according to FSRU ship and pipeline availability)				
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Point	Operator	Year	From Gas System	To Gas System	Capacity
	LNG Hrvatska d.o.o.	2018	LNG_Tk_HR	HR	107.0 GWh/d

Comment: Short-term rented FSRU (min 3, max 5 years)

Croatia LNG

*Commissioning (COD) year - 2018
(Challenging pipeline availability)*

*Send-out - 1-4 bcm/y
(According to FSRU ship and pipeline availability)*

Capacity Increments Variant(s) For Information Only

Variant : 2. - Onshore LNG terminal	2nd phase - LNG onshore terminal with annual send-out capacity of 3.5 bcm/y				
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Point	Operator	Year	From Gas System	To Gas System	Capacity
Croatia LNG	LNG Hrvatska d.o.o.	2021	LNG_Tk_HR	HR	-13.0 GWh/d

*Comment: Minimum on-shore LNG terminal size based on the most appropriate capacity booked through the Open Season
1×150.000m³storagetank
Utilization of jetty used also for the FSRU terminal*

Croatia LNG

*COD - 2021-2023
(depending on duration of FSRU charter contract)*

Capacity Increments Variant(s) For Information Only
Variant : 4. - Onshore LNG terminal 4th phase - LNG onshore terminal with annual send-out capacity of 8.75 bcm/y

Point	Operator	Year	From Gas System	To Gas System	Capacity
	LNG Hrvatska d.o.o.	2024	LNG_Tk_HR	HR	100.0 GWh/d

Comment: If market demands, expand (with minimum investment in re-gasificators) the LNG terminal send-out

Croatia LNG

COD - 2024+

Capacity Increments Variant(s) For Information Only
Variant : 3. - Onshore LNG terminal 3rd phase - LNG onshore terminal with annual send-out capacity of 5 bcm/y

Point	Operator	Year	From Gas System	To Gas System	Capacity
	LNG Hrvatska d.o.o.	2023	LNG_Tk_HR	HR	40.0 GWh/d

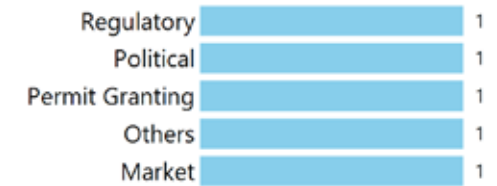
Comment: In case that the limited volume risk condition is reached, expansion

Croatia LNG

Introduction of the second tank to allow peak management

*COD - 2021/2023
(depending on duration of FSRU charter contract)*

Sponsors		General Information	
HEP d.d.	50%	Promoter	<i>LNG Hrvatska d.o.o. za poslovanje ukapljenim prirodnim plinom</i>
Plinacro d.o.o.	50%		
		Operator	<i>LNG Hrvatska d.o.o.</i>
		Host Country	<i>Croatia</i>
		Status	<i>Planned</i>
		Website	<u><i>Project's URL</i></u>
		Publication Approval Status	<i>Approved</i>



Barriers (Count)

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (Desetogodišnji plan razvoja plinskog...)</i>	Pre-Feasibility		<i>01/2013</i>	Considered TPA Regime	<i>Not Applicable</i>
NDP Number	<i>6.5.1.</i>	Feasibility		<i>07/2012</i>	Considered Tariff Regime	<i>Not Applicable</i>
		FEED		<i>06/2015</i>	Applied for Exemption	<i>No</i>
		Market Test		<i>10/2015</i>	Exemption Granted	<i>No</i>
Currently PCI	<i>Yes (6.5.1.)</i>	Permitting				
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning		<i>2018</i>		<i>2018</i>

Technical Information (LNG)

LNG Facility		<i>The import terminal for the liquefied natural gas (LNG) on the Island of Krk</i>
Expected Volume (bcm/y)	<i>4</i>	<i>1st stage - 1-4 bcm/y (According to FSRU ship and pipeline availability), 2nd stage - 3,5 bcm/y, 3rd stage - 5bcm/y, 4th stage - 8.75 bcm/y</i>
Storage Capacity (m3)	<i>300,000</i>	<i>1st stage depending on FSRU storage capacity availability, 2nd stage 1 x 150,000.00, 3rd stage 2 x 150,000.00, 4th stage 2 x 150,000.00</i>
Ship Size (m3)	<i>265,000</i>	<i>75,000.00 – 265,000.00 (Jetty construction and sea depth will enable Q Max LNG carriers to berth at the site. The size of the carriers that are going to berth alongside to the FSRU will depend on the storage and regasification capabilities of the FSRU)</i>

Reloading Ability Yes

PCI Details

PCI Benefits Project aims at fulfilling the infrastructure standard (N-1) rule at regional level in accordance with Article 6(3) of Regulation EU, Project aims at supplying directly or indirectly at least two Member States

General Criteria Fulfilled Yes

Specific Criteria Fulfilled Competition, Market Integration, Security of Supply, Sustainability

Specific Criteria Fulfilled Comments All specific criteria are fulfilled by this project

Time Schedule

Grant Obtention Date 20/11/2015

Delay Since Last TYNDP None

Delay Explanation In comparison with last TYNDP, there is no delay because the FSRU solution represents a fast track solution enabling the gas to flow from the Island of Krk from Q1/2018. This represents a one year acceleration of the project comparing to the last TYNDP.

Expected Gas Sourcing

Gas sourcing will be decided by LNG terminal capacity users, who will have the freedom to arrange gas supplies and gas origin

Comments about the Third-Party Access Regime

TPA regime will be defined after market survey procedure (in our case Open Season)

Benefits

Main Driver Regulation SoS

Main Driver Explanation Importance of LNG terminal in Croatia is in possibility of providing natural gas to multiple countries in the region. Countries included: Hungary, Slovenia, Austria, Italy, Germany, Czech Republic, Slovak Republic, former Yugoslav Republic of Macedonia, Albania, Kosovo, Serbia, Montenegro, Bosnia and Herzegovina, Ukraine, Romania, and Bulgaria. Gas supply in the region is heavily dependent on one supply source and therefore LNG terminal in Croatia represents a major diversification gas supply route in the region.

Benefit Description Project benefits include: providing diversity of supply of natural gas, providing security of supply of natural gas, introducing the ecologically sound energy source in the region, reducing CO₂emissions in the region, facilitating economic development, etc.

Barriers

Barrier Type	Description
Regulatory	National Regulatory Agency needs to approve missing regulatory framework for liquefied natural gas i.e. methodology for determination of tariff for receiving LNG and gas send-out. In order for the project to be implemented on time, when the CBA/CBCA request is submitted to the Croatian NRA all of the relevant NRA's (six identified countries) need to come to a fast decision.

Permit Granting	Permit granting process for the project has started in 10/2013 by requesting the EIA which was approved in 04/2014. Location permit was approved in 09/2015. Accordingly to the specific phase of the projects permits will be modified/ obtained.
Political	Project named LNG terminal on the Island of Krk was declared on Government of Republic of Croatia session from 16th of July 2015 a project of strategic importance for the Republic of Croatia. The Act on strategic investments enables this kind of projects to have the highest priority with faster and simplified procedure in obtaining necessary documents and permits for the project implementation.
Others	Potential barrier of enough pipeline capacity availability. The pipelines need to be build but FID has not yet been reached, which is a precondition for LNG terminal realization in forseen deadlines.
Market	Market Background Analysis was carried out and it indicated that the market has commercial potential. Open Season procedure will serve as an official confirmation of that analysis. The binding phase of Open Season has been carried out. Signing of the contract is expected to be upon NRA's approval of missing regulatory framework for liquefied natural gas i.e. methodology for determination of tariff for receiving LNG and gas send-out.

Intergovernmental Agreements

Agreement	Agreement Description	Is Signed	Agreement Signature Date
CESEC MoU	Memorandum of Understanding	Yes	10/07/2015

4 Greece

Revythoussa (2nd upgrade)

LNG-F-147	Project	LNG Terminal	FID
Update Date	04/07/2016		Advanced
Description	The projects consists of: - the upgrading of the send-out capacity from 1000 to 1400 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		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Agia Triada	DESFA S.A.	2017	LNG_Tk_GR	GR	80.4 GWh/d

Sponsors	General Information	Barriers (Count)
DESFA 100%	Promoter <i>DESFA S.A.</i> Operator <i>DESFA S.A.</i> Host Country <i>Greece</i> Status <i>Under Construction</i> Website <i>Project's URL</i> Publication Approval Status <i>Approved</i>	No Barriers Defined

NDP and PCI Information	Schedule	Start Date	End Date	Third-Party Access Regime
Part of NDP <i>Yes (Development Plan NNGS 2015-2024)</i>	Pre-Feasibility			Considered TPA Regime <i>Regulated</i>
NDP Number <i>2.2.1.5</i>	Feasibility			Considered Tariff Regime <i>Regulated</i>
	FEED			Applied for Exemption <i>No</i>
Currently PCI <i>No</i>	Market Test			Exemption Granted <i>Not Relevant</i>
	Permitting			
CBCA Decision <i>No</i>	Supply Contracts			Exemption in entry direction <i>0.00%</i>
Market Survey <i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction <i>0.00%</i>
	Construction		<i>12/2017</i>	
	Commissioning	<i>2017</i>	<i>2017</i>	

Technical Information (LNG)

LNG Facility	<i>Revythoussa LNG Terminal</i>	
Expected Volume (bcm/y)	2	
Storage Capacity (m3)	95,000	130,000 presently
Ship Size (m3)	120,000	140.000 presently
Reloading Ability	Yes	

Time Schedule

Grant Obtention Date	
Delay Since Last TYNDP	two quarters
Delay Explanation	Delays in the contract award procedure Delays due to the capital controls imposed in Greece in July 2015

Expected Gas Sourcing

LNG (DZ,WO)

Benefits

Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	The Revythoussa LNG Terminal plays a significant role regarding the Security of Supply of gas in Greece and the SE Europe region. The project will enhance this role along with its flexibility for serving more shippers. It will also increase the storage capacity of the terminal. The above benefits will also be felt by BG and RO through the reverse flow arrangements or new North-South interconnections

Metering and Regulating station at Nea Messimvria

TRA-N-941	Project	Pipeline including CS	Non-FID
Update Date	04/07/2016		Non-Advanced
Description	The project consists of the implementation of one Metering & Regulating station at Nea Messimvria for the interconnection of the Greek transmission system with TAP.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Nea Mesimvria	DESFA S.A.	2019	GR/TAP	GR	142.0 GWh/d

Sponsors	General Information	No Barriers Defined	Barriers (Count)
	Promoter	DESFA S.A.	
	Operator	DESFA S.A.	
	Host Country	Greece	
	Status	Planned	
	Website	Project's URL	
	Publication Approval Status	Approved	

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (Development Plan NNGS 2015-2024)	Pre-Feasibility			Considered TPA Regime	Regulated
NDP Number	2.2.1.3	Feasibility			Considered Tariff Regime	Regulated
		FEED	05/2016	03/2018	Applied for Exemption	Not Relevant
Currently PCI	Yes (7.1.6)	Market Test			Exemption Granted	Not Relevant
		Permitting				
CBCA Decision	No	Supply Contracts			Exemption in entry direction	0.00%
Market Survey	Not Relevant (no CBCA decision)	FID			Exemption in exit direction	0.00%
		Construction				
		Commissioning	2019	2019		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Nea-Messivria to TAP			1		
Total			1		

PCI Details	
PCI Benefits	Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply
Specific Criteria Fulfilled Comments	

Expected Gas Sourcing
Caspian Region, LNG ()

Benefits	
Main Driver	Regulation SoS
Main Driver Explanation	
Benefit Description	The project will enable the Greek gas transmission system to be supplied by an additional gas source and route.

Compressor Station Kipi

TRA-N-128	Project	Pipeline including CS	Non-FID
Update Date	04/07/2016		Non-Advanced
Description	The project consists of a Compressor Station on the GR side of the GR/TK border aiming at increasing the capacity of the Greek transmission system in order to make possible the transmission of natural gas to the Greek and European markets with the use of downstream transmission systems. Depending on the variant that will be implemented the configuration will be (1+1) x 4.5 MW or (1+1) x 9.7 MW or (2+1) x 9.7 MW.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Variant : 103.20 GWh/d		case where TAP will be, from the beginning, connected to TANAP at the GR/TR border, and IGB will be supplied by TAP therefore the C/S will supply gas to the DESFA system and the ones of neighbouring operators.			
Point	Operator	Year	From Gas System	To Gas System	Capacity
Kipi (TR) / Kipi (GR)	DESFA S.A.	2020	TRi	IB-GRk	54.4 GWh/d <i>Comment: 3 bcm/y</i>
Komotini (DESFA) Bottleneck	DESFA S.A.	2020	IB-GRk	GR	54.4 GWh/d <i>Comment: 3 bcm/y</i>

Capacity Increments Variant(s) For Information Only

Variant : 206.40 GWh/d		case where TAP will be, from the beginning, connected to TANAP at the GR/TR border, and IGB will be supplied by the DESFA network therefore the C/S will supply gas to the DESFA system and the ones of neighbouring operators through IGB.			
Point	Operator	Year	From Gas System	To Gas System	Capacity
Kipi (TR) / Kipi (GR)	DESFA S.A.	2020	TRi	IB-GRk	157.8 GWh/d <i>Comment: 6 bcm/y</i>

Sponsors		General Information	
DESFA S.A.	100%	Promoter	DESFA S.A.
		Operator	DESFA S.A.
		Host Country	Greece
		Status	Planned
		Website	Project's URL
		Publication Approval Status	Approved

No Barriers Defined

Barriers (Count)

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime
Part of NDP	Yes (Development Plan NNGS 2015-2024)	Pre-Feasibility			Considered TPA Regime <i>Regulated</i>
NDP Number	2.2.1.3	Feasibility			Considered Tariff Regime <i>Regulated</i>
		FEED			Applied for Exemption <i>No</i>
Currently PCI	Yes (6.9.3 and 7.4.1)	Market Test			Exemption Granted <i>Not Relevant</i>
		Permitting			
CBCA Decision	No	Supply Contracts			Exemption in entry direction <i>0.00%</i>
Market Survey	Not Relevant (no CBCA decision)	FID			Exemption in exit direction <i>0.00%</i>
		Construction			
		Commissioning	2020	2020	

Pipelines and Compressor Stations					
103.20 GWh/d		case where TAP will be, from the beginning, connected to TANAP at the GR/TR border, and IGB will be supplied by TAP therefore the C/S will supply gas to the DESFA system and the ones of neighbouring operators.			
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Kipi		0	0	9	
Total			0	9	

Pipelines and Compressor Stations - Alternative Variant

206.40 GWh/d

case where TAP will be, from the beginning, connected to TANAP at the GR/TR border, and IGB will be supplied by the DESFA network therefore the C/S will supply gas to the DESFA system and the ones of neighbouring operators through IGB.

Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)
Kipi		0	0	18
Total			0	18

PCI Details

PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Time Schedule

Grant Obtention Date	
Delay Since Last TYNDP	0
Delay Explanation	

Expected Gas Sourcing

Caspian Region, Russia, LNG (), Other Central Asian, Middle Eastern and East-Mediterranean sources

Benefits

Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	

Greek part of Tesla project

TRA-N-631	Project	Pipeline including CS	Non-FID
Update Date	04/07/2016		Non-Advanced
Description	The project consists in the construction of a pipeline and three compressor stations, within the territory of Greece, from the GR/TK border to the GR/MK border. The project is part of a greater project (TESLA project) aiming at transporting natural gas from the GR/TK border to Central Europe, via Greece, FYROM, Serbia, Hungary and Austria, as well as Italy.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
TESLA / GR Offtake	DESFA S.A.	2020	GR/TLA	GR	318.0 GWh/d
TESLA / GR>FYROM	DESFA S.A.	2020	GR/TLA	MK/TLA	909.0 GWh/d
TESLA / TR>GR	DESFA S.A.	2020	TRr	GR/TLA	1,227.0 GWh/d

Sponsors	General Information	Barriers (Count)
DESFA S.A. 100%	Promoter <i>DESFA S.A.</i> Operator <i>DESFA S.A.</i> Host Country <i>Greece</i> Status <i>Planned</i> Website Publication Approval Status <i>Approved</i>	Political 1

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>No (The project is still on the maturing phase and will be included in the NDP in a later stage.)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
		Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
		Market Test			Exemption Granted	<i>Not Relevant</i>
		Permitting				
NDP Number	<i>Greek TS to TAP.)</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
		FID			Exemption in exit direction	<i>0.00%</i>
Currently PCI	<i>Yes (6.25.2)</i>	Construction				
		Commissioning	<i>2020</i>	<i>2020</i>		
CBCA Decision						<i>No</i>
Market Survey						<i>Not Relevant (no CBCA decision)</i>

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Greek section		1,400	370	280	
Total			370	280	

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	MI. The project will provide access to natural gas to countries/ regions without adequate access to it SoS. The project will provide a diversified supply route Sustainability. The project will increase gas penetration in countries/regions where it will replace less environment friendly energy sources

Time Schedule
Grant Obtention Date



Current TYNDP : TYNDP 2017 - Annex A

Delay Since Last TYNDP 1 year

Delay Explanation Uncertainties on geopolitical issues in SE Europe

Expected Gas Sourcing

Russia, Middle East, Central Asia

Comments about the Third-Party Access Regime

TPA status and tariff regime will be examined at the next stage.

Benefits

Main Driver Market Demand

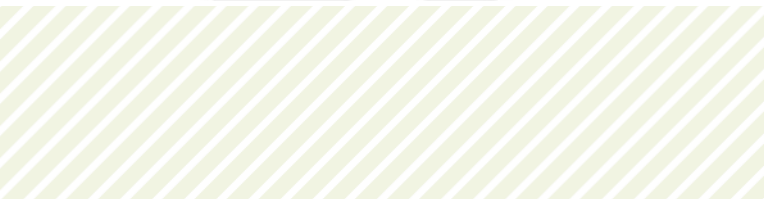
Main Driver Explanation The project investment decision will be taken based on commercial commitments.

Benefit Description

Barriers

Barrier Type Description

Political Uncertainty on the implementation of upstream infrastructure due to geopolitical issues in the Region.



Metering and Regulating station at Komotini

TRA-N-940	Project	Pipeline including CS	Non-FID
Update Date	04/07/2016		Non-Advanced
Description	The project consists of the implementation of one Metering & Regulating station at Komotini for the potential interconnection of the Greek transmission system with transit projects developed in the area.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Komotini (DESFA) - GR / TAP	DESFA S.A.	2020	GR/TAP	IB-GRk	0.0 GWh/d

Sponsors	General Information	No Barriers Defined	Barriers (Count)
	Promoter	DESFA S.A.	
	Operator	DESFA S.A.	
	Host Country	Greece	
	Status	Planned	
	Website	Project's URL	
	Publication Approval Status	Approved	

NDP and PCI Information	Schedule	Start Date	End Date	Third-Party Access Regime
Part of NDP	Yes (Development Plan NNGS 2015-2024)	Pre-Feasibility		Considered TPA Regime
NDP Number	2.2.1.3	Feasibility		Considered Tariff Regime
		FEED		Applied for Exemption
Currently PCI	Yes (7.1.6)	Market Test		Exemption Granted
		Permitting		
CBCA Decision	No	Supply Contracts		Exemption in entry direction
Market Survey	Not Relevant (no CBCA decision)	FID		Exemption in exit direction
		Construction		
		Commissioning	2020	2020



PCI Details

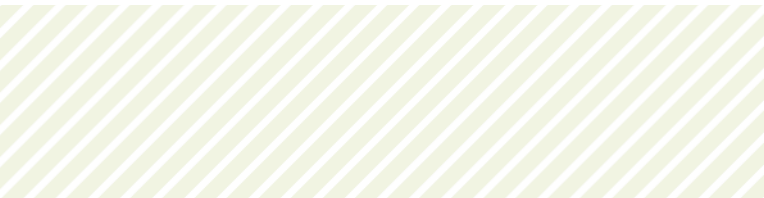
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply
Specific Criteria Fulfilled Comments	

Expected Gas Sourcing

Caspian Region

Benefits

Main Driver	Regulation SoS
Main Driver Explanation	
Benefit Description	The project will enable the Greek gas transmission system to be supplied by an additional gas source and route.



Metering Station at Komotini to IGB

TRA-N-957	Project	Pipeline including CS	Non-FID
Update Date	05/07/2016		Non-Advanced
Description	The project consists of a Metering station that will enable the Gas Transmission System of Greece to supply gas into the IGB pipeline.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Komotini (DESFA) - GR / IGB	DESFA S.A.	2020	IB-GRk	BG/IGB	206.4 GWh/d

Sponsors	General Information	No Barriers Defined	Barriers (Count)
	Promoter	DESFA S.A.	
	Operator	DESFA S.A.	
	Host Country	Greece	
	Status	Planned	
	Website		
	Publication Approval Status	Approved	

NDP and PCI Information	Schedule	Start Date	End Date	Third-Party Access Regime
Part of NDP	Pre-Feasibility			Considered TPA Regime
	Feasibility			Considered Tariff Regime
	FEED			Applied for Exemption
NDP Number	Market Test			Exemption Granted
	Permitting			
Currently PCI	Supply Contracts			Exemption in entry direction
	FID			Exemption in exit direction
CBCA Decision	Construction			0.00%
Market Survey	Commissioning	2020	2020	0.00%
<i>Not Relevant (no CBCA decision)</i>				

PCI Details

PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply
Specific Criteria Fulfilled Comments	

Expected Gas Sourcing

Caspian Region, LNG (DZ,WO)

Benefits

Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	

Nea-Messimvria to FYROM pipeline

TRA-N-967	Project	Pipeline including CS	Non-FID
Update Date	04/07/2016		Non-Advanced
Description	The project consists of a pipeline from Nea-Messimvria to the GR/MK border allowing the supply of FYROM by the Greek Gas Transmission System		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Stojakovo village (MK) / Pontoiraklia (GR)	DESFA S.A.	2020	GR	MK	76.5 GWh/d

Sponsors		General Information		Market	Barriers (Count)	
DESFA S.A.	100%	Promoter	DESFA S.A.			1
		Operator	DESFA S.A.			
		Host Country	Greece			
		Status	Planned			
		Website				
		Publication Approval Status	Approved			

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>No (The Project is included in the 10-year Development Study. The D. S. includes projects which are likely to be implemented but are not yet part of the compulsory Projects.)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
		Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>Yes</i>
		Market Test			Exemption Granted	<i>Yes</i>
NDP Number		Permitting				
Currently PCI	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
		FID			Exemption in exit direction	<i>0.00%</i>
CBCA Decision	<i>No</i>	Construction				
Market Survey	<i>Not Relevant (no CBCA decision)</i>					
		Commissioning	<i>2020</i>	<i>2020</i>		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Nea-Messimvria to Pontoiraklia/Stojakovo		700	50		
Total			50		

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply
Specific Criteria Fulfilled Comments	

Expected Gas Sourcing
Caspian Region, LNG (DZ,WO)

Benefits	
Main Driver	Market Demand
Main Driver Explanation	



Benefit Description

Barriers	
Barrier Type	Description
Market	Lack of market maturity



Metering and Regulating Station at Alexandroupoli

TRA-N-1090	Project	Pipeline including CS	Non-FID
Update Date	04/07/2016		Non-Advanced
Description	The project consists of the implementation of one Metering and Regulating Station at Alexandroupoli (Amphitriti) for the potential intrconnection of the Greek transmission system with the LNG terminal in Northern Greece.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Alexandroupolis Amphitriti	DESFA S.A.	2020	GRa	IB-GRk	268.0 GWh/d

Sponsors	General Information		Barriers (Count)	
DESFA S.A. 100%	Promoter	DESFA S.A.		Market 1
	Operator	DESFA S.A.		
	Host Country	Greece		
	Status	Planned		
	Website			
	Publication Approval Status	Approved		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>No (This project is not included in the National Development Plan because no application has been made, by the promoter of the LNG terminal in Northern Greece, for the connection of this project to the Greek gas transmission system.)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
		Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>Not Relevant</i>
		Market Test			Exemption Granted	<i>Not Relevant</i>
		Permitting				
NDP Number		Supply Contracts			Exemption in entry direction	100.00%
Currently PCI	<i>No</i>	FID			Exemption in exit direction	0.00%
		Construction				
CBCA Decision	<i>No</i>	Commissioning	2020	2020		
Market Survey	<i>Not Relevant (no CBCA decision)</i>					

PCI Details

PCI Benefits	
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply
Specific Criteria Fulfilled Comments	

Benefits

Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	

Barriers

Barrier Type	Description
Market	Lack of market maturity

Compressor station at Nea Messimvria

TRA-N-971	Project	Pipeline including CS	Non-FID
Update Date	04/07/2016		Non-Advanced
Description	The project consists of the implementation of a 27 MW compressor station in order to enable flow from the Greek transmission system to TAP. This project is the second phase of development of project "TRA-N-941-Metering and Regulating station at Nea Messimvria" .		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Nea Mesimvria	DESFA S.A.	2022	GR	GR/TAP	142.0 GWh/d

Sponsors	General Information	No Barriers Defined	Barriers (Count)
	Promoter	DESFA S.A.	
	Operator	DESFA S.A.	
	Host Country	Greece	
	Status	Planned	
	Website		
	Publication Approval Status	Approved	

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>No (The Compressor station is included in the 10-year Development Study. The D. S. includes projects which are likely to be implemented but are not yet part of the compulsory Projects or projects that require the commercial binding agreements by users of the infrastructure.)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
		Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>Not Relevant</i>
		Market Test			Exemption Granted	<i>Not Relevant</i>
		Permitting				
NDP Number		Supply Contracts			Exemption in entry direction	<i>0.00%</i>
		FID			Exemption in exit direction	<i>0.00%</i>
Currently PCI	<i>No</i>	Construction				
		Commissioning	<i>2022</i>	<i>2022</i>		
CBCA Decision	<i>No</i>					
Market Survey	<i>Not Relevant (no CBCA decision)</i>					

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Nea Messimvria to TAP				27	
Total				27	

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply
Specific Criteria Fulfilled Comments	

Expected Gas Sourcing
Caspian Region, Russia, LNG ()

Benefits
Main Driver: Market Demand



Main Driver Explanation

Benefit Description

The project will enable TAP to acquire increased flexibility since gas quantities that might be delivered by TAP to intermediate destinations will be compensated by quantities delivered by DESFA to TAP.



Metering and Regulating station at Megalopoli

TRA-N-1091	Project	Pipeline including CS	Non-FID
Update Date	04/07/2016		Non-Advanced
Description	The project consists of the implementation of one Metering & Regulating station at Megalopoli, in the Peloponnese, for the potential interconnection of the Greek gas transmission system with the East-Med pipeline.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
East Med / Peloponnesus (GR)	DESFA S.A.	2022	GR/EMD	GR	90.0 GWh/d

Sponsors		General Information		Market	Barriers (Count)	
DESFA S.A.	100%	Promoter	DESFA S.A.			1
		Operator	DESFA S.A.			
		Host Country	Greece			
		Status	Planned			
		Website				
		Publication Approval Status	Approved			

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>No (This project is not included in the National Development Plan because no application has been made, by the promoter of the East-Med pipeline, for the connection of this project to the Greek gas transmission system.)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
		Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>Not Relevant</i>
		Market Test			Exemption Granted	<i>Not Relevant</i>
NDP Number				Exemption in entry direction	<i>0.00%</i>	
Currently PCI	<i>No</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
CBCA Decision	<i>No</i>	Commissioning	<i>2022</i>	<i>2022</i>		
Market Survey	<i>Not Relevant (no CBCA decision)</i>					

PCI Details

PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply
Specific Criteria Fulfilled Comments	

Expected Gas Sourcing

Cyprus, Israel

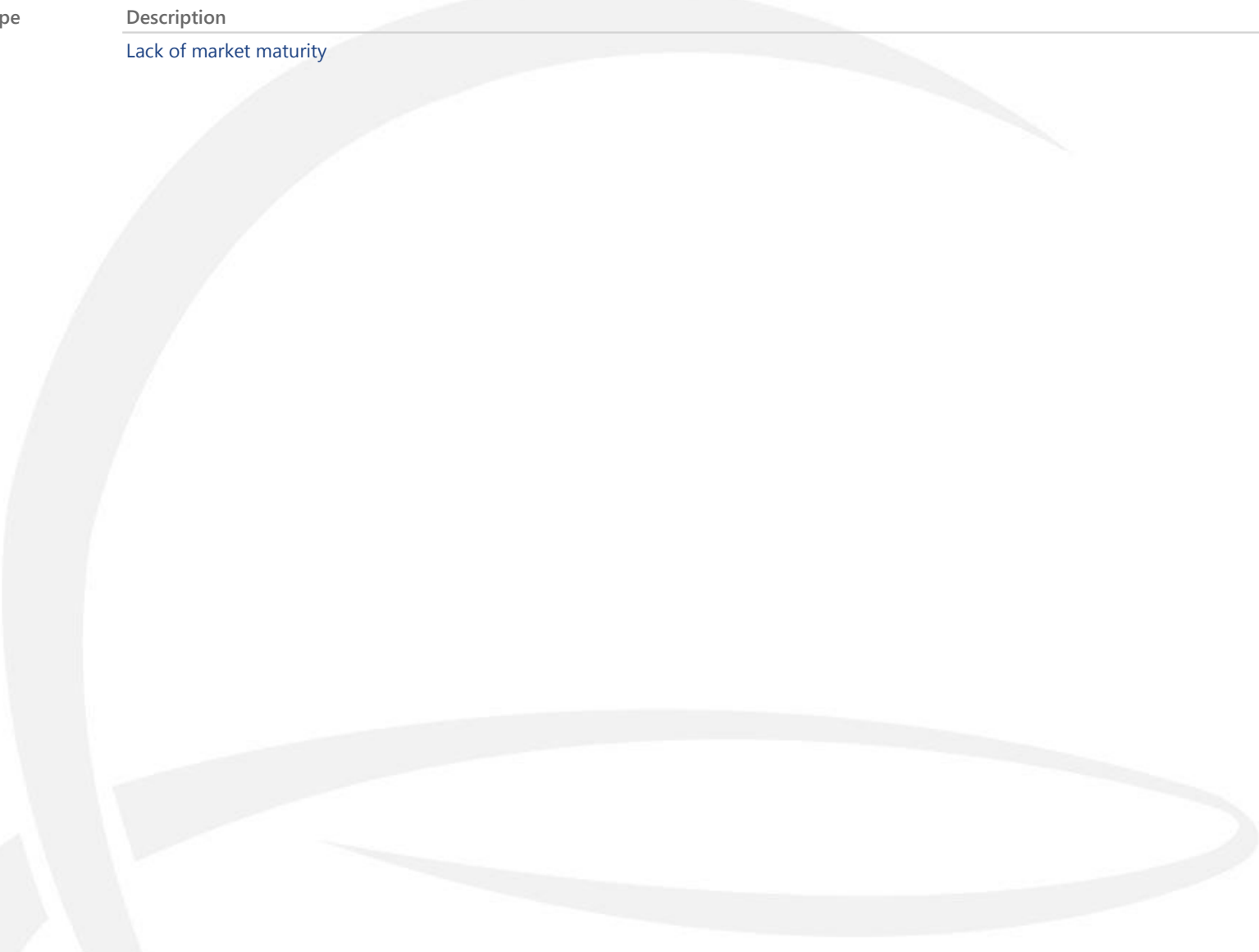
Benefits

Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	



Barriers

Barrier Type	Description
Market	Lack of market maturity



Komotini-Thesprotia pipeline

TRA-N-014	Project	Pipeline including CS	Non-FID
Update Date	04/07/2016		Non-Advanced
Description	High pressure pipeline from Komotini to Thesprotia area near Ionian coast along with 2 compressor stations and 1 operation & maintenance centre.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Poseidon Greek Entry	DESFA S.A.	2023	IB-GRk	GR/IGI	275.4 GWh/d
	DESFA S.A.	2023	GR/IGI	IB-GRk	80.0 GWh/d

Sponsors

DESFA S.A.	100%
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General Information

Promoter	DESFA S.A.
Operator	DESFA S.A.
Host Country	Greece
Status	Planned
Website	Project's URL
Publication Approval Status	Approved



NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (Development Plan NNGS 2015-2024)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number	<i>2.2.1.4</i>	Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
Currently PCI	<i>Yes (7.1.7)</i>	Market Test			Exemption Granted	<i>Not Relevant</i>
		Permitting				
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning	<i>2023</i>	<i>2023</i>		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Komotini-Thesprotia	total length of new pipes	1,067	613	58	
Total			613	58	

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Time Schedule	
Grant Obtention Date	
Delay Since Last TYNDP	1 year
Delay Explanation	Lack of interest from the market

Expected Gas Sourcing
Caspian Region, Russia, Other Central Asian, Middle Eastern and East-Mediterranean sources.

Benefits

Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	The project, together with Greece-Italy interconnector offshore project (sponsored by 3rd parties) will establish one more energy corridor between Asian, Middle Eastern and Eastern Mediterranean gas sources and European consumers. The project aims at enhancing the diversification of supply routes at a European level and possibly, depending on the source of gas to be transmitted, the diversification of supply sources thus contributing to the improvement of the Security of Supply level in the region of South Eastern Europe.

Barriers

Barrier Type	Description
Market	Lack of market support

Intergovernmental Agreements

Agreement	Agreement Description	Is Signed	Agreement Signature Date
Intergovernmental Agreement between Greece and Italy for the implementation of the Interconnection Greece Italy.	The Agreement was ratified by the Greek Parliament in 2006 (Law 3441/Government Gazette A' 39/27.02.2006).	Yes	04/11/2005

Metering and Regulating Station at UGS South Kavala

TRA-N-1092	Project	Pipeline including CS	Non-FID
Update Date	04/07/2016		Non-Advanced
Description	The project consists of the implementation of one Metering and Regulating Station at Kavala for the potential intrconnection of the Greek transmission system with the UGS in South Kavala.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
UGS South Kavala (GR)	DESFA S.A.	2023	STcGR	IB-GRk	44.0 GWh/d
	DESFA S.A.	2023	IB-GRk	STcGR	55.0 GWh/d

Sponsors	General Information		Barriers (Count)
DESFA S.A. 100%	Promoter	DESFA S.A.	
	Operator	DESFA S.A.	
	Host Country	Greece	
	Status	Planned	
	Website		
	Publication Approval Status	Approved	

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>No (This project is not included in the National Development Plan because no application has been made, by the promoter of the UGS in South Kavala, for the connection of this project to the Greek gas transmission system.)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
		Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>Yes</i>
		Market Test			Exemption Granted	<i>Yes</i>
		Permitting				
NDP Number		Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Currently PCI	<i>No</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
CBCA Decision	<i>No</i>	Commissioning	<i>2023</i>	<i>2023</i>		
Market Survey	<i>Not Relevant (no CBCA decision)</i>					

Benefits

Main Driver	<u>Market Demand</u>
Main Driver Explanation	
Benefit Description	

Barriers

Barrier Type	<u>Description</u>
Market	<u>Lack of market maturity</u>

Trans Adriatic Pipeline

TRA-F-051	Project	Pipeline including CS	FID
Update Date	24/05/2016		Advanced
Description	<p>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. TAP's capacity can be expanded up to a total of 20 bcm/a, subject to binding market demand. The Expansion Capacity will be offered to the market via market tests, from no later than start of operations and subsequently every two years.</p>		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Gostivar (MK) / TAP	Trans-Adriatic Pipeline AG	2019	GR/TAP	MK	25.0 GWh/d
	<p><i>Comment: Point not in TAP's initial design.</i></p> <p><i>GCV used for capacity calculations: 11.071 kWh/Sm3.</i></p> <p><i>Incremental capacity available for allocation is subject to a check of the system's capabilities and dependent on the capacity bookings in place.</i></p>				
Ionic-Adriatic Pipeline - IAP Entry	Trans-Adriatic Pipeline AG	2019	GR/TAP	IB-HRi/IAP	150.0 GWh/d
	<p><i>Comment: Point not in TAP's initial design.</i></p> <p><i>GCV used for capacity calculations: 11.071 kWh/Sm3.</i></p> <p><i>Incremental capacity available for allocation is subject to a check of the system's capabilities and dependent on the capacity bookings in place.</i></p>				
Kipi (TR) / Kipi (TAP)	Trans-Adriatic Pipeline AG	2019	TR/TNP	GR/TAP	350.0 GWh/d
<p><i>Comment: GCV used for capacity calculations: 11.071 kWh/Sm3.</i></p>					
Komotini - TAP / IGB	Trans-Adriatic Pipeline AG	2019	GR/TAP	BG/IGB	142.0 GWh/d
<p><i>Comment: GCV used for capacity calculations: 11.071 kWh/Sm3.</i></p>					
Melendugno - IT / TAP	Trans-Adriatic Pipeline AG	2019	GR/TAP	IB-ITs	334.0 GWh/d

Melendugno - IT / TAP

Comment: GCV used for capacity calculations: 11.071 kWh/Sm3.

Trans-Adriatic Pipeline AG	2019	GR	GR/TAP	142.0 GWh/d
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Comment: GCV used for capacity calculations: 11.071 kWh/Sm3.

Incremental capacity available for allocation is subject to a check of the system's capabilities and dependent on the capacity bookings in place.

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Trans-Adriatic Pipeline AG	2019	GR/TAP	GR	142.0 GWh/d
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Comment: GCV used for capacity calculations: 11.071 kWh/Sm3.

Incremental capacity available for allocation is subject to a check of the system's capabilities and dependent on the capacity bookings in place.

Sponsors		General Information		No Barriers Defined	Barriers (Count)
BP	20%	Promoter	Trans Adriatic Pipeline AG		
Snam	20%	Operator	Trans-Adriatic Pipeline AG		
SOCAR	20%	Host Country	Greece		
Fluxys	19%	Status	Planned		
Enagas	16%	Website	Project's URL		
Axpo	5%	Publication Approval Status	Approved		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>No (The TAP project is being developed on a stand-alone basis, independent from the national transmission systems of Greece, Albania and Italy.)</i>	Pre-Feasibility			Considered TPA Regime	<i>Negotiated</i>
		Feasibility			Considered Tariff Regime	<i>Negotiated</i>
		FEED	01/2008	03/2013	Applied for Exemption	Yes
NDP Number		Market Test		11/2014	Exemption Granted	Yes
		Permitting	09/2011	03/2017		
Currently PCI	Yes (7.1.3)	Supply Contracts		09/2013	Exemption in entry direction	100.00%
		FID		12/2013	Exemption in exit direction	100.00%
CBCA Decision	No	Construction	05/2016	12/2019		
Market Survey	<i>Not Relevant (no CBCA decision)</i>	Commissioning	2019	2019		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Main onshore section	48" onshore section Greece and Albania	1,200	773	90	
Offshore section	36" offshore section and short onshore section Italy	900	105	90	
Total			878	180	

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply
Specific Criteria Fulfilled Comments	

Expected Gas Sourcing

Caspian Region

Comments about the Third-Party Access Regime

Initial Capacity exempted from third party access. Expansion Capacity is subject to third party access and will be offered to the market via market tests, fromm no later than start of operations and subsequently every two years.

Benefits	
Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	TAP will contribute to the security and diversity of Europe's energy supply by connecting to existing gas networks and will allow gas to flow directly from the Caspian basin into European markets. TAP will be providing the necessary infrastructure to transport gas from the Shah Deniz field in Azerbaijan by the most direct route to Southern Europe.

Intergovernmental Agreements			
Agreement	Agreement Description	Is Signed	Agreement Signature Date
Host-government agreement between TAP and Albania	The HGA is designed to fill legal, regulatory and fiscal caviats to mitigate commercial risks and thereby provide the necessary investor protection to ensure that the project is built and enable construction and operation in accordance with high standards	Yes	05/04/2013
Host-government agreement between TAP and Greece	The HGA is designed to fill legal, regulatory and fiscal caviats to mitigate commercial risks and thereby provide the necessary investor protection to ensure that the project is built and enable construction and operation in accordance with high standards	Yes	26/06/2013
Inter-governmental Agreements (only applicable for import pipeline projects)	An IGA between Italy, Greece and Albania has formalized the state parties' support for the TAP project, ensure cross-country harmonization of standards in order to facilitate the implementation of TAP and provide the necessary investor protection measure	Yes	13/02/2013
Inter-ministerial agreement between Italy, Albania and Greece	An inter-ministerial agreement between Italy, Albania and Greece is required under Italian law to commence the TPA exemption application process in Italy.	Yes	27/09/2012

LNG terminal in northern Greece / Alexandroupolis - LNG Section

LNG-N-062	Project	LNG Terminal	Non-FID
Update Date	20/05/2016		Advanced
Description	Please note that this part refers only to LNG section of the Project, i.e. the floating terminal and its Mooring system. The Pipeline section of the Project is addressed in TRA-N-063. The project consists of an LNG offshore Floating Storage Regasification Unit, a Mooring & a Pipeline system (24km Subsea and 4km Onshore), connecting the floating unit to the Greek National Natural Gas System at the area of Amfritriti, 5.5km NE of Alexandroupolis where, DESFA, the NNGS TSO, will build a metering & regulating station. The floating unit, will be stationed in the sea of Thrace, 17.6km SW of Alexandroupolis in NE Greece, at an offshore distance of 5.4 n.m. from the nearest shore. It will have up to 170.000m3 LNG storage capacity and a gas send out capacity of 700.000 Nm3/h corresponding to 6.1bcm/y.		
Regulatory Decisions and similar material conditions	No TPA exemption requested NRA only gave opinion on the Independent Natural Gas System License issued by the Ministry of Energy & Environment on 19.08.2011 (opin. number: 29/2011)		

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Alexandroupolis LNG	Gastrade S.A.	2018	LNG_Tk_GR	GRa	187.5 GWh/d
<i>Comment: Increment available 100% at operation start-up.</i>					
Alexandroupolis Amphitriti	Gastrade S.A.	2018	GRa	IB-GRk	268.0 GWh/d
<i>Comment: Increment available 100% at operation start-up.</i>					

Sponsors		General Information		Barriers (Count)	
LNG-N-062		Promoter	Gastrade S.A.		Market 2
GASTRADE S.A.	100%	Operator	Gastrade S.A.		Financing 2
TRA-N-063		Host Country	Greece		Regulatory 1
GASTRADE S.A.	100%	Status	Planned		Political 1
		Website	Project's URL	Permit Granting 1	
		Publication Approval Status	Approved	Others 1	

Enabled Projects

Project Code	Project Name
TRA-N-063	LNG terminal in northern Greece / Alexandroupolis - Pipeline Section

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>No (The Project is not included in the NDP because it is an Independent Natural Gas System and therefore the NTSO is not obliged to include it in the NDP because it is not the Project's promoter and/or operator.)</i>	Pre-Feasibility		12/2010	Considered TPA Regime	<i>Regulated</i>
		Feasibility	01/2014	06/2014	Considered Tariff Regime	<i>Regulated</i>
		FEED	05/2016	12/2016	Applied for Exemption	<i>No</i>
		Market Test		03/2017	Exemption Granted	<i>Not Relevant</i>
NDP Number		Permitting	12/2010	01/2015		
		Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Currently PCI	<i>Yes (6.9.1)</i>	FID		12/2016	Exemption in exit direction	<i>0.00%</i>
		Construction	04/2017	06/2018		
CBCA Decision		Commissioning	2018	2018		
Market Survey	<i>No</i>					
	<i>Not Relevant (no CBCA decision)</i>					

Technical Information (LNG)

LNG Facility	<i>LNG terminal in northern Greece / Alexandroupolis</i>	
Expected Volume (bcm/y)	<i>6</i>	<i>New regaseification technical capacity increment will be available from start of operations.</i>
Storage Capacity (m3)	<i>170,000</i>	<i>4 storage tanks</i>
Ship Size (m3)	<i>170,000</i>	<i>DWT 85,000 MT, LOA 300-310 m., Breadth 46 m., Draft 12m.</i>
Reloading Ability	<i>Yes</i>	

PCI Details

PCI Benefits	Project aims at fulfilling the infrastructure standard (N-1) rule at regional level in accordance with Article 6(3) of Regulation EU, Project aims at supplying directly or indirectly at least two Member States	
General Criteria Fulfilled	Yes	
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability	
Specific Criteria Fulfilled Comments	Market Integration - Regional (SEE + Serbia + FYROM) and beyond (e.g. Hungary and through across the NSI gas corridor) Security of Supply through inter alia source and route diversification- Greece, Bulgaria, Serbia, FYROM, Hungary, Ukraine, Turkey Enhances competition in the region by introducing new sources and routes of supply Sustainability - Supports back up to renewables and power to gas	

Time Schedule

Grant Obtention Date	16/04/2015
Delay Since Last TYNDP	12 months in commissining date / same delay in FID
Delay Explanation	Delays in permitting phase: competent authorities delayed in issuing the required licenses. In the case of Access to shore, seabed & sea area, there was a delay of 9 months in order to decide how the existing legislation would apply specifically to the Project. In the case of issuance of the Installation Act & Installation license, the main delay was due to the requirement for the introduction of a legislative change necessary to grant the RoW for the onshore pipeline. Other reasons: complex economic & political situation in Greece, in particular, in the 2H2015 (e.g. capital controls). Also, GASTRADE entered into discussions with Public Gas Corporation of Greece (DEPA) for the participation of the later in the Project. (The EC was duly informed on this since 06/2015). However, the finalization of DEPA's participation in the Project was delayed due to political developments in Greece and administrative changes with DEPA. This caused delay in execution of FEED & reaching FID.

Expected Gas Sourcing

LNG (), Multi-sourced supply including new sources (e.g. U.S., Mozambique)

Comments about the Third-Party Access Regime

It is not planned to run a formal Market Test as the Project has not applied for a TPA Exemption and Project's commercial viability will be determined by the success of the negotiations with potential gas offtakers and/or interested LNG suppliers who have interest in using the infrastructure.

Benefits

Main Driver	Market Demand
Main Driver Explanation	Main drivers: 1. Expressed requirement for diversification of supply sources and routes for SEE markets (Bulgaria, Serbia, FYROM, Romania,Hungary) creates market / demand opportunities for the project 2. Regional demand growth
Benefit Description	LNG terminal in northern Greece will: Secure new natural gas quantities for the supply of the Greek and the SE European markets, hence enhancing the security of supply of these markets. Diversify the supply sources and routes in particular with regards to markets with limited supply options (Bulgaria, Serbia, Romania, FYROM, Hungary, Ukraine) and to this extent lift existing isolation with an aim to reduce dependency on Russian gas while provide access for new gas findings in the East Med basin to the markets of SEE. Support the South Corridor project(s) by providing alternative/additional supply quantities when/if required and the interoperability of systems and the creation of a regional gas trading hub. The Project technical design will include provision for LNG-reloading ability for the purpose of supporting LNG bunkering activities or regional distribution of LNG to remote island locations for power generation and other industrial and commercial activities.

Barriers

Barrier Type	Description
Regulatory	If tariff levels for the Project do not enjoy the same regulatory regime as the one applied for other competitive regulated infrastructures in the area, then the Project will become commercially unattractive to potential regional offtakers and therefore financially not viable.
Permit Granting	See above. Delays in Permit granting have led to delays in Project implementation.



Political	No political barriers. On the contrary, there is clear and declared Political support for the Project from the impacted Member States and in particular from the governments of Greece and Bulgaria. Political stability in the region of the Project's direct influence will support commercial viability of the Project.
Others	Delays in the implementation/start up of new regional interconnection infrastructures (IGB, IBS) and upgrade of existing ones including reverse flow availability. The most critical one is the Interconnector Greece-Bulgaria (IGB). Also, availability of capacity in the greek, bulgarian and romanian Transmission Systems and reverse flow capacity in Trans Balkan will enable flows from the terminal to Ukraine. Finally, reverse flow functionality to the Turkey-Greece Interconnector will open up the Turkish market to the Project. Regarding Financing: The project received grants for studies (from the 1st CEF Energy Call-August 2014) and will apply for grants for works in a future Call from CEF. Award of such Public financing will be critical for the Project's commercial viability. Also access to EIB, EBRD, EFSI, IFC PCI favourable financing tools is very important for the Project.
Market	The markets in SEE are not mature. Currently all gas transactions are done on a bilateral basis and no price transparency exists. Creation of a trading hub in the region with multiple supply options will generate significant opportunities for the marketing of gas imported through the LNG Alexandroupolis floating terminal.
Financing	The Project has been awarded with grants for studies (CEF 2014 Call) and will apply for grants for works (in the next Calls) from the CEF. Award of such Public financing will be critical for the Project's commercial viability. Also access to EIB, EBRD, EFSI, IFC PCI favourable financing tools is very important for the Project.
Market	Lack of market maturity
Financing	Availability of funds and associated conditions



LNG terminal in northern Greece / Alexandroupolis - Pipeline Section

TRA-N-063	Project	Pipeline including CS	Non-FID
Update Date	20/05/2016		Advanced
Description	Please note that this part refers only to the pipeline section of the Project. The LNG section of the Project is addressed in LNG-N-062. The project consists of an LNG offshore Floating Storage Regasification Unit, a Mooring & a Pipeline system (24km Subsea and 4km Onshore), connecting the floating unit to the Greek National Natural Gas System at the area of Amfitriti, 5.5km NE of Alexandroupolis where, DESFA, the NNGS TSO, will build a metering & regulating station. The regasified LNG will be transmissioned from the floating unit to the 30" subsea and onshore pipeline through a Pipeline End Manifold. A valve station will be established to the shore-crossing point of the pipeline. The maximum capacity of the pipeline is 6.1 bcm/y.		
Regulatory Decisions and similar material conditions	No TPA exemption requested NRA only gave opinion on the Independent Natural Gas System License issued by the Ministry of Energy & Environment on 19.08.2011 (opin. number 29/2011)		

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Alexandroupolis LNG	Gastrade S.A.	2018	LNG_Tk_GR	GRa	187.5 GWh/d
<i>Comment: Increment not assessed by ENTSOG: Submitted in the linked Pipelines project</i>					
Alexandroupolis Amphitriti	Gastrade S.A.	2018	GRa	IB-GRk	268.0 GWh/d
<i>Comment: Increment not assessed by ENTSOG: Submitted in the linked LNG project</i>					

Sponsors		General Information		Barriers (Count)	
LNG-N-062		Promoter	Gastrade S.A.		Market 2
GASTRADE S.A.	100%	Operator	Gastrade S.A.		Financing 2
TRA-N-063		Host Country	Greece		Regulatory 1
GASTRADE S.A.	100%	Status	Planned		Political 1
		Website	Project's URL	Permit Granting 1	
		Publication Approval Status	Approved	Others 1	

Enabled Projects

Project Code	Project Name
LNG-N-062	LNG terminal in northern Greece / Alexandroupolis - LNG Section

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>No (The Project is not included in the NDP because it is an Independent Natural Gas System and therefore the NTSO is not obliged to include it in the NDP because it is not the Project's promoter and/or operator.)</i>	Pre-Feasibility		12/2010	Considered TPA Regime	<i>Regulated</i>
		Feasibility	01/2014	06/2014	Considered Tariff Regime	<i>Regulated</i>
		FEED	05/2016	12/2016	Applied for Exemption	<i>No</i>
		Market Test		03/2017	Exemption Granted	<i>Not Relevant</i>
NDP Number		Permitting	12/2010	01/2015		
Currently PCI	Yes (6.9.1)	Supply Contracts			Exemption in entry direction	0.00%
		FID		12/2016	Exemption in exit direction	0.00%
CBCA Decision	No	Construction	04/2017	06/2018		
Market Survey	<i>Not Relevant (no CBCA decision)</i>	Commissioning	2018	2018		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Alexandroupolis LNG terminal - M/R Amfritriti		762	28	0	
Total			28	0	

PCI Details	
PCI Benefits	Project aims at fulfilling the infrastructure standard (N-1) rule at regional level in accordance with Article 6(3) of Regulation EU, Project aims at supplying directly or indirectly at least two Member States
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	Market Integration - Regional (SEE + Serbia + FYROM) and beyond (e.g. Hungary and through across the NSI gas corridor) Security of Supply through inter alia source and route diversification- Greece, Bulgaria, Serbia, FYROM, Hungary, Ukraine, Turkey Enhances competition in the region by introducing new sources and routes of supply Sustainability - Supports back up to renewables and power to gas

Time Schedule	
Grant Obtention Date	16/04/2015
Delay Since Last TYNDP	12 months in commissining date / same delay in FID

Delay Explanation
 Delays in permitting phase: competent authorities delayed in issuing the required licenses. In the case of Access to shore, seabed & sea area, there was a delay of 9 months in order to decide how the existing legislation would apply specifically to the Project. In the case of issuance of the Installation Act & Installation license, the main delay was due to the requirement for the introduction of a legislative change necessary to grant the RoW for the onshore pipeline. Other reasons: complex economic & political situation in Greece, in particular, in the 2H2015 (e.g. capital controls). Also, GASTRADE entered into discussions with Public Gas Corporation of Greece (DEPA) for the participation of the later in the Project. (The EC was duly informed on this since 06/2015). However, the finalization of DEPA's participation in the Project was delayed due to political developments in Greece and administrative changes with DEPA. This caused delay in execution of FEED & reaching FID.

Expected Gas Sourcing

LNG (LNG), The pipeline will be fed with regasified LNG from the floating unit (LNG-N-062) -hence it means various sources.

Comments about the Third-Party Access Regime

It is not planned to run a formal Market Test as the Project has not applied for a TPA Exemption and Project's commercial viability will be determined by the success of the negotiations with potential gas offtakers and/or interested LNG suppliers who have interest in using the infrastructure.

Benefits

Main Driver	Market Demand
Main Driver Explanation	Main drivers: 1. Expressed requirement for diversification of supply sources and routes for SEE markets (Bulgaria, Serbia, FYROM, Romania, Hungary) creates market / demand opportunities for the project 2. Regional demand growth
Benefit Description	LNG terminal in northern Greece will: Secure new natural gas quantities for the supply of the Greek and the SE European markets, hence enhancing the security of supply of these markets. Diversify the supply sources and routes in particular with regards to markets with limited supply options (Bulgaria, Serbia, Romania, FYROM, Hungary, Ukraine) and to this extent lift existing isolation with an aim to reduce dependency on Russian gas while provide access for new gas findings in the East Med basin to the markets of SEE. Support the South Corridor project(s) by providing alternative/additional supply quantities when/if required and the interoperability of systems and the creation of a regional gas trading hub. The Project technical design will include provision for LNG-reloading ability for the purpose of supporting LNG bunkering activities or regional distribution of LNG to remote island locations for power generation and other industrial and commercial activities.

Barriers

Barrier Type	Description
Regulatory	If tariff levels for the Project do not enjoy the same regulatory regime as the one applied for other competitive regulated infrastructures in the area, then the Project will become commercially unattractive to potential regional offtakers and therefore financially not viable.
Permit Granting	See above. Delays in Permit granting have led to delays in Project implementation.
Political	No political barriers. On the contrary, there is clear and declared Political support for the Project from the impacted Member States and in particular from the governments of Greece and Bulgaria. Political stability in the region of the Project's direct influence will support commercial viability of the Project.



Others	Delays in the implementation/start up of new regional interconnection infrastructure (IGB/IBS) and upgrade of existing ones including reverse flow availability. The most critical one is the Interconnector Grece-Bulgaria (IGB). Also, availability of capacity in the greek, bulgarian and romanian Transmission Systems and reverse flow capacity in Trans Balkan will enable flows from the Terminal (through the assorted pipeline) to Ukraine. Finally, reverse flow functionality to the Turkey-Greece Interconnector will open up the Turkish market to the Project. Regarding financing: The Project received grants for studies (from the 1st CEF Energy Call-August 2014) and will apply for works in a future Call from CEF. Award of such Public financing will be critical for the Project's commercial viability. Also access to EIB, EBRD, EFSI, IFC PCI favourable financing tools is very important for the Project.
Market	The markets in SEE are not mature. Currently all gas transactions are done in a bilateral basis and no price transparency exists. Creation of a trading hub in the region with multiple supply options will generate significant opportunities for the marketing of gas imported through the LNG Alexandroupolis floating terminal (that the pipeline will be connected to).
Financing	The Project has been awarded with grants for studies (CEF 2014 Call) and will apply for grants for works (in the next Calls) from the CEF. Award of such Public financing will be critical for the Project's commercial viability. Also access to EIB, EBRD, EFSI, IFC PCI favourable financing tools is very important for the Project.
Market	Lack of market maturity
Financing	Availability of funds and associated conditions



Poseidon Pipeline

TRA-N-010	Project	Pipeline including CS	Non-FID
Update Date	25/05/2016		Advanced
Description	<p>The Poseidon project consists of a multisource offshore pipeline that will connect the Greek and Italian natural gas transportation systems. The Poseidon project is designed to import 14 Billion cubic meters per year of natural gas from sources available at the Greek borders, such as Caspian, East Mediterranean, Middle East. The total capacity could be upgraded up to 20 Bcm/y with minimal modification of the basic configuration, mainly regarding increased power of the compression station.</p>		
Regulatory Decisions and similar material conditions	<p>Decree of the Italian Ministry for Economic Development, dated 31.01.2007 (amended by the Decree dated 21.06.2007) granting exemption from Third Party Access to IGI Poseidon S.A.</p>		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
East Med / Thesprotia (Poseidon)	IGI Poseidon S.A.	2020	GR/EMD	GR/IGI	320.0 GWh/d
	IGI Poseidon S.A.	2020	IB-ITs	GR/IGI	252.5 GWh/d
Otranto - IT / IGI Poseidon	IGI Poseidon S.A.	2020	GR/IGI	IB-ITs	329.4 GWh/d
	IGI Poseidon S.A.	2020	IB-GRk	GR/IGI	329.4 GWh/d
Poseidon Greek Entry	IGI Poseidon S.A.	2020	GR/IGI	IB-GRk	252.5 GWh/d
	IGI Poseidon S.A.	2020	GR/IGI	IB-GRk	252.5 GWh/d

Sponsors	General Information		
IGI POSEIDON S.A. 100%	Promoter	<i>Natural Gas Submarine Interconnector Greece-Italy Poseidon S.A</i>	
	Operator	<i>IGI Poseidon S.A.</i>	
	Host Country	<i>Greece</i>	
	Status	<i>Planned</i>	
	Website	<i>Project's URL</i>	
	Publication Approval Status	<i>Approved</i>	

Enabled Projects

Project Code	Project Name
TRA-N-330	EastMed Pipeline

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime		
Part of NDP	<i>No (Poseidon pipeline is mentioned in the latest Italian NDP in ANNEX 4 (page 76) while in the Greek NDP there is no reference to the project, since it constitutes an Independent Natural Gas System (INGIS).)</i>	Pre-Feasibility		06/2003	Considered TPA Regime	<i>Not Applicable</i>	
		Feasibility		03/2004	10/2007	Considered Tariff Regime	<i>Not Applicable</i>
		FEED		04/2010	04/2013	Applied for Exemption	Yes
		Market Test			06/2017	Exemption Granted	Yes
		Permitting		11/2006	12/2016		
NDP Number		Supply Contracts			12/2017	Exemption in entry direction	0.00%
		FID			06/2017	Exemption in exit direction	89.00%
Currently PCI	Yes (7.1.4)	Construction		12/2017	07/2020		
		Commissioning		2020	2020		
CBCA Decision		No					
Market Survey		<i>Not Relevant (no CBCA decision)</i>					

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Poseidon pipeline	In 2015 technical studies have been finalized for the potential upgrade of capacity up to 20 Bcm/yr in order to allow the transportation of gas from sources available at the Greek borders and from the sources recently discovered in East Med region.	808	216	120	
Total			216	120	

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability

Specific Criteria Fulfilled Comments
 The project creates the connection between the markets of Greece and Italy, enhancing connectivity and market integration, while promoting price convergence. Poseidon strengthens security of supply by promoting diversified sources of gas, potentially from the East Mediterranean, broadens the Southern Gas Corridor and provides reverse flow. Furthermore, by creating more liquidity the project will boost competition leading to more competitive and affordable prices in the markets concerned. The Poseidon pipeline furthers the EU’s goal regarding the transition towards a low carbon economy by promoting the use of natural gas and contributing to the displacement of coal while constituting a valuable back up for renewables.

Time Schedule

Grant Obtention Date 28/07/2010
 Delay Since Last TYNDP
 Delay Explanation

Expected Gas Sourcing

Caspian Region, Levantine Basin (Cyprus and Israel), offshore Crete and any other gas volumes that could be available at the GR/TU borders

Comments about the Third-Party Access Regime

The exempted capacity is only relative to the forward flow capacity from Greece to Italy.

Benefits

Main Driver Market Demand

Main Driver Explanation The Poseidon pipeline will provide valuable amounts of diversified sources of gas, leading to greater liquidity of the impacted markets, enhancing the competitiveness of prices. Other than Italy (as well as Greece through reverse flow) Poseidon, functioning in complementarity with the SNAM RETE GAS, Adriatica line will enable the delivery of gas to markets in North East Europe where its benefits will also be felt. While market demand is a key driver, the Poseidon pipeline, by allowing gas from the Southern Corridor to European markets, contributes fundamentally to security of supply.

Benefit Description Through the promotion of diversification of sources, routes and counterparts, Poseidon serves to enhance energy security. In conjunction with the EastMed pipeline, it will enable the delivery of a completely new source, via a new route to reach markets, in Italy and beyond. Moreover, due to the reverse flow function, Poseidon will supply gas from Italy to the Greek system and thereby contribute decisively during disruption periods. As regards Italy, Poseidon creates a new entry point with firm capacity, enhancing the effectiveness of the N-I indicator. The new gas will also lead to greater market liquidity creating conditions for healthy gas trading. Via synergies with the Transitgas pipeline, these benefits and excess gas created can contribute to SoS in regions bordering NE and NW of Italy while SE European market conditions will also be positively influenced through the connection, via Greece, with these more developed, hub-based markets.

Barriers

Barrier Type Description

Permit Granting The major permits for Poseidon Pipeline have been obtained including the EIA in both Italy and Greece and no significant barriers are foreseen for the remaining permits.

Political Poseidon Pipeline has been consistently supported by the Greek and Italian Governments

Others Poseidon Pipeline was initially conceived to transport gas from the Azeri Shah Deniz 2 field. Following the selection of TAP by the SD2 Consortium, IGI Poseidon is in the process of securing new sources, while maintaining the project's objectives to diversify sources, routes and counterparts.

Intergovernmental Agreements			
Agreement	Agreement Description	Is Signed	Agreement Signature Date
Italy-Greece Intergovernmental Agreement		Yes	01/11/2005
Italy-Greece-Turkey Intergovernmental Agreement		Yes	01/07/2007
Joint statement of the Italian Minister of Economic Development and the Turkish Minister of Energy and Natural Resources		Yes	01/11/2009
Memorandum of Understanding between Greece and Turkey		Yes	01/05/2010
Protocol of Cooperation between Italy and Azerbaijan		Yes	01/12/2007

EastMed Pipeline

TRA-N-330	Project	Pipeline including CS	Non-FID
Update Date	25/05/2016		Non-Advanced
Description	The EastMed project is an approximately 1900 km offshore/onshore pipeline project that will directly connect the East Mediterranean gas resources to the European gas system. The project consists of 5 sections connecting the following areas: Levantine basin – Cyprus –Crete- Peloponnese –West Greece-Thesprotia. The system will have a capacity of 320-350 GWh/d with the option to upgrade the capacity of the pipeline sections from Crete up to 510 Gwh/d, in case relevant reserves will be discovered in the offshore of Crete.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
East Med / Crete (GR)	IGI Poseidon S.A.	2020	GRc	GR/EMD	190.0 GWh/d
	<i>Comment: In case relevant gas reserves will be discovered in the offshore area around Crete island.</i>				
	IGI Poseidon S.A.	2020	GR/EMD	GRc	20.0 GWh/d
East Med / Cyprus (CY)	IGI Poseidon S.A.	2020	GR/EMD	CY	30.0 GWh/d
East Med / Cyprus/Israeli Production Field	IGI Poseidon S.A.	2020	NPcCY	GR/EMD	350.0 GWh/d
East Med / Peloponnese (GR)	IGI Poseidon S.A.	2020	GR/EMD	GR	90.0 GWh/d
East Med / Thesprotia (Poseidon)	IGI Poseidon S.A.	2020	GR/IGI	GR/EMD	320.0 GWh/d
	<i>Comment: It could be upgraded for further 190 Gwh/d, in case relevant gas reserves will be discovered in the offshore area around Crete</i>				

Sponsors	General Information
EastMed pipeline: from Crete to Peloponnese IGI Poseidon SA 100%	Promoter <i>Natural Gas Submarine Interconnector Greece-Italy Poseidon S.A</i>
EastMed pipeline: from Cyprus to Crete IGI Poseidon SA 100%	Operator <i>IGI Poseidon S.A.</i>
EastMed pipeline: from Levantine Basin to Cyprus IGI Poseidon SA 100%	Host Country <i>Greece</i>
EastMed pipeline: from Peloponnese to West Greece IGI Poseidon SA 100%	Status <i>Planned</i>
EastMed pipeline: from West Greece to Thesprotia (tie-in with Poseidon) IGI Poseidon SA 100%	Website <i>Project's URL</i>
	Publication Approval Status <i>Approved</i>



NDP and PCI Information	Schedule	Start Date	End Date	Third-Party Access Regime
Part of NDP <i>No (EastMed pipeline is not included in the Greek NDP, as the project is considered an Independent Natural gas System. In Cyprus there is no NND as the country does not have any gas TSO.)</i>	Pre-Feasibility		08/2012	Considered TPA Regime <i>Not Applicable</i>
	Feasibility	05/2015	04/2016	Considered Tariff Regime <i>Not Applicable</i>
	FEED	09/2016	06/2017	Applied for Exemption <i>Not Yet</i>
	Market Test		07/2017	Exemption Granted <i>No</i>
NDP Number	Permitting	06/2016	12/2017	
	Supply Contracts		12/2017	Exemption in entry direction <i>0.00%</i>
Currently PCI <i>Yes (7.3.1)</i>	FID		06/2017	Exemption in exit direction <i>0.00%</i>
CBCA Decision	Construction	01/2018	12/2020	
	Commissioning	2020	2020	
Market Survey	<i>Not Relevant (no CBCA decision)</i>			

Pipelines and Compressor Stations

Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)
EastMed pipeline: section from Crete to Peloponnese	This offshore pipeline section is designed to transport 320 GWh/d of natural gas from the Levantine Basine and can be upgraded for further 190 GWh/d of natural gas from the offshore of Crete in case relevant reserves will be discovered.	813	421	100
EastMed pipeline: section from Cyprus to Crete	This section of the project is related to the offshore pipeline between Cyprus and Crete.	660	732	125
EastMed pipeline: section from Levantine Basin to Cyprus	This offshore pipeline section will transport 350GWh/d to Cyprus where it will deliver 30 Gwh/d for the internal consumption and the remaing 320GW/d will be exported to Greece via Crete.	610	165	
EastMed pipeline: section from West Greece to Thesprotia	This offshore pipeline section is designed to transport 320 GWh/d of natural gas from the Levantine Basine and can be upgraded for further 190 GWh/d of natural gas from the offshore of Crete in case relevant reserves will be discovered.	1,070	236	
EastMed: section from Peloponnese to West Greece	This offshore pipeline section is designed to transport 320 GWh/d of natural gas from the Levantine Basine and can be upgraded for further 190 GWh/d of natural gas from the offshore of Crete in case relevant reserves will be discovered.	1,170	317	
Total			1,871	225

PCI Details

PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	Market Integration The project provides significant contribution to Market Integration as it allows to interconnect Cyprus and Crete to European gas network system. Security of Supply The contribution of EastMed project to Security of Supply is particularly relevant as it provides diversification of sources, routes and counterparts, providing solutions to the disruption scenarios. An additional benefit will be provided by enabling the gasification of Cyprus, Crete and Western Greece. Competition The EastMed project will enhance market competition along the whole gas chain, including among producers. The new gas will compete, to the advantage of the consumer, with all existing supplies available in the European markets, enhancing the benefits arising from a better diversified market. Sustainability The Eastmed project will provide competitive gas supply, contributing to displace power production from Coal and Oil, reducing CO2 emissions per energy unit generated.

Time Schedule

Grant Obtention Date 23/10/2015
 Delay Since Last TYNDP
 Delay Explanation

Expected Gas Sourcing

Levantine Basin and offshore of Crete in case relevant reserves will be discovered.

Comments about the Third-Party Access Regime

The access regime will be defined at a later stage of the development activities

Benefits

	Others
Main Driver	
Main Driver Explanation	The primary objective of the Eastern Mediterranean Pipeline is to provide a permanent connection of the recently discovered gas reserves in the Levantine Basin with the European gas markets. The specific objectives to be achieved with implementation of the project are to: • exploit the proximity of the Levantine Basin gas fields to mainland Europe, to diversify the sources, routes and counterparts of the European gas supply with 10-16 bcm/year of deliveries from new sources, which are wholly or partly produced within the EU; • integrate Cyprus with the European gas system, further promoting gas trading in the South Eastern Europe region; • promote the development of a gas trading hubs in Greece and in Italy, in connection with other Southern Corridor initiatives, facilitating gas exchanges in South Eastern Europe; • gasify regions of Greece that currently have no access to gas, such as Crete, Peloponnese and Western Greece.
Benefit Description	The dependence of the European Union on external gas supplies is continuously increasing, with indigenous production declining, leading to the need to diversify sources so as to strengthen security of the markets' supply, particularly in SEE. On the other hand, unlocking the recent discoveries in the Levantine Basin, including - referring to the sole Cyprus - the largest recent discovery of gas reserves in Europe, is particularly relevant for the development of the exploration and hydrocarbons in the whole East Mediterranean. Considering all the above, EastMed addresses the following main needs: • Increases security and diversification of gas supplies to Europe, as well as competition in line with the EU objectives to complete the internal energy market; • Contributes to the development of EU domestic gas resources, thus limiting the dependence on third countries • Secures access to gas sources strategically located for EU

Barriers

Barrier Type	Description
Political	EastMed Pipeline has been consistently supported by the Cypriot, Greek and Italian Governments.
Financing	It is going to be submitted a request to access CEF funds for feasibility studies

South Kavala Underground Gas Storage facility

UGS-N-385	Project	Storage Facility	Non-FID
Update Date	25/05/2016		Non-Advanced
Description	The projects consists in converting the offshore depleted gas field of South Kavala to an Underground Gas Storage Facility.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
UGS South Kavala (GR)	Hellenic Republic Asset Management Fund	2022	STcGR	IB-GRk	44.0 GWh/d
	Hellenic Republic Asset Management Fund	2022	IB-GRk	STcGR	55.0 GWh/d

Sponsors		General Information		Market	Barriers (Count)	
Hellenic Republic Asset Development Fund (HRADF)	100%	Promoter	<i>Hellenic Republic Asset anagement Fund</i>			1
		Operator	<i>Hellenic Republic Asset Management Fund</i>			
		Host Country	<i>Greece</i>			
		Status	<i>Planned</i>			
		Website	<i><u>Project's URL</u></i>			
		Publication Approval Status	<i>Draft</i>			

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>No (The Project Promoter is not a Transmission System Operator and as such does not have the obligation to submit a National Development Plan.)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
		Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
NDP Number		Market Test			Exemption Granted	<i>Not Relevant</i>
		Permitting				
Currently PCI	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
		FID			Exemption in exit direction	<i>0.00%</i>
CBCA Decision	<i>No</i>	Construction				
Market Survey	<i>Not Relevant (no CBCA decision)</i>	Commissioning	<i>2022</i>	<i>2022</i>		

Technical Information (UGS)

Storage Facility	<i>South Kavala</i>
Storage Facility Type	<i>Aquifer</i>
Multiple-Cycle	<i>Yes</i>
Working Volume (mcm)	<i>360.00</i>

PCI Details

PCI Benefits	Project aims at fulfilling the infrastructure standard (N-1) rule at regional level in accordance with Article 6(3) of Regulation EU, Project aims at supplying directly or indirectly at least two Member States
General Criteria Fulfilled	<i>Yes</i>
Specific Criteria Fulfilled	Competition, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Time Schedule

Grant Obtention Date	
Delay Since Last TYNDP	<i>2 years</i>
Delay Explanation	Decision on the procedure to select the project promoter and time needed to prepare the relevant tender procedure.

Expected Gas Sourcing

Caspian Region, Russia, LNG. The project may source gas from all gas sources supplying or transitting Greece

Comments about the Third-Party Access Regime

At the present stage of maturity of the project the tariff regime is not known. It is possible that the project capacity might be split into a part under regulated tariff and a part under negotiated access.

Benefits

Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	The project will enhance the national and regional (GR, BG, RO) security of supply and will help Users benefit from market opportunities, especially in the LNG market. Given the proximity of the project location to the TAP route the benefits might also reach Italy.

Barriers

Barrier Type	Description
Market	Lack of market maturity

5 Hungary

Romanian-Hungarian reverse flow Hungarian section 1st stage

TRA-N-286	Project	Pipeline including CS	Non-FID
Update Date	22/06/2016		Non-Advanced
Description	A new compressor station at Csanádpalota with 2 units (4.5 MW each) - necessary to create pressure conditions for the transportation capacity of 1.75 bcm/a from and towards Romania.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Csanadpalota	FGSZ Ltd.	2020	RO	HU	48.9 GWh/d

Sponsors		General Information		Barriers (Count)	
FGSZ Ltd.	100%	Promoter	FGSZ Ltd.	Regulatory	1
		Operator	FGSZ Ltd.	Market	1
		Host Country	Hungary		
		Status	Planned		
		Website			
		Publication Approval Status	Approved		

Enabled Projects

Project Code	Project Name
TRA-N-377	Romanian-Hungarian reverse flow Hungarian section 2nd stage

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (Hungarian TYNDP 2015)	Pre-Feasibility		06/2014	Considered TPA Regime	Regulated
NDP Number	12.6.1.	Feasibility	09/2016	07/2017	Considered Tariff Regime	Regulated
		FEED	07/2018	10/2018	Applied for Exemption	No
Currently PCI	Yes (6.24.1)	Market Test		12/2016	Exemption Granted	No
		Permitting	07/2018			
CBCA Decision	Yes (2016-10-06)	Supply Contracts		06/2017	Exemption in entry direction	0.00%
Market Survey	Open Season(2016-12-31)	FID		05/2017	Exemption in exit direction	0.00%
		Construction	10/2018			
		Commissioning	2020	2020		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Csanadpalota				9	
Total				9	

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Time Schedule	
Grant Obtention Date	14/10/2015
Delay Since Last TYNDP	1 year
Delay Explanation	Open Season is delayed.

Expected Gas Sourcing
Caspian Region, Romanian, sources available from Bulgaria direction

Benefits

Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	

Barriers

Barrier Type	Description
Regulatory	Low rate of return
Market	Lack of market support

Slovenian-Hungarian interconnector

TRA-N-325	Project	Pipeline including CS	Non-FID
Update Date	22/06/2016		Non-Advanced
Description	Hungary – Slovenia interconnection will establish a bidirectional interconnection between Slovenian and Hungarian gas transmission systems and with that a connection of national gas markets.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
	FGSZ Ltd.	2020	HU	SI	38.2 GWh/d
			<i>Comment: 1/3 is firm capacity+2/3 is interruptible capacity</i>		
Pince (SI) / Tornyszentmiklos (HU)	FGSZ Ltd.	2020	SI	HU	38.2 GWh/d
			<i>Comment: 1/3 is firm capacity + 2/3 is interruptible capacity</i>		

Sponsors	General Information	No Barriers Defined	Barriers (Count)
FGSZ Ltd. <div style="width: 100%; height: 10px; background-color: #00AEEF; margin-top: 5px;"></div> 100%	Promoter <i>FGSZ Ltd.</i> Operator <i>FGSZ Ltd.</i> Host Country <i>Hungary</i> Status <i>Planned</i> Website <i>Project's URL</i> Publication Approval Status <i>Approved</i>		

Enabled Projects

Project Code	Project Name
TRA-N-123	Városföld CS
TRA-N-018	Városföld-Ercsi-Győr

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (Hungarian TYNDP 2015)	Pre-Feasibility		12/2015	Considered TPA Regime	Regulated
NDP Number	12.12.1.-12.12.2	Feasibility	05/2016	12/2017	Considered Tariff Regime	Regulated
		FEED	06/2017	11/2019	Applied for Exemption	No
Currently PCI	Yes (6.23)	Market Test			Exemption Granted	No
		Permitting	11/2016	10/2017		
CBCA Decision	No	Supply Contracts			Exemption in entry direction	0.00%
Market Survey	Not Relevant (no CBCA decision)	FID		02/2018	Exemption in exit direction	0.00%
		Construction	09/2019	12/2020		
		Commissioning	2020	2020		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Nagykanizsa-Tornyiszentmiklós		500	41	9	
Total			41	9	

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Market Integration, Security of Supply
Specific Criteria Fulfilled Comments	

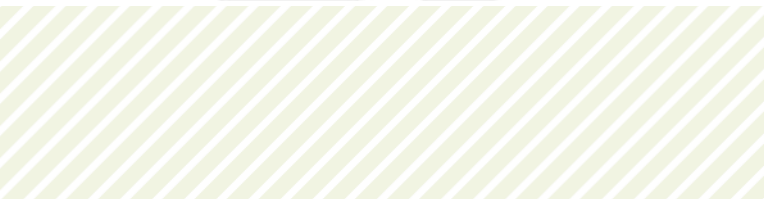
Expected Gas Sourcing
LNG ()

Benefits	
Main Driver	Market Demand
Main Driver Explanation	



Benefit Description

o The Hungarian projects taken as a whole main aim, is to enhance the flexibility of the Hungarian transmission system by connecting to neighbouring systems, ensuring reserves flow availability, and guaranteeing flow deliverability which will enhance the transmission systems security of supply position along with helping with further market integration.



Hungarian section of Tesla project

TRA-N-585	Project	Pipeline including CS	Non-FID
Update Date	27/05/2016		Non-Advanced
Description	The main aim of the Tesla project is to transport natural gas from the planned Turkish Stream (RU-TR) to Central and Eastern Europe via Greece, Macedonia, Serbia, Hungary and Austria. The Hungarian section is part of the TR-GR-FYROM-SRB-HU-AT corridor. The main flow direction is from Turkey to Austria, but according to EU rules we intend to ensure the reverse flow (from Austria to Turkey) with the same capacity as the main flow direction.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
TESLA / HU Offtake	FGSZ Ltd.	2020	HU/TLA	HU	175.0 GWh/d
TESLA / RS>HU	FGSZ Ltd.	2020	RS/TLA	HU/TLA	582.0 GWh/d

Sponsors		General Information		Barriers (Count)
FGSZ Ltd.	100%	Promoter	FGSZ Ltd.	
		Operator	FGSZ Ltd.	
		Host Country	Hungary	
		Status	Planned	
		Website		
		Publication Approval Status	Approved	
			Others	1

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (Hungarian TYNDP 2015)	Pre-Feasibility		12/2015	Considered TPA Regime	Regulated
NDP Number	12.15.1. - 12.15.2.	Feasibility	01/2017	12/2017	Considered Tariff Regime	Regulated
		FEED	10/2016	03/2018	Applied for Exemption	No
Currently PCI	Yes (6.25.2.)	Market Test		10/2016	Exemption Granted	No
		Permitting	10/2016	03/2018		
CBCA Decision	No	Supply Contracts		08/2018	Exemption in entry direction	0.00%
Market Survey	Not Relevant (no CBCA decision)	FID		03/2018	Exemption in exit direction	0.00%
		Construction	09/2018	05/2020		
		Commissioning	2020	2020		

Pipelines and Compressor Stations

Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)
Hungarian section	+30 MW compressor station, in order to put natural gas from the Hungarian national system (gas storage, other sources) to Tesla pipeline.	1,200	361	50
Total			361	50

PCI Details

PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Time Schedule

Grant Obtention Date	
Delay Since Last TYNDP	1 year
Delay Explanation	Russian/Turkey conflict.

Expected Gas Sourcing

Caspian Region, Russia

Benefits

Main Driver	Others
Main Driver Explanation	The main project driver is to ensure the supply of countries in the Balkan region and Central and Eastern Europe in case the Russian supply will terminate via Ukraine in the future.
Benefit Description	

Barriers

Barrier Type	Description
Others	Financing difficulties.

HU-UA reverse flow

TRA-N-586	Project	Pipeline including CS	Non-FID
Update Date	25/05/2016		Non-Advanced
Description	The main aim of the project is to ensure firm capacity at IP Beregdaróc in the Hungary-Ukraine direction.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Beregdaróc 800 (HU) - Beregovo (UA) (HU>UA)	FGSZ Ltd.	2020	HU	UAe	180.0 GWh/d

Sponsors		General Information		Barriers (Count)
FGSZ Ltd.	100%	Promoter	FGSZ Ltd.	
		Operator	FGSZ Ltd.	
		Host Country	Hungary	
		Status	Planned	
		Website		
		Publication Approval Status	Approved	
		Others	1	

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (Hungarian TYNDP 2015)	Pre-Feasibility			Considered TPA Regime	Regulated
NDP Number	12.17.	Feasibility			Considered Tariff Regime	Regulated
		FEED			Applied for Exemption	No
Currently PCI	No	Market Test			Exemption Granted	No
		Permitting				
CBCA Decision	No	Supply Contracts			Exemption in entry direction	0.00%
Market Survey	Not Relevant (no CBCA decision)	FID			Exemption in exit direction	0.00%
		Construction				
		Commissioning	2020	2020		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Hungarian section	Piping installation at Városföld, Hajdúszoboszló, Beregdaróc nodes and compressor stations and aftercoolers, which enables the reverse flow. Measuring station is also necessary at Beregdaróc node.		0		
Total			0		

Expected Gas Sourcing
 Algeria, Norway, Russia, LNG (HR)

Benefits	
Main Driver	Market Demand
Main Driver Explanation	At the moment FGSZ is able to ensure only interruptible capacity at IP Beregdaróc (HU>UA direction). Ukrainian party always requests firm capacity, and this new entry point is very important for Ukraine.
Benefit Description	

Barriers	
Barrier Type	Description
Others	Financing difficulties.

Eastring - Hungary

TRA-N-656	Project	Pipeline including CS	Non-FID
Update Date	27/05/2016		Non-Advanced
Description	Eastring-HU is subproject located in Hungary and is essential part of the Eastring project, which connects IP Velké Kapušany at the SK-UA border, with IP at the BG/TR border in the following routing options: – from SK to RO – via HU, (new pipeline). – from RO to TR – Option A – new pipeline passing production & storage area and continuing to IP Isaccea and then to BG/TR border by utilizing existing RO-BG transit assets – Option B – new pipeline, passing 2 production & storage areas and continuing to BG/TR border. The project would (i) secure supplies in case of RU disruption and therefore it will increase gas SoS in the broader Central-South-East EU region, (ii) allow access to alternative gas sources for Central, Western & Southern Europe and (iii) mean step towards EU single gas market.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Eastring Cross-Border HU/EAR <> SK/EAR	FGSZ Ltd.	2021	HU/EAR	SK/EAR	570.0 GWh/d
	FGSZ Ltd.	2021	SK/EAR	HU/EAR	570.0 GWh/d
	FGSZ Ltd.	2025	HU/EAR	SK/EAR	570.0 GWh/d
	FGSZ Ltd.	2025	SK/EAR	HU/EAR	570.0 GWh/d
Eastring Cross-Border RO/EAR <> HU/EAR	FGSZ Ltd.	2021	HU/EAR	RO/EAR	570.0 GWh/d
	<i>Comment: New interconnection point, New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>				
	FGSZ Ltd.	2021	RO/EAR	HU/EAR	570.0 GWh/d
	<i>Comment: New interconnection point, New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>				
Eastring HU Domestic Point	FGSZ Ltd.	2025	HU/EAR	RO/EAR	570.0 GWh/d
	FGSZ Ltd.	2025	RO/EAR	HU/EAR	570.0 GWh/d
	FGSZ Ltd.	2021	HU	HU/EAR	570.0 GWh/d
	FGSZ Ltd.	2021	HU/EAR	HU	570.0 GWh/d

Sponsors		General Information		No Barriers Defined	Barriers (Count)
FGSZ Ltd.	100%	Promoter	FGSZ Ltd.		
		Operator	FGSZ Ltd.		
		Host Country	Hungary		
		Status	Planned		
		Website	Project's URL		
		Publication Approval Status	Approved		

Enabled Projects

Project Code	Project Name
TRA-N-018	Városföld-Ercsi-Győr

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (Eastring pipeline)	Pre-Feasibility			Considered TPA Regime	Not Applicable
NDP Number	12.16	Feasibility	05/2016	04/2017	Considered Tariff Regime	Not Applicable
		FEED			Applied for Exemption	Not Relevant
Currently PCI	Yes (Not Defined yet)	Market Test			Exemption Granted	Not Relevant
		Permitting				
CBCA Decision	No	Supply Contracts			Exemption in entry direction	0.00%
Market Survey	Not Relevant (no CBCA decision)	FID			Exemption in exit direction	0.00%
		Construction				
		Commissioning	2021	2025		

Pipelines and Compressor Stations

Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)
Eastring-HU-1/2		1,400	112	0
Total			112	0

PCI Details

PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
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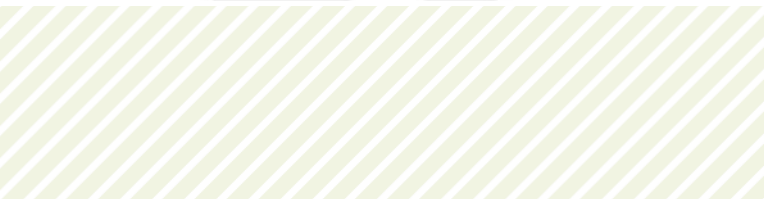
General Criteria Fulfilled Yes
 Specific Criteria Fulfilled Competition, Market Integration, Security of Supply, Sustainability
 Specific Criteria Fulfilled Comments

Expected Gas Sourcing

Caspian Region, Norway, Russia, LNG (TR), Iraq, Iran, Egypt, Israel, Turkmenistan, Kazakhstan, Cyprus, Azerbaijan, Any gas available at Turkish/European HUBs. For dire

Benefits

Main Driver	Others
Main Driver Explanation	The project brings significant benefits to the SoS of Europe bringing the increasing new sources of gas supply in South Eastern Europe to the markets of Central and Western Europe, while further enhancing the market integration of the affected countries.
Benefit Description	- Physical alternative for providing 100% of all Balkan countries' consumption; - Providing security of supply for 100% of all Balkan countries' consumption; - Additional utilization for CZ, SK, PL, UA, RO, BG transit and storage assets; - Providing Western shippers with possibility to supply Balkan countries and even Turkey from NCG/Gaspool/Baumgarten; - Corridor ready for future gas imports to Europe from alternative sources – AGRI, TANAP, Caspian, Iran, Iraq, Egypt, Israel, Cyprus. Most of them from perspective Turkish natural gas hub/border Turkey/BG;



Városföld-Ercsi-Győr

TRA-N-018	Project	Pipeline including CS	Non-FID
Update Date	08/05/2016		Non-Advanced
Description	Pipeline between Városföld-Ercsi and Győr nodes, DN1000, PN100, 210 km. This project will enable the Mosonmagyaróvár interconnection point to reach its full capacity of 153 GWh/d from Austria to Hungary. It will also enable the Mosonmagyaróvár interconnection point to realize reverse flow capacity up to 153 GWh/d from Hungary to Austria as well.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Mosonmagyaróvár	FGSZ Ltd.	2022	AT	HU	25.0 GWh/d
	FGSZ Ltd.	2022	HU	AT	153.0 GWh/d

Sponsors	General Information	Barriers (Count)
FGSZ Ltd. 100%	Promoter: <i>FGSZ Ltd.</i> Operator: <i>FGSZ Ltd.</i> Host Country: <i>Hungary</i> Status: <i>Planned</i> Website: Publication Approval Status: <i>Approved</i>	Market: 2 Regulatory: 1

Enabled Projects

Project Code	Project Name
TRA-N-377	Romanian-Hungarian reverse flow Hungarian section 2nd stage
TRA-N-286	Romanian-Hungarian reverse flow Hungarian section 1st stage
TRA-N-123	Városföld CS

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (Hungarian TYNDP 2015)	Pre-Feasibility		06/2014	Considered TPA Regime	Regulated
NDP Number	12.7.	Feasibility	09/2016	07/2017	Considered Tariff Regime	Regulated
		FEED	11/2018	04/2020	Applied for Exemption	No
Currently PCI	Yes (6.24.4.)	Market Test		12/2016	Exemption Granted	No
		Permitting	05/2017	09/2018		
CBCA Decision	Yes (2016-10-06)	Supply Contracts		04/2017	Exemption in entry direction	0.00%
Market Survey	Open Season(2016-12-31)	FID		10/2018	Exemption in exit direction	0.00%
		Construction	03/2021	12/2022		
		Commissioning	2022	2022		

Pipelines and Compressor Stations

Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)
Városfold-Ercsi-Gyor		1,000	210	
Total			210	

PCI Details

PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Time Schedule

Grant Obtention Date	14/10/2015
Delay Since Last TYNDP	3 year
Delay Explanation	New Power Plants demands delay minimum 3 years and harmonization with RO/HU/AT planned capacity booking.

Expected Gas Sourcing

Black Sea

Benefits

Main Driver	Market Demand
Main Driver Explanation	RO>HU>AT transmission corridor (Black Sea or other gas source)
Benefit Description	oBlack Sea gas or other gas source transmission to the European Gas Market The Hungarian projects taken as a whole main aim, is to enhance the flexibility of the Hungarian transmission system by connecting to neighbouring systems, ensuring reserves flow availability, and guaranteeing flow deliverability which will enhance the transmission systems security of supply position along with helping with further market integration.

Barriers

Barrier Type	Description
Market	Lack of market support
Market	Lack of market maturity
Regulatory	Low rate of return

Ercsi-Szazhalombatta

TRA-N-061	Project	Pipeline including CS	Non-FID
Update Date	06/05/2016		Non-Advanced
Description	New pipeline between Ercsi and Szazhalombatta nodes, DN800 PN63, 11 km. The 11 km long pipeline connecting the Városföld-Ercsi-Győr pipeline at Ercsi to the Budapest ring at Százhalombatta (Central Hungary) – it increases the capacity of the HU-SK interconnector up to 152 GWh/d; 600 000 m3/h (at 15 °C) in both directions in the FGSZ system.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Vecsés MGT / FGSZ	FGSZ Ltd.	2022	HUi	HU	25.5 GWh/d

Sponsors		General Information		No Barriers Defined	Barriers (Count)
FGSZ Ltd.	100%	Promoter	FGSZ Ltd.		
		Operator	FGSZ Ltd.		
		Host Country	Hungary		
		Status	Planned		
		Website			
		Publication Approval Status	Approved		

Enabled Projects

Project Code	Project Name
TRA-N-123	Városföld CS
TRA-N-018	Városföld-Ercsi-Győr

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (Hungarian TYNDP 2015)	Pre-Feasibility		06/2014	Considered TPA Regime	Regulated
NDP Number	12.9.	Feasibility	09/2016	07/2017	Considered Tariff Regime	Regulated
		FEED	11/2018	04/2020	Applied for Exemption	No
Currently PCI	Yes (6.24.5)	Market Test		12/2016	Exemption Granted	No
		Permitting	05/2017	09/2018		
CBCA Decision	Yes (2016-12-31)	Supply Contracts		04/2017	Exemption in entry direction	0.00%
Market Survey	Open Season(2016-12-31)	FID		10/2018	Exemption in exit direction	0.00%
		Construction	03/2021	12/2022		
		Commissioning	2022	2022		

Pipelines and Compressor Stations

Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)
Ercsi-Szazhalombatta		800	11	
Total			11	

PCI Details

PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Security of Supply
Specific Criteria Fulfilled Comments	

Time Schedule

Grant Obtention Date	14/10/2015
Delay Since Last TYNDP	3 year
Delay Explanation	New power plants' demands delay minimum 3 year, which related to the TYNDP.

Expected Gas Sourcing

which available from Slovakia direction

Benefits

Main Driver Market Demand

Main Driver Explanation

Benefit Description

o The Hungarian projects taken as a whole main aim, is to enhance the flexibility of the Hungarian transmission system by connecting to neighbouring systems, ensuring reserves flow availability, and guaranteeing flow deliverability which will enhance the transmission systems security of supply position along with helping with further market integration.

Városföld CS

TRA-N-123	Project	Pipeline including CS	Non-FID
Update Date	06/05/2016		Non-Advanced
Description	An additional compressor unit (5.7 MW) at the existing compressor station at Városföld, necessary to ensure adequate pressure for the transportation along the HU section of the Corridor.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Mosonmagyaróvár	FGSZ Ltd.	2022	AT	HU	25.0 GWh/d

Sponsors		General Information		Barriers (Count)	
FGSZ Ltd.	100%	Promoter	FGSZ Ltd.	Regulatory	1
		Operator	FGSZ Ltd.	Market	1
		Host Country	Hungary		
		Status	Planned		
		Website	Project's URL		
		Publication Approval Status	Approved		

Enabled Projects

Project Code	Project Name
TRA-N-018	Városföld-Ercsi-Győr
TRA-N-286	Romanian-Hungarian reverse flow Hungarian section 1st stage

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (Hungarian TYNDP 2015)	Pre-Feasibility		06/2014	Considered TPA Regime	Regulated
NDP Number	12.10.	Feasibility	09/2016	07/2017	Considered Tariff Regime	Regulated
		FEED	11/2018	04/2020	Applied for Exemption	No
Currently PCI	Yes (6.24.6.)	Market Test		12/2016	Exemption Granted	No
		Permitting	05/2017	09/2018		
CBCA Decision	No	Supply Contracts		04/2017	Exemption in entry direction	0.00%
Market Survey	Not Relevant (no CBCA decision)	FID		10/2018	Exemption in exit direction	0.00%
		Construction	03/2021	12/2022		
		Commissioning	2022	2022		

Pipelines and Compressor Stations

Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)
Városföld CS				6
Total				6

PCI Details

PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Security of Supply
Specific Criteria Fulfilled Comments	

Time Schedule

Grant Obtention Date	14/10/2015
Delay Since Last TYNDP	Yes, 3 year.
Delay Explanation	New power plants' demands delay minimum 3 year, which related to the TYNDP.

Benefits

Main Driver	Market Demand
Main Driver Explanation	



Benefit Description o The Hungarian projects taken as a whole main aim, is to enhance the flexibility of the Hungarian transmission system by connecting to neighbouring systems, ensuring reserves flow availability, and guaranteeing flow deliverability which will enhance the transmission systems security of supply position along with helping with further market integration.

Barriers	
Barrier Type	Description
Regulatory	Low rate of return
Market	Lack of market support



Romanian-Hungarian reverse flow Hungarian section 2nd stage

TRA-N-377

Project

Pipeline including CS

Non-FID

Update Date

08/05/2016

Non-Advanced

Description

A third unit (4.5 MW) at Csanádpalota to reach the increased 4.4 bcm/a capacity of the corridor at the RO/HU border.

Regulatory Decisions and similar material conditions

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Csanadpalota	FGSZ Ltd.	2022	HU	RO	76.5 GWh/d
	FGSZ Ltd.	2022	RO	HU	76.5 GWh/d

Sponsors

FGSZ Ltd. 100%

General Information

Promoter *FGSZ Ltd.*
 Operator *FGSZ Ltd.*
 Host Country *Hungary*
 Status *Planned*
 Website
 Publication Approval Status *Approved*

Regulatory



1

Market



1

Barriers (Count)

Enabled Projects

Project Code	Project Name
TRA-N-286	Romanian-Hungarian reverse flow Hungarian section 1st stage
TRA-N-123	Városföld CS
TRA-N-018	Városföld-Ercsi-Győr

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (Hungarian TYNDP 2015)	Pre-Feasibility		06/2014	Considered TPA Regime	Regulated
NDP Number	12.6.1.	Feasibility	09/2016	07/2017	Considered Tariff Regime	Regulated
		FEED	11/2018	04/2020	Applied for Exemption	No
Currently PCI	Yes (6.24.9.)	Market Test		12/2016	Exemption Granted	No
		Permitting	05/2017	09/2018		
CBCA Decision	Yes (2016-10-06)	Supply Contracts		04/2017	Exemption in entry direction	0.00%
Market Survey	Open Season(2016-12-31)	FID		10/2018	Exemption in exit direction	0.00%
		Construction	03/2021	12/2022		
		Commissioning	2022	2022		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Csanádpalota	+1 Compressor unit 4.5MW			4	
Total				4	

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Time Schedule	
Grant Obtention Date	14/10/2015
Delay Since Last TYNDP	3 year
Delay Explanation	Black Sea project delay

Expected Gas Sourcing	
Black Sea	

Benefits

Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	

Barriers

Barrier Type	Description
Market	Lack of market support
Regulatory	Low rate of return

BG-RO-HU-AT transmission corridor

TRA-N-380	Project	Pipeline including CS	Non-FID
Update Date	25/05/2016		Non-Advanced
Description	It is able to transport gas from Bulgaria (12 Bcm/a) to Austria (Baumgarten) (10 Bcm/a) via Romania and Hungary.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Csanadpalota 2	FGSZ Ltd.	2024	HU	RO	145.5 GWh/d
	FGSZ Ltd.	2024	RO	HU	145.5 GWh/d
Mosonmagyaróvár 2	FGSZ Ltd.	2024	AT	HU	145.5 GWh/d
	FGSZ Ltd.	2024	HU	AT	145.5 GWh/d

Sponsors		General Information		Barriers (Count)	
FGSZ Ltd.	100%	Promoter	FGSZ Ltd.	Market	2
		Operator	FGSZ Ltd.	Regulatory	1
		Host Country	Hungary		
		Status	Planned		
		Website			
		Publication Approval Status	Approved		

Enabled Projects

Project Code	Project Name
TRA-N-377	Romanian-Hungarian reverse flow Hungarian section 2nd stage
TRA-N-286	Romanian-Hungarian reverse flow Hungarian section 1st stage
TRA-N-123	Városföld CS
TRA-N-061	Ercsi-Szazhalombatta
TRA-N-018	Városföld-Ercsi-Győr

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (Hungarian TYNDP 2015)</i>	Pre-Feasibility		<i>12/2015</i>	Considered TPA Regime	<i>Regulated</i>
NDP Number	<i>12.13.1.-12.14.7</i>	Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test			Exemption Granted	<i>No</i>
		Permitting				
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction		<i>12/2023</i>		
		Commissioning	<i>2024</i>	<i>2024</i>		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Csanádpalota-Városföld		1,000	115	54	
Győr-HU/AT border Mosonmagyaróvár		1,000	71	0	
Total			186	54	

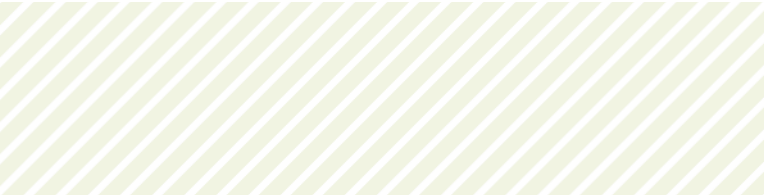
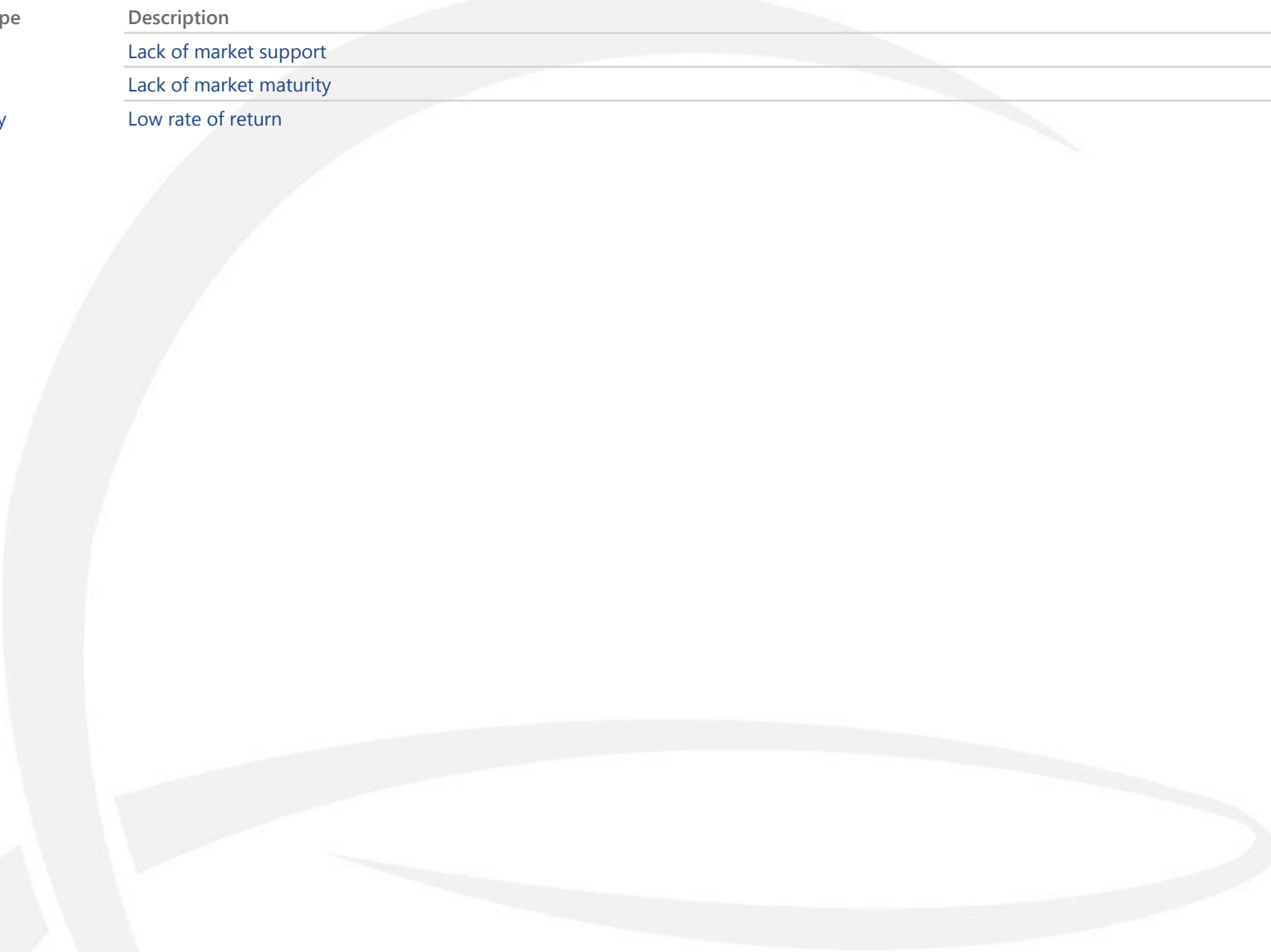
PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project
General Criteria Fulfilled	No
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Benefits	
Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	



Barriers

Barrier Type	Description
Market	Lack of market support
Market	Lack of market maturity
Regulatory	Low rate of return



Hajduszoboszlo CS

TRA-N-065	Project	Pipeline including CS	Non-FID
Update Date	08/05/2016		Non-Advanced
Description	An additional compressor unit put into operation at Hajdúszoboszló. This is a new unit, for replacement an earlier unit, which was relocated an other compressor station.		
Regulatory Decisions and similar material conditions			

Sponsors	General Information		No Barriers Defined	Barriers (Count)
FGSZ Ltd.	100%	Promoter		
		Operator		
		Host Country		
		Status		
		Website		
		Publication Approval Status		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (Hungarian TYNDP 2015)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number	<i>12-11</i>	Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test			Exemption Granted	<i>No</i>
		Permitting				
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning				

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
hajdúszoboszló CS				6	
Hajdusoboszlo node	No cross-border (interconnection point) relevance.			0	
Total				6	

Time Schedule

Grant Obtention Date
 Delay Since Last TYNDP Yes, 1 year.
 Delay Explanation Due to decreasing transmission volume the project was rescheduled.

Benefits

Main Driver Others
 Main Driver Explanation
 Benefit Description o The Hungarian projects taken as a whole main aim, is to enhance the flexibility of the Hungarian transmission system by connecting to neighbouring systems, ensuring reserves flow availability, and guaranteeing flow deliverability which will enhance the transmission systems security of supply position along with helping with further market integration. In particular, this project helps the reverse flow from Varösföld to Beregdaroc.

Vecsés-Városföld gas transit pipeline

TRA-N-831	Project	Pipeline including CS	Non-FID
Update Date	25/05/2016		Non-Advanced
Description	The aim of the project is to build a new bidirectional high pressure transit pipeline between Vecsés and Városföld to extend the Slovak-Hungarian Interconnector into south direction. The project contributes to develop the North-South gas corridor and to increase the European energy security and to diversificate the gas supply sources and transmission routes.		
Regulatory Decisions and similar material conditions			

Sponsors	General Information	No Barriers Defined	Barriers (Count)
	Promoter		
	Operator		
	Host Country		
	Status		
	Website		
	Publication Approval Status		

Enabled Projects	
Project Code	Project Name
TRA-F-148	Slovak-Hungarian interconnector (Vecsés-Szada-Balassagyarmat)
TRA-N-524	Enhancement of Transmission Capacity of Slovak-Hungarian interconnector

NDP and PCI Information	Schedule	Start Date	End Date	Third-Party Access Regime
Part of NDP	Pre-Feasibility			Considered TPA Regime
	Feasibility			Considered Tariff Regime
	FEED			Applied for Exemption
	Market Test			Exemption Granted
	Permitting			
NDP Number	Supply Contracts			Exemption in entry direction
	FID			Exemption in exit direction
Currently PCI	Construction			
	Commissioning	2021	2021	
CBCA Decision				
Market Survey				

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Vecsés-Városföld	Pressure regulator at Vecsés node, hub and metering station at Városföld.,	800	80		
Total			80		

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	No
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Expected Gas Sourcing
Norway, Russia, LNG ()



Benefits

Main Driver	Market Demand
Main Driver Explanation	Security of Gas Supply New gas transit routes New gas sources Diversification of gas sources and routes
Benefit Description	



Enhancement of Transmission Capacity of Slovak-Hungarian interconnector

TRA-N-524	Project	Pipeline including CS	Non-FID
Update Date	25/05/2016		Non-Advanced
Description	Enhancement of Exit transmission capacity with 102 GWh/day in HU>SK direction and enhancement of Entry transmission capacity with 26 GWh/day in SK>HU direction at Balassagyarmat with new compressors on Szada Compressor station. The available bi-directional transmission capacities will be the same in both direction at the Slovak-Hungarian interconnector.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Balassagyarmat (HU) / Velké Zlievce (SK)	MGT Hungarian Gas Transit Ltd.	2017	HUi	SK	102.0 GWh/d
	MGT Hungarian Gas Transit Ltd.	2017	SK	HUi	26.0 GWh/d
Vecsés MGT / FGSZ	MGT Hungarian Gas Transit Ltd.	2017	HU	HUi	102.0 GWh/d
	MGT Hungarian Gas Transit Ltd.	2017	HUi	HU	26.0 GWh/d

Comment: .

Sponsors	General Information	No Barriers Defined	Barriers (Count)
	Promoter <i>Magyar Gáz Tranzit Zrt.</i>		
	Operator <i>MGT Hungarian Gas Transit Ltd.</i>		
	Host Country <i>Hungary</i>		
	Status <i>Planned</i>		
	Website		
	Publication Approval Status <i>Approved</i>		

Enabled Projects

Project Code	Project Name
TRA-F-148	Slovak-Hungarian interconnector (Vecsés-Szada-Balassagyarmat)
TRA-N-636	Development of Transmission Capacity at Slovak-Hungarian interconnector

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>No (MGT submitted this project to FGSZ and proposed to forward for approval to Hungarian Energy Office (MEKH). FGSZ is responsible for setup the Hungarian TYNDP and for submit it to MEKH. FGSZ put this project to the documentation of Development Plan 2015 but doesn't propose it for approval.)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
		Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>Yes</i>
		Market Test			Exemption Granted	<i>No</i>
		Permitting				
NDP Number		Supply Contracts			Exemption in entry direction	<i>0.00%</i>
		FID			Exemption in exit direction	<i>0.00%</i>
Currently PCI	<i>Yes (TRN-A-524)</i>	Commissioning	<i>2017</i>	<i>2017</i>		
CBCA Decision					<i>No</i>	
Market Survey	<i>Not Relevant (no CBCA decision)</i>					

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Hungarian section		800	92		
Slovak		800	18		
Total			110		

PCI Details	
PCI Benefits	Project concerns investment in reverse flow capacity
General Criteria Fulfilled	No
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Expected Gas Sourcing
Norway, Russia, LNG (HR,PL)



Benefits

Main Driver

[Market Demand](#)

Main Driver Explanation

Benefit Description



Development of Transmission Capacity at Slovak-Hungarian interconnector

TRA-N-636	Project	Pipeline including CS	Non-FID
Update Date	25/05/2016		Non-Advanced
Description	Reducing the flow direction switch operation time. Developing the transmission capacity in HU>SK and SK>HU direction from interruptible capacity to non-interruptible (firm) capacity.		
Regulatory Decisions and similar material conditions			

Sponsors	General Information	No Barriers Defined	Barriers (Count)
	Promoter <i>Magyar Gáz Tranzit Zrt.</i>		
	Operator <i>MGT Hungarian Gas Transit Ltd.</i>		
	Host Country <i>Hungary</i>		
	Status <i>Planned</i>		
	Website		
	Publication Approval Status <i>Approved</i>		

Enabled Projects

Project Code	Project Name
TRA-F-148	Slovak-Hungarian interconnector (Vecsés-Szada-Balassagyarmat)
TRA-N-524	Enhancement of Transmission Capacity of Slovak-Hungarian interconnector

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>No (MGT submitted this project to FGSZ and proposed to forward for approval to Hungarian Energy Office (MEKH). FGSZ is responsible for setup the Hungarian TYNDP and for submit it to MEKH. FGSZ put this project to the documentation of Development Plan 2015 but doesn't propose it for approval.)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
		Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>Yes</i>
		Market Test			Exemption Granted	<i>Yes</i>
		Permitting				
NDP Number		Supply Contracts			Exemption in entry direction	<i>0.00%</i>
		FID			Exemption in exit direction	<i>0.00%</i>
Currently PCI	<i>Yes (TRA-N-636)</i>	Commissioning	<i>2017</i>	<i>2017</i>		
CBCA Decision					<i>No</i>	
Market Survey	<i>Not Relevant (no CBCA decision)</i>					

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Hungarian section		800	92		
Slovak section		800	18		
Total			110		

PCI Details	
PCI Benefits	Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Expected Gas Sourcing
Norway, Russia, LNG ()

Benefits

Main Driver [Market Demand](#)

Main Driver Explanation [The transmission capacity in HU>SK direction is changed from interruptible capacity to non-interruptible \(firm\) capacity.](#)

Benefit Description [Reducing the flow direction switch operation time.](#)

6 Italy

Support to the North West market and bidirectional cross-border flows

TRA-F-214	Project	Pipeline including CS	FID
Update Date	13/06/2016		Advanced
Description	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.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Griespass (CH) / Passo Gries (IT)	Snam Rete Gas S.p.A.	2018	IB-ITe	CH	368.0 GWh/d
	<i>Comment: Total capacity of TRA-F-213 and TRA-F-214 is equal to 421 GWh/d. 232 GWh/d can be booked only at the point of Gries Pass, 189 GWh/d can be booked at the point of Tarvisio and/or Gries (competing capacity).</i>				
Italy Northern Export Fork	Snam Rete Gas S.p.A.	2018	IT	IB-ITe	421.0 GWh/d
	<i>Comment: Total capacity of TRA-F-213 and TRA-F-214 is equal to 421 GWh/d. 232 GWh/d can be booked only at the point of Gries Pass, 189 GWh/d can be booked at the point of Tarvisio and/or Gries (competing capacity).</i>				
Tarvisio (IT) / Arnoldstein (AT)	Snam Rete Gas S.p.A.	2018	IB-ITe	AT	189.0 GWh/d
	<i>Comment: Total capacity of TRA-F-213 and TRA-F-214 is equal to 421 GWh/d. 232 GWh/d can be booked only at the point of Gries Pass, 189 GWh/d can be booked at the point of Tarvisio and/or Gries (competing capacity).</i>				

Sponsors	General Information
Snam Rete Gas S.p.A. 100%	Promoter Snam Rete Gas S.p.A.
	Operator Snam Rete Gas S.p.A.
	Host Country Italy
	Status Planned
	Website Project's URL
	Publication Approval Status Approved

No Barriers Defined

Barriers (Count)

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (<i>Snam Rete Gas TYNDP 2016-2025</i>)	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number	<i>TRA-F-214(into text)</i>	Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
Currently PCI	Yes (<i>5.11</i>)	Market Test			Exemption Granted	<i>No</i>
		Permitting				
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning	<i>2018</i>	<i>2018</i>		

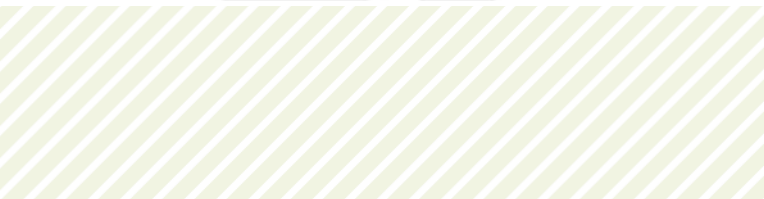
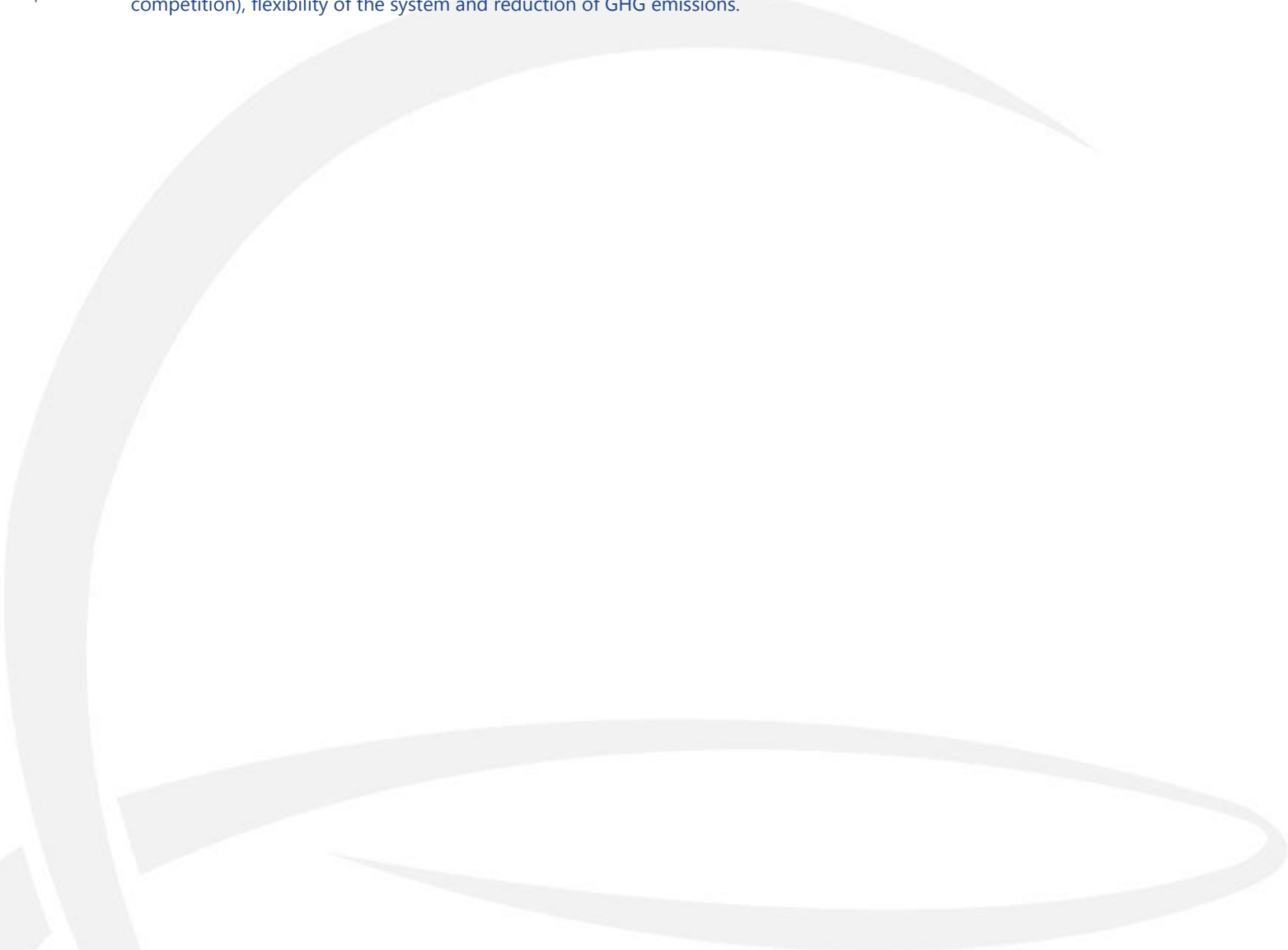
Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Section 1		1,400	62	0	
Section 2		1,200	19	0	
Section 3		0	0	85	
Total			81	85	

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply
Specific Criteria Fulfilled Comments	The project fulfills also the criteria of reverse flows, diversification of routes, N-1 regional, back-up for renewables, power-to-gas, market integration (increase of competition), flexibility of the system and reduction of GHG emissions.

Benefits	
Main Driver	Market Demand
Main Driver Explanation	



Benefit Description Security of supply, reverse flows, diversification of routes, N-1 regional, back-up for renewables, power-to-gas, market integration (increase of competition), flexibility of the system and reduction of GHG emissions.



Development for new import from the South (Adriatica Line)

TRA-N-007	Project	Pipeline including CS	Non-FID
Update Date	13/06/2016		Non-Advanced
Description	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.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Italy Mezzogiorno Import Fork	Snam Rete Gas S.p.A.	2023	IB-ITs	IT	264.0 GWh/d

Sponsors		General Information		No Barriers Defined	Barriers (Count)
Snam Rete Gas s.p.a.	100%	Promoter	<i>Snam Rete Gas S.p.A.</i>		
		Operator	<i>Snam Rete Gas S.p.A.</i>		
		Host Country	<i>Italy</i>		
		Status	<i>Planned</i>		
		Website	<u><i>Project's URL</i></u>		
		Publication Approval Status	<i>Approved</i>		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (<i>Snam Rete Gas TYNDP 2016-2025</i>)	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number	<i>TRA-N-007(into text)</i>	Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
Currently PCI	Yes (<i>6.18</i>)	Market Test			Exemption Granted	<i>No</i>
		Permitting				
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning	<i>2023</i>	<i>2023</i>		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
All the pipe		1,200	430	33	
Total			430	33	

PCI Details	
PCI Benefits	
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply
Specific Criteria Fulfilled Comments	The project fulfills also the criteria of diversification of sources, diversification of routes, N-1 National (Italy), back-up for renewables, power-to-gas, market Integration (Increase of competition) and flexibility of the system.

Benefits	
Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	Security of supply, diversification of sources, diversification of routes, N-1 National (Italy), back-up for renewables, power-to-gas, market Integration (Increase of competition) and flexibility of the system.

Interconnection with Slovenia

TRA-N-354	Project	Pipeline including CS	Non-FID
Update Date	24/05/2016		Non-Advanced
Description	In line with the expected increase in gas consumption in the area of Koper (SLO), the project foresees new capacity at the new exit point of the national network of San Dorligo della Valle.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
San Dorligo della Valle (IT) /Osp (SI)	Snam Rete Gas S.p.A.	2023	IT	SI	3.6 GWh/d

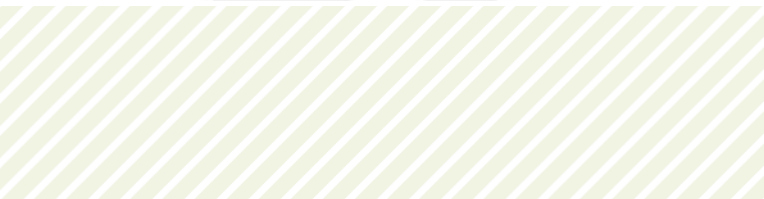
Sponsors	General Information	No Barriers Defined	Barriers (Count)
Snam Rete Gas s.p.a. 100%	Promoter <i>Snam Rete Gas S.p.A.</i> Operator <i>Snam Rete Gas S.p.A.</i> Host Country <i>Italy</i> Status <i>Planned</i> Website <i>Project's URL</i> Publication Approval Status <i>Approved</i>		

NDP and PCI Information	Schedule	Start Date	End Date	Third-Party Access Regime
Part of NDP <i>Yes (Snam Rete Gas TYNDP 2016-2025)</i>	Pre-Feasibility			Considered TPA Regime <i>Regulated</i>
NDP Number <i>TRA-N-354</i>	Feasibility			Considered Tariff Regime <i>Regulated</i>
	FEED			Applied for Exemption <i>No</i>
Currently PCI <i>No</i>	Market Test			Exemption Granted <i>No</i>
	Permitting			
CBCA Decision <i>No</i>	Supply Contracts			Exemption in entry direction <i>0.00%</i>
Market Survey <i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction <i>0.00%</i>
	Construction			
	Commissioning	2023	2023	



Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
All the pipe		250	6	0	
Total			6	0	

Benefits	
Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	



Import developments from North-East

TRA-N-008	Project	Pipeline including CS	Non-FID
Update Date	24/05/2016		Non-Advanced
Description	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.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
	Snam Rete Gas S.p.A.	2034	IB-ITn	IT	340.0 GWh/d
New IP North-East Italy	<i>Comment: Considering that the promoter submitted the project as relevant for TYNDP according to its national development plan, ENTSOG considers the capacity increment as relevant for modelling purposes in the final year of the publication (2035).</i>				

Sponsors	General Information	No Barriers Defined	Barriers (Count)
Snam Rete Gas s.p.a.	Promoter <i>Snam Rete Gas S.p.A.</i> Operator <i>Snam Rete Gas S.p.A.</i> Host Country <i>Italy</i> Status <i>Planned</i> Website <i>Project's URL</i> Publication Approval Status <i>Approved</i>		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (<i>Snam Rete Gas TYNDP 2016-2025</i>)	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number	<i>TRA-N-008(into text)</i>	Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test			Exemption Granted	<i>No</i>
		Permitting				
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning	<i>2034</i>	<i>2034</i>		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Section 1		1,050	15	0	
Section 2		1,400	119	0	
Section 3		0	0	75	
Total			134	75	

Benefits	
Main Driver	<u>Market Demand</u>
Main Driver Explanation	
Benefit Description	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.

Additional Southern developments

TRA-N-009	Project	Pipeline including CS	Non-FID
Update Date	24/05/2016		Non-Advanced
Description	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.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Italy Mezzogiorno Import Fork	Snam Rete Gas S.p.A.	2034	IB-ITs	IT	264.0 GWh/d
	<i>Comment: Considering that the promoter submitted the project as relevant for TYNDP according to its national development plan, ENTSOG considers the capacity increment as relevant for modelling purposes in the final year of the publication (2035).</i>				
Italy Southern Import Fork	Snam Rete Gas S.p.A.	2034	IB-ITi	IB-ITs	264.0 GWh/d
	<i>Comment: Considering that the promoter submitted the project as relevant for TYNDP according to its national development plan, ENTSOG considers the capacity increment as relevant for modelling purposes in the final year of the publication (2035).</i>				

Sponsors		General Information		No Barriers Defined	Barriers (Count)
Snam Rete Gas s.p.a.	100%	Promoter	Snam Rete Gas S.p.A.		
		Operator	Snam Rete Gas S.p.A.		
		Host Country	Italy		
		Status	Planned		
		Website	Project's URL		
		Publication Approval Status	Approved		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (<i>Snam Rete Gas TYNDP 2016-2025</i>)	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number	<i>TRA-N-009(into text)</i>	Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test			Exemption Granted	<i>No</i>
		Permitting				
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning	<i>2034</i>	<i>2034</i>		

Pipelines and Compressor Stations

Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)
Section 1		800	255	0
Section 2		1,050	115	0
Section 3		1,200	590	0
Section 4		0	0	60
Total			960	60

Benefits

Main Driver	<u>Market Demand</u>
Main Driver Explanation	
Benefit Description	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.

Bordolano Second phase

UGS-F-1045	Project	Storage Facility	FID
Update Date	13/06/2016		Advanced
Description	The project is related to the conversion of the depleted reservoir of Bordolano, into a reservoir for the storage of methane gas		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
	STOGIT	2019	STcIT	IT	185.0 GWh/d
	<i>Comment: Interconnection point Storage hub/Transportation grid is a commercial point. The capacity available is equal to the capacity offered or planned to be offered by the storage companies.</i>				
UGS - IT - Snam Rete Gas/STOGIT	STOGIT	2019	IT	STcIT	109.0 GWh/d
	<i>Comment: Interconnection point Storage hub/Transportation grid is a commercial point. The capacity available is equal to the capacity offered or planned to be offered by the storage companies.</i>				

Sponsors	General Information	No Barriers Defined	Barriers (Count)
	Promoter		
	Operator		
	Host Country		
	Status		
	Website		
	Publication Approval Status		

Promoter *STOGIT S.p.A.*
 Operator *STOGIT*
 Host Country *Italy*
 Status *Planned*
 Website *[Project's URL](#)*
 Publication Approval Status *Approved*

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (Snam Rete Gas TYNDP 2016-2025)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number	<i>NA</i>	Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test			Exemption Granted	<i>Not Relevant</i>
		Permitting				
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning	<i>2019</i>	<i>2019</i>		

Technical Information (UGS)

Storage Facility	<i>Bordolano</i>				
Storage Facility Type	<i>Depleted Field</i>				
Multiple-Cycle	<i>No</i>				
Working Volume (mcm)	<i>757.00</i>	<i>the entire w.g. volume of Bordolano (first + second phases) is 1.136 M Nmc</i>			

Benefits

Main Driver	<i>Market Demand</i>
Main Driver Explanation	
Benefit Description	<i>Increased flexibility of the system; Market integration (increase of competition and market liquidity).</i>

System Enhancements - Stogit - on-shore gas fields

UGS-F-260	Project	Storage Facility	FID
Update Date	13/06/2016		Advanced
Description	The project envisages the development of the following depleted on-shore gas fields: Fiume Treste - Minerbio - Ripalta - Sabbioncello - Sergnano - Alfonsine		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
	STOGIT	2026	STcIT	IT	207.0 GWh/d
	<i>Comment: Interconnection point Storage hub/Transportation grid is a commercial point. The capacity available is equal to the capacity offered or planned to be offered by the storage companies.</i>				
UGS - IT - Snam Rete Gas/STOGIT	STOGIT	2026	IT	STcIT	147.0 GWh/d
	<i>Comment: Interconnection point Storage hub/Transportation grid is a commercial point. The capacity available is equal to the capacity offered or planned to be offered by the storage companies.</i>				

Sponsors	General Information	No Barriers Defined	Barriers (Count)
Stogit <div style="width: 100%; height: 10px; background-color: #00AEEF; margin-top: 5px;"></div> 100%	Promoter <i>STOGIT</i> Operator <i>STOGIT</i> Host Country <i>Italy</i> Status <i>Planned</i> Website Publication Approval Status <i>Approved</i>		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (Snam Rete Gas TYNDP 2016-2025)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number	<i>NA</i>	Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test			Exemption Granted	<i>Not Relevant</i>
		Permitting		<i>01/2025</i>		
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning	<i>2026</i>	<i>2026</i>		

Technical Information (UGS)

Storage Facility	<i>Stogit Enhancements and New Developments</i>
Storage Facility Type	<i>Depleted Field</i>
Multiple-Cycle	<i>No</i>
Working Volume (mcm)	<i>2,120.00</i>

Benefits

Main Driver	<i>Regulation SoS</i>
Main Driver Explanation	
Benefit Description	<i>Increased flexibility of the system; Market integration (increase of competition and market liquidity).</i>

Bordolano first phase

UGS-F-259	Project	Storage Facility	FID
Update Date	13/06/2016		Advanced
Description	The project is to convert the depleted reservoir of Bordolano, into a reservoir for the storage of methane gas.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
	STOGIT	2016	STcIT	IT	32.0 GWh/d
	<i>Comment: Interconnection point Storage hub/Transportation grid is a commercial point. The capacity available is equal to the capacity offered or planned to be offered by the storage companies.</i>				
UGS - IT - Snam Rete Gas/STOGIT	STOGIT	2016	IT	STcIT	109.0 GWh/d
	<i>Comment: Interconnection point Storage hub/Transportation grid is a commercial point. The capacity available is equal to the capacity offered or planned to be offered by the storage companies.</i>				

Sponsors	General Information	No Barriers Defined	Barriers (Count)
Stogit <div style="width: 100%; height: 10px; background-color: #00AEEF; margin-top: 5px;"></div> 100%	Promoter <i>STOGIT</i> Operator <i>STOGIT</i> Host Country <i>Italy</i> Status <i>Planned</i> Website <i>Project's URL</i> Publication Approval Status <i>Approved</i>		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (Snam Rete Gas TYNDP 2016-2025)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number	<i>NA</i>	Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test			Exemption Granted	<i>Not Relevant</i>
		Permitting				
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning	<i>2016</i>	<i>2016</i>		

Technical Information (UGS)

Storage Facility	<i>Bordolano</i>	
Storage Facility Type	<i>Depleted Field</i>	
Multiple-Cycle	<i>No</i>	
Working Volume (mcm)	<i>379.00</i>	<i>Total w.g. of Bordolano (first + second phases) is 1136 M Nmc</i>

Benefits

Main Driver	<i>Regulation SoS</i>
Main Driver Explanation	
Benefit Description	<i>Increased flexibility of the system; Market integration (increase of competition and market liquidity).</i>

Nuovi Sviluppi Edison Stoccaggio

UGS-N-235	Project	Storage Facility	Non-FID
Update Date	13/05/2016		Advanced
Description	The project concerns some technical interventions on existing wells of the operating gas storage field of Collalto to increase performances of the field in particular withdrawal and injection capacity.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	Edison Stoccaggio S.p.A.	2017	STclT	IT	16.0 GWh/d
	<i>Comment: The commissioning year is the year of start up of commercial operations.</i>				
UGS - IT - Snam Rete Gas/Edison	Edison Stoccaggio S.p.A.	2017	IT	STclT	11.0 GWh/d
	<i>Comment: The commissioning year is the year of start up of commercial operations.</i>				

Sponsors		General Information		Barriers (Count)	
Edison Stoccaggio	100%	Promoter	Edison Stoccaggio S.p.A	Regulatory	1
		Operator	Edison Stoccaggio S.p.A.	Permit Granting	1
		Host Country	Italy		
		Status	Planned		
		Website			
		Publication Approval Status	Approved		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (National Energy Strategy)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number	<i>No Number</i>	Feasibility	<i>01/2016</i>	<i>01/2017</i>	Considered Tariff Regime	<i>Regulated</i>
		FEED	<i>01/2016</i>	<i>01/2017</i>	Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test			Exemption Granted	<i>No</i>
		Permitting	<i>01/2016</i>	<i>01/2017</i>		
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID		<i>12/2016</i>	Exemption in exit direction	<i>0.00%</i>
		Construction	<i>01/2016</i>	<i>01/2017</i>		
		Commissioning	<i>2017</i>	<i>2017</i>		

Technical Information (UGS)

Storage Facility	<i>Nuovi Sviluppi Edison Stoccaggio</i>	
Storage Facility Type	<i>Depleted Field</i>	
Multiple-Cycle	<i>No</i>	
Working Volume (mcm)	<i>0.00</i>	<i>in 10⁶ Sm³</i>

Time Schedule

Grant Obtention Date	
Delay Since Last TYNDP	<i>1 year delay</i>
Delay Explanation	<i>Delays due to authorization process.</i>

Benefits

Main Driver	<i>Regulation SoS</i>
Main Driver Explanation	
Benefit Description	<i>Market Integration (Increase of competition) and Security of Supply. The Italian Storage system is a market characterized by two operators (Stogit Spa 97% and Edison Stoccaggio Spa 3% of the market share) and our project will enhance the level of competition at national level. it is necessary having in mind that only storage jointly with production are present on national territory and can intervene in case of serious gas crisis. New storages are more flexible to operate for security of supply. The project brings some benefits in case of disruption on critical gas supply routes (such as Ukraine and Libya) towards Italy and more broadly Europe The project is also synergic to develop Italian system as a gas hub and to improve Europe security of supply.</i>

Barriers

Barrier Type	Description
Regulatory	Authority has set a new regulation to boost the increase of withdrawal capacity.
Permit Granting	Local permitting

Palazzo Moroni

UGS-N-237	Project	Storage Facility	Non-FID
Update Date	06/05/2016		Advanced
Description	The project foresees the conversion to storage of a depleting field owned by Edison Stoccaggio S.p.A. in Italy (Marche Region).		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	Edison Stoccaggio S.p.A.	2019	STcIT	IT	11.0 GWh/d
	<i>Comment: The commissioning year is the year of start up of commercial operations.</i>				
UGS - IT - Snam Rete Gas/Edison	Edison Stoccaggio S.p.A.	2019	IT	STcIT	11.0 GWh/d
	<i>Comment: The commissioning year is the year of start up of commercial operations.</i>				

Sponsors		General Information		Barriers (Count)	
Edison Stoccaggio	100%	Promoter	Edison Stoccaggio S.p.A	Regulatory	1
		Operator	Edison Stoccaggio S.p.A.	Permit Granting	1
		Host Country	Italy		
		Status	Planned		
		Website	Project's URL		
		Publication Approval Status	Approved		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (National Energy Strategy)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number	<i>No Number</i>	Feasibility	<i>01/2009</i>	<i>01/2013</i>	Considered Tariff Regime	<i>Regulated</i>
		FEED	<i>01/2013</i>	<i>01/2017</i>	Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test		<i>01/2019</i>	Exemption Granted	<i>No</i>
		Permitting	<i>01/2009</i>	<i>01/2017</i>		
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID		<i>01/2017</i>	Exemption in exit direction	<i>0.00%</i>
		Construction	<i>01/2017</i>	<i>01/2019</i>		
		Commissioning	<i>2019</i>	<i>2019</i>		

Technical Information (UGS)

Storage Facility	<i>Palazzo Moroni</i>	
Storage Facility Type	<i>Depleted Field</i>	
Multiple-Cycle	<i>No</i>	
Working Volume (mcm)	<i>50.00</i>	<i>in 10⁶ Sm³</i>

PCI Details

PCI Benefits	Project aims at fulfilling the infrastructure standard (N-1) rule at regional level in accordance with Article 6(3) of Regulation EU, Project aims at supplying directly or indirectly at least two Member States
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply
Specific Criteria Fulfilled Comments	Security of Supply and Market Integration (Increase of competition); The Italian Storage system is a market characterized by two operators (Stogit Spa 97% and Edison Stoccaggio Spa 3% of the market share), and our projects will enhance the level of competition at national level. It is necessary having in mind that only storage jointly with production are present on national territory and can intervene in case of serious gas crisis. New storages are more flexible to operate for security of supply and to work as back up to renewables. The project increases security of supply on European gas system. The project brings some benefits in case of disruption on critical gas supply routes (such as Ukraine and Libya) towards Italy and more broadly Europe Our project is also synergic to develop Italian system as a gas hub and to improve Europe security of supply.

Benefits

Main Driver	Regulation SoS
Main Driver Explanation	
Benefit Description	Security of Supply and Market Integration (Increase of competition); The Italian Storage system is a market characterized by two operators (Stogit Spa 97% and Edison Stoccaggio Spa 3% o f the market share). The project will enhance the level of competition and security of supply at national level. It's synergic to develop Italian system as a gas hub and to improve Europe security of supply. Palazzo Moroni has an optimal working gas/withdrawal capacity ratio which is in line with the Italian energy strategy.

Barriers

Barrier Type	Description
Regulatory	Authority has set a new regulatory framework for 2015-2018, which was really different from the previous. In 2018 the Authority will set the new framework for 2019-2022.
Permit Granting	Delays with local permitting. The project has already achieved important autorization such as EIA and Seveso.

GALSI Pipeline Project

TRA-N-012	Project	Pipeline including CS	Non-FID
Update Date	09/05/2016		Advanced
Description	<p>Gas pipeline project aiming to create a new link between Algeria and Italy via Sardinia. It will be the first direct route between Algeria and Italy transporting 8 billions mc of gas. From El Kala (Koudiet Draouche) in Algeria an offshore section will cross the Mediterranean Sea going down to 2.800 m of depth getting to Porto Botte in Sardinia (which will be the entry point in the Italian RNG - Rete Nazionale Gasdotti or Gas National Network). From Porto Botte an onshore section will cross Sardinia towards Olbia in the north of the island (with 39 offtake point along the route to finally bring the long awaited gas to Sardinian users and thus remove the isolation of Sardinia from RNG). From Olbia then another offshore section of the pipeline will cross the Tyrrhenian Sea at around 800 m of depth to get to Piombino in Tuscany where the pipeline will be connected with the existing Rete Nazionale Gasdotti of Snam Rete Gas.</p>		
Regulatory Decisions and similar material conditions	<p>The Project has already received from the competent Italian Ministry (Ministero dello Sviluppo Economico) a Priority Allocation (Allocazione Prioritaria) for 100% of its capacity for a period of 25 years.</p>		

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Koudiet Eddraouch (Galsi) (DZ)	Galsi S.p.A.	2019	DZ	DZi/GAL	258.0 GWh/d
	<i>Comment: Entry of GALSI International Section Increment is equivalent to 8 bcm/y</i>				
Olbia (Galsi)	Galsi S.p.A.	2019	ITs	ITn/GAL	258.0 GWh/d
	<i>Comment: Increment is equivalent to 8 bcm/y</i>				
Piombino (Galsi)	Galsi S.p.A.	2019	ITn/GAL	ITs	32.0 GWh/d
	<i>Comment: Equivalent to 1 bcm/y</i>				
Porto Botte (Galsi)	Galsi S.p.A.	2019	ITn/GAL	IB-ITs	226.0 GWh/d
	<i>Comment: Equivalent to 7 bcm/y</i>				
Porto Botte (Galsi)	Galsi S.p.A.	2019	DZi/GAL	ITs	258.0 GWh/d
	<i>Comment: Exit of GALSI International Section Increment is equivalent to 8 bcm/y</i>				

Sponsors		General Information	
Sonatrach	47%	Promoter	Galsi S.p.A.
Edison SpA	23%	Operator	Galsi S.p.A.
Enel Produzione SpA	17%	Host Country	Italy
Hera SpA	11%	Status	Planned
		Website	Project's URL
		Publication Approval Status	Approved



Barriers (Count)

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (SNAM NDP 2015 (page 61))	Pre-Feasibility		12/2006	Considered TPA Regime	Not Applicable
NDP Number	n.a.	Feasibility	01/2006	12/2006	Considered Tariff Regime	Not Applicable
		FEED	01/2007	12/2010	Applied for Exemption	Not Relevant
Currently PCI	Yes (5.20)	Market Test		10/2010	Exemption Granted	Not Relevant
		Permitting	07/2008	05/2016		
CBCA Decision	No	Supply Contracts		05/2016	Exemption in entry direction	0.00%
Market Survey	Not Relevant (no CBCA decision)	FID		05/2016	Exemption in exit direction	0.00%
		Construction	06/2016	06/2019		
		Commissioning	2019	2019		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
GALSI International Section	The GALSI International Section includes a compression station on the Algerian coast (3x33 MW) and a gas sealine from Algerian coast to South Sardinia coast (Porto Botte, near Cagliari)	660	288	99	
GALSI Italian Section 1 onshore pipeline crossing Sardinia	The GALSI National Section will become integral part of the Italian National Gas Network, with the Entry Point located at the landfall of the sealine from Algeria in South Sardinia coast (Porto Botte). In Sardinia the project foresees 39 offtake points.	1,219	285		

GALSI Italian Section 2 sealine Sardinia - Tuscany	This section includes a 285 km sealine from Olbia (Sardinia) - where it will be realized a 2x26 MW compression station - to Piombino (Tuscany) and 3 km onshore pipeline in Tuscany up to the interconnection with existing Snam gas network.	812	288	52
Total			861	151

PCI Details

PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity, Project aims at supplying directly or indirectly at least two Member States
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	The project will contribute to the creation of an Italian Gas Hub, by opening a more efficient route to reach the barycentre of Italian gas demand and further on the Central EU market. It will give a significant contribution to security of supply and competition for Italy and Europe. It represents a unique opportunity of a clean and sustainable energy source for Sardinia (and possibly for Corsica).

Time Schedule

Grant Obtention Date	13/08/2010
Delay Since Last TYNDP	12 months
Delay Explanation	Delay mainly due to delays in the authorisation process in Italy and Algeria.

Expected Gas Sourcing

Algeria, In the longer term, with the realisation of ambitious projects aiming to interconnect new African gas reserves to European ma

Comments about the Third-Party Access Regime

On 29th October 2010, the project has received from the competent Italian Authority (Ministry of the Economic Development) by decree a Priority Allocation right (Allocazione Prioritaria) of the entry capacity at the Porto Botte Entry Point, for 100% of the capacity and for a period of 25 years.

Benefits

Main Driver	Market Demand
Main Driver Explanation	The project has been developed from its start on the basis of the prospected timing of European gas demand growth.

Benefit Description - 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 fo

Barriers	
Barrier Type	Description
Regulatory	The Italian Section of the project will be ruled under the Italian regulatory framework. The International Section (from Algeria to Italian territorial waters in Sardinia) will be build and operated by Galsi as an independent operator with a tariff agreed between the Company and shippers.
Permit Granting	Permitting process (involved inter alia 2 regions, 9 provinces and 40 townships) substantially completed: environmental permi
Market	The persistent uncertainties in the market scenarios make more complex the finalisation by the Shareholders of the commercial framework of the project, i.e. the definition of suitable terms and conditions for the gas supply and gas transportation agreements, which represents an essential piece for the final investment decision.
Financing	EEPR funds for 120 millions euros were granted by the European Commission with decision on 13th August 2010. This grant was then cancelled with decision on 26th September 2014. Future availability of new European Commission funds would be a key issue for the success of the project.

Intergovernmental Agreements			
Agreement	Agreement Description	Is Signed	Agreement Signature Date
Italy – Algeria Inter-Governmental Agreement for Galsi project	Agreement between Italy and Algeria to promote and support the permitting, the construction and the commissioning of the Galsi Pipeline Project.	Yes	14/11/2007

Porto Empedocle LNG

LNG-N-198	Project	LNG Terminal	Non-FID
Update Date	25/05/2016		Advanced
Description	<p>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.</p>		
Regulatory Decisions and similar material conditions	awaiting Ministerial decree to be classified as "Strategic Infrastructure" for Italian system		

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Porto Empedocle LNG	Nuove Energie S.r.l.	2021	LNG_Tk_IT	IB-ITi	301.5 GWh/d

Sponsors	General Information		Barriers (Count)	
Nuove Energie Srl	100%	Promoter		Nuove Energie S.r.l.
		Operator		Nuove Energie S.r.l.
		Host Country		Italy
		Status		Planned
		Website		
		Publication Approval Status		Approved

Financing

1

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime		
Part of NDP	<i>Yes (Piano decennale di sviluppo SNAM 2015-2024)</i>	Pre-Feasibility		01/2006	Considered TPA Regime	<i>Regulated</i>	
NDP Number		Feasibility		01/2006	Considered Tariff Regime	<i>Negotiated</i>	
Currently PCI	<i>n.a.</i>	FEED		03/2006	Applied for Exemption	<i>Yes</i>	
CBCA Decision		Market Test			01/2018	Exemption Granted	<i>Yes</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	Permitting		01/2009			
		Supply Contracts				Exemption in entry direction	<i>100.00%</i>
		FID			10/2017	Exemption in exit direction	<i>100.00%</i>
		Construction		11/2017			
		Commissioning		2021			

Technical Information (LNG)

LNG Facility	<i>Porto Empedocle LNG</i>	
Expected Volume (bcm/y)	<i>8</i>	
Storage Capacity (m3)	<i>320,000</i>	
Ship Size (m3)	<i>155,000</i>	
Reloading Ability	<i>Yes</i>	
	<i>Current design foresees that the terminal will be able to receive LNG tankers up to 155.000 m3 of capacity. Possible future studies to allow the berthing of larger ships</i>	

PCI Details

PCI Benefits	Project aims at fulfilling the infrastructure standard (N-1) rule at regional level in accordance with Article 6(3) of Regulation EU	
General Criteria Fulfilled	Yes	
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability	
Specific Criteria Fulfilled Comments	<p>market integration: it provides a good contribution to the EU gas market integration, being the Italian system well interconnected with the rest of EU gas market, through TAG and Transigas, with positive impact on prices, gas flows, diversification, flexibility and price convergence.</p> <p>security of supply: it provides a strong improvement of the SoS of the system, not only in Italy but also in other Member States; LNG is more diversified and flexible than gas via pipeline and it gives access to a plurality of markets and players.</p> <p>sustainability: it provides additional gas-fired operational flexibility required by the growing intermittent renewables generation; building a terminal in South Italy (Sicily) would help to create local and sustainable jobs in the area.</p> <p>competition: it provides additional competitive pressure to traditional import sources (Algeria, Norway, Lybia, Russia) which are becoming more important because of the indigenous production depletion</p>	

Time Schedule

Grant Obtention Date	
Delay Since Last TYNDP	about 2 years
Delay Explanation	Nuove Energie is awaiting the ministerial decree that have to follow the National Energy Strategy (SEN) which will identify the "Strategic Infrastructure" for the gas italian system. Such decree should also clarifies possible incentive mechanisms for infrastructure which are classified as "strategic".

Expected Gas Sourcing

LNG (DZ,QA,US), Nigeria, Trinidad and Tobago, Equatorial Guinea

Comments about the Third-Party Access Regime

The TPA exemption has been granted as per EC Decision issued on 7.5.2012 and Italian Ministry of Economic Development Decree issued on June 6th, 2012. Nuove Energie is currently evaluating the possibility to revise its initial position of full TPA exemption.

Benefits

Main Driver	Others
Main Driver Explanation	Diversification: the presence of PE terminal facilitates a strong diversification of supply (in terms of both origins and counterparties) and makes Italy and Europe more resilient in case of disruption and / or increase in prices of the other gas sources System flexibility: Porto Empedocle LNG terminal is a strategic infrastructure for the supply of power technology like the CCGT plants, which provide flexibility to the electric system, also to compensate swift changes in electricity generation from intermittent renewable source. It is a matter of fact that the growing level of intermittent renewable energy sources requires more flexible operation of gas-fired power plants and that this implies a more flexible gas system
Benefit Description	The LNG terminal will provide some storage capacity within its tanks allowing to provide flexibility to the entire system and capability to cope gas emergency. The Porto Empedocle LNG terminal will represent a future platform for additional LNG services for ship bunkering and truck loading that are not currently existing in Italy.

Barriers

Barrier Type	Description
Financing	in the current italian market context, the PCI project status would help to finance the project

LARINO - RECANATI Adriatic coast backbone

TRA-N-974	Project	Pipeline including CS	Non-FID
Update Date	25/05/2016		Advanced
Description	<p>Complete the realisation of a Gas Transportation system on Adriatic coast. The project foresees the development under 5 phases of the main backbone and the compression station. Of these 5 phases, one section is already completed and another one is under construction. - 1 Construction of 110 km 24" LARINO-CHIETI - 55 km 20" CHIETI - CELLINO (already completed and running) - 90 km 20" CELLINO - SAN MARCO (15 km completed and 75 km under construction) - Construction of 32 km 24" SAN MARCO Recanati - Construction 3 MW compression station SAN MARCO</p> <p>The construction and operation of each project section has been already authorized by MISE (Italian Ministry of Economic Development) as part of the National Gas Network. Decree No. 14624 of 25 May 2016, the Italian Ministry of Economic Development has assessed the consistency of SGI's TYNDP with the National Energy Strategy. SGI has included the project in its own TYNDP, as submitted to MiSE and the NRS (AEEGSI). TYNDP approval process is currently being revised due to the transfer of the relevant competences from MiSE to AEEGSI.</p>		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Larino (IT)	Società Gasdotti Italia	2022	IT	ITg	53.0 GWh/d
	<i>Comment: Capacity values refer to the whole completed project</i>				
Recanati (IT)	Società Gasdotti Italia	2022	ITg	IT	53.0 GWh/d
	<i>Comment: Capacity values refer to the whole completed project</i>				
Recanati (IT)	Società Gasdotti Italia	2022	IT	ITg	53.0 GWh/d
	<i>Comment: Capacity values refer to the whole completed project</i>				

Sponsors	General Information	No Barriers Defined
	Promoter	Barriers (Count)
	Operator	
	Host Country	
	Status	
	Website	
	Publication Approval Status	

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (There is no NDP currently in force)</i>	Pre-Feasibility		12/2013	Considered TPA Regime	<i>Regulated</i>
NDP Number	<i>Not applicable</i>	Feasibility	01/2014	12/2014	Considered Tariff Regime	<i>Regulated</i>
		FEED	01/2015	01/2015	Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test		06/2012	Exemption Granted	<i>No</i>
		Permitting	01/2015	12/2019		
CBCA Decision	<i>No</i>	Supply Contracts		06/2019	Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID		12/2016	Exemption in exit direction	<i>0.00%</i>
		Construction	06/2018	12/2022		
		Commissioning	2022	2022		

Pipelines and Compressor Stations

Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)
Cellino-San Marco	15 km completed, 75 km under construction	500	90	
Chieti-Cellino	already completed and running	500	55	
Larino - Chieti		600	110	
San Marco-Recanati	Construction 3 MW compression station SAN MARCO	600	32	3
Total			287	3

PCI Details

PCI Benefits	Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Security of Supply
Specific Criteria Fulfilled Comments	The project appears necessary considering that the stress test on the existing pipeline system have proved critical issues in case of emergency or peak demand in an area where gas flows from the south and from the north merges at a relatively low pressure regime.

Benefits

Main Driver	Regulation SoS
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Main Driver Explanation	<p>The construction of the adriatic coast pipeline will strengthen the flow capacity to SGI's network from the South. The project will enable a new connection to the Stogit's San Salvo Storage facility and to additional potential future storage facilities planned in the area It is expected to deliver incremental capacity northward through connection to existing storage facilities (Cellino) and will complete a major integrated gas transport system in Central Italy The pipe, together with the construction of the planned compression station, will allow the return to SRG of volumes coming from Stogit San Salvo storage</p> <p>The project will strenghten an area where gas flows from the south and from the north merges at a relatively low pressure regime. In critical conditions this set up will face problem in meeting peak gas demand. The project will add 5 mil standard cubic meters per day to the peak gas capacity in reverse flow mode (both in the flow south/north and in the flow north/south).</p>
Benefit Description	<p>Increasing flexibility and allowing reverse flow along the Adriatic coasto:1) support the management of Emergency situation by Snam and 2) ensure the capability to meet increasing peak demand requirement in the area.</p>



Sardinia Gas Transportation Network

TRA-N-975	Project	Pipeline including CS	Non-FID
Update Date	25/05/2016		Non-Advanced
Description	Construction of an onshore Gas Transportation Network on Sardinia island, to be supplied at least by 1 or more micro/mini/midi LNG regassification terminals with small scale LNG capabilities and/or by an offshore connection to mainland. The project foresees the development of the main backbone of the national gas transmission grid (national line) and the parallel connection of the regional lines: - Construction of 292,4 km of 16" national backbone - Additional 657 km of regional primary and secondary connections with diameter ranging from 4" to 16"		
Regulatory Decisions and similar material conditions	SGI has included the project in its own TYNDP, as submitted to MiSE and the NRA (AEEGSI). TYNDP approval process is currently being revised due to the recent transfer of the relevant competence from MiSE to AEEGSI. Sardinia Region Energy and Environmental Plan as issued on 28.01.2016, "PEARS 2015-2030 Proposta Tecnica". Decree No. 14624 of 25 May 2016, the Italian Ministry of Economic Development has assessed the consistency of SGI's TYNDP		

Sponsors	General Information				Barriers (Count)
	Promoter	<i>Società Gasdotti Italia</i>	Regulatory	1	Barriers (Count)
	Operator	<i>Società Gasdotti Italia</i>			
	Host Country	<i>Italy</i>	Others	1	
	Status	<i>Planned</i>			
	Website				
	Publication Approval Status	<i>Approved</i>			

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (There is no NDP currently in force)</i>	Pre-Feasibility		<i>09/2015</i>	Considered TPA Regime	<i>Regulated</i>
NDP Number	<i>Not applicable</i>	Feasibility	<i>02/2016</i>	<i>03/2016</i>	Considered Tariff Regime	<i>Regulated</i>
		FEED	<i>03/2016</i>	<i>12/2016</i>	Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test		<i>06/2014</i>	Exemption Granted	<i>No</i>
		Permitting	<i>01/2017</i>	<i>12/2018</i>		
CBCA Decision	<i>No</i>	Supply Contracts		<i>06/2019</i>	Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID		<i>12/2016</i>	Exemption in exit direction	<i>0.00%</i>
		Construction	<i>06/2019</i>			
		Commissioning	<i>2031</i>	<i>2031</i>		

PCI Details

PCI Benefits	
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Sustainability
Specific Criteria Fulfilled Comments	This Project will halt Sardinia industrial decline driven - also - by higher than average energy cost. The high energy cost is a barrier to the development of new competitive productive activities. Current generation capacity is coal/fuel oil based. Gas substitution is an upside which will bring environmental benefits. An integrated onshore gas + Small Scale LNG development will be the catalyst for developing LNG bunkering leveraging on Sardinia ferry connections and its position at the centre of the Med.

Expected Gas Sourcing

LNG ()

Benefits

Main Driver	Market Demand
Main Driver Explanation	Sardinia, located off the West coast of Italy, has ca. 1.7mn inhabitants and is currently the only region in Italy that does not have a proper gas infrastructure Sassari, Nuoro, Oristano and Cagliari have already a developed local distribution network, supplied by aired LPG; local distribution companies are developing a network covering ca. 40% of the population. Additional investments would significantly improve gas penetration in the island. MSE, the Sardinia region and AEEGSI are assessing possible solutions to Sardinia’s gas supply via LNG
Benefit Description	Converting coal and oil fired power stations to gas will lead to a substantial reduction of CO2 emissions. A single Sardinia price for gas - enabled by a region wide gas Network - will also bring a relevant cost reduction for Sardinia citizens and industries, whose energy prices can be as high as twice Italian average.

Barriers

Barrier Type	Description
Regulatory	NRA to clarify: 1) that Tariff Regime applicable in mainland Italy is also applicable on Sardinia gas network development, irrespective of its physical connection with Italy's Network; 2) Tariff and TPA Regime for SSLNG (this only indirectly relevant to onshore network)
Others	Time-table of the project can be affected by the effective realization of LNG Terminals

Onshore LNG terminal in the Northern Adriatic

LNG-N-217	Project	LNG Terminal	Non-FID
Update Date	04/07/2016		Non-Advanced
Description	Onshore regasification terminal with 8 bcm/y capacity. Storage capacity: 2 x 140.000 m3; Send-out capacity: 1.075.000 m3(s)/hour. Single jetty and maximum vessel size of 145.000 m3.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Zaule LNG (Trieste)	gasNatural Rigassificazione S.p.A.	2021	LNG_Tk_IT	IB-ITn	258.0 GWh/d

Sponsors	General Information		No Barriers Defined	Barriers (Count)
GAS NATURAL RIGASSIFICAZIONE ITALIA S.p.A. 100%	Promoter	Gas Natural Rigassificazione Italia		
	Operator	gasNatural Rigassificazione S.p.A.		
	Host Country	Italy		
	Status	Planned		
	Website	Project's URL		
	Publication Approval Status	Approved		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>No (This project is not part of a National Development Plan as it is located on the Italian coast and there is no National Development Plan in Italy, which is the project host country.)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
		Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
		Market Test			Exemption Granted	<i>No</i>
NDP Number		Permitting				
Currently PCI	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
		FID		<i>12/2017</i>	Exemption in exit direction	<i>0.00%</i>
CBCA Decision	<i>No</i>	Construction				
Market Survey	<i>Not Relevant (no CBCA decision)</i>					
		Commissioning	<i>2021</i>	<i>2021</i>		

Technical Information (LNG)

LNG Facility	<i>Zaule LNG Terminal (Trieste - Italy)</i>	
Expected Volume (bcm/y)	<i>8</i>	
Storage Capacity (m3)	<i>280,000</i>	<i>net storage capacity in 2 tanks</i>
Ship Size (m3)	<i>145,000</i>	
Reloading Ability	<i>No</i>	

PCI Details

PCI Benefits	
General Criteria Fulfilled	<i>Yes</i>
Specific Criteria Fulfilled	<i>Market Integration</i>
Specific Criteria Fulfilled Comments	

Time Schedule

Grant Obtention Date	
Delay Since Last TYNDP	



Delay Explanation

The temporary suspension of the validity of the July 2009 EIA by Italian Environment Ministry Decree (April 18, 2013), has delayed up to date the Services Conference procedures, the award of Final Authorization and therefore the project construction and commissioning dates The final resolution recently issued in February 2015 restoring the validity of the EIA will resume the last phase of permitting process (Services Conference).

Expected Gas Sourcing

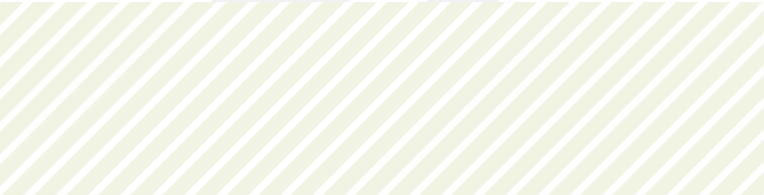
LNG for the terminal may come from any LNG producer in the world . We envisage a liquid LNG market with a crescent importance

Benefits

Main Driver Others

Main Driver Explanation

Benefit Description Decontamination of part of Trieste Industrial Harbour. Boost in economic activity in the city, province and region.



7 Romania

Romania-Bulgaria Interconnection (EPR-2009-INTg-RO-BG)

TRA-F-029	Project	Pipeline including CS	FID
Update Date	24/05/2016		Advanced
Description	<p>The interconnection project includes the following objectives: • land section (DN 500, PN 40 bar, L= 5,1 km) on the Romanian territory between the metering station Giurgiu and the Danube undercrossing point on the Romanian shore and the gas metering station in the vicinity of Giurgiu - SNTGN Transgaz SA is responsible for its implementation; • land section (DN 500, PN 40 bar, L = 15,4 km) on the Bulgarian territory, between the gas metering station Ruse and the Danube undercrossing point on the Bulgarian shore and the gas metering station in the vicinity of Ruse - Bulgartransgaz EAD is responsible for its implementation; • Danube undercrossing by two pipelines (DN 500, PN 50 bar), each pipeline is 2.1 km long (one main pipeline and one back-up pipeline) the responsibility of their implementation is joint.</p>		
Regulatory Decisions and similar material conditions			

Point	Operator	Year	From Gas System	To Gas System	Capacity
Ruse (BG) / Giurgiu (RO)	SNTGN Transgaz S.A.	2016	BGn	RO	14.4 GWh/d
	SNTGN Transgaz S.A.	2016	RO	BGn	14.4 GWh/d

Sponsors		General Information		No Barriers Defined	Barriers (Count)
Bulgartransgaz	54%	Promoter	SNTGN Transgaz SA		
Transgaz	46%	Operator	SNTGN Transgaz S.A.		
		Host Country	Romania		
		Status	Planned		
		Website			
		Publication Approval Status	Approved		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>No (The project is in the final stage of the construction works and will be commissioned during 2016.)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
		Feasibility			Considered Tariff Regime	<i>Regulated</i>
NDP Number		FEED			Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test			Exemption Granted	<i>Not Relevant</i>
		Permitting				
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey		FID			Exemption in exit direction	<i>0.00%</i>
		Construction		<i>01/2016</i>		
	<i>Not Relevant (no CBCA decision)</i>	Commissioning	<i>2016</i>	<i>2016</i>		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Giurgiu-Ruse		500	25		
Total			25		

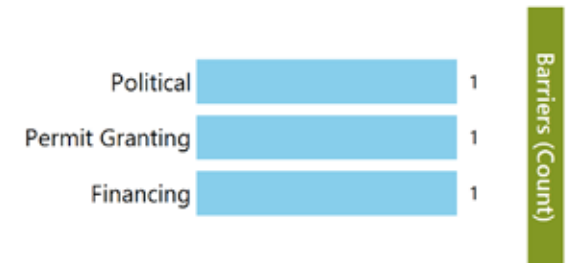
Time Schedule	
Grant Obtention Date	06/09/2010
Delay Since Last TYNDP	12 months
Delay Explanation	Problems during the construction phase. The complicated geological structure, under the bottom section of the Danube river had to be crossed by Horizontal Directional Drilling, produced significant delays as a result of unpredictable factors.

Benefits	
Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	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.

NTS developments in North-East Romania

TRA-N-357	Project	Pipeline including CS	Non-FID
Update Date	01/09/2016		Advanced
Description	<p>Development of the Romanian gas transmission system in order to improve the gas supply in the North –East region of Romania and to increase transmission capacities so as to improve gas supply in the area as well as to ensure transmission capacities in the perspective offered by the new pipeline for the interconnection of Romania and the Republic of Moldova. The scope of the project is the achievement of the following objectives: □ The construction of a new gas transmission pipeline Dn 700, Pn 55 bar, in the direction Onești-Gherăiești, 104 km long; □ The construction of a new gas transmission pipeline Dn 700, Pn 55 bar, in the direction Gherăiești-Lețcani, 61 km long; □ The construction of a gas compressor station at Onești, with an installed power of 6 MW, with 2 compressors of 3 MW each; □ The construction of a gas compressor station at Gherăiești with an installed power of 4 MW, with 2 compressors of 2 MW each.</p>		
Regulatory Decisions and similar material conditions			

Sponsors	General Information
SNTGN Transgaz S.A. 100%	Promoter <i>SNTGN Transgaz SA</i>
	Operator <i>SNTGN Transgaz S.A.</i>
	Host Country <i>Romania</i>
	Status <i>Planned</i>
	Website <i>Project's URL</i>
	Publication Approval Status <i>Approved</i>



NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (Development Plan for the National GTS 2016 - 2025)</i>	Pre-Feasibility		12/2014	Considered TPA Regime	<i>Regulated</i>
NDP Number		Feasibility	01/2015	12/2015	Considered Tariff Regime	<i>Regulated</i>
Currently PCI	<i>No</i>	7.4 FEED	01/2016	05/2017	Applied for Exemption	<i>No</i>
CBCA Decision		Market Test			Exemption Granted	<i>Not Relevant</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	Permitting	01/2015	05/2017	Exemption in entry direction	<i>0.00%</i>
		Supply Contracts			Exemption in exit direction	<i>0.00%</i>
		FID				
		Construction	06/2017	10/2018		
		Commissioning	2018	2018		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Onesti - Letcani		711	165	10	
Total			165	10	

Expected Gas Sourcing

European gas market

Benefits

Main Driver	<u>Regulation-Interoperability</u>
Main Driver Explanation	
Benefit Description	

Barriers

Barrier Type	<u>Description</u>
Permit Granting	<u>The permitting process is long and complicated</u>
Political	<u>Area with potential conflicts Requires the conclusion of an Intergovernmental Agreement</u>
Financing	<u>Availability of funds and associated conditions</u>

Interconnection of the NTS with the DTS and reverse flow at Isaccea

TRA-N-139	Project	Pipeline including CS	Non-FID
Update Date	22/06/2016		Non-Advanced
Description	The project consists of: □ the modernisation and extension of the Siliştea compressor station; □ the modernisation and extension of the Oneşti compressor station; □ changes within the Isaccea metering station; □ rehabilitation of the Cosmeşti – Oneşti (66.2 km) and Siliştea - Şendreni (11.3 km) pipeline sections.		
Regulatory Decisions and similar material conditions			

Sponsors		General Information		Barriers (Count)	
Transgaz	100%	Promoter	SNTGN Transgaz SA	Regulatory	1
		Operator	SNTGN Transgaz S.A.	Permit Granting	1
		Host Country	Romania	Financing	1
		Status	Planned		
		Website	Project's URL		
		Publication Approval Status	Approved		

Enabled Projects

Project Code	Project Name
TRA-N-959	Further enlargement of the BG—RO—HU—AT transmission corridor (BRUA) phase 3

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (Development Plan for the National GTS 2016 - 2025)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number		Feasibility			Considered Tariff Regime	<i>Regulated</i>
	<i>7.3</i>	FEED			Applied for Exemption	<i>No</i>
Currently PCI		Market Test			Exemption Granted	<i>Not Relevant</i>
	<i>Yes (6.15)</i>	Permitting				
CBCA Decision		Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	<i>No</i>			Exemption in exit direction	<i>0.00%</i>
		FID				
		Construction				
		Commissioning	<i>2019</i>	<i>2019</i>		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Onesti-Isaccea	The route from Onesti to Isaccea is approximately 200-km long, but rehabilitation works are foreseen only for 77.5 km.	813	77	22	
Total			77	22	

PCI Details	
PCI Benefits	Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

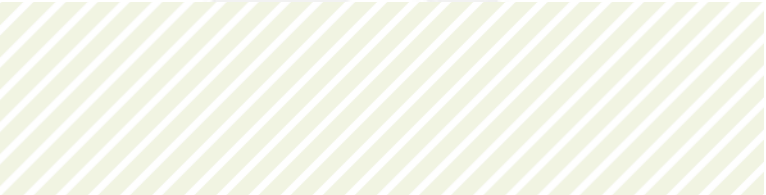
Time Schedule	
Grant Obtention Date	30/07/2010
Delay Since Last TYNDP	12 months
Delay Explanation	

Benefits	
Main Driver	Regulation-Interoperability
Main Driver Explanation	



Benefit Description

Barriers	
Barrier Type	Description
Regulatory	The Competent Authority to coordinate all permit granting processes is not yet functional in Romania.
Permit Granting	The permitting process is long and complicated
Financing	Availability of funds and associated conditions



New NTS developments for taking over gas from the Black Sea shore

TRA-N-964	Project	Pipeline including CS	Non-FID
Update Date	07/05/2016		Non-Advanced
Description	The project consists of the NTS extension for creating an additional overtaking point for the offshore Black Sea blocks gas. In this respect it is considered the building of a transmission pipeline approximately 25 – 30-km long, from the Black Sea shore to the existing T1 international transmission pipeline.		
Regulatory Decisions and similar material conditions			

Sponsors		General Information		Barriers (Count)
SNTGN Transgaz SA	100%	Promoter	SNTGN Transgaz SA	
		Operator	SNTGN Transgaz S.A.	
		Host Country	Romania	
		Status	Planned	
		Website		
		Publication Approval Status	Approved	

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime
Part of NDP	Yes (Development Plan for the National GTS 2016 - 2025)	Pre-Feasibility			Considered TPA Regime
NDP Number	7.6	Feasibility			Considered Tariff Regime
Currently PCI	No	FEED			Applied for Exemption
CBCA Decision	No	Market Test		12/2016	Exemption Granted
Market Survey	Not Relevant (no CBCA decision)	Permitting			
		Supply Contracts			Exemption in entry direction
		FID			Exemption in exit direction
		Construction			
		Commissioning	2019	2019	

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Black Sea Shore - T1	Several pipeline diameter variants under analysis		30		
Total			30		

PCI Details

PCI Benefits					
General Criteria Fulfilled	No				
Specific Criteria Fulfilled	Competition, Security of Supply, Sustainability				
Specific Criteria Fulfilled Comments					

Expected Gas Sourcing

Black Sea

Benefits

Main Driver	Regulation SoS
Main Driver Explanation	Positive impact for security of supply with gas for Romania and Bulgaria through the diversification of the gas transmission routes and enabling access to new sources (the Black Sea zone); - Increase of security of supply with gas for Romania. Since this pipeline enables access to new supply sources over the long term, the probability to interrupt gas supply will be reduced, and in case of an interruption, the consequences will be less serious. This increase of security of supply has benefits also for Bulgaria through a larger gas delivery availability, ensuring thus the cross-border externalities;
Benefit Description	- Increase of competition through the diversification of the gas supply sources and transmission routes, and the the emerging of new players on the regional gas market, with positive effects on the gas price, thus decreasing market concentration for each impacted country; - Increase of sustainability through diminishing CO2 emissions, as a result of replacing gas with liquid (oil) or solid fossil fuels (coal) with higher CO2 emissions.

Barriers

Barrier Type	Description
Financing	Availability of funds and associated conditions

Development on the Romanian territory of the NTS (BG-RO-HU-AT Corridor)

TRA-N-358	Project	Pipeline including CS	Non-FID
Update Date	15/09/2016		Advanced
Description	<p>The scope of the project is the construction of a new gas transmission pipeline to enable the connection between the Technological Hub Podisor and GMS Horia and the construction of compressor stations along the route (CS Jupa, CS Bibesti and CS Podisor). Transgaz considers the development of the BRHA Project in stages, as follows: Stage I □ Gas transmission pipeline Podișor-Recaș 32" x 63 bar, approximately 478 km long; □ Three gas compressor stations (CS Podisor, CS Bibesti, CS Jupa) each station is equipped with two compressor units which may enable bidirectional gas flows. Upon the completion of Stage I the following transmission capacities will be ensured: □ towards Hungary: 1,75 billion m3/year; □ towards Bulgaria: 1,5 billion m3/year. Stage II □ gas transmission pipeline Recaș-Horia 32" x 63 bar, approximately 50 km long; □ expansion of the three gas compressor stations (CS Podisor, CS Bibesti and CS Jupa) by mounting an additional compressor unit in each station); □ Expan</p>		
Regulatory Decisions and similar material conditions	Cross Border Cost Allocation Decision (CBCA)		

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Csanadpalota	SNTGN Transgaz S.A.	2020	HU	RO	76.5 GWh/d
	SNTGN Transgaz S.A.	2020	RO	HU	126.1 GWh/d
Ruse (BG) / Giurgiu (RO)	SNTGN Transgaz S.A.	2020	RO	BGn	29.3 GWh/d

Sponsors	General Information		Barriers (Count)	
SNTGN Transgaz S.A. 100%	Promoter	SNTGN Transgaz S.A.	Regulatory	1
	Operator	SNTGN Transgaz S.A.	Permit Granting	1
	Host Country	Romania		
	Status	Planned		
	Website	Project's URL		
	Publication Approval Status	Approved		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (Development Plan for the National GTS 2016-2025)</i>	Pre-Feasibility		12/2013	Considered TPA Regime	<i>Regulated</i>
NDP Number		Feasibility	01/2014	12/2014	Considered Tariff Regime	<i>Regulated</i>
	<i>7.1</i>	FEED	01/2016	02/2017	Applied for Exemption	<i>No</i>
Currently PCI		Market Test		10/2017	Exemption Granted	<i>Not Relevant</i>
	<i>Yes (Stage I: 6.24.2 Stage II: 6.24.7)</i>	Permitting	01/2014	02/2017		
CBCA Decision		Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Open Season(2017-10-02)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction	08/2017	09/2020		
		Commissioning	2020	2020		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Podisor - Horia		813	528	50	
Total			528	50	

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Time Schedule	
Grant Obtention Date	18/05/2015
Delay Since Last TYNDP	Stage 1- 9 months delay in commissioning Stage 2 – 21 months in commissioning
Delay Explanation	Stage 1 – delay in the tender for teh FEED services related to the compresor stations Stage 2 – uncertainties related to the execution of the infrastructure which enables the connection with the production at the Black Sea

Expected Gas Sourcing	
Caspian Region, LNG (), Black Sea	

Benefits

Main Driver	Market Demand
Main Driver Explanation	Beside Market Demand driver, other important drivers are Security of Supply and Interoperability
Benefit Description	

Barriers

Barrier Type	Description
Regulatory	The Competent Authority to coordinate all permit granting processes is not yet functional in Romania.
Permit Granting	Long and complicated process implying the need to receive the right of access on the field

Development on the Romanian territory of the Southern Transmission Corridor

TRA-N-362	Project	Pipeline including CS	Non-FID
Update Date	01/09/2016		Advanced
Description	The project consists in the building of a transmission pipeline from the Black Sea shore to the Podișor technological node (Giurgiu county) to connect the gas source which will be available at the Black Sea shore with the BULGARIA – ROMANIA – HUNGARY – AUSTRIA corridor.		
Regulatory Decisions and similar material conditions			

Sponsors	General Information			
SNTGN Transgaz SA	100%	Promoter	SNTGN Transgaz SA	
<div style="width: 100%; height: 5px; background-color: #00aaff;"></div>		Operator	SNTGN Transgaz S.A.	
		Host Country	Romania	
		Status	Planned	
		Website	Project's URL	
		Publication Approval Status	Approved	

Regulatory		1	Barriers (Count)
Permit Granting		1	
Financing		1	

Enabled Projects

Project Code	Project Name
TRA-N-358	Development on the Romanian territory of the NTS (BG-RO-HU-AT Corridor)

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (Development Plan for the National GTS 2016-2025)</i>	Pre-Feasibility		05/2014	Considered TPA Regime	<i>Regulated</i>
NDP Number		Feasibility	09/2014	02/2016	Considered Tariff Regime	<i>Regulated</i>
	<i>7.2</i>	FEED	06/2016	03/2017	Applied for Exemption	<i>No</i>
Currently PCI		Market Test		05/2017	Exemption Granted	<i>Not Relevant</i>
	<i>Yes (6.24.8)</i>	Permitting	01/2015	03/2017		
CBCA Decision		Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	<i>No</i> FID			Exemption in exit direction	<i>0.00%</i>
		Construction	01/2018	10/2020		
		Commissioning	2020	2020		

Pipelines and Compressor Stations

Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)
Black Sea - Podișor	The pipeline is telescopic, the diameter is reduced to 1,000 mm	1,200	307	
Total			307	

PCI Details

PCI Benefits	
General Criteria Fulfilled	<i>Yes</i>
Specific Criteria Fulfilled	<i>Competition, Market Integration, Security of Supply, Sustainability</i>
Specific Criteria Fulfilled Comments	

Expected Gas Sourcing

Black Sea

Benefits

Main Driver	<u>Market Demand</u>
Main Driver Explanation	
Benefit Description	- Increase of competition through the diversification of gas sources and transmission routes, and the emerging of new players on the regional gas market, with positive effects on the gas price, decreasing thus market concentration for each impacted country; - Increase of sustainability through diminishing CO2 emissions, as a result of replacing gas with liquid (oil) or solid fossil fuels (coal) with higher CO2 emissions.

Barriers	
Barrier Type	Description
Regulatory	Changes in national/EU legislation which may impact the implementation of the project.
Permit Granting	Long and complicated process requiring also the obtaining of the right of way
Financing	Availability of funds and associated conditions

Eastring - Romania

TRA-N-655	Project	Pipeline including CS	Non-FID
Update Date	03/06/2016		Non-Advanced
Description	Eastring-RO, located in Romania is an essential part of the Eastring project, which connects IP Velké Kapušany / Velké Zlievce at the SK-UA border, with IP at the BG/TR border. Eastring is a natural gas pipeline project. It will not own or sell any natural gas and once available, all its capacity will be offered to any shipper on non-discriminatory basis respecting all EU rules and laws (Directives and Regulations). Eastring will connect the existing gas infrastructure between Slovakia, Hungary, Romania and Bulgaria in a bidirectional conjunction bringing a new transit potential and improving gas market situation in each of the respective countries. Maximum daily bi-directional capacity will be of 20 bcm/year (Stage I) and 40 bcm/year (Stage II). The project would secure supplies in case of RU disruption and therefore it will increase gas SoS in the broader Central-South-East EU region, as well as will allow access to alternative gas sources for Central, Western & Southern Europe		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Eastring Cross-Border BG/EAR <> RO/EAR	SNTGN Transgaz S.A.	2021	BG/EAR	RO/EAR	570.0 GWh/d
	SNTGN Transgaz S.A.	2021	RO/EAR	BG/EAR	570.0 GWh/d
	SNTGN Transgaz S.A.	2025	BG/EAR	RO/EAR	570.0 GWh/d
	SNTGN Transgaz S.A.	2025	RO/EAR	BG/EAR	570.0 GWh/d
Eastring Cross-Border RO/EAR <> HU/EAR	SNTGN Transgaz S.A.	2021	HU/EAR	RO/EAR	570.0 GWh/d
	SNTGN Transgaz S.A.	2021	RO/EAR	HU/EAR	570.0 GWh/d
	SNTGN Transgaz S.A.	2025	HU/EAR	RO/EAR	570.0 GWh/d
	SNTGN Transgaz S.A.	2025	RO/EAR	HU/EAR	570.0 GWh/d

Sponsors		General Information		No Barriers Defined
Transgaz S.A.	100%	Promoter	SNTGN Transgaz SA	Barriers (Count)
		Operator	SNTGN Transgaz S.A.	
		Host Country	Romania	
		Status	Planned	
		Website	Project's URL	
		Publication Approval Status	Approved	

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>No (For the moment, the project lacks sufficient descriptive elements in order for it to be included in the National Gas Transmission System Development Plan.)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
		Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
NDP Number		Market Test			Exemption Granted	<i>Not Relevant</i>
Currently PCI	<i>Yes (6.25.1)</i>	Permitting				
		Supply Contracts			Exemption in entry direction	<i>0.00%</i>
		FID			Exemption in exit direction	<i>0.00%</i>
CBCA Decision	<i>No</i>	Construction				
Market Survey	<i>Not Relevant (no CBCA decision)</i>	Commissioning	<i>2021</i>	<i>2025</i>		

PCI Details

PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Expected Gas Sourcing

Caspian Region, Norway, Russia, LNG (TR), Iraq, Iran, Egypt, Israel, Turkmenistan, Kazakhstan, Cyprus, Azerbaijan, Any gas available at Turkish/European HUBs. For dire

Benefits


Main Driver	Regulation SoS
Main Driver Explanation	The project brings benefits to the SoS, bringing the new sources of gas supply and South-Eastern Europe countries, towards the Central and Western Europe markets, while further enhancing the market integration of the affected countries.
Benefit Description	- Physical alternative for providing gas from other sources, for all Balkan countries' consumption; - Providing security of supply for the Balkan countries' consumption; - Additional utilization for transit and storage assets; - Providing Western shippers with possibility to supply to Balkan countries and even Turkey from different other gas surces located in Europe; - Corridor ready for future gas imports to Europe from the Southern Corridor and other alternative sources.


Further enlargement of the BG—RO—HU—AT transmission corridor (BRUA) phase 3

TRA-N-959	Project	Pipeline including CS	Non-FID
Update Date	22/06/2016		Non-Advanced
Description	Development of gas transmission capacity on the Onești – Coroi – Hațeg – Nădlac corridor depending on the available gas quantities at the Black Sea shore or from other on-shore blocks. The development of this gas transmission corridor requires: □ the rehabilitation of some of the NTS existing pipelines; □ replacement of some of the NTS existing pipelines with new pipelines or the building of new pipelines installed in parallel with the existing ones; □ development of 4 or 5 new compressor stations having a total installed power of approximately 66- 82.5MW.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Csanadpalota 2	SNTGN Transgaz S.A.	2023	HU	RO	128.7 GWh/d
	SNTGN Transgaz S.A.	2023	RO	HU	128.7 GWh/d

Sponsors		General Information		Barriers (Count)
SNTGN Transgaz SA	100%	Promoter	SNTGN Transgaz SA	
		Operator	SNTGN Transgaz S.A.	
		Host Country	Romania	
		Status	Planned	
		Website		
		Publication Approval Status	Approved	

Permit Granting  1

Market  1

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (Development Plan for the National GTS 2016 - 2025)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number		Feasibility			Considered Tariff Regime	<i>Regulated</i>
	<i>7.5</i>	FEED			Applied for Exemption	<i>No</i>
Currently PCI		Market Test			Exemption Granted	<i>Not Relevant</i>
	<i>Yes (6.25.3)</i>	Permitting				
CBCA Decision		Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	<i>No</i>			Exemption in exit direction	<i>0.00%</i>
		FID				
		Construction				
		Commissioning	<i>2023</i>	<i>2023</i>		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Onesti - Nadlac	existing pipelines + rehabilitation + new pipelines	813	843	82	
Total			843	82	

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

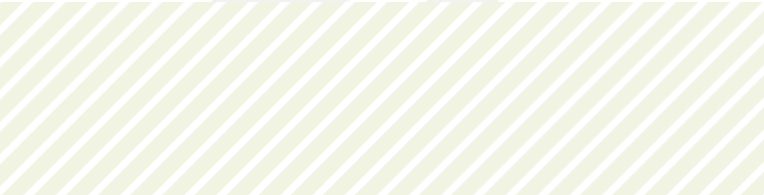
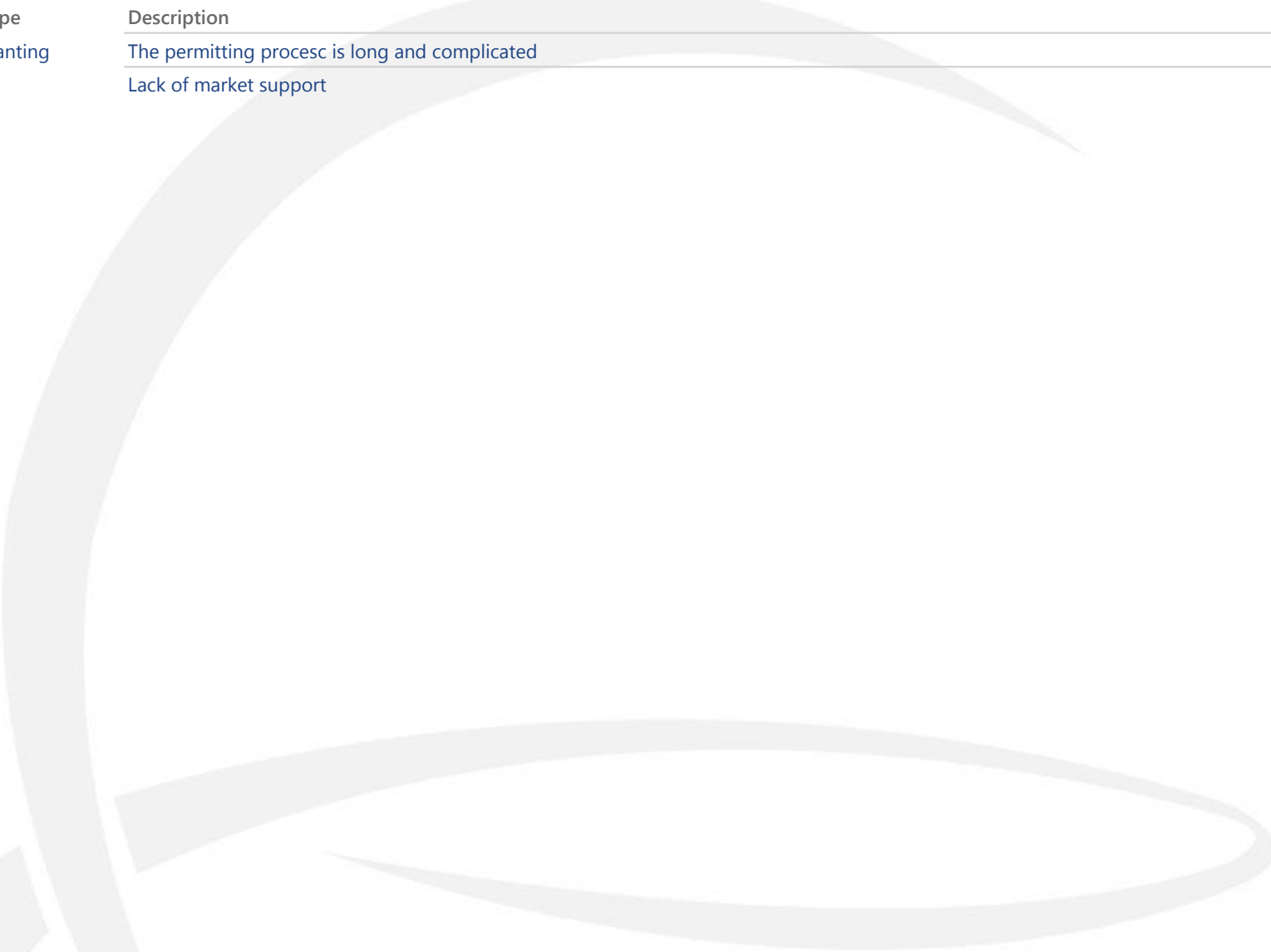
Expected Gas Sourcing
Black Sea or other on-shore blocks

Benefits	
Main Driver	<u>Market Demand</u>
Main Driver Explanation	
Benefit Description	



Barriers

Barrier Type	Description
Permit Granting	The permitting procesc is long and complicated
Market	Lack of market support



White Stream

TRA-N-053	Project	Pipeline including CS	Non-FID
Update Date	24/05/2016		Non-Advanced
Description	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 Georgian-Turkish border (the SCP) and will include an onshore pipeline from the SCP connection point to Georgian Black Sea coast where a major compressor station will provide the high pressure required to transmit gas to Constanta Romania, across the Black Sea. An alternative destination to Varna, Bulgaria and connection to Trans-Balkan pipeline is currently being considered.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Constanta (White Stream)	White Stream	2022	AZ/SCP	RO	505.0 GWh/d <i>Comment: .</i>
South Caucasus Pipeline / White Stream	White Stream	2022	AZ	AZ/SCP	505.0 GWh/d <i>Comment: .</i>

Sponsors		General Information		No Barriers Defined	Barriers (Count)
w-stream-pipeline Ltd	90%	Promoter	White Stream Ltd		
M Bryza	10%	Operator	White Stream		
		Host Country	Romania		
		Status	Planned		
		Website	Project's URL		
		Publication Approval Status	Approved		

Enabled Projects	
Project Code	Project Name
TRA-N-339	Trans-Caspian

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime		
Part of NDP	<i>No (Countries outside EU do not have established practices similar to EU MSs for the NDPs. As for EU MSs, Germany has included the White Stream project, a continuation of the TCP project: http://www.fnb-gas.de/files/2015_07_27_nep_gas_2016_szenarioahmen.pdf)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>	
		Feasibility			Considered Tariff Regime	<i>Negotiated</i>	
		FEED			Applied for Exemption	<i>No</i>	
		Market Test			Exemption Granted	<i>Not Relevant</i>	
		Permitting					
		Supply Contracts				Exemption in entry direction	<i>0.00%</i>
NDP Number		FID			Exemption in exit direction	<i>0.00%</i>	
		Construction					
Currently PCI		<i>No</i>	<i>2022</i>	<i>2022</i>			
CBCA Decision		<i>No</i>					
Market Survey	<i>Not Relevant (no CBCA decision)</i>						

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Supsa to Constanta	Offshore (for first stage / 16 bcma)	726	1,115	375	
Vale to Supsa	Onshore	1,039	135		
Total			1,250	375	

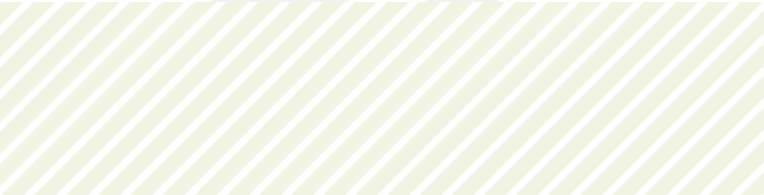
PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Expected Gas Sourcing
Caspian Region



Benefits

Main Driver	Others
Main Driver Explanation	risk reduction for sizable supply via commercially comparable (with Turkish route) diversification of route within the Southern Corridor
Benefit Description	Security of Supply

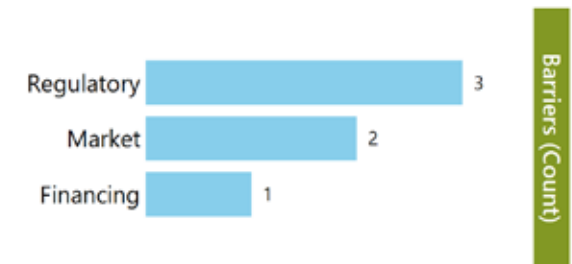


Sarmasel underground gas storage in Romania

UGS-N-371	Project	Storage Facility	Non-FID
Update Date	23/05/2016		Non-Advanced
Description	<p>Improvement of the injection capacity of the seasonal storage facility and installation of compressors at UGS Sarmasel. Project may greatly contribute to increasing the overall UGS capacity in South-East Europe by connecting Sarmasel UGS to "Bulgaria-Romania-Hungary-Austria Corridor", a project developed by SNTGN Transgaz S.A. Medias, consisting of gradual construction of a new gas transmission line between Podisor Technological Node and Horia gas metering station. The project consists of: 1 increasing the working capacity of Sarmasel UGS by 650 million m3, up to a total of 1,550 million m3/cycle with a cushion gas of 1,130 million m3; 2 increasing the security and efficiency of Sarmasel UGS 3 increasing the energy security by ensuring a higher volume of stored gas (increase of approximately 18%). 4 increasing the daily delivery capacity by 3 million m3/day. 5 lowering the dependence on import gas during winter time by approximately 40% on a daily basis.</p>		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
UGS Sarmasel	SNTGN Romgaz S.A.	2022	STcRO	RO	34.0 GWh/d
	SNTGN Romgaz S.A.	2022	RO	STcRO	42.0 GWh/d
VIP Romgaz UGS (RO)	SNTGN Romgaz S.A.	2022	STcRO	RO	34.0 GWh/d
	SNTGN Romgaz S.A.	2022	RO	STcRO	42.0 GWh/d

Sponsors	General Information
SNGN ROMGAZ S.A. 100%	Promoter <i>Societatea Națională de Gaze Naturale ROMGAZ S.A.</i>
	Operator <i>SNTGN Romgaz S.A.</i>
	Host Country <i>Romania</i>
	Status <i>Planned</i>
	Website <i>Project's URL</i>
	Publication Approval Status <i>Approved</i>



NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>No (S.N.G.N. ROMGAZ S.A., the project promotor, is not a TSO, therefore it is not mandatory to have a TYNDP, as Transgaz does. There is no NDP at country level.)</i>	Pre-Feasibility		06/2016	Considered TPA Regime	<i>Regulated</i>
		Feasibility	10/2016	10/2017	Considered Tariff Regime	<i>Regulated</i>
		FEED	11/2017	08/2018	Applied for Exemption	<i>No</i>
NDP Number		Market Test		10/2017	Exemption Granted	<i>No</i>
		Permitting	03/2017	09/2018		
Currently PCI	Yes (6.20.6)	Supply Contracts		03/2021	Exemption in entry direction	<i>0.00%</i>
		FID		09/2018	Exemption in exit direction	<i>0.00%</i>
CBCA Decision	No	Construction	04/2019	05/2022		
Market Survey	<i>Not Relevant (no CBCA decision)</i>	Commissioning	2022	2022		

Technical Information (UGS)

Storage Facility	<i>UGS SARMASEL</i>
Storage Facility Type	<i>Depleted Field</i>
Multiple-Cycle	<i>No</i>
Working Volume (mcm)	<i>650.00</i>

PCI Details

PCI Benefits	Project aims at fulfilling the infrastructure standard (N-1) rule at regional level in accordance with Article 6(3) of Regulation EU, Project aims at supplying directly or indirectly at least two Member States
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	The project may contribute to SoS in Romania and neighbouring countries in SE Europe and lead to decrease of dependency on imports during the cold season. Market Integration. Some impact of the project on GPI in various countries, especially in RO and BG under various price scenarios, Some impact on Remaining Flexibility for BG in 2035 for Ukraine disruption for 2 weeks. Correlated impact on disrupted rate and disrupted demand. Security of Supply. Impact of the project under Ukraine disruption only in Romania, after 2030 both in DC and 2W . N-1 impact under low and high infrastructure scenario. Minor impact on on supply price diversification and supply price dependence . Sustainability. Positive project impact on the total EU bill, NP Bill ex. CO2, CO2 bill in 2025 and 2030 under most price scenarios under FID. Positive impact on disrupted . Reducing bottlenecks. Significant impact on Marginal Price in Price in RO in 2025 and 2030

Time Schedule

Grant Obtention Date 01/11/2016
 Delay Since Last TYNDP
 Delay Explanation

Expected Gas Sourcing

Romania

Benefits

Main Driver Regulation SoS
 Main Driver Explanation The project is able to have a major contribution to SoS on the N-S corridor Bulgaria - Romania - Hungary, which is currently included in the plans of Transgaz S.A. envisaging the construction of a new pipeline between Podisor and Horia.
 Benefit Description Increasing safety of gas supply in Romania and South-East Europe by securing higher gas volumes to be stored; - Increasing the daily capacity and the natural gas delivery flexibility; - Reducing gas imports during winter time; - Contributing to sustainability and market integration in the region We wish to highlight the fact that any present or future pipeline project aiming to improve Romania’s interconnection to the gas systems in the region does need underground storage facilities as a support to ensure base-load supply as well as flexibility of supply, both to and from Romania. Considering the interconnection pipelines included in the TYNDP to neighbouring MS (Hungary reverse flow, Bulgaria) UGS facilities are indispensable assets for the proper operation of such interconnections. Another reasons are the new discoveries in the Romanian sector of the Black Sea (e.g Domino1).

Barriers

Barrier Type	Description
Regulatory	- no negotiated tariffs - no daily/weekly balance reports
Regulatory	Low or zero-priced short-term capacity
Market	Lack of market support
Market	Lack of market maturity
Financing	Amortization rates
Regulatory	Low rate of return

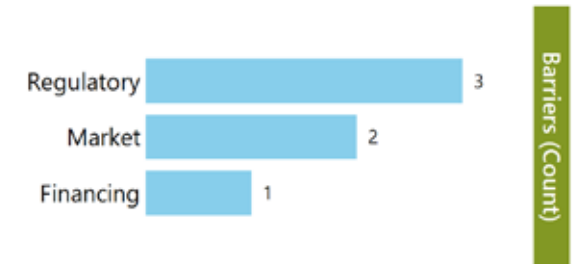
New underground gas storage in Romania

UGS-N-366	Project	Storage Facility	Non-FID
Update Date	23/05/2016		Non-Advanced
Description	<p>Several options for the construction of a new gas storage facility in depleted gas field (onshore) to be considered. The project to be located in the Eastern part of Romania (Moldova region), near Falticeni. The location of the depleted reservoirs to be converted into UGS was determined according to the following criteria: - the envisaged reservoirs allow the construction of a small-medium sized UGS of 200 million m3/cycle, with future development possibilities; - the location is next to areas with consumption deficit and very low temperatures during winter season; - the UGS is to be located near important industrial gas consumers and households - it may be used for increasing the security of supply in Romania and for facilitating possible gas exports to Republic of Moldova - existing projects to develop gas resources in the Black Sea and the possibility to create interconnections to projects part of the southern European transmission corridor - main pipeline close to the area</p>		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
New Gas Storage Facility in Romania	SNTGN Romgaz S.A.	2023	STcRO	RO	21.0 GWh/d
	SNTGN Romgaz S.A.	2023	RO	STcRO	15.0 GWh/d

Sponsors	General Information	
SNGN ROMGAZ S.A. 100%	Promoter	<i>Societatea Națională de Gaze Naturale ROMGAZ S.A.</i>
	Operator	<i>SNTGN Romgaz S.A.</i>
	Host Country	<i>Romania</i>
	Status	<i>Planned</i>
	Website	<i>Project's URL</i>
	Publication Approval Status	<i>Approved</i>



NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>No (S.N.G.N. ROMGAZ, the project promoter, is not a TSO, it is only storage operator, therefore it is not mandatory to have a TYNDP, as Transgaz has. There is no NDP country level.)</i>	Pre-Feasibility		06/2016	Considered TPA Regime	<i>Regulated</i>
		Feasibility	10/2016	10/2017	Considered Tariff Regime	<i>Regulated</i>
		FEED	11/2017	11/2018	Applied for Exemption	<i>No</i>
NDP Number		Market Test		10/2017	Exemption Granted	<i>No</i>
		Permitting	03/2017	11/2018		
Currently PCI	Yes (6.20.5)	Supply Contracts		07/2021	Exemption in entry direction	0.00%
		FID		12/2018	Exemption in exit direction	0.00%
CBCA Decision	No	Construction	07/2019	05/2023		
Market Survey	<i>Not Relevant (no CBCA decision)</i>					

Technical Information (UGS)

Storage Facility	<i>UGS Moldova</i>
Storage Facility Type	<i>Depleted Field</i>
Multiple-Cycle	<i>No</i>
Working Volume (mcm)	<i>200.00</i>

PCI Details

PCI Benefits	Project aims at fulfilling the infrastructure standard (N-1) rule at regional level in accordance with Article 6(3) of Regulation EU
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	Increase of security of supply by adding new storage capacity in the Eastern part of Romania. This part of Romania includes major cities and industry and has the coldest climate in Romania. Possible increase of security of supply in the Republic of Moldova by connection to the Romanian - Moldavian Interconnection. Market integration: Some impact on GPI in RO under various price scenarios. Increase of security of supply by adding new storage capacity in the Eastern part of Romania. This part of Romania includes some major cities and industry and has the coldest climate in Romania. Possible increase of security of supply in the Republic of Moldova by connection to the Romanian - Moldavian Interconnection. Sustainability: Positive project impact higher in 2030 and 2035 on the total EU bill, Gas Bill ex. NP ex. CO2, and Disrupted Demand Cost under most price scenarios under FID. Highest impact on the total Disrupted Demand Cost for various price sources, FID, in 2035.

Time Schedule

Grant Obtention Date 01/11/2016
 Delay Since Last TYNDP
 Delay Explanation

Expected Gas Sourcing

Romania

Benefits

Main Driver Regulation SoS

Main Driver Explanation The project shall contribute to the enhancement of the energy security in Romania and South-East Europe by creating the UGS connection to internal consumption areas with current gas supply deficit, making thus available gas volumes for use in other consumption directions. The project shall also have a contribution in terms of supply of regional market in Republic of Moldova, a country associated to EU via Iasi-Ungheni interconnector.

Benefit Description We wish to highlight the fact that any present or future pipeline project aiming to improve Romania’s interconnection to the gas systems in the region does need Underground Storage Facilities as a support to ensure base-load supply as well as flexibility of supply, both to and from Romania. Considering the interconnection pipelines included in the TYNDP to neighbouring MS (Hungary reverse flow, Bulgaria) as well as interconnections to Non-member States which are Associate States to the EU (Ukraine, Moldova), UGS facilities are indispensable assets for the proper operation of such interconnections. Another reason for our proposal to extend UGS capacities in Romania (including the construction of a completely new facility in the NE part of Romania) are the new discoveries in the Romanian sector of the Black Sea (e.g Domino1),

Barriers

Barrier Type	Description
Regulatory	- no negotiated tariffs - no daily/weekly balance reports
Market	Lack of market support
Regulatory	Low or zero-priced short-term capacity
Market	Lack of market maturity
Financing	Amortization rates
Regulatory	Low rate of return

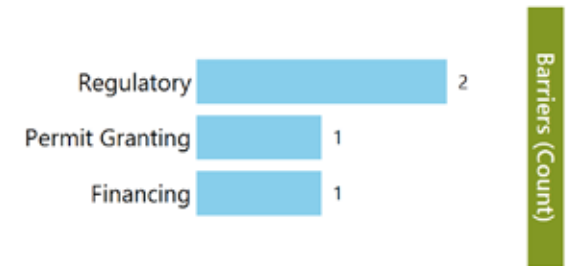
Depomures

UGS-N-233	Project	Storage Facility	Non-FID
Update Date	23/05/2016		Advanced
Description	<p>The project consists in the revamping and expansion of an existing gas storage facility of 300 mcm situated in Targu Mures, Central Romania. The rationale of the project is three fold (i) increase operational independence by building its own compression unit as currently compression services are rented from another party (ii) gradually expand the storage capacity (from 300 mcm to 400 mcm in a first stage and to 600 mcm in a second stage) and (iii) increase flexibility of the storage by increasing injection and withdrawing capacity from the existing average 1.7 mcm/ day to approx. 5.0 mcm/day after implementation of the second stage. The implementation of the first stage has already been initiated with a partial investment to be finalized in 2016, while the FID for the entire phase I of the development project is expected in 2016.</p>		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
UGS Targu Mures	Depomures	2019	STcRO	RO	15.8 GWh/d
	<i>Comment: To be considered for modeling purposes.</i>				
	Depomures	2019	RO	STcRO	15.8 GWh/d
	<i>Comment: To be considered for modeling purposes.</i>				
UGS Targu Mures	Depomures	2022	STcRO	RO	18.9 GWh/d
	<i>Comment: To be considered for modeling purposes.</i>				
UGS Targu Mures	Depomures	2022	RO	STcRO	18.9 GWh/d
	<i>Comment: To be considered for modeling purposes.</i>				

Sponsors	General Information
GDF International 59%	Promoter <i>Engie Romania SA</i>
	Operator <i>Depomures</i>
	Host Country <i>Romania</i>
	Status <i>Planned</i>
	Website <i>Project's URL</i>
	Publication Approval Status <i>Approved</i>



NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime		
Part of NDP	<i>No (As far as we are aware, currently there is no comprehensive system wide national development plan, only one regarding the gas transmission infrastructure put together by the TSO. Nevertheless, the operator submitted a 5-year investment plan to Romanian NRA in 2015, which is updated annually.)</i>	Pre-Feasibility		06/2004	Considered TPA Regime	<i>Regulated</i>	
		Feasibility		06/2008	06/2009	Considered Tariff Regime	<i>Regulated</i>
		FEED		06/2011	06/2012	Applied for Exemption	<i>No</i>
		Market Test			06/2016	Exemption Granted	<i>Not Relevant</i>
		Permitting		06/2012	06/2016		
NDP Number		Supply Contracts			Exemption in entry direction	<i>0.00%</i>	
		FID			11/2016	Exemption in exit direction	<i>0.00%</i>
Currently PCI	<i>Yes (6.20.4)</i>	Construction		07/2015	01/2022		
		Commissioning		2019	2022		
CBCA Decision		<i>No</i>					
Market Survey		<i>Not Relevant (no CBCA decision)</i>					

Technical Information (UGS)

Storage Facility	<i>Depomures</i>	
Storage Facility Type	<i>Depleted Field</i>	
Multiple-Cycle	<i>No</i>	
Working Volume (mcm)	<i>300.00</i>	<i>The capacity increment is planned to be implemented in 2 phases: 100 mcm in 2019 and 200 mcm with COD in 2022</i>

PCI Details

PCI Benefits	<i>Project aims at supplying directly or indirectly at least two Member States</i>
General Criteria Fulfilled	<i>Yes</i>
Specific Criteria Fulfilled	<i>Competition, Market Integration, Security of Supply, Sustainability</i>

Specific Criteria Fulfilled Comments Although the project meets all the criteria, the most significant contribution it brings is to the EU's security of supply. - The project is even more important in a low infrastructure scenario, in which the N-1 indicator is below 100% and in which the additional storage capacity of Depomures would partially compensate a malfunction at Mediesu-Aurit/ Isaccea gas entry point from Ukraine to Romania. - The remaining flexibility indicator shows that the project successfully contributes to increasing resilience in case of additional demand in almost all scenarios with impact on Romania, Bulgaria, Hungary, Italy, Greece and Croatia. The impact is most visible in extreme scenarios such as Ukraine disruption with 2 week cold spell. - The project contributes to a decrease of the disrupted demand in two Members States, namely Romania and Bulgaria, and also in the FYR of Macedonia (although not a Member State) in most scenarios.

Time Schedule

Grant Obtention Date

Delay Since Last TYNDP 3 years for Phase 2

Delay Explanation The main delay encountered is related to permit granting for part of the investment (i.e. the last sector of the main gathering pipeline). The construction of the main gathering pipeline is essential for the entire project and a pre-requisite for implementing the rest of the project (dehydration and compression station and subsequent expansion to 600 mcm of the capacity). We are currently in the process of finding a solution for the remaining permit and have communicated the problem to the Competent Authority as well as to the European Commission.

Benefits

Main Driver Regulation SoS

Main Driver Explanation In addition to those mentioned in the additional comments to the specific criteria, the project is even more important in the current rather potentially unstable geo-political context in the far Eastern Europe in which having sufficient capacities of the gas storage facilities may become critical for ensuring security of supply.

Benefit Description Market Integration The Project successfully contributes to increasing resilience in case of additional demand in almost all disruption scenarios with positive impact on Romania, Bulgaria, Hungary, Italy, Greece and Croatia. Thus, indirectly it contributes to a more integrated gas market. Sustainability It replaces existing rather obsolete gas compression facilities with modern and high-efficiency technology (new electro-compressors etc.) which will reduce emissions currently generated by the compression services supplied by the third party. Competition The implementation of this project would also increase the competition on the Romanian storage market considering that currently there are only 2 players: Depomures, the private operator with ~10% market share and Romgaz, state owned, with ~90% market share. After project COD, the market share of the private sector would increase proportionally.

Barriers

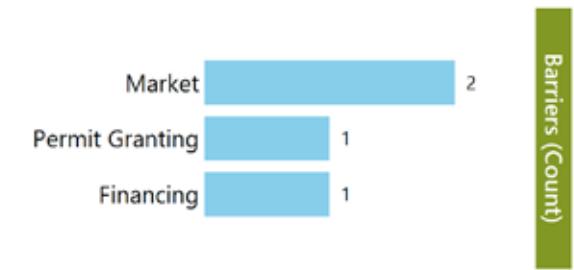
Barrier Type	Description
Permit Granting	The permit granting process has been delayed due to difficulties in obtaining the building permit from local administration for the last section of the main collector pipeline, which may impact the implementation of the entire project.
Financing	Availability of funds and associated conditions
Regulatory	Low or zero-priced short-term capacity
Regulatory	Low rate of return

Azerbaijan, Georgia, Romania Interconnector - AGRI

TRA-N-376	Project	Pipeline including CS	Non-FID
Update Date	07/05/2016		Non-Advanced
Description	The solution for the transmission of natural gas from Caspian region through the territory of Azerbaijan and Georgia, its liquefaction and transportation via Black Sea to Romania and Hungary and potentially to other European markets; As a "standby LNG project", AGRI will implement and operate the LNG portion: - the "natural gas the liquefaction Facilities") on Georgian Shore; - transport of LNG from Georgian shore to Romanian shore; - the "natural Re-gasification terminal" on Romanian Shore. The project is pure LNG project and has no possibility to include technical details so please see below: ===== For LNG Project: Maximum Annual Capacity: 8.0 bcm/y; Maximum sendout capacity: 22.0 milion cm/d; Storage capacity: 160,000.0 cm of LNG; Maximum ship cargo size: 2 x 140,000.0 mc of LNG; =====		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
AGRI / Constanta (RO)	AGRI	2026	GEa	RO	240.0 GWh/d
<i>Comment: Regazification terminal</i>					
AGRI / Poti (GE)	AGRI	2026	GE?	GEa	240.0 GWh/d
<i>Comment: Liquefaction terminal</i>					

Sponsors		General Information	
GOGC (GE)	25%	Promoter	AGRI LNG Project Company SRL (RO)
MVM (HU)	25%	Operator	AGRI
ROMGAZ (RO)	25%	Host Country	Romania
SOCAR (AZ)	25%	Status	Planned
		Website	<u>Project's URL</u>
		Publication Approval Status	Approved



NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>No (AGRI is not a Transmission System Operator, so it is not necessary for its project to be part of a National Development Plan.)</i>	Pre-Feasibility			Considered TPA Regime	<i>Not Applicable</i>
		Feasibility	06/2012	04/2015	Considered Tariff Regime	<i>Not Applicable</i>
		FEED	01/2019	04/2020	Applied for Exemption	<i>Not Relevant</i>
NDP Number		Market Test		06/2021	Exemption Granted	<i>Not Relevant</i>
		Permitting	01/2018	09/2019		
Currently PCI	<i>No</i>	Supply Contracts		10/2022	Exemption in entry direction	0.00%
		FID		11/2020	Exemption in exit direction	0.00%
CBCA Decision	<i>No</i>	Construction	06/2022	08/2026		
Market Survey	<i>Not Relevant (no CBCA decision)</i>	Commissioning	2026	2026		

PCI Details

PCI Benefits	Project aims at fulfilling the infrastructure standard (N-1) rule at regional level in accordance with Article 6(3) of Regulation EU, Project aims at supplying directly or indirectly at least two Member States
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Expected Gas Sourcing

Caspian Region

Benefits

Main Driver	Others
Main Driver Explanation	Diversification of supply sources; New Markets competition; Market demand
Benefit Description	Links EU market with Azerbaijan (Caspian) gas source by the most direct route wich avoids sole reliance on pipelines. .

Barriers

Barrier Type	Description
Permit Granting	long duration for obtaining permits
Market	market further integration with the local Project is required



Market

Lack of market support

Financing

Availability of funds and associated conditions





8 Slovakia

System Enhancements - Eustream

TRA-F-017	Project	Pipeline including CS	FID
Update Date	25/05/2016		Advanced
Description	Modernization and Upgrade of the Network and Replacement of Technologies due to new Environmental Norms		
Regulatory Decisions and similar material conditions			

Sponsors	General Information	No Barriers Defined	Barriers (Count)
eustream, a.s. 100%	Promoter <i>eustream, a.s.</i>		
	Operator <i>eustream, a.s.</i>		
	Host Country <i>Slovakia</i>		
	Status <i>Planned</i>		
	Website <i>Project's URL</i>		
	Publication Approval Status <i>Approved</i>		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (National Development Plan 2016-2025)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number		Feasibility			Considered Tariff Regime	<i>Regulated</i>
	<i>10.3.</i>	FEED			Applied for Exemption	<i>No</i>
Currently PCI		Market Test			Exemption Granted	<i>No</i>
	<i>No</i>	Permitting				
CBCA Decision		Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning		<i>2026</i>	<i>2026</i>	



Benefits

Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	Modernization and upgrade of the network and replacement of technologies due to new environmental norms.



Poland - Slovakia interconnection

TRA-N-190	Project	Pipeline including CS	Non-FID
Update Date	25/05/2016		Advanced
Description	To build interconnection between Slovak and Polish transmission system and thus increase the Security of Supply in CEE region, and contribute to establishing a well-functioning internal gas market		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Interconnector PL - SK	eustream, a.s.	2019	PL	SK	144.0 GWh/d
	eustream, a.s.	2019	SK	PL	174.6 GWh/d

Sponsors		General Information	
eustream, a.s.	100%	Promoter	<i>eustream, a.s.</i>
		Operator	<i>eustream, a.s.</i>
		Host Country	<i>Slovakia</i>
		Status	<i>Planned</i>
		Website	<u><i>Project's URL</i></u>
		Publication Approval Status	<i>Approved</i>



NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (National Development Plan 2016-2025)	Pre-Feasibility			Considered TPA Regime	Regulated
NDP Number		Feasibility	05/2011	07/2013	Considered Tariff Regime	Regulated
	10.1.2.-PL-SK	FEED	10/2015	04/2018	Applied for Exemption	No
Currently PCI		Market Test			06/2016	Exemption Granted
	Yes (6.2.1.)	Permitting	08/2015	09/2017		
CBCA Decision		Supply Contracts				Exemption in entry direction
Market Survey	Yes (2014-11-28)	FID			Exemption in exit direction	0.00%
		Open Season(2016-06-01)	Construction		12/2019	
		Commissioning	2019	2019		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Slovak section	Achieving additional compressor power by upgrade of compressor station in Velké Kapušany	1,000	100	16	
Total			100	16	

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Time Schedule	
Grant Obtention Date	19/08/2014
Delay Since Last TYNDP	Yes
Delay Explanation	Waiting for regulatory approvals

Expected Gas Sourcing	
Spot	

Benefits

Main Driver	Others
Main Driver Explanation	Increase of SoS in the CEE region Integration of gas infrastructure in the CEE region by constructing a cross-border interconnection between PL and SK that is currently missing.
Benefit Description	List of countries as defined by the 2013/2014 PS-CBA analysis. Even though Ukraine is not a member state of the EU, the Project has important impact to the country due to adoption of reverse flow capacity from Slovakia towards Ukraine. Furthermore, Ukraine has adopted the Association Agreement with the European Union already.

Barriers

Barrier Type	Description
Regulatory	Low rate of return
Financing	Availability of funds and associated conditions
Market	Lack of market support

Intergovernmental Agreements

Agreement	Agreement Description	Is Signed	Agreement Signature Date
Agreement between the Government of the Slovak Republic and the Government of the Republic of Poland for cooperation on the implementation of the project of a gas pipeline connecting the Slovak transmission system and Polish transmission system	Intergovernmental agreement	Yes	22/11/2013

Capacity increase at IP Lanžhot entry

TRA-N-902	Project	Pipeline including CS	Non-FID
Update Date	25/05/2016		Advanced
Description	The goal of the project Capacity increase at IP Lanžhot (Entry - Eustream) is the upgrade of cross-border capacity at the entry IP Lanžhot. Project is among others developed in the context of Eastring project, the aim is to provide sufficient future transit capacity for delivery of gas for the region of CEE/SEE Europe, namely Balkan countries, as well as ensuring security supplies to Ukraine as well as integration of CEE/SEE region to the developed spot markets.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling					
Variant : 1		Increment at level of 780 GWh/d			
Point	Operator	Year	From Gas System	To Gas System	Capacity
Lanžhot	eustream, a.s.	2019	CZ	SK	780.0 GWh/d
Capacity Increments Variant(s) For Information Only					
Variant : 2		Increment at level of 988GWh/d			
Point	Operator	Year	From Gas System	To Gas System	Capacity
Lanžhot	eustream, a.s.	2020	CZ	SK	988.0 GWh/d

Sponsors		General Information		Barriers (Count)	
eustream, a.s.	100%	Promoter	eustream, a.s.	Regulatory	2
		Operator	eustream, a.s.	Market	1
		Host Country	Slovakia		
		Status	Planned		
		Website			
		Publication Approval Status	Approved		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (National Development Plan 2016-2025)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number		Feasibility			Considered Tariff Regime	<i>Regulated</i>
	<i>10.1.2. Lanžhot</i>	FEED	<i>09/2015</i>	<i>08/2017</i>	Applied for Exemption	<i>No</i>
Currently PCI		Market Test		<i>06/2017</i>	Exemption Granted	<i>No</i>
	<i>No</i>	Permitting				
CBCA Decision		Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning	<i>2019</i>	<i>2019</i>		

Pipelines and Compressor Stations

1		Increment at level of 780 GWh/d				
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)		
Capacity increase at IP Lanžhot Entry	Capacity increase to 780 GWh/d					
Total						

Pipelines and Compressor Stations - Alternative Variant

2		Increment at level of 988GWh/d				
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)		
Capacity increase at IP Lanžhot Entry	Capacity increase to 988 GWh/d					
Total						

PCI Details

PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Expected Gas Sourcing

Spot

Benefits

Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	Project is among others developed in the context of Eastring project, the aim is to provide sufficient future transit capacity for delivery of gas for the region of CEE/SEE Europe, namely Balkan countries, as well as ensuring security supplies to Ukraine as well as integration of CEE/SEE region to the developed spot markets.

Barriers

Barrier Type	Description
Market	Lack of market maturity
Regulatory	Low rate of return
Regulatory	Capacity quotas

Eastring - Slovakia

TRA-N-628	Project	Pipeline including CS	Non-FID
Update Date	25/05/2016		Non-Advanced
Description	Eastring-SK is subproject located in Slovakia/Ukraine and is essential part of the Eastring project, which connects IP Veľké Kapušany at the SK-UA border, with a new entry IP at an external border of the EU on the territory of Bulgaria in the following routing options: – from SK to RO – via UA, (exist. pipeline) – via HU, (new pipeline). – from RO to TR – Option A – new pipeline passing production & storage area and continuing to IP Isaccea and to BG/TR border by utilizing existing RO-BG transit assets – Option B – new pipeline, passing 2 production & storage areas and continuing to an external border of the EU on the territory of Bulgaria. The project would (i) secure supplies in case of RU disruption and therefore it will increase gas SoS in the broader Central-South-East EU region, (ii) allow access to alternative gas sources for Central, Western & Southern Europe and (iii) mean step towards EU single gas market.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Variant : Eastring - SK-2	High capacity scenario, starting at Veľké Kapušany IP and passing through SK using new pipeline to new IP at SK-HU border				
Point	Operator	Year	From Gas System	To Gas System	Capacity
Eastring Cross-Border HU/EAR <> SK/EAR	Eastring B.V.	2021	HU/EAR	SK/EAR	570.0 GWh/d
	<i>Comment: New interconnection point, New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>				
	Eastring B.V.	2021	SK/EAR	HU/EAR	570.0 GWh/d
	<i>Comment: New interconnection point, New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>				
Eastring SK/EAR <-> Veľké Kapušany	Eastring B.V.	2025	HU/EAR	SK/EAR	570.0 GWh/d
	Eastring B.V.	2025	SK/EAR	HU/EAR	570.0 GWh/d
	Eastring B.V.	2021	SK	SK/EAR	570.0 GWh/d
	<i>Comment: Connection of Eastring - SK to existing SK transmission system at Veľké Kapušany IP (VK), New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>				
Eastring SK/EAR <-> Veľké Kapušany	Eastring B.V.	2021	SK/EAR	SK	570.0 GWh/d
	<i>Comment: Connection of Eastring - SK to existing SK transmission system at Veľké Kapušany IP (VK), New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>				
	Eastring B.V.	2025	SK	SK/EAR	570.0 GWh/d

Eastring SK/EAR <-> Veľké Kapušany	Eastring B.V.	2025	SK/EAR	SK	570.0 GWh/d
Capacity Increments Variant(s) For Information Only					
Variant : Eastring – SK-1		High capacity scenario, starting at Veľké Kapušany IP and passing through SK using new pipeline to new IP at SK-HU border with following continuance to RO and BG existing system			
Point	Operator	Year	From Gas System	To Gas System	Capacity
	Eastring B.V.	2021	HU/EAR	SK/EAR	570.0 GWh/d
	<i>Comment: New interconnection point, New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>				
Eastring Cross-Border HU/EAR <> SK/EAR	Eastring B.V.	2021	SK/EAR	HU/EAR	570.0 GWh/d
	<i>Comment: New interconnection point, New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>				
	Eastring B.V.	2025	HU/EAR	SK/EAR	570.0 GWh/d
	Eastring B.V.	2025	SK/EAR	HU/EAR	570.0 GWh/d
	Eastring B.V.	2021	SK	SK/EAR	570.0 GWh/d
	<i>Comment: Connection of Eastring - SK to existing SK transmission system at Veľké Kapušany IP (VK), New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>				
Eastring SK/EAR <-> Veľké Kapušany	Eastring B.V.	2021	SK/EAR	SK	570.0 GWh/d
	<i>Comment: Connection of Eastring - SK to existing SK transmission system at Veľké Kapušany IP (VK), New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>				
	Eastring B.V.	2025	SK	SK/EAR	570.0 GWh/d
	Eastring B.V.	2025	SK/EAR	SK	570.0 GWh/d
Capacity Increments Variant(s) For Information Only					
Variant : Eastring – SK-3/4		Low capacity scenario, starting at Veľké Kapušany IP at SK-UA border, passing through UA to new IP at UA-RO border			
Point	Operator	Year	From Gas System	To Gas System	Capacity
	Eastring B.V.	2021	RO/EAR	UA/EAR	570.0 GWh/d
	<i>Comment: New interconnection point at UA/RO border, New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>				
Eastring Cross-Border RO/EAR <> UA/EAR	Eastring B.V.	2021	UA/EAR	RO/EAR	342.0 GWh/d
	<i>Comment: New interconnection point at UA/RO border, New capacity increment from 4Q 2025 to the level of 712 GWh/d. Exit means direction UA->RO.</i>				

Eastring Cross-Border RO/EAR <-> UA/EAR	Eastring B.V.	2025	RO/EAR	UA/EAR	570.0 GWh/d
	Eastring B.V.	2025	UA/EAR	RO/EAR	370.0 GWh/d
<i>Comment: Exit means direction UA->RO.</i>					
Eastring Cross-Border UA/EAR <-> SK/EAR	Eastring B.V.	2021	SK/EAR	UA/EAR	342.0 GWh/d
	<i>Comment: New interconnection point at SK-UA border, New capacity increment from 4Q 2025 to the level of 712 GWh/d. Exit means direction SK->UA.</i>				
	Eastring B.V.	2021	UA/EAR	SK/EAR	570.0 GWh/d
	<i>Comment: New interconnection point at SK-UA border, New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>				
Eastring SK/EAR <-> Velké Kapušany	Eastring B.V.	2025	SK/EAR	UA/EAR	370.0 GWh/d
	<i>Comment: Exit means direction SK->UA.</i>				
	Eastring B.V.	2025	UA/EAR	SK/EAR	570.0 GWh/d
	Eastring B.V.	2021	SK	SK/EAR	570.0 GWh/d
	<i>Comment: Connection of Eastring - SK to existing SK transmission system at Velké Kapušany IP (VK), New capacity increment from 4Q 2025 to the level of 1140 GWh/d.</i>				
	Eastring B.V.	2021	SK/EAR	SK	342.0 GWh/d
<i>Comment: Connection of Eastring - SK to existing SK transmission system at Velké Kapušany IP (VK), New capacity increment from 4Q 2025 to the level of 712 GWh/d. Exit means direction EUS->Eastring.</i>					
	Eastring B.V.	2025	SK	SK/EAR	570.0 GWh/d
	Eastring B.V.	2025	SK/EAR	SK	370.0 GWh/d
<i>Comment: Exit means direction EUS->Eastring.</i>					

Sponsors	General Information	No Barriers Defined	Barriers (Count)
Eastring B.V. <div style="width: 100%;"><div style="width: 100%; height: 10px; background-color: #0070c0;"></div></div> 100%	Promoter <i>Eastring B.V.</i> Operator <i>Eastring B.V.</i> Host Country <i>Slovakia</i> Status <i>Planned</i> Website <i>Project's URL</i> Publication Approval Status <i>Approved</i>		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (National Development Plan 2016-2025)</i>	Pre-Feasibility			Considered TPA Regime	<i>Not Applicable</i>
NDP Number	<i>10.1.2. Eastring</i>	Feasibility	<i>05/2016</i>	<i>04/2017</i>	Considered Tariff Regime	<i>Not Applicable</i>
Currently PCI	<i>Yes (6.25.1)</i>	FEED			Applied for Exemption	<i>Not Relevant</i>
CBCA Decision	<i>No</i>	Market Test			Exemption Granted	<i>Not Relevant</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	Permitting			Exemption in entry direction	<i>0.00%</i>
		Supply Contracts			Exemption in exit direction	<i>0.00%</i>
		FID				
		Construction				
		Commissioning	<i>2021</i>	<i>2025</i>		

Pipelines and Compressor Stations

Eastring - SK-2		High capacity scenario, starting at Velké Kapušany IP and passing through SK using new pipeline to new IP at SK-HU border		Diameter (mm)	Length (km)	Compressor Power (MW)
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)		
Eastring-SK-2	Data refers to the first stage - capacity 570 GWh/d for new route via SK,HU,RO,BG, in case of increase of capacity up to 1140 GWh/d in 2023, compressor power at level of 93 MW will be needed	1,400	19	52		
Total			19	52		

Pipelines and Compressor Stations - Alternative Variant

Eastring – SK-1		High capacity scenario, starting at Velké Kapušany IP and passing through SK using new pipeline to new IP at SK-HU border with following continuance to RO and BG existing system		Diameter (mm)	Length (km)	Compressor Power (MW)
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)		
Eastring-SK-1	Data refers to the first stage - capacity 570 GWh/d for new route via SK, HU and partly RO and existing route via RO & BG, in case of increase of capacity up to 1140 GWh/d in 2023, compressor power at level of 90 MW will be needed	1,400	19	42		
Total			19	42		

Pipelines and Compressor Stations - Alternative Variant					
Eastring – SK-3/4		Low capacity scenario, starting at Velké Kapušany IP at SK-UA border, passing through UA to new IP at UA-RO border			
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Eastring-SK-3/4	Total length of used pipeline - 113 km	1,400	0	0	
Total			0	0	

PCI Details	
PCI Benefits	Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Competition, Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Expected Gas Sourcing

Caspian Region, Norway, Russia, LNG (TR), Iraq, Iran, Egypt, Israel, Turkmenistan, Kazakhstan, Cyprus, Azerbaijan, Any gas available at Turkish/European HUBs including

Benefits	
Main Driver	Others
Main Driver Explanation	The project brings significant benefits to the SoS of Europe, bringing the increasing new sources of gas supply in South Eastern Europe to the markets of Central and Western Europe, while further enhancing the market integration of the affected countries.
Benefit Description	- Physical alternative for providing 100% of all Balkan countries' consumption; - Providing security of supply for 100% of all Balkan countries' consumption; - Additional utilization for CZ, SK, PL, UA, RO, BG transit and storage assets; - Providing Western shippers with possibility to supply Balkan countries and even Turkey from NCG/Gaspool/Baumgarten; - Corridor ready for future gas imports to Europe from alternative sources – AGRI, TANAP, Caspian, Iran, Iraq, Egypt, Israel, Cyprus, Turkey, etc.

9 Slovenia

Upgrade of Rogatec interconnection (M1A/1 Interconnection Rogatec)

TRA-N-390	Project	Pipeline including CS	Non-FID
Update Date	22/05/2016		Advanced
Description	Adjustment to operating parameters of the transmission system of the Croatian TSO, increasing the transmission capacity and enabling bidirectional operation. The project is a part of the PCI 6.26 Cluster Croatia - Slovenia - Austria at Rogatec.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Rogatec	Plinovodi d.o.o.	2020	HR	SI	165.0 GWh/d
	Plinovodi d.o.o.	2020	SI	HR	165.0 GWh/d

Sponsors	General Information	No Barriers Defined	Barriers (Count)
Plinovodi 100%	Promoter <i>Plinovodi d.o.o.</i> Operator <i>Plinovodi d.o.o.</i> Host Country <i>Slovenia</i> Status <i>Planned</i> Website <i>Project's URL</i> Publication Approval Status <i>Approved</i>		

Enabled Projects

Project Code	Project Name
TRA-N-389	Upgrade of Murfeld/Ceršak interconnection (M1/3 Interconnection Ceršak)
TRA-N-094	CS Kidričevo, 2nd phase of upgrade

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (TYNDP for the period 2016-2025)	Pre-Feasibility			Considered TPA Regime	Regulated
NDP Number	C12	Feasibility			Considered Tariff Regime	Regulated
		FEED	01/2018	11/2019	Applied for Exemption	No
Currently PCI	Yes (6.26.6)	Market Test			Exemption Granted	No
		Permitting	12/2015	10/2019		
CBCA Decision	No	Supply Contracts			Exemption in entry direction	0.00%
Market Survey	Not Relevant (no CBCA decision)	FID			Exemption in exit direction	0.00%
		Construction	01/2019	12/2020		
		Commissioning	2020	2020		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Upgrade of Rogatec interconnection	The length is 3.8 km.	800	4		
Total			4		

PCI Details	
PCI Benefits	Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Market Integration, Security of Supply
Specific Criteria Fulfilled Comments	

Benefits	
Main Driver	Market Demand
Main Driver Explanation	Also essential contribution to Security of supply.
Benefit Description	

M6 Ajdovščina – Lucija

TRA-N-365	Project	Pipeline including CS	Non-FID
Update Date	22/05/2016		Non-Advanced
Description	Connecting the DSO in the municipalities of Izola, Piran, Sežana, Divača and Herpelje-Kozina. Connection to the M3 pipeline and R61 pipeline.		
Regulatory Decisions and similar material conditions			

Sponsors	General Information	No Barriers Defined	Barriers (Count)
Plinovodi d.o.o. 100%	Promoter <i>Plinovodi d.o.o.</i>		
	Operator <i>Plinovodi d.o.o.</i>		
	Host Country <i>Slovenia</i>		
	Status <i>Planned</i>		
	Website <i>Project's URL</i>		
	Publication Approval Status <i>Approved</i>		

Enabled Projects	
Project Code	Project Name
TRA-N-107	M6 Interconnection Osp
TRA-N-114	R61 Dragonja - Izola


NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (TYNDP for the period 2016-2025)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number	<i>A15</i>	Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test			Exemption Granted	<i>No</i>
		Permitting				
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning	<i>2019</i>	<i>2019</i>		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
M6 Ajdovščina - Lucija		250	69		
Total			69		

Benefits	
Main Driver	<u>Market Demand</u>
Main Driver Explanation	
Benefit Description	

CS Kidričevo, 2nd phase of upgrade

TRA-N-094	Project	Pipeline including CS	Non-FID
Update Date	22/05/2016		Non-Advanced
Description	Upgrade of CS for higher operational pressure in existing M1/1 and M2/1 pipelines, higher flow and bidirectional operation. The project aims to assure additional necessary compressor power for the PCI 6.26 Cluster Croatia - Slovenia - Austria at Rogatec.		
Regulatory Decisions and similar material conditions			

Sponsors	General Information	No Barriers Defined	Barriers (Count)
Plinovodi 100% 	Promoter <i>Plinovodi d.o.o.</i> Operator <i>Plinovodi d.o.o.</i> Host Country <i>Slovenia</i> Status <i>Planned</i> Website <u>Project's URL</u> Publication Approval Status <i>Approved</i>		

Enabled Projects

Project Code	Project Name
TRA-N-390	Upgrade of Rogatec interconnection (M1A/1 Interconnection Rogatec)
TRA-N-389	Upgrade of Murfeld/Ceršak interconnection (M1/3 Interconnection Ceršak)

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (TYNDP for the period 2016-2025)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number		C5 Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED	<i>01/2018</i>	<i>11/2019</i>	Applied for Exemption	<i>No</i>
Currently PCI	<i>Yes (6.26.2)</i>	Market Test			Exemption Granted	<i>No</i>
		Permitting				
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID		<i>01/2018</i>	Exemption in exit direction	<i>0.00%</i>
		Construction	<i>01/2019</i>	<i>12/2020</i>		
		Commissioning	<i>2020</i>	<i>2020</i>		

Pipelines and Compressor Stations

Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)
CS Kidričevo, 2nd phase of upgrade	Up to three compressor units with total power of up to 30 MW.			30
Total				30

PCI Details

PCI Benefits	Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Market Integration, Security of Supply
Specific Criteria Fulfilled Comments	

Benefits

Main Driver	Market Demand
Main Driver Explanation	Also essential contribution to Security of supply.
Benefit Description	

M3 pipeline reconstruction from CS Ajdovščina to Šempeter/Gorizia

TRA-N-108	Project	Pipeline including CS	Non-FID
Update Date	22/05/2016		Non-Advanced
Description	Interconnector with the Italian TSO. Adjustment to operating parameters of the transmission system of the Italian TSO.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Gorizia (IT) /Šempeter (SI)	Plinovodi d.o.o.	2020	IT	SI	35.5 GWh/d
	Plinovodi d.o.o.	2020	SI	IT	38.0 GWh/d

Sponsors		General Information		No Barriers Defined	Barriers (Count)
Plinovodi	100%	Promoter	Plinovodi d.o.o.		
		Operator	Plinovodi d.o.o.		
		Host Country	Slovenia		
		Status	Planned		
		Website	Project's URL		
		Publication Approval Status	Approved		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (TYNDP for the period 2016-2025)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number		C2 Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test			Exemption Granted	<i>No</i>
		Permitting				
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning	<i>2020</i>	<i>2020</i>		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
M3 pipeline reconstruction from CS Ajdovščina to Šempeter/Gorizia		500	31		
Total			31		

Benefits	
Main Driver	<u>Others</u>
Main Driver Explanation	<u>Adjustment of IP boundary conditions (pressure).</u>
Benefit Description	

R15/1 Pince - Lendava - Kidričevo

TRA-N-112	Project	Pipeline including CS	Non-FID
Update Date	22/05/2016		Non-Advanced
Description	Interconnector with the transmission system of the Hungarian TSO. Cross-border transmission, enabling access to underground storages in Hungary for Slovenian gas suppliers, enabling access to LNG terminals in northern Adriatic and other gas sources for Hungarian gas suppliers. PCI 6.23. Hungary – Slovenia interconnection (Nagykanizsa - Tornyiszentmiklós (HU) - Lendava (SI) - Kidričevo)		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Pince (SI) / Tornyiszentmiklos (HU)	Plinovodi d.o.o.	2020	HU	SI	38.1 GWh/d
	Plinovodi d.o.o.	2020	SI	HU	38.1 GWh/d

Sponsors	General Information	Barriers (Count)
<p>Plinovodi 100%</p>	<p>Promoter <i>Plinovodi d.o.o.</i></p> <p>Operator <i>Plinovodi d.o.o.</i></p> <p>Host Country <i>Slovenia</i></p> <p>Status <i>Planned</i></p> <p>Website <i>Project's URL</i></p> <p>Publication Approval Status <i>Approved</i></p>	<p>Permit Granting 1</p>

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (TYNDP for the period 2016-2025)	Pre-Feasibility			Considered TPA Regime	Regulated
NDP Number	C3	Feasibility			Considered Tariff Regime	Regulated
		FEED	01/2018	11/2019	Applied for Exemption	No
Currently PCI	Yes (6.23)	Market Test		09/2017	Exemption Granted	No
		Permitting				
CBCA Decision	No	Supply Contracts			Exemption in entry direction	0.00%
Market Survey	Not Relevant (no CBCA decision)	FID		01/2018	Exemption in exit direction	0.00%
		Construction	06/2019	12/2020		
		Commissioning	2020	2020		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
R15/1 Pince - Lendava - Kidričevo		500	73	4	
Total			73	4	

PCI Details	
PCI Benefits	Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Market Integration, Security of Supply, Sustainability
Specific Criteria Fulfilled Comments	

Expected Gas Sourcing
Algeria, Caspian Region, Russia, Qatar, Egypt, Nigeria, Cyprus, Israel, Austria, UGS in Hungary

Benefits	
Main Driver	Market Demand
Main Driver Explanation	Also essential contribution to Security of supply.
Benefit Description	

Barriers

Barrier Type	Description
Permit Granting	Long lasting and complicated procedures of Spatial planning (National Spatial Plan, SEA and EIA procedures, Environmental consent) as well as the procedure of acquiring the Construction permit (long procedures for land acquisition, etc.)

Intergovernmental Agreements

Agreement	Agreement Description	Is Signed	Agreement Signature Date
Memorandum of Understanding (MOU)		Yes	27/11/2009

Upgrade of Murfeld/Ceršak interconnection (M1/3 Interconnection Ceršak)

TRA-N-389	Project	Pipeline including CS	Non-FID
Update Date	22/05/2016		Non-Advanced
Description	Adjustment to operating parameters of the transmission system of the Austrian TSO, increasing the transmission capacity and enabling bidirectional operation. The project is a part of the PCI 6.26 Cluster Croatia - Slovenia - Austria at Rogatec.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Murfeld (AT) / Ceršak (SI)	Plinovodi d.o.o.	2020	AT	SI	78.7 GWh/d
	Plinovodi d.o.o.	2020	SI	AT	165.0 GWh/d

Sponsors		General Information		No Barriers Defined	Barriers (Count)
Plinovodi	100%	Promoter	Plinovodi d.o.o.		
		Operator	Plinovodi d.o.o.		
		Host Country	Slovenia		
		Status	Planned		
		Website	Project's URL		
		Publication Approval Status	Approved		

Enabled Projects	
Project Code	Project Name
TRA-N-094	CS Kidričevo, 2nd phase of upgrade
TRA-N-390	Upgrade of Rogatec interconnection (M1A/1 Interconnection Rogatec)

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	Yes (TYNDP for the period 2016-2025)	Pre-Feasibility			Considered TPA Regime	Regulated
NDP Number	C4	Feasibility			Considered Tariff Regime	Regulated
		FEED	01/2018	11/2019	Applied for Exemption	No
Currently PCI	Yes (6.26.5)	Market Test		09/2017	Exemption Granted	No
		Permitting				
CBCA Decision	No	Supply Contracts			Exemption in entry direction	0.00%
Market Survey	Not Relevant (no CBCA decision)	FID		01/2018	Exemption in exit direction	0.00%
		Construction	01/2019	12/2020		
		Commissioning	2020	2020		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
Upgrade of Murfeld/Ceršak interconnection	Pipeline length: 160m.	800	0		
Total			0		

PCI Details	
PCI Benefits	Project concerns investment in reverse flow capacity
General Criteria Fulfilled	Yes
Specific Criteria Fulfilled	Market Integration, Security of Supply
Specific Criteria Fulfilled Comments	

Benefits	
Main Driver	Market Demand
Main Driver Explanation	Also essential contribution to Security of supply.
Benefit Description	

CS Ajdovščina, 1st phase of upgrade

TRA-N-092	Project	Pipeline including CS	Non-FID
Update Date	22/05/2016		Non-Advanced
Description	Adjustment to the operating parameters of the transmission system of the Italian TSO and increasing the transmission capacity.		
Regulatory Decisions and similar material conditions			

Sponsors	General Information	No Barriers Defined	Barriers (Count)
Plinovodi <div style="width: 100%;"><div style="width: 100%; height: 10px; background-color: #00aaff;"></div></div> 100%	Promoter <i>Plinovodi d.o.o.</i> Operator <i>Plinovodi d.o.o.</i> Host Country <i>Slovenia</i> Status <i>Planned</i> Website <i>Project's URL</i> Publication Approval Status <i>Approved</i>		

Enabled Projects

Project Code	Project Name				
TRA-N-108	M3 pipeline reconstruction from CS Ajdovščina to Šempeter/Gorizia				
NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime
Part of NDP	<i>Yes (TYNDP for the period 2016-2025)</i>	Pre-Feasibility			Considered TPA Regime <i>Regulated</i>
NDP Number	<i>C1</i>	Feasibility			Considered Tariff Regime <i>Regulated</i>
		FEED			Applied for Exemption <i>No</i>
Currently PCI	<i>No</i>	Market Test			Exemption Granted <i>No</i>
		Permitting			
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction <i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction <i>0.00%</i>
		Construction			
		Commissioning	<i>2021</i>	<i>2021</i>	

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
CS Ajdovščina, 1st phase of upgrade	Power up to 5 MW.			5	
Total				5	

Benefits	
Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	

CS Ajdovščina, 2nd phase of upgrade

TRA-N-093	Project	Pipeline including CS	Non-FID
Update Date	22/05/2016		Non-Advanced
Description	LNG North Adriatic, cross-border transmission. The project is connected to projects M8, M3/1a, M3/1b and M3/1c.		
Regulatory Decisions and similar material conditions			

Sponsors	General Information	No Barriers Defined	Barriers (Count)
Plinovodi 100%	Promoter <i>Plinovodi d.o.o.</i> Operator <i>Plinovodi d.o.o.</i> Host Country <i>Slovenia</i> Status <i>Planned</i> Website <i>Project's URL</i> Publication Approval Status <i>Approved</i>		

Enabled Projects

Project Code	Project Name
TRA-N-262	M3/1b Ajdovščina - Kalce
TRA-N-261	M3/1c Kalce - Vodice
TRA-N-101	M8 Kalce - Jelšane
TRA-N-099	M3/1a Šempeter - Ajdovščina

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (TYNDP for the period 2016-2025)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number		C1 Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test			Exemption Granted	<i>No</i>
		Permitting				
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning	<i>2022</i>	<i>2022</i>		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
CS Ajdovščina, 2nd phase of upgrade	Two compressor units with total power of up to 20 MW.			20	
Total				20	

Benefits	
Main Driver	<u>Market Demand</u>
Main Driver Explanation	
Benefit Description	

M3/1a Šempeter - Ajdovščina

TRA-N-099	Project	Pipeline including CS	Non-FID
Update Date	22/05/2016		Non-Advanced
Description	Interconnector with the Italian TSO, LNG North Adriatic, cross-border transmission. The project is connected to M3/1b Ajdovščina - Kalce, M3/1c Kalce - Vodice, M8 Kalce - Jelšane and CS Ajdovščina, 2nd phase of upgrade.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Gorizia (IT) /Šempeter (SI) (Planned)	Plinovodi d.o.o.	2022	IB-ITn	SI	340.0 GWh/d
	<i>Comment: Incremental capacity would be up to 340 GWh/d.</i>				
	Plinovodi d.o.o.	2022	SI	IB-ITn	340.0 GWh/d
<i>Comment: Incremental capacity would be up to 340 GWh/d.</i>					

Sponsors		General Information		Permit Granting	Barriers (Count)	
Plinovodi	100%	Promoter	Plinovodi d.o.o.			1
		Operator	Plinovodi d.o.o.			
		Host Country	Slovenia			
		Status	Planned			
		Website	Project's URL			
		Publication Approval Status	Approved			

Enabled Projects	
Project Code	Project Name
TRA-N-261	M3/1c Kalce - Vodice
TRA-N-101	M8 Kalce - Jelšane
TRA-N-093	CS Ajdovščina, 2nd phase of upgrade
TRA-N-262	M3/1b Ajdovščina - Kalce

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (TYNDP for the period 2016-2025)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number		C7 Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test			Exemption Granted	<i>No</i>
		Permitting				
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning	<i>2022</i>	<i>2022</i>		



Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
M3/1a Šempeter - Ajdovščina		1,100	30		
Total			30		

Benefits	
Main Driver	<u>Market Demand</u>
Main Driver Explanation	
Benefit Description	

Barriers	
Barrier Type	Description
Permit Granting	Long lasting and complicated procedures of Spatial planning (National Spatial Plan, SEA and EIA procedures, Environmental consent) as well as the procedure of acquiring the Construction permit (long procedures for land acquisition, etc.)

M3/1c Kalce - Vodice

TRA-N-261	Project	Pipeline including CS	Non-FID
Update Date	22/05/2016		Non-Advanced
Description	Interconnector with the Italian TSO, LNG North Adriatic, cross-border transmission. The project is connected to M3/1a Šempeter - Ajdovščina, M3/1b Ajdovščina - Kalce, M8 Kalce - Jelšane and CS Ajdovščina, 2nd phase of upgrad		
Regulatory Decisions and similar material conditions			

Sponsors	General Information		Permit Granting  1	Barriers (Count)	
Plinovodi 	100%	Promoter			Plinovodi d.o.o.
		Operator			Plinovodi d.o.o.
		Host Country			Slovenia
		Status			Planned
		Website			Project's URL
		Publication Approval Status			Approved

Enabled Projects

Project Code	Project Name
TRA-N-099	M3/1a Šempeter - Ajdovščina
TRA-N-101	M8 Kalce - Jelšane
TRA-N-093	CS Ajdovščina, 2nd phase of upgrade
TRA-N-262	M3/1b Ajdovščina - Kalce

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (TYNDP for the period 2016-2025)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number		C9 Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test			Exemption Granted	<i>No</i>
		Permitting				
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning	<i>2022</i>	<i>2022</i>		



Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
M3/1c Kalce - Vodice		1,100	47		
Total			47		

Benefits	
Main Driver	<u>Market Demand</u>
Main Driver Explanation	
Benefit Description	

Barriers	
Barrier Type	Description
Permit Granting	Long lasting and complicated procedures of Spatial planning (National Spatial Plan, SEA and EIA procedures, Environmental consent) as well as the procedure of acquiring the Construction permit (long procedures for land acquisition, etc.)

M3/1b Ajdovščina - Kalce

TRA-N-262	Project	Pipeline including CS	Non-FID
Update Date	22/05/2016		Non-Advanced
Description	Interconnector with the Italian TSO, LNG North Adriatic, cross-border transmission. The project is connected to M3/1a Šempeter - Ajdovščina, M3/1c Kalce - Vodice, M8 Kalce - Jelšane and CS Ajdovščina, 2nd phase of upgrad		
Regulatory Decisions and similar material conditions			

Sponsors	General Information		Permit Granting  1	Barriers (Count)		
Plinovodi  100%	Promoter	Plinovodi d.o.o.				
	Operator	Plinovodi d.o.o.				
	Host Country	Slovenia				
	Status	Planned				
	Website	Project's URL				
	Publication Approval Status	Approved				

Enabled Projects

Project Code	Project Name
TRA-N-099	M3/1a Šempeter - Ajdovščina
TRA-N-101	M8 Kalce - Jelšane
TRA-N-093	CS Ajdovščina, 2nd phase of upgrade
TRA-N-261	M3/1c Kalce - Vodice

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (TYNDP for the period 2016-2025)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number		C8 Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test			Exemption Granted	<i>No</i>
		Permitting				
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning	<i>2022</i>	<i>2022</i>		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
M3/1b Ajdovščina - Kalce		1,100	24		
Total			24		

Benefits	
Main Driver	<u>Market Demand</u>
Main Driver Explanation	
Benefit Description	


Barriers	
Barrier Type	Description
Permit Granting	Long lasting and complicated procedures of Spatial planning (National Spatial Plan, SEA and EIA procedures, Environmental consent) as well as the procedure of acquiring the Construction permit (long procedures for land acquisition, etc.)

M8 Kalce - Jelšane

TRA-N-101	Project	Pipeline including CS	Non-FID
Update Date	22/05/2016		Non-Advanced
Description	Interconnector with the transmission system of the Croatian TSO, LNG North Adriatic, as well as connection of new municipalities. Cross-border transmission.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
Rupa (HR) / Jelšane (SI)	Plinovodi d.o.o.	2022	HR	SI	414.0 GWh/d
	Plinovodi d.o.o.	2022	SI	HR	414.0 GWh/d

Sponsors	General Information	Barriers (Count)
<p>Plinovodi 100%</p>	<p>Promoter <i>Plinovodi d.o.o.</i></p> <p>Operator <i>Plinovodi d.o.o.</i></p> <p>Host Country <i>Slovenia</i></p> <p>Status <i>Planned</i></p> <p>Website <i>Project's URL</i></p> <p>Publication Approval Status <i>Approved</i></p>	<p>Permit Granting  1</p>

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (TYNDP for the period 2016-2025)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number	<i>C10</i>	Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
Currently PCI	<i>No</i>	Market Test			Exemption Granted	<i>No</i>
		Permitting				
CBCA Decision	<i>No</i>	Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning	<i>2022</i>	<i>2022</i>		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
M8 Kalce - Jelšane		1,200	60		
Total			60		

Benefits	
Main Driver	<u>Market Demand</u>
Main Driver Explanation	
Benefit Description	


Barriers	
Barrier Type	Description
Permit Granting	Long lasting and complicated procedures of Spatial planning (National Spatial Plan, SEA and EIA procedures, Environmental consent) as well as the procedure of acquiring the Construction permit (long procedures for land acquisition, etc.)

M6 Interconnection Osp

TRA-N-107	Project	Pipeline including CS	Non-FID
Update Date	22/05/2016		Non-Advanced
Description	New IP Osp with the transmission system of the Italian TSO. Previously as M6 Ajdovščina-Lucija, 1st phase.		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling

Point	Operator	Year	From Gas System	To Gas System	Capacity
San Dorligo della Valle (IT) /Osp (SI)	Plinovodi d.o.o.	2022	IT	SI	6.1 GWh/d

Sponsors	General Information	No Barriers Defined	Barriers (Count)
Plinovodi 100% 	Promoter <i>Plinovodi d.o.o.</i> Operator <i>Plinovodi d.o.o.</i> Host Country <i>Slovenia</i> Status <i>Planned</i> Website Publication Approval Status <i>Approved</i>		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>No (The project is not included in the currently valid and confirmed NDP (2016-2025), but it was included in the previous one (2015-2024) and it will also be included in the new one, which is in preparation (TYNDP 2017-2026) and will be confirmed by our regulator expectedly in the next months.)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
		Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
		Market Test			Exemption Granted	<i>No</i>
		Permitting				
NDP Number		Supply Contracts			Exemption in entry direction	<i>0.00%</i>
		FID			Exemption in exit direction	<i>0.00%</i>
Currently PCI	<i>No</i>	Commissioning	<i>2022</i>	<i>2022</i>		
CBCA Decision	<i>No</i>	Construction				
Market Survey	<i>Not Relevant (no CBCA decision)</i>					

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
M6 Interconnection Osp	The length is approximately 1.2 km.	250	1		
Total			1		

Benefits	
Main Driver	<u>Market Demand</u>
Main Driver Explanation	
Benefit Description	

R61 Dragonja - Izola

TRA-N-114	Project	Pipeline including CS	Non-FID
Update Date	24/05/2016		Non-Advanced
Description	Interconnector with the transmission system of the Croatian TSO. New IP Sečovlje (SI) / Plovanija (HR).		
Regulatory Decisions and similar material conditions			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Sečovlje (SI) / Plovanija (HR)	Plinovodi d.o.o.	2024	HR	SI	5.1 GWh/d
	Plinovodi d.o.o.	2024	SI	HR	5.1 GWh/d

Sponsors		General Information		No Barriers Defined	Barriers (Count)
Plinovodi	100%	Promoter	Plinovodi d.o.o.		
		Operator	Plinovodi d.o.o.		
		Host Country	Slovenia		
		Status	Planned		
		Website	Project's URL		
		Publication Approval Status	Approved		

NDP and PCI Information		Schedule	Start Date	End Date	Third-Party Access Regime	
Part of NDP	<i>Yes (TYNDP for the period 2016-2025)</i>	Pre-Feasibility			Considered TPA Regime	<i>Regulated</i>
NDP Number		<i>C11</i> Feasibility			Considered Tariff Regime	<i>Regulated</i>
		FEED			Applied for Exemption	<i>No</i>
Currently PCI		<i>No</i> Market Test			Exemption Granted	<i>No</i>
		Permitting				
CBCA Decision		<i>No</i> Supply Contracts			Exemption in entry direction	<i>0.00%</i>
Market Survey	<i>Not Relevant (no CBCA decision)</i>	FID			Exemption in exit direction	<i>0.00%</i>
		Construction				
		Commissioning	<i>2024</i>	<i>2024</i>		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	
R61 Dragonja - Izola		300	10		
Total			10		

Benefits	
Main Driver	<u>Market Demand</u>
Main Driver Explanation	
Benefit Description	



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