# PCI 5.1.1 Physical Reverse Flow at Moffat interconnection point (IE/UK)

TRA-A-829	Project Project	Pipeline including CS	Non-FID
Update Date	22/09/2020		Advanced
Description	Physical Reverse Flow at the Moffat interconnection point, which is currently uni-d Man and Northern Ireland (onshore). The planned capacity is 139 GWH/d.	lirectional, supporting forward flow only fro	om UK to IE, the Isle of
PRJ Code - PRJ Name	PRJ-G-001 - Physical Reverse Flow at Moffat interconnection point (IE/UK)		

Point		Operator		Year	From Gas System	To Gas System	Capacity
Moffat		Gas Networks Ireland		2022	IE	Y-UKm	139.00 GWh/d
Sponsors		General Infor	rmation		NDP and	PCI Information	
Gas Networks Ireland	100%	Promoter	Gas Networks Ireland	Part o	of NDP	s (GNI, Network De	evelopment Plan
		Operator	Gas Networks Ireland		STADI		2017)
		Host Country	Ireland	NDP	Number		PCI 5.1.1
		Status	Planned	NDP	Release Date		15/12/2017
		Website	Project's URL	NDP	Website		NDP URL
					ently PCI		No
				Priori	ity Corridor(s)		NSIW

Schedule	Start Date	End Date
Pre-Feasibility		11/2018
Feasibility	06/2017	11/2018
FEED	06/2020	12/2020
Permitting	01/2021	12/2021
Supply Contracts		06/2021
FID		12/2021
Construction	01/2022	12/2022
Commissioning	2022	2022
Grant Obtention Date	14/03/2017	14/03/2017

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

<b>Pipelines and Compresso</b>	or Stations				
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Interconnector 2		750	194	29	0
	Total		194	29	

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

## Delays since last TYNDP

Delay Since Last TYNDP

**Delay Explanation** 

Results and recommendations from the feasibility study were communicated to stakeholders and industry in Q1 2019. The project can now progress into FEED stage. The FEED commencement date has been adjusted by 12 months to allow sufficient time to progress an application to the next CEF call for proposals.

# **Expected Gas Sourcing**

LNG ()

Benefits				
Main Driver	Market Demand			
Main Driver Explanation				
Benefit Description	The PCI of which this action is an element would benefit the operators of supply sources in Ireland by facilitating access to the UK and continental markets. In particular the progression of PCI 5.1.1 would be seen as a key enabler for PCI 5.3 Shannon LNG Terminal, by facilitating access to the UK market. This would help Ireland's security of supply position in terms of the N-1 standard.			

CRCA					
CBCA					
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or				
	not				
Submissin Date					
Decision Date					
Website					
Countries Affected					
Countries Net Cost Bearer					
Additional Comments					

	Financial Assistance
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Grants for studies	Yes
Grants for studies amount	Mln EUR 0.9
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	
Other Financial Assistance	No
Comments	
General Comments	

# Moffat Physical Reverse Flow

TRA-N-1064	Project	Pipeline including CS	Non-FID
Update Date	22/11/2019		Non-Advanced
Description	Physical Reverse Flow at the Moffat interconnection point, which is currently uni-direct Man and Northern Ireland (onshore). The planned capacity is 139GWH/d.  The scope for this project from the National Grid perspective is limited to modification any other modifications to National Grid infrastructure, in particular no additional piep	s to the receiving AGI at Moffat. There	
PRJ Code - PRJ Name	PRJ-G-001 - Physical Reverse Flow at Moffat interconnection point (IE/UK)		

Capacity Increments Variant For Modelling						
Point	Operator		Year From G	as System	To Gas System	Capacity
Moffat	National Grid Gas plc		2020 Y-	UKm	UK	139.00 GWh/d
Sponsors	General Infor	mation		NDP and	PCI Information	
GNI (UK) Limited 100%	Promoter	National Grid Gas plo			there is no obliga	
	Operator	National Grid Gas plo	Part of NDP	level	level for such a project to be part of th ND	
	Host Country	United Kingdom	NIDD Niversia an			
	Status	Planned				
	Website		NDP Release D	ate		
			NDP Website			
			Currently PCI			No
			Priority Corrido	or(s)		NSIW

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	06/2017	11/2018
FEED	06/2019	12/2019
Permitting	01/2020	12/2020
Supply Contracts		
FID		12/2020
Construction	01/2021	12/2021
Commissioning	2020	2020
Grant Obtention Date	14/03/2017	14/03/2017

Third-Party Access Regime			
Considered TPA Regime	Regulated		
Considered Tariff Regime	Regulated		
Applied for Exemption	No		
Exemption Granted	No		
Exemption in entry direction	100.00%		
Exemption in exit direction	0.00%		

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Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes

Specific Criteria Fulfilled Comments

Delays since last TYND	P
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Delay Since Last TYNDP

Delay Explanation

Results and recommendations from the feasibility study will be communicated to stakeholders and industry in Q1 2019. Following this, the project will progress into FEED stage. The FEED commencement date has been adjusted by 5 months to allow for communication of Feasibility Study results to take place. This adjustment will be made feasible by building on the initial conceptual design work undertaken as part of the Feasibility Study.

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Main Driver

Others

Main Driver Explanation

The PCI of which this action is an element would benefit the UK through improvements in Security of Supply and would also benefit the operators of supply sources in Ireland by facilitating access to the UK and continental markets. In particular the progression of PCI 5.1.1 would be seen as a key enabler for PCI 5.3 Shannon LNG Terminal, by facilitating access to the UK market. This would help Ireland's security of supply position in terms of the N-1 standard

Benefit Description

	CBCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financia	al Assistance
Applied for CEF	(3) No, we have not applied for CEF
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	No decision yet taken
Other Financial Assistance	No
Comments	
General Comments	

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# **Bidirectional Austrian-Czech Interconnector (BACI)**

TRA-A-21	Project Pipeline including (		Non-FID
Update Date	22/11/2019		Advanced
Description	The Bidirectional Austrian Czech Interconnection (BACI) will be a new infrastructuc connected to the existing Czech transmission system via CS Břeclav (NET4GAS s. CONNECT AUSTRIA GmbH). The project BACI will enable capacity transmission for facilitate better market integration between Austria and the Czech Republic. The Austrian and also Polish system by diversification of gas supply routes and by containing the containing transmission of the containing transmission for the	r.o.) and to the Austrian transmission system for the first time between these two EU Member project BACI will also increase the overall fle	via Baumgarten (GAS ber States and it will exibility of the Czech,
PRJ Code - PRJ Name	PRJ-G-002 - Bidirectional Austrian - Czech Interconnection (BACI)		

Capacity Increments Variant For Modelling						
Point	Opera	or	Year	From Gas System	To Gas System	Capacity
	Gas Co	Gas Connect Austria GmbH 2			CZ	201.42 GWh/d
Poštorná / Reintal	Gas Co	Gas Connect Austria GmbH		CZ	AT	201.42 GWh/d
Sponsors		General Information		NDP and	PCI Information	
Pineline on Austrian territory	Promoter GAS CONNECT AUSTRIA GmbH Part of NDP		Vos (N	IDP 2019 - 2028)		

Sponsors		General Information		NDP and PCI Information		
Pipeline on Austrian territory		Promoter	GAS CONNECT AUSTRIA GmbH	Part of NDP	Yes (NDP 2019 - 2028)	
GAS CONNECT AUSTRIA GmbH	100%	Operator	Gas Connect Austria GmbH	NDP Number	GCA 2015/01a	
Pipeline on Czech territory		Host Country	Austria	NDP Release Date	11/02/2019	
NET4GAS, s.r.o	100%	Status	Planned	NDP Website	NDP URL	
142173, 3.1.0	10070	Website	<u>Project's URL</u>	Currently PCI	No	
				Priority Corridor(s)	NSIE	

Schedule	Start Date	End Date
Pre-Feasibility		01/2014
Feasibility		
FEED		
Permitting	04/2021	09/2021
Supply Contracts		11/2021
FID		07/2021
Construction	01/2022	05/2024
Commissioning	2024	2024
Grant Obtention Date	30/04/2015	30/04/2015

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Austrian Side	The technical load factor of the pipeline is confidential and must not be published. Conversion from Nm³ (0°) to kwh with GCV of 11.19 AT side is TRA-N-021 and CZ side is TRA-N-133 Electric driven compressor	800	49		0
Czech Side	Conversion from Nm <sup>3</sup> (0°) to kwh with GCV of 11.19 AT side is TRA-N-021 and CZ side is TRA-N-133	800	12		0
	Total		61		

Fulfilled Criteria

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

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## **Delays since last TYNDP**

Delay Since Last TYNDP

**Delay Explanation** 

According to the footnote of the 3rd PCI list the implementation of BACI as a PCI is conditional upon the outcome of the pilot project 'Trading Regional Upgrade" (TRU). Currently the one-year long pilot phase of TRU service is ongoing. The commissioning year (and the entire time-schedule was changed to 2024.

	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. 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 BACI the region would become less vulnerable in case of supply disruption.

	CBCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

	Financial Assistance
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Grants for studies	Yes
Grants for studies amount	Mln EUR 0.1
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	
Other Financial Assistance	No
Comments	
General Comments	

# **Bidirectional Austrian Czech Interconnection (BACI)**

TRA-A-133	Project	Pipeline including CS	Non-FID
Update Date	22/11/2019		Advanced
Description	The transmission system operators of the Czech Republic (NET4GAS, s.r.o.) and project Bidirectional Austrian Czech Interconnection (BACI). The project BACI air Republic and Austria. The pipeline is planned to be connected at CS Břeclav (NE to the existing transmission systems of both countries.	ms at establishing the first direct connection b	petween the Czech
PRJ Code - PRJ Name	PRJ-G-002 - Bidirectional Austrian - Czech Interconnection (BACI)		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Poštorná / Reintal	NET4GAS, s.r.o.	2024	AT	CZ	201.42 GWh/d
			Comment: Entry from AT to CZ		
	NET4GAS, s.r.o.	2024	CZ	AT	201.42 GWh/d
			Comment:	Exit from CZ to A7	Γ

Sponsors			General Information	NDF	P and PCI Information
Austria		Promoter	NET4GAS, s.r.o.	Part of NDP	Yes (CZ NDP 2019-2028 (approved))
GAS CONNECT AUSTRIA GmbH	100%	Operator	NET4GAS, s.r.o.	NDP Number	TRA-N-133
Czech Republic		Host Country	Czechia	NDP Release Date	31/10/2018
NET4GAS, s.r.o.	100%	Status	Planned	NDP Website	NDP URL
1421 167 67 5.1.6.	10070	Website	<u>Project's URL</u>	Currently PCI	No
				Priority Corridor(s)	NSIE

Schedule	Start Date	End Date
Pre-Feasibility		05/2009
Feasibility	03/2012	02/2014
FEED	03/2012	10/2020
Permitting	05/2015	10/2021
Supply Contracts		11/2021
FID		
Construction	01/2023	04/2024
Commissioning	2024	2024
Grant Obtention Date	30/04/2015	30/04/2015

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations			
Pipeline Section	Pipeline Comment	Diameter Length Compressor Power Comission (mm) (km) (MW) Year	_
Břeclav (CZ) - Poštorná/Reintal (CZ/AT)	CZ side	800 12 2024	4
	Total	12	

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

		Delays since last TYND
Delay Since Last TYNDP	0	

**Delay Explanation** 

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# **Expected Gas Sourcing**

Norway, Russia

	Benefits
Main Driver	Others
Main Driver Explanation	n Competition, Market Integration
Benefit Description	The aim of BACI is to bring competition into the Austrian gas market which could help to decrease gas prices in Austria (and connected markets like Italy). In the last couple of months, the spreads between the German hub (i.e. Gaspool) and the Austrian VP have been above 2 €/MWh. For the Austrian VP/Czech market, the recent spreads are around 1.5 €/MWh, which fully justifies the need to further market integration between the Czech Republic and Austria.
	Barriers
Barrier Type	Description
Permit Granting	Permitting obstacles
Market	Shippers mainly buy transmission capacity in monthly and daily auctions and are not interested in booking long-term capacity which traditionally covers investment in infrastructure.
Regulatory	Low rate of return
Regulatory	Lack of proper transposition of EU regulation

	CBCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance			
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision		
Grants for studies	Yes		
Grants for studies amount	Mln EUR 0.0		
Grants for works	No		
Grants for works amount	Mln EUR 0.0		
Intention to apply for CEF	No decision yet taken		
Other Financial Assistance	Yes		
Comments	TEN-E, 92 942 EUR		
General Comments			

# Interconnection Croatia/Slovenia (Lučko - Zabok - Jezerišće - Sotla)

TRA-N-86	Project	Pipeline including CS	Non-FID	
Update Date	21/09/2020		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 an 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 of the interconnection Karlovac-Lučko-Zabok-Rogatec, a new gas pipeline system has been planned which would significantly increase the capacity of the 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 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 of the interconnection of the Croatian storage potentials this opens significant transit potentials in both directions.			
PRJ Code - PRJ Name	PRJ-G-003 - Interconnection Slovenia-Croatia (Gas pipeline Lučko-Zabok-Rogatec)			

Capacity Increments Variant For	Modelling						
Point		Operator		Year	From Gas System	To Gas System	Capacity
		Plinacro Ltd		2021	SI	HR	40.80 GWh/d
Rogatec		Plinacro Ltd		2023	HR	SI	162.00 GWh/d
		Plinacro Ltd		2023	SI	HR	121.20 GWh/d
Sponsors		General Information			NDP and	PCI Information	
Plinacro	100%	Promoter	Plinacro Ltd	Part o	f NDP		Yes (2018-2027)
		Operator	Plinacro Ltd	NDP	Number		1.9, 1.10, 1.11
		Host Country	Croatia	NDP F	Release Date		15/12/2017
		Status	Planned	NDP \	Website		NDP URL
	,	Website	<u>Project's URL</u>	Curre	ntly PCI	Yes	6 (6.26.1.1 (2020))
				Priorit	y Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	09/2014	12/2014
FEED	01/2020	01/2020
Permitting	01/2020	01/2020
Supply Contracts		01/2020
FID		01/2020
Construction	01/2020	01/2023
Commissioning	2021	2023
Grant Obtention Date	01/04/2020	01/04/2020

	_			
Third-Party Access Regime				
Considered TPA Regime	Regulated			
Considered Tariff Regime	Regulated			
Applied for Exemption	No			
Exemption Granted	No			
Exemption in entry direction	0.00%			
Exemption in exit direction	0.00%			

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
BS Rakitje-Zabok		700	26		2023
Jezerisce-Sotla		700	8		2023
Lučko-BS Rakitje		700	10		2021
Zabok-Jezerisce		700	25		2023
	Total		69		

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#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

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 Specific Criteria Fulfilled Comments 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

#### **Delays since last TYNDP**

Delay Since Last TYNDP **Delay Explanation** 

Financing

#### **Expected Gas Sourcing**

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

Availability of funds and associated conditions

	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

Intergovernmental Agreements				
Agreement	Agreement Description	Is Signed Ag	reement 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	

	CBCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

	Financial Assistance				
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision				
Grants for studies	Yes				
Grants for studies amount	Mln EUR 0.5				
Grants for works	No				
Grants for works amount	Mln EUR 0.0				
Intention to apply for CEF	No decision yet taken				
Other Financial Assistance	No				
Comments					
General Comments					

# Upgrade of Rogatec interconnection (M1A/1 Interconnection Rogatec)

TRA-N-390	Project	Pipeline including CS	Non-FID			
Update Date	13/02/2020		Advanced			
Description	Adjustment of the operating parameters of the transmission system of the C bidirectional operation in the frame of the bidirectional gas route Austria - S		y and enabling			
	The project is a part of the PCI 6.26 Cluster Croatia - Slovenia - Austria at Rogatec.					
PRJ Code - PRJ Name	PRJ-G-003 - Interconnection Slovenia-Croatia (Gas pipeline Lučko-Zabok-Ro	gatec)				

Point		Operator		Year	From Gas System	To Gas System	Capacity
		Plinovodi d.o.o.		2021	HR	SI	40.80 GWh/d
Rogatec		Plinovodi d.o.o.		2023	HR	SI	121.20 GWh/d
		Plinovodi d.o.o.		2023	SI	HR	162.00 GWh/d
Sponsors		General Information NDP an			NDP and	PCI Information	
Plinovodi	100%	Promoter	Plinovodi d.o.o.	Part c	of NDP Yes	(TYNDP for the pe	eriod 2019-2028)
		Operator	Plinovodi d.o.o.	NDP I	Number		C12
		Host Country	Slovenia	NDP I	Release Date		26/11/2018
		Status	Planned	NDP	Website		NDP URL
		Website	Project's URL	Curre	ntly PCI	Y	es (6.26.6 (2020))
				Priori	ty Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		01/2015
Feasibility	04/2015	05/2015
FEED	07/2020	07/2022
Permitting	07/2021	12/2022
Supply Contracts		12/2023
FID		09/2021
Construction	07/2022	12/2023
Commissioning	2021	2023
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations		
Pipeline Section	Pipeline Comment	Diameter Length Compressor Power Comissioning (mm) (km) (MW) Year
Upgrade of Rogatec interconnection	The length is 3.8 km.	800 4 0
	Total	4

	Fulfilled Criteria
Specific Criteria Fulfilled	Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes
	The project will provide security of supply for Croatia and Slovenia and a reverse flow (from Croatia to Slovenia). It will provide access to/from
Specific Criteria Fulfilled Comments	the gas markets of Austria and Italy via the Slovenian system. It will provide import and significant access to Krk LNG and IAP pipeline:
	contributing to the security of supply and benefits of the open gas market.

# **Expected Gas Sourcing**

Caspian Region, Russia, LNG (HR)

Current TYNDP : TYNDP 2020 - Annex A Page 19 of 773

# BenefitsMain DriverMarket DemandMain Driver ExplanationAlso essential contribution to Security of supply.Benefit Description

	CBCA	Finar	ncial Assistance
Decision  Submissin Date  Decision Date  Website  Countries Affected  Countries Net Cost Bearer	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not	Applied for CEF Grants for studies Grants for studies amount Grants for works Grants for works amount Intention to apply for CEF Other Financial Assistance	(3) No, we have not applied for CEF  No  Mln EUR 0.0  No  Mln EUR 0.0  No  Mln EUR 0.0  No decision yet taken
Additional Comments		Comments General Comments	

# LNG Evacuation Pipeline Kozarac-Slobodnica

TRA-N-1058	Project	Pipeline including CS	Non-FID
Update Date	21/09/2020		Advanced
Description	Gas pipeline Kozarac - Slobodnica jointly with gas pipeline sytem Zlobin - Bosiljevo - Main Evacuation Pipeline connecting LNG from the LNG solution on the island of Krk is a continuation of the existing Hungary – Croatia interconnection (gas pipeline Varcwill 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.	with Central Eastern European counties	s. The pipeline system
PRJ Code - PRJ Name	PRJ-G-004 - Krk LNG terminal with connecting and evacuation pipelines towards Hur	ngary and beyond	

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Croatia LNG	Plinacro Ltd	2027	LNG_Tk_HR	HR	82.00 GWh/d
Development	Plinacro Ltd	2027	HR	HU	82.00 GWh/d
Dravaszerdahely	Plinacro Ltd	2027	HU	HR	135.85 GWh/d

Sponsors			General Information	NDP :	and PCI Information
Plinacro	100%	Promoter	Plinacro Ltd	Part of NDP	Yes (2018-2027)
		Operator	Plinacro Ltd	NDP Number	1.32
		Host Country	Croatia	NDP Release Date	15/12/2017
		Status	Planned	NDP Website	<u>NDP URL</u>
		Website	<u>Project's URL</u>	Currently PCI	No
				Priority Corridor(s)	NSIE

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	09/2015	10/2016
FEED	01/2023	01/2023
Permitting	09/2014	01/2023
Supply Contracts		01/2024
FID		01/2024
Construction	01/2024	01/2027
Commissioning	2027	2027
Grant Obtention Date	24/11/2015	24/11/2015

	9
Third-Party Access Regim	ne
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Kozarac-Slobodnica		800	128		2027
	Total		128		

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

## Delays since last TYNDP

Delay Since Last TYNDP

Delay Explanation Project depend on LNG project

## **Expected Gas Sourcing**

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

Current TYNDP: TYNDP 2020 - Annex A Page 22 of 773

#### **Benefits** Main Driver Market Demand 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 Main Driver Explanation 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. 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 **Benefit Description** 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

	CBCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

	Financial Assistance
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Grants for studies	Yes
Grants for studies amount	Mln EUR 1.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	No decision yet taken
Other Financial Assistance	No
Comments	
General Comments	

# LNG evacuation pipeline Omišalj - Zlobin (Croatia)

TRA-F-90	Project	Pipeline including CS	FID
Update Date	18/11/2019		Advanced
Description	The pipeline is the connection of the LNG on the Krk island with the existing Croatia with gas pipeline system Zlobin - Bosiljevo - Sisak-Kozarac and with gas pipeline Koconnecting LNG from the LNG solution on the island of Krk with Central Eastern Eur Hungary – Croatia interconnection (gas pipeline Varosföld-Dravaszerdahely-Donji NIt will be the "backbone" of the Croatian gas system.	ozarac-Slobodnica makes LNG Main Evacuropean counties. The pipeline is a continu	uation Pipeline
PRJ Code - PRJ Name	PRJ-G-004 - Krk LNG terminal with connecting and evacuation pipelines towards Ho	ungary and beyond	

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Croatia LNG	Plinacro Ltd	2020	LNG_Tk_HR	HR	81.51 GWh/d
Dravaszerdahely	Plinacro Ltd	2020	HR	HU	40.76 GWh/d

Sponsors		General Information	NDP and PC	Cl Information
Plinacro	100% Promoter	Plinacro Ltd	Part of NDP	Yes (2018-2027)
	Operator	Plinacro Ltd	NDP Number	1.18
	Host Countr	Croatia	NDP Release Date	15/12/2017
	Status	Planned	NDP Website	<u>NDP URL</u>
	Website	<u>Project's URL</u>	Currently PCI	Yes (6.5.1 (2020))
			Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	09/2015	10/2016
FEED	10/2015	03/2017
Permitting	07/2009	01/2019
Supply Contracts		01/2019
FID		06/2019
Construction	06/2019	12/2020
Commissioning	2020	2020
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

<b>Pipelines and Compressor Stations</b>						
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year	
Omišalj-Zlobin		800	18		2020	
	Total		18			
	Fulfilled Criteria					
Specific Criteria Fulfilled	Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Secur of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas					
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.					-South (Baltic – ne (as well as y all	

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# **Expected Gas Sourcing**

LNG ()

	Benefits	

Main Driver Market Demand

Main Driver Explanation

Benefit Description

	CBCA		Financial Assistance
Decision	Yes, we have submitted an investment request and have received a decision	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Submissin Date	14/10/2016	Grants for studies	No
Decision Date	10/04/2017	Grants for studies amount	Mln EUR 0.0
Website	<u>CBCA URL</u>	Grants for works	Yes
Countries Affected	Croatia, Hungary, Ukraine	Grants for works amount	Mln EUR 16.4
Countries Net Cost Bearer		Intention to apply for CEF	
Additional Comments		Other Financial Assistance	No
		Comments	
		General Comments	

# LNG evacuation pipeline Zlobin-Bosiljevo-Sisak-Kozarac

TRA-N-75	Project	Pipeline including CS	Non-FID
Update Date	21/09/2020		Advanced
Description	Gas pipeline Zlobin - Bosiljevo - Sisak – Kozarac jointly with gas pipeline Omišalj-Zle Evacuation Pipeline connecting LNG from the LNG solution on the island of Krk wit is a continuation of the existing Hungary – Croatia interconnection (gas pipeline Vawill 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.	th Central Eastern European counties. The	pipeline
PRJ Code - PRJ Name	PRJ-G-004 - Krk LNG terminal with connecting and evacuation pipelines towards Hu	ungary and beyond	

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Croatia LNG	Plinacro Ltd	2027	LNG_Tk_HR	HR	27.17 GWh/d
Dravaszerdahely	Plinacro Ltd	2027	HR	HU	54.34 GWh/d

Sponsors			General Information	NDP and P	CI Information
Plinacro	100%	Promoter	Plinacro Ltd	Part of NDP	Yes (2018-2027)
		Operator	Plinacro Ltd	NDP Number	1.19, 1.20, 1.21
		Host Country	Croatia	NDP Release Date	15/12/2017
		Status	Planned	NDP Website	<u>NDP URL</u>
		Website	<u>Project's URL</u>	Currently PCI	No
				Priority Corridor(s)	NSIE

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	09/2015	10/2016
FEED	06/2018	04/2019
Permitting	07/2009	01/2025
Supply Contracts		01/2025
FID		01/2025
Construction	01/2025	01/2027
Commissioning	2027	2027
Grant Obtention Date	24/11/2015	24/11/2015

	-
Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Bosiljevo - Sisak		800	102		2027
Kozarac - Sisak		800	20		2027
Zlobin - Bosiljevo		800	58		2027
	Total		180		

## **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

## **Delays since last TYNDP**

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)

Availability of funds and associated conditions

## Comments about the Third-Party Access Regime

TPA regime is not defined yet, Exemption Regime possibly

Financing

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

CBCA				Financial Assistance
Decision	Yes, we have submitted an investment request and have received a decision		Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Submissin Date	14/10/2016		Grants for studies	Yes
Decision Date	10/04/2017		Grants for studies amount	Mln EUR 1.2
Website	<u>CBCA URL</u>		Grants for works	Yes
Countries Affected	Croatia, Hungary, Ukraine		Grants for works amount	Mln EUR 0.0
Countries Net Cost Bearer			Intention to apply for CEF	
Additional Comments			Other Financial Assistance	No
			Comments	
			General Comments	

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# LNG terminal Krk 1st phase

LNG-F-82	Project	LNG Terminal	FID	
Update Date	22/09/2020		Advanced	
Description	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 be developed in two phases - in first phase as FSRU and in second phase as onshore LNG terminal.  First phase is planned to be developed as FSRU solution, with correspondent capacity of up to 2.6 bcm/y.			
PRJ Code - PRJ Name	PRJ-G-004 - Krk LNG terminal with connecting and evacuation pipelines towards Hungar	y and beyond		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	LNG Hrvatska d.o.o.	2021	LNG_Tk_HR	HR	81.50 GWh/d
Croatia LNG	Comment: FSRU vessel with conne	ecting pipeline Omišo		up to 2,6 bcm/y as hase of the project	

Sponsors			General Information	NDP and PCI Information		
HEP d.d.	85%	Promoter	LNG Hrvatska d.o.o.		Yes (DESETOGODISNJI PLAN RAZVOJA	
Plinacro d.o.o.	15%	Operator	LNG Hrvatska d.o.o.	Part of NDP	PLINSKOG TRANSPORTNOG SUSTAVA	
		Host Country	Croatia		REPUBLIKE HRVATSKE 2018 2027.)	
		Status	In Progress	NDP Number	LNG terminal on the island of Krk	
		Website	Project's URL	NDP Release Date	01/11/2017	
		***************************************	<u></u>	NDP Website	<u>NDP URL</u>	
				Currently PCI	Yes (6.5.1 (2020))	
				Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		04/2017
Feasibility	07/2012	01/2014
FEED	03/2017	12/2017
Permitting	10/2013	04/2019
Supply Contracts		01/2019
FID		01/2019
Construction	01/2019	12/2020
Commissioning	2021	2021
Grant Obtention Date	18/12/2017	18/12/2017

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

	Technical Information (LNG)								
Regasification Facility	Reloading Ability	Project Phase	Expected Increment (bcm/y)	Ship Size (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 LNG)	Comments	Commissioning Year	Load Factor (%)
The import terminal for the liquefied natural gas(LNG) on the Island of Krk	Yes	1st phase	2.6	140,000	7.12	140,000	up to 2,6 bcm/y due to technical limitation of entry point into TS	2021	20

Fulfil	led	Criteria	
. a.i.ii		Circciia	

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

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

	Delays since last TYNDP
Delay Since Last TYNDP	None
Delay Explanation	In comparison with last TYNDP, the project is rescheduled with new beginning of operation from 1st January 2021.

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# **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

	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 CO <sub>2</sub> emissions in the region, facilitating economic development, etc.					

	Barriers
Barrier Type	Description
Permit Granting	N/A
Political	N/A
Others	N/A
Market	Current market interest is lower than planned. It is expected higher capacity booking in the future.

	Intergovernmental Agreements		
Agreement	Agreement Description	Is Signed	Agreement Signature Date
CESEC MoU	Memorandum of Understanding	Yes	10/07/2015
The Three Seas initiative	Connecting Central and Eastern European economies and infrastructure from North to South of Europe, in order to complete the single European market.	Yes	25/08/2016

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	CBCA		Financial Assistance
Decision	Yes, we have submitted an investment request and have received a decision	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Submissin Date	09/07/2016	Grants for studies	Yes
Decision Date	12/10/2016	Grants for studies amount	Mln EUR 6.2
Website	<u>CBCA URL</u>	Grants for works	Yes
Countries Affected	Croatia, Hungary	Grants for works amount	Mln EUR 101.4
Countries Net Cost Bearer	Croatia	Intention to apply for CEF	No decision yet taken
Additional Comments		Other Financial Assistance	Yes
		Comments	At European level, funding programme IPF TA (Western Balkans Investment Framework) financed – Conceptual Solution, Feasibility Study, EIA/SIA and Conceptual Design in amount of 1 mil €
		General Comments	

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# LNG terminal Krk 2nd phase

LNG-N-815	Project	LNG Terminal	Non-FID
Update Date	09/12/2019		Advanced
Description	The import terminal for the liquefied natural gas (LNG) will be situated in Omišalj on the Islande developed in two phases - in first phase as FSRU and in second phase as onshore LNG te Second phase is planned to be developed as onshore terminal with capacity of 7 bcm/y.	·	he project is planned to

PRJ Code - PRJ Name PRJ-G-004 - Krk LNG terminal with connecting and evacuation pipelines towards Hungary and beyond

Capa	city In	crements	Variant	For Mo	dellina
900	سد وس		o di lali		GCIIII IS

Point	Operator	Year	From Gas System	To Gas System	Capacity
7	LNG Hrvatska d.o.o.	2027	LNG_Tk_HR	HR	109.20 GWh/d

**Croatia LNG** 

Comment: Onshore LNG terminal with a correspondent annual send-out capacity of interconnection pipeline HR-HU as 2nd phase of the project

Sponsors			General Information		NDP and PCI Information		
HEP d.d.	85%	Promoter	LNG Hrvatska d.o.o.		Yes (DESETOGODISNJI PLAN RAZVOJA		
Plinacro d.o.o.	15%	Operator	LNG Hrvatska d.o.o.	Part of NDP	PLINSKOG TRANSPORTNOG SUSTAVA REPUBLIKE HRVATSKE 2018 2027.)		
		Host Country	Croatia	NDP Number	LNG terminal on the island of Krk		
		Status	Planned		·		
		Website	<u>Project's URL</u>	NDP Release Date	01/11/2017		
				NDP Website	<u>NDP URL</u>		
				Currently PCI	Yes (6.5.6 (2020))		
				Priority Corridor(s)			

Schedule	Start Date	End Date
Pre-Feasibility		04/2017
Feasibility	07/2012	01/2014
FEED	03/2016	08/2016
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2027	2027
Grant Obtention Date	27/03/2015	27/03/2015

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

		Technical Information (LN	1G)				
Regasification Facility	Reloading Ability Project Phase	Expected Increment Ship Size (bcm/y) (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 LNG)	Comments	Commissioning Load F Year (%	Factor %)
The import terminal for the liquefied natural gas(LNG) on the Island of Krk	Yes 2nd phase	4.4 120,000	12.05	160,000	Onshore LNG terminal with a correspondent annual send-out capacity of interconnection pipeline HR-HU	2027 5	50

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

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

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## **Delays since last TYNDP**

Delay Since Last TYNDP

Delay Explanation In comparison with last TYNDP, the project is planned for year 2027.

# **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

	Benefits 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, int source in the region, reducing CO <sub>2</sub> emissions in the region, facilitating economic development, etc.	roducing the e	cologically sound energy				
	Barriers						
Barrier Type	Description						
Permit Granting	N/A						
Political	N/A						
Others	N/A						
Market	Current market interest is lower than planned. It is expected higher capacity booking in the future.						
	Intergovernmental Agreements						
Agreement	Agreement Description	Is Signed A	greement Signature Dat				
CESEC MoU	Memorandum of Understanding	Yes	10/07/2015				
The Three Seas initiative	Connecting Central and Eastern European economies and infrastructure from North to South of Europe, in order to complete the single European market.	Yes	25/08/2016				

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Financial Assistance		
Applied for CEF Grants for studies Grants for studies amount Grants for works Grants for works amount Intention to apply for CEF Other Financial Assistance Comments General Comments	(3) No, we have not applied for CEF  No  MIn EUR 0.0  No  MIn EUR 0.0  No decision yet taken  Yes  At European level, funding programme IPF TA (Western Balkans Investment Framework) financed – Conceptual  Solution, Feasibility Study, EIA/SIA and Conceptual Design  in amount of 1 mil €	
	Grants for studies Grants for studies amount Grants for works Grants for works amount Intention to apply for CEF Other Financial Assistance Comments	

# Poland - Slovakia Gas Interconnection (PL section)

TRA-F-275	Project	Pipeline including CS	FID
Update Date	22/06/2020		Advanced
Description	The main goal of the project is to create an important part of the North-South gas missing interconnection between the transmission systems in Poland and Slovakia Europe through the diversification of supply sources and routes, as well as integra functionality. The project consists of Poland-Slovakia Interconnector and relevant functionality of the Interconnection.	a and, thus, increase the security of gas sup ation of Sub-Carpathian Market Area and er	plies in Central-Eastern nhancing market
PRJ Code - PRJ Name	PRJ-G-008 - Poland – Slovakia Gas Interconnection		

Capacity Increments Variant For Modelling								
Point		Oper	ator	1	Year F	From Gas System	To Gas System	Capacity
Interconnector PL - SK		GAZ-SYSTEM S.A. 2021		2021	PL	SK	143.90 GWh/d	
		GAZ-	SYSTEM S.A.	2	2021	SK	PL	174.50 GWh/d
Sponsors			General Information			NDP and	PCI Information	
Gas Transmission Operator GAZ-SYSTEM S.A.	100%	Promoter	GAZ-S	YSTEM S.A.	Part of N	Ye Ye	s (National Ten-Ye	ear Transmission

		General Information		NDP and PCI Information		
100%	Promoter	GAZ-SYSTEM S.A.	Part of NDP	Yes (National Ten-Year Transmission		
	Operator	GAZ-SYSTEM S.A.	Tare of No	System Development Plan 2018-2027)		
	Host Country	Poland	NDP Number	N/A		
	Status	Planned	NDP Release Date			
	Website	Project's URL	NDP Website	<u>NDP URL</u>		
		,	Currently PCI	Yes (6.2.1 (2020))		
			Priority Corridor(s)			
	100%	Operator Host Country Status	100% Promoter GAZ-SYSTEM S.A. Operator GAZ-SYSTEM S.A. Host Country Poland Status Planned	100% Promoter GAZ-SYSTEM S.A. Operator GAZ-SYSTEM S.A. Host Country Poland NDP Number Status Planned NDP Release Date Website Project's URL Currently PCI		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	08/2011	07/2013
FEED	10/2014	11/2018
Permitting	10/2015	06/2018
Supply Contracts		
FID		04/2018
Construction	12/2017	09/2021
Commissioning	2021	2021
Grant Obtention Date	18/12/2017	18/12/2017

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
PL-SK Interconnection - Polish section		1,000	59		0
Pogórska Wola - Tworzeń pipeline		1,000	168		0
Strachocina - Pogórska Wola pipeline		1,000	98		0
Tworóg - Tworzeń pipeline		1,000	56		0
	Total		381		

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

Market integration: - Creation of a well-integrated and functioning market in the CEE region. SoS: - Mitigation of exposure to supply disruptions in CEE countries; - Reduction of dependence on gas supplies from Russia in the CEE region. Competition: - Reduction of price differences between the CEE and North-West regions; - Enhanced access to new sources of supply in the CEE region (LNG, NO supplies). d) Sustainability - Reduction of emissions in the CEE region by promoting natural gas in national economies.

#### Delays since last TYNDP

Delay Since Last TYNDP

**Delay Explanation** 

#### **Expected Gas Sourcing**

LNG ()

	Benefits				
Main Driver	Others				
Main Driver Evolanation	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. Sustainability				
Benefit Description	Implementation of PL-SK Interconnection will have an impact on: creating the cross-border capacity between Poland and Slovakia by establishing a large transportation corridor that will allow for flexible transport of gas in Central Europe within the North-South axis; increasing the security of gas supply and diversification of supply routes for the CEE region; improving European gas grid interconnection; increasing the security and reliability of the cross-border gas transmission between Slovakia and Poland (contribution to N-1 standard in Poland and Slovakia); creating a robust, well-functioning internal market in Slovakia and Poland and promote the competition.				

# Agreement Description Agreement Description Agreement Description Agreement Description Is Signed Agreement Signature Date Agreement Description Agreement Description In Comments In Comments Yes 11/06/2014

	CBCA
Decision	Yes, we have submitted an investment request and have received a decision
Submissin Date	31/10/2013
Decision Date	28/11/2014
Website	<u>CBCA URI</u>
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance				
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision			
Grants for studies	Yes			
Grants for studies amount	Mln EUR 2.3			
Grants for works	Yes			
Grants for works amount	Mln EUR 52.5			
Intention to apply for CEF				
Other Financial Assistance	Yes			
Comments	Structural Funds (Operational Programme Infrastructure and Environment 2014-2020): - Pogórska Wola - Tworzeń; - Strachocina - Pogórska Wola; - Tworóg - Tworzeń.			

**General Comments** 

Current TYNDP : TYNDP 2020 - Annex A Page 42 of 773

# Poland - Slovakia interconnection

TRA-F-190	Project	Pipeline including CS	FID
Update Date	22/09/2020		Advanced
Description	Construction of a missing interconnection between Slovak and Polish transmissio gas market via diversification of gas routes and sources. Security of supply will be region.		9
PRJ Code - PRJ Name	PRJ-G-008 - Poland – Slovakia Gas Interconnection		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	eustream, a.s.	2021	PL	SK	143.96 GWh/d
		Comment: Commissioning has been postponed to 12/2021			
Interconnector PL - SK	eustream, a.s.	2021	SK	PL	174.59 GWh/d
		Comment: Commissioning has been postponed to 12/2021			

Sponsors		General Information		NDP and PCI Information	
eustream, a.s. 10	Promoter	eustream,a.s. (a joint-stock company)	Part of NDP	Yes (National Development Plan 2019- 2028)	
	Operator	eustream, a.s.	NDP Number	4.1.1.1PL-SK gas interconnection	
	Host Country	Slovakia	NDP Release Date	30/11/2018	
	Status	In Progress	NDP Website	<u>NDP URL</u>	
	Website	<u>Project's URL</u>	Currently PCI	Yes (6.2.1 (2020))	
			Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		05/2013
Feasibility	05/2011	07/2013
FEED	10/2015	04/2019
Permitting	08/2015	09/2018
Supply Contracts		12/2019
FID		04/2018
Construction	05/2018	12/2020
Commissioning	2021	2021
Grant Obtention Date	18/12/2017	18/12/2017

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Slovak section	Existing compressor station at Veľké Kapušany will be modified in order to reach the most optimal technical solution without creation of stranded assets.	1,000	106	0	2021
	Total		106	0	

Current TYNDP: TYNDP 2020 - Annex A Page 44 of 773

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

Construction of new interconnection between markets enables new trade exchange between these two countries or even other countries in the region. This will force the markets into price convergence process – its effectiveness is dependent on the interconnector's capacity relative to national consumptions and various trade barriers. Creating new transport routes and access to new gas sources lowers these prices and thus benefits all consumers on the market by lower prices. Most of the European countries are able to cover only a small or minimal fraction of their gas consumption by indigenous production. There is a large historical dependence on Russian supplies of gas which concentrates the risks mostly around one supply source. Considering gas as an energy source it is vitally important to diversify supply sources in order to prevent security risks. Robust infrastructure helps to mitigate these risks. Gas as a clean fossil fuel, with low emissions represents sustainable energy source.

Delays since last TYNDP					
Delay Since Last TYNDP	Yes				
Delay Explanation	1)Necessity to prolong public procurement proceeding due to the request of tenderers for extension of time period for submission of the initial tender bids. 2)Prolongation of the tendering process caused by postponement of documentation submission by the winning bidder resulted in delay of detailed engineering. 3) Delay in deliveries of pipelines				

#### **Expected Gas Sourcing**

Caspian Region, Norway, LNG (QA,US), Turkish hub, Adriatic and Black sea sources, Southern Corridor,

Benefits				
Main Driver	Others			
Maria Dairea Franka aki	1,Incease of SoS in the CEE region and potentially also in the Baltic region after constructing gas infrastructure between Poland and Baltic states			
Main Driver Explanation	Integration of gas infrastructure in the CEE region by constructing a currently missing cross-border interconnection between PL and SK. 2, Price convergence based on new gas supply sources and routes 3. Decrease of market concentration on producers side 4, Decrease of carbon emissions			
Benefit Description				

	Barriers				
Barrier Type	Description				
Permit Granting	- Long term and difficult permitting process with regional counties - Project unfriendly approach by local citizens relating to acceptance of the Project with significant impact on land acquisition in spite of many public consultations and public meetings				
Financing	Availability of funds and associated conditions				
Market	Lack of market support				
Regulatory	Low rate of return				

		Intergovernmental Agreements	
Agreement	Agreement Description	Is Signed	Agreement Signature Date
Agreement between the Government of the	2		
Clavely Benublic and the Covernment 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

	CBCA		Financial Assistance
Decision	Yes, we have submitted an investment request and have received a decision	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Submissin Date	31/10/2013	Grants for studies	Yes
Decision Date	28/11/2014	Grants for studies amount	Mln EUR 2.2
Website	<u>CBCA URL</u>	Grants for works	Yes
Countries Affected	Czechia, Hungary, Poland, Slovakia, Ukraine	Grants for works amount	Mln EUR 55.2
Countries Net Cost Bearer		Intention to apply for CEF	No, we do not plan to apply
Additional Comments	CAPEX is modified because of a decision not to contruct new compressor units at Veľké Kapušany but to technologically modify the existing compressor station at Veľké Kapušany. This will have a positive impact on CAPEX.	Other Financial Assistance Comments	Yes  TEN – E: EU Commission Decision C (2012)8546 granting financial aid for the project "Study: Pre – feasibility study for the Gas Interconnector Poland – Slovakia (Identification of the business case and preparation of prefeasibility study)" (action duration: 01.03.2011 – 31.05.2013).
		General Comments	

# **Enhancement of Latvia-Lithuania interconnection (Lithuania's part)**

TRA-A-342	Project	Pipeline including CS	Non-FID
Update Date	30/01/2020		Non-Advanced

Description

The aim of the Project is to increase the capacity of the gas systems between Latvia and Lithuania, ensure safe and reliable natural gas supply and achieve more effective use of the infrastructure and better integration of the gas markets of the Baltic States, Finland and overall BEMIP region. In addition, better conditions will be provided for the region of the use of Latvia's Inčukalns underground gas storage facility. After the implementation of the project, the capacity to Latvia will be increased up to 130.47 GWh/ day and to Lithuania up to 119.53 GWh/ day.

PRJ Code - PRJ Name

PRJ-G-010 - Latvia - Lithuania interconnection

Capacity Increments V	riant For Modelling				
Point	Operator Ye	ear Fr	rom Gas System	To Gas System	Capacity
Wismanna!	AB Amber Grid 20	)23	LV	LT	54.43 GWh/d
Kiemenai	AB Amber Grid 20	23	LT	LV	62.87 GWh/d
Kiemenai	Δ		LT	LV	

Sponsors	General Informatio		General Information	ND	P and PCI Information	
AB Amber Grid	100%	Promoter	AB Amber Grid	Part of NDP	Yes (Ten-Year Network Development	
		Operator	AB Amber Grid		Plan 2018-2027)	
		Host Country	Lithuania	NDP Number	n/a	
		Status	Planned	NIDD D I	23/08/2018	
		Website	Project's URL	NDP Website	<u>NDP URL</u>	
				Currently PCI	Yes (8.2.1 (2020))	
				Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	10/2017	09/2018
FEED	09/2018	04/2019
Permitting	05/2019	01/2020
Supply Contracts		04/2023
FID		10/2020
Construction	10/2020	04/2023
Commissioning	2023	2023
Grant Obtention		
Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

	Fulfilled Criteria
Specific Criteria Fulfilled	Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas
Specific Criteria Fulfilled Comments	The project will remove the exsisting bottleneck of supply limitations and create the adequate infrastructure to fully use the benefits of other infrastructure as well as contribute to the implementation of internal energy market of the Baltic States, Finland and overall BEMIP region. It will ensure safe and reliable supply of gas. The project will contribute to the enhancement of sustainable gas flow and increase of diversification of sources in the region.
	Delays since last TYNDP

**Expected Gas Sourcing** 

Referring to the results of the Feasibility study for the project (carried out in 2018) the project's implementation time shedule has been

Russia, LNG (NO)

Delay Since Last TYNDP

adjusted accordingly.

Delay Explanation

Current TYNDP : TYNDP 2020 - Annex A Page 48 of 773

Benefits	
Main Driver	Market Demand
Main Driver Explanation Increased gas flows between Latvia and Lithuania.	
Benefit Description	The enhancement of the bi-directional capacity between Latvia and Lithuania will increase the opportunities for a cross-border trade, higher usage of Latvia's UGS and ensure safe and reliable natural gas supply, flexibility of the transmission systems both in Lithuania and Latvia and better integration of the gas markets of the Baltic States, Finalnd and overall BEMIP region.

	CBCA		Financial Assistance
Decision	Yes, we have submitted an investment request and have received a decision	Applied for CEF	(2) Yes, we have applied for CEF, but we have not received a decision yet
Submissin Date	04/03/2019	Grants for studies	No
Decision Date	30/05/2019	Grants for studies amount	Mln EUR 0.0
Website	<u>CBCA URL</u>	Grants for works	Yes
Countries Affected	Estonia, Finland, Latvia, Lithuania	Grants for works amount	Mln EUR 7.3
Countries Net Cost Bearer	Latvia;#Lithuania	Intention to apply for CEF	
Additional Comments		Other Financial Assistance	No
		Comments	
		General Comments	

# **Enhancement of Latvia-Lithuania interconnection (Latvian part)**

TRA-A-382	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Non-Advanced
Description	The project is aimed at increase of the interconnection capacity between Latvia the market. On Latvian side it provides for increase of maximal operation pres the most efficient by the feasibility study completed in 2018. On Lithuanian side and adjust piping of Panevežys gas compressor station. After compection of the from Lithuania to Latvia and 119.53 GWh/d from Latvia to Lithuania.	sure in the transmission system to 50 bar. Thi le it is planned to increase the capacity of Kier	s solution was selected as menai metering station
PRJ Code - PRJ Name	PRJ-G-010 - Latvia - Lithuania interconnection		

Point		Operator		Year F	rom Gas System	To Gas System	Capacity
Wie we em ei		Conexus B	altic Grid	2023	LV	LT	54.43 GWh/d
Kiemenai		Conexus Baltic Grid		2023	LT	LV	62.87 GWh/d
Sponsors		(	General Information		NDP and	PCI Information	
JSC "Conexus Baltic Grid"	100%	Promoter	JSC "Conexus Baltic Grid	1		4) there is no obligo	
		Operator	Conexus Baltic Grid	Part of N	IDP level	! for such a project	
		Host Country	Latvia				NDF
		Status	Planned	NDP Nu			
		Website	<u>Project's URL</u>	_	ease Date		
				NDP We			
				Currently	y PCI		Yes (8.2.1 (2020)

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	10/2017	09/2018
FEED	06/2018	12/2020
Permitting	06/2018	06/2022
Supply Contracts		08/2022
FID		01/2020
Construction	01/2020	06/2023
Commissioning	2023	2023
Grant Obtention Date	30/03/2018	30/03/2018

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

	Fulfilled Criteria
Specific Criteria Fulfilled	Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas
Specific Criteria Fulfilled Comments	Interconnection between Latvia and Lithuania is a bottleneck . By implementing this project regional market integration, security of supply and competition will be improved. In addition, upgrading of gas transmission system will reduce possible leaks, thus contributing towards susstanability

# Delays since last TYNDP

Delay Since Last TYNDP

Delay Explanation

## **Expected Gas Sourcing**

Russia, LNG ()

Benefits	
Main Driver	Market Demand
Main Driver Explanation	Main driver of the project will be increased gas flows between Lithuania and Latvia.
Benefit Description	The enhancement of bi-directional capacity between Latvia and Lithuania could increase opportunities for cross-border trade, access to Incukalns UGS for Lithuania and Poland, security of supply, market integration, flexibility of gas transmission systems of Latvia and Lithuania etc.
	Rarriers

Barrier Type	Description
Market	Lack of market maturity
Market	Lack of market support
Financing	Availability of funds and associated conditions

	CBCA		Financial Assistance
Decision	Yes, we have submitted an investment request and have received a decision	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision;#(2) Yes, we have applied for CEF, but we have
Submissin Date	04/03/2019		not received a decision yet
Decision Date	30/05/2019	Grants for studies	No
Website	<u>CBCA URL</u>	Grants for studies amount	Mln EUR 0.0
Countries Affected	Estonia, Finland, Latvia, Lithuania	Grants for works	Yes
Countries Net Cost Bearer	Lithuania	Grants for works amount	Mln EUR 7.3
Additional Comments		Intention to apply for CEF	
		Other Financial Assistance	No
		Comments	
		General Comments	We have received funds from CEF for studies and have submitted application for works

Current TYNDP : TYNDP 2020 - Annex A Page 52 of 773

# Balticconnector

TRA-F-895	Project	Pipeline including CS	FID
Update Date	22/11/2019		Advanced
Description	New bidirectional offshore pipeline (Inkoo-Paldiski, DN500, 80 bar) of 80 km, plus 5 ) and 20 km onshore pipeline in FI (Siuntio-Inkoo pipeline, DN500, 80 bar) including nominal capacity of 7.2 mcm/day. The power of each compressor station is about 10	metering and compressor stations at bo	
PRJ Code - PRJ Name	PRJ-G-011 - Interconnection Estonia – Finland		

Capacity Increments Variant For Modelling						
Point	Operator	Year	From Gas System	To Gas System	Capacity	
	Elering AS	2019	EE	FI/BAC	32.00 GWh/d	
	Comment: ntry/exit capacity will be approximately 40% of final capacity until the commissioning of Estonian compressor stations (until june 2020)					
	Elering AS	2019	FI/BAC	EE	32.00 GWh/d	
Balticonnector / Paldiski (EE)	Comment: ntry/exit capacity will be approximately 40% of final capacity until the commissioning of Estonian compressor stations (until june 2020)					
	Elering AS	2020	EE	FI/BAC	48.00 GWh/d	
Comment: after compressor station commissioning entry/exit capacity will be 100%						
	Elering AS	2020	FI/BAC	EE	48.00 GWh/d	
	Con	mment: after compressor station commis	ssioning entry/exit cap	pacity will be 100%		

Current TYNDP : TYNDP 2020 - Annex A Page 53 of 773

Sponsors		
EE Kiili pressure reduc	tion station	
Elering AS	7	100%
EE Kiili-Paldiski pipelir	ne	
Elering AS		100%
EE Paldiski metering a	nd Compressor statio	on
Elering AS		100%
FI-EE Inkoo-Paldiski O	ffshore pipeline	
Elering AS		50%

Elering AS		5
Schedule	Start Date	End Date
Pre-Feasibility	7	12/2005
Feasibility	01/2006	12/2006
FEED	01/2016	02/2016
Permitting	12/2012	01/2019
Supply Contracts		05/2018
FID		10/2016
Construction	11/2017	12/2019
Commissioning	2019	2020

21/10/2016

21/10/2016

**Grant Obtention** 

Date

	General Information		NDP and PCI Information		
Promoter		Elering AS	Part of NDP	Yes (EESTI GAASIÜLEKANDEVÕRGU	
Operator		Elering AS	Tart of ND1	ARENGUKAVA 2019-2028)	
Host Country		Estonia	NDP Number	paragraph 3.2	
Status		In Progress	NDP Release Date	03/03/2019	
Website		Project's URL	NDP Website	NDP URL	
			Currently PCI	No	
			Priority Corridor(s)		

Regulated
Regulated
No
Not Relevant
0.00%
0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
EE Onshore	Kiili-Paldiski onshore pipeline, Paldiski compressor station	700	55	10	0
Offshore	Inkoo-Paldiski offshore pipeline (Estonian section)	500	40		0
	Total		95	10	

## Delays since last TYNDP

Delay Since Last TYNDP

Delay Explanation

#### **Expected Gas Sourcing**

Russia, LNG (WO)

	Benefits					
Main Driver	Regulation-Interroperability					
Main Driver Evolanation	Balticconnector will lift Finland out of the current energy isolation and will provide Finland an opportunity to join in the European single gas market and to terminate the derogations on the EU gas market legislation.					
Benefit Description	Project has several qualitative and quantitative benefits, such as inccrease in energy security, price convergence in the region, development of the energy market etc.					

CBCA				Financial Assistance
Decision	Yes, we have submitted an investment request and have received a decision		Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Submissin Date	06/04/2016		Grants for studies	Yes
Decision Date	22/04/2016		Grants for studies amount	Mln EUR 0.8
Website	<u>CBCA URL</u>		Grants for works	Yes
Countries Affected	Finland, Latvia		Grants for works amount	Mln EUR 98.0
Countries Net Cost Bearer	Estonia		Intention to apply for CEF	
Additional Comments			Other Financial Assistance	No
			Comments	
			General Comments	

# Balticconnector Finnish part

TRA-F-928		Project	Pipeline including CS	FID
Update Date		22/11/2019		Advanced
Description		New bidirectional offshore pipeline (Inkoo-Paldiski, DN500, 80 bar) of 80 km, 55 bar) and 20 km onshore pipeline in Finland (Siuntio-Inkoo pipeline, DN500 a daily nominal capacity of 7.2 mcm/day. The power of each compressor station	), 80 bar) including metering and compressor st	
PRJ Code - PR	U Name	PRJ-G-011 - Interconnection Estonia – Finland		

Point	Operator	Year	From Gas System	To Gas System	Capacity
/ / /	Baltic Connector Oy	2019	FI	FI/BAC	32.00 GWh/d
Balticconnector / Siuntio (FI)				t: The capacity will acity 80) until the Estonian compressor station is completed.	
	Baltic Connector Oy	2019	FI/BAC	FI	32.00 GWh/d
				t: The capacity will acity 80) until the Estonian compressor station is completed.	
	Baltic Connector Oy	2020	FI	FI/BAC	48.00 GWh/d
	Comment: New capacity incre	nents after Estonian (	CS is completed with r	emaining capacity increment (60%)	
	Baltic Connector Oy	2020	FI/BAC	FI	48.00 GWh/d
	Comment: New capacity incre	ments after Estonian (	CS is completed with r	emaining capacity increment (60%)	
Balticonnector / Paldiski (EE)	Baltic Connector Oy	2019	EE	FI/BAC	32.00 GWh/d

Current TYNDP : TYNDP 2020 - Annex A Page 57 of 773

Balticonnector / Paldiski (EE)

Comment: The capacity will be 40 % (full capacity 80) until the Estonian compressor station is completed. Baltic Connector Oy 2019 FI/BAC EE 32.00 GWh/d Comment: The capacity will be 40 % (full capacity 80) until the Estonian compressor station is completed. Baltic Connector Oy 2020 EE FI/BAC 48.00 GWh/d Comment: New capacity increments after Estonian CS is completed with remaining capacity increment (60%) Baltic Connector Oy 2020 FI/BAC ΕE 48.00 GWh/d

Comment: New capacity increments after Estonian CS is completed with remaining capacity increment (60%

Sponsors	General Information		NDP and PCI Information		
FI Inkoo metering and compressor station		Promoter	Baltic Connector Oy	Part of NDP	No ((2) no NDP exists in the country)
Baltic Connector OY	100%	Operator	Baltic Connector Oy	NDP Number	
FI Inkoo-Siuntio pipeline		Host Country	Finland	NDP Release Date	
Baltic Connector OY	100%	Status	In Progress	NDP Website	
	10070	Website	<u>Project's URL</u>	Currently PCI	No
FI-EE Inkoo-Paldiski Offshore pipeline				Priority Corridor(s)	
Baltic Connector OY	50%			,	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	01/2006	12/2006
FEED	01/2016	05/2017
Permitting	12/2012	05/2018
Supply Contracts		10/2017
FID		10/2016
Construction	12/2017	12/2019
Commissioning	2019	2020
Grant Obtention Date	21/10/2016	21/10/2016

<u> </u>	
Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
FI Onshore	Inkoo-Siuntio pipeline, Inkoo compressor station	500	20	10	0
Offshore	Inkoo-Paldiski offshore pipeline (the whole pipeline is 80 km)	500	40		0
	Total		60	10	

Delays since last TYNDP

Delay Since Last TYNDP

Delay Explanation

**Expected Gas Sourcing** 

Russia, LNG (LT)

Current TYNDP : TYNDP 2020 - Annex A Page 59 of 773

	Benefits						
Main Driver	Regulation-Interroperability						
Main Driver Evolanation	Balticconnector will lift Finland out of the current energy isolation and will provide Finland an opportunity to join in the European single gas market and to terminate the derogations on the EU gas market legislation.						
Benefit Description	Project has several qualitative and quantitative benefits, such as increase in energy security, price convergence in the region, development of the energy market etc.						

	CBCA	Financial Assistance			
Decision	Yes, we have submitted an investment request and have received a decision	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision		
Submissin Date	06/04/2016	Grants for studies	Yes		
Decision Date	22/04/2016	Grants for studies amount	Mln EUR 4.6		
Website	<u>CBCA URL</u>	Grants for works	Yes		
Countries Affected	Finland, Latvia	Grants for works amount	Mln EUR 89.5		
Countries Net Cost Bearer	Estonia	Intention to apply for CEF			
Additional Comments		Other Financial Assistance	No		
		Comments			
		General Comments			

Current TYNDP : TYNDP 2020 - Annex A Page 60 of 773

# Gaspipeline Brod - Zenica

TRA-N-224	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Non-Advanced
Description	Gaspipeline Brod-Zenica is the project that will enable new supply route for BiH provabove, the realization of the project will contribute to the development of the gas market in the Brod Gas pipeline will be be-directional and together with the Project Southern Intervision in connection with Project Slobodnica-Bosanski Brod (TRA-N-66) located in Croatian	northern part of Bosnia and Herzegovir connection (TRA-N-851) will create a pa	na. Gas pipeline route
PRJ Code - PRJ Name	PRJ-G-013 - North Interconnection of BiH and Croatia		

Capacity Increments Variant For Modelling						
Point	Operator	Year	From Gas System	To Gas System	Capacity	
	BH Gas d.o.o.	2025	BA	HR	35.00 GWh/d	
Clabaduias Bassuski Brad Zanias	Comment: Technical entry capacity from Croatia to BIH is 162 GWh/d					
Slobodnica- Bosanski Brod-Zenica	BH Gas d.o.o.	2025	HR	BA	162.00 GWh/d	
		Comment: Technical exit c	apacity from BIH to C	roatia is 35 GWh/a	1	

Sponsors			General Information	NDP and PCI Information		
BH-Gas	100%	Promoter	BH-Gas d.o.o.		Yes (Framework Energy Strategy of BiH	
		Operator	BH Gas d.o.o.	Part of NDP	until 2035, 2018 and Strategic Plan and Program of FBiH, 2009)	
		Host Country	Bosnia Herzegovina	NDP Number	РТG1	
		Status	Planned			
		Website	<u>Project's URL</u>	NDP Release Date	29/08/2018	
				NDP Website	<u>NDP URL</u>	
				Currently PCI	No	
				Priority Corridor(s)	NSIE	

Schedule	Start Date	End Date
Pre-Feasibility		02/2006
Feasibility	01/2020	01/2021
FEED	02/2021	02/2022
Permitting	02/2021	01/2023
Supply Contracts		01/2024
FID		01/2022
Construction	03/2024	09/2025
Commissioning	2025	2025
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Not Applicable
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Brod-Zenica	Total length includes branches to the cities along the route	500	140	0	2025
	Total		140	0	

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

Dala	ve cinca	last TYNDP
Dela	ys silice	last I IIVDF

Delay Since Last TYNDP YES

Delay Explanation

Regarding the fact that the part of this project runs through Republic of Srpska Entity, the main obstacle is lack of political support of the RS official representatives, as well as lack of primary gas legislation at the state level in accordance with the Third Energy Package. Also, existing natural gas market is not able to cover assessed project cost related to preliminary activities.

Current TYNDP : TYNDP 2020 - Annex A Page 62 of 773

#### **Expected Gas Sourcing**

Algeria, Caspian Region, Norway, Russia, LNG (HR), UGS in neigboring and other countries

#### Comments about the Third-Party Access Regime

It is expected that TPA regime and Tariff methodology will be covered by gas primary legislation, all in accordance with Third Package.

	Benefits		
Main Driver	Regulation SoS		
Main Driver Explanation	on Project will directly increase N-1 for Bosnia and Herzegovina and enable flexibility of the natural gas system in BiH.		
Benefit Description	Project will enable route and supply source diversification for BiH as well as development of natural gas market and integration BiH gas market in regional gas network. Project will increase SoS for BiH (currently N-1=0). Project will enable introducing gas in energy consumption sector (residential, industrial and specially existing Oil rafinery in Brod). Switching from traditional fuels to using natural gas means significant reducing CO2, SO2 and NOx emissions.		
Barriers			
Barrier Type	Description		
Permit Granting	Projects runs through the two BiH entities and procedures of providing neccessary consents and permits could need much time, having in mind that Competent authority did in BiH not formed yet.		
Political	Lack of primary gas legislation in accordance with Third Energy Package, as well as conensus at the state level.		
Financing	Availability of funds and associated conditions		
Market	Lack of market support		
Regulatory	Lack of proper transposition of EU regulation		

CBCA		Financial Assistance
No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF
•	Grants for studies	No
not	Grants for studies amount	Mln EUR 0.0
	Grants for works	No
	Grants for works amount	Mln EUR 0.0
	Intention to apply for CEF	
	Other Financial Assistance	No
	Comments	Grant of 1 MEUR for FS, EIA, SIA and CBA was approved in WBIF round 6, Dec. 2011, but this grant was not relized, but it was withdrawn because of subsequent lack of the entity of Republic of Srpska support. Due to Measures Imposed to BiH by EnC Ministerial Council in Oct 2015, BH-Gas projects are not eligible for applying to WBIF.
	General Comments	Having in mind that BiH is not MS, but Energy Community Contracting Party, BH-Gas is not in possition to apply to CEF. Once if this criterium will be changed, we will use this opportunity.
		No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not not Grants for studies amount Grants for works Grants for works Grants for works amount Intention to apply for CEF Other Financial Assistance  Comments

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

TRA-N-66	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Advanced
	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 furter extension to Zenica.		
PRJ Code - PRJ Name	PRJ-G-013 - North Interconnection of BiH and Croatia		

Point		Operator		Year	From Gas System	To Gas System	Capacity
Slobodnica- Bosanski Brod-Zenica		Plinacro Ltd		2025	ВА	HR	162.00 GWh/d
		Plinacro Ltd		2025	HR	ВА	162.00 GWh/d
Sponsors		General Inf	ormation		NDP and	PCI Information	
B&H, Bosanski Brod - Zenica		Promoter	Plinacro Ltd	Part o	f NDP		Yes (2018-2027)
BH Gas	100%	Operator	Plinacro Ltd	NDP I	Number		1.15
Croatia, Slobodnica-Bosanski Brod (border)		Host Country	Croatia	NDP F	Release Date		15/12/2017
Plinacro	100%	Status	Planned	NDP \	Website		NDP URL
· imacro	10070	Website	Project's URL	Curre	ntly PCI		No
				Driorit	ty Corridor(s)		NSIE

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	01/2020	01/2020
FEED	01/2020	01/2020
Permitting	01/2020	01/2020
Supply Contracts		01/2021
FID		01/2022
Construction	01/2022	01/2023
Commissioning	2025	2025
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Slobodnica - Bosanski Brod		700	6		2024
	Total		6		

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

	Delays since last TYNDP
Delay Since Last TYNDP	The start of the construction has been postponed until 2020.
Delay Explanation	Environmental impact assessment has expired. Environmental impact assessment of the project of the northern interconnection pipeline between Croatia and B&H shall be conducted again. Also, location permit for has expired as well. New request for the issuing of the location permit should be submit to the ralevant body.

Current TYNDP : TYNDP 2020 - Annex A Page 66 of 773

## **Expected Gas Sourcing**

Russia, LNG (HR)

	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 anable 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 1	Agreement Signature Date
Memorandum of unders	standing MoU between Plinacro and Bh Gas	No	27/04/2017
Memorandum of unders	standing signed between Plinacro and BH Gas	Yes	26/06/2006
Letter of Intent	between Plinacro and BH Gas for all projects of interconnection	Yes	06/04/2011

	CBCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or
	not
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance		
Applied for CEF	(3) No, we have not applied for CEF	
Grants for studies	No	
Grants for studies amount	Mln EUR 0.0	
Grants for works	No	
Grants for works amount	Mln EUR 0.0	
Intention to apply for CEF		
Other Financial Assistance	No	
Comments		
General Comments		

Current TYNDP : TYNDP 2020 - Annex A Page 68 of 773

# Southern Interconnection pipeline BiH/CRO

TRA-N-851	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Non-Advanced
Description	Southern Interconnection pipeline BIH/CRO (Posusje-Novi Travnik with main branch to B&H providing a diversified and reliable natural gas supply such as LNG, Caspian, Mido and together with realization of gas pipeline Brod - Zenica (TRA-N-224) will create a p	dle East and other gas sources. Project	
PRJ Code - PRJ Name	PRJ-G-014 - South Interconnection of BiH and Croatia		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	BH Gas d.o.o.	2023	BA	HR	38.00 GWh/d
De way!		Comment: Technical entry c	apacity from Croatia t	to BiH is 73 GWh/d	1
Posušje	BH Gas d.o.o.	2023	HR	ВА	73.00 GWh/d
		Comment: Technical exit of	apacity from BiH to C	roatia is 38 GWh/d	1

Sponsors		General Information		NDP and PCI Information		
BH-Gas 100%	Promoter	BH-GAS d.o.o.		Yes (Framework Energy Strategy BiH		
	Operator	BH Gas d.o.o.	Part of NDP	until 2035, 2018 and Strategic Plan and		
	Host Country	Bosnia Herzegovina		Programme of FBiH, 2009)		
	Status	Planned	NDP Number	No 10 in Framework Energy Strategy BiH until 2035 and PTG2 in SPP		
	Website	<u>Project's URL</u>	NDP Release Date	29/08/2018		
			NDP Website	NDP URL		
			Currently PCI	No		
			Priority Corridor(s)	SGC		

Schedule	Start Date	End Date
Scriedule	Start Date	End Date
Pre-Feasibility		10/2013
Feasibility	08/2019	08/2020
FEED	08/2019	01/2021
Permitting	08/2020	01/2022
Supply Contracts		02/2022
FID		01/2021
Construction	03/2022	09/2023
Commissioning	2023	2023
Grant Obtention		
Date		

Third-Party Access Regime	
Considered TPA Regime	Not Applicable
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Posusje - Novi Travnik with branch to Mostar	Total lenght of main route Posusje - Novi Travnik is 114 km; Total lenght of branch to Mostar is 48 km.	500	162	0	2023
	Total		162	0	

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

#### **Expected Gas Sourcing**

Algeria, Caspian Region, Norway, Russia, LNG (HR), UGS in neighboring and other countries

#### Comments about the Third-Party Access Regime

It is expected that TPA regime and Tariff methodology will be covered by gas primary legislation in accordance with Third Energy Package.

urrent TYNDP : TYNDP	Page 70 of 773
	Benefits Programme Control of the Co
Main Driver	Others
Main Driver Explanation	Currently BiH gas system is isolated and depending of one supply route. With the realization of this Project, natural gas systems of BiH and Croatia will be interconnected. Main goal is to establish new supply route for BiH providing reliable and diversified natural gas supply increasing security of supply. Having in mind limited capacity and age of the existing supply route, South Interconnector in the near future could become the only supply route for Federation of BiH/BiH. Because of the urgency of realization of this Project, Government of Federation of BiH issued Conclusion V. No. 853/2017 on Strategic importance of the Project. Project is contained in Comprehensive Energy Strategy BiH 2035 which is adoppted in August 2018.
Benefit Description	Capacity of the existing system is jeopardise by intetion to connect a new consumers in RS reducing gas quantities for FBiH. In this case consumers in Federation of BiH will directly depend on the realization of this project. Project will improve import route and supply source diversification. Lower usage of traditional fuels in energy consumption sectors (residential and industrial) means significant protection of BiH forestry and decreasing CO2, SO2 and NOx emissions.
	Barriers
Barrier Type	Description
Political	Lack of primary gas legislation in accordance with Third Energy Package.
Regulatory	Lack of proper transposition of EU regulation
Financing	Availability of funds and associated conditions
Market	Lack of market maturity

	CBCA
Decision	No, we have not submitted an investment request yet but we do plan to submit
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

	Financial Assistance
Applied for CEF	(3) No, we have not applied for CEF
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	
Other Financial Assistance	Yes
	0,40 Million EUR from WBIF, PFS finalized in October
	2013; 0,141 Million EUR from CONNECTA, CBA finalized in May 2018.
Comments	approx 0,418 Million EUR from USAID for FS and ESIA preparation, in progress
	approx 1,0 Million EUR for Preliminary Design and Tender  Dossier from EC, in progress
General Comments	

# Interconnection Croatia-Bosnia and Herzegovina (South)

TRA-A-302	Project	Pipeline including CS	Non-FID			
Update Date	15/08/2019		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 dieventural gas supply. The pipeline will enable the flow of IAP to Bosnia and Herzegovina.					
PRJ Code - PRJ Name	PRJ-G-014 - South Interconnection of BiH and Croatia					

Capacity Increments Variant For Modelling							
Point	Operator	Year	From Gas System	To Gas System	Capacity		
Desužie	Plinacro Ltd	2023	BA	HR	81.00 GWh/d		
Posušje	Plinacro Ltd	2023	HR	BA	81.00 GWh/d		

Sponsors		General Information		NDP and PCI Information	
Croatian part		Promoter	Plinacro Ltd	Part of NDP	Yes (2018-2027)
Plinacro d.o.o.	100%	Operator	Plinacro Ltd	NDP Number	1.13
parts in B&H		Host Country	Croatia	NDP Release Date	15/12/2017
BH Gas	100%	Status	Planned	NDP Website	NDP URL
	.0070	Website	<u>Project's URL</u>	Currently PCI	No
				Priority Corridor(s)	NSIE, SGC

Schedule	Start Date	End Date
Pre-Feasibility		09/2013
Feasibility	07/2017	05/2018
FEED	06/2021	05/2022
Permitting	08/2014	05/2022
Supply Contracts		09/2022
FID		06/2022
Construction	10/2022	12/2023
Commissioning	2023	2023
Grant Obtention		
Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Zagvozd-Imotski-Posušje		500	22		2023
	Total		22		

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

### **Expected Gas Sourcing**

Caspian Region, Russia, LNG ()

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		шч	_

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.

#### Barriers

**Barrier Type** 

Description

Financing Availability of funds and associated conditions

Interd	jovernment	tal Ac	reements

AgreementAgreement DescriptionIs SignedAgreement Signature DateLetter of Intentbetween Plinacro and BH Gas for all projects of interconnectionYes06/04/2011Memorandum of UnderstandingMoU between Plinacro and BH GasYes27/04/2017

CBCA		Financial Assistance	
	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF
Decision	and we have not yet decided whether we will submit or	Grants for studies	No
Culturalization Data	not	Grants for studies amount	Mln EUR 0.0
Submissin Date		Grants for works	No
Decision Date		Grants for works amount	Mln EUR 0.0
Website		Intention to apply for CEF	
Countries Affected		Other Financial Assistance	Yes
Countries Net Cost Bearer Additional Comments		Comments	The Project is awarded by WBIF grant for the joint Prefeasibility Study in the total amount of 0,4 mil € and by CONNECTA grant for the joint CBA in the total
			amount of 0,141 mil €.

**General Comments** 

### West Interconnection BiH/CRO

TRA-N-910	Project Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Non-Advanced
Description	Western interconnection BiH/CRO (Trzac-Bosanska Krupa with branches to Bihac and Licka Jesenica - Rakovica (TRA-N-33) located in Croatia will connect BiH with existing Una-Sana Canton in western Bosnia and Herzegovina.		

PRJ-G-015 - West Interconnection of BiH and Croatia

PRJ Code - PRJ Name

Capacity Increments Variant For Mod	lelling				
Point	Operator	Year	From Gas System	To Gas System	Capacity
Rakovica (HR) / Trzac (BA)	BH Gas d.o.o.	2026	BA	HR	73.00 GWh/d
	BH Gas d.o.o.	2026	HR	ВА	73.00 GWh/d

Sponsors	G	eneral Information	N	DP and PCI Information
BH-Gas 100%	Promoter	BH-Gas d.o.o.		Yes (Framework Energy Strategy of BiH
	Operator	BH Gas d.o.o.	Part of NDP	until 2035 and Strategic Plan and
	Host Country	Bosnia Herzegovina		Programe of Development Energy Sector in FBiH 2009)
	Status	Planned		No 11 - Framework Energy Strategy of
	Website	<u>Project's URL</u>	NDP Number	BiH until 2035 and PTG4 - Strategic Plan and Program of Development Energy Sector in FBiH 2009
			NDP Release Date	29/08/2018
			NDP Website	<u>NDP URL</u>
			Currently PCI	No
			Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		06/2008
Feasibility	01/2020	01/2021
FEED	02/2021	02/2023
Permitting	02/2021	03/2024
Supply Contracts		03/2025
FID		03/2023
Construction	03/2025	09/2026
Commissioning	2026	2026
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Not Applicable
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Trzac - Bosanska Krupa	Additionally, branches to Bihac and Velika Kladusa in total lenght of 45 km with diameter 250 mm.	500	35	0	2026
	Total		35	0	

#### **Expected Gas Sourcing**

Algeria, Caspian Region, Norway, Russia, LNG (HR), UGS in neighboring and other countries

### Comments about the Third-Party Access Regime

It is expected that TPA regime and Tariff methodology will be covered by gas primary legislation in accordance with Third Package at least up to the end of 2016.

	Benefits		
Main Driver	Market Demand		
Main Driver Explanation	Project will enable development of natural gas market in the western part of BiH.		
Benefit Description	efit Description  Project will enable development of the natural gas market in BiH. Lower usage of firewood in the energy consumption sector (residential and industrial means significant protection of BiH forestry. Project will decrease CO2 emissions. Project will not cause any damaging environmental impact.		
	Barriers		
Barrier Type	Description		
Political	Lack of primary gas legislation in accordance with Third Energy Package, as well as energy policy at the state level.		
Regulatory	Lack of proper transposition of EU regulation		
Financing	Availability of funds and associated conditions		
Market	Lack of market support		

	CBCA		Financial Assistance
Decision  Submissin Date  Decision Date  Website	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not	Applied for CEF Grants for studies Grants for studies amount Grants for works Grants for works amount	(3) No, we have not applied for CEF No Mln EUR 0.0 No Mln EUR 0.0
Countries Affected Countries Net Cost Bearer Additional Comments		Intention to apply for CEF Other Financial Assistance Comments	No BH-Gas financed by its own funds Pre-fesibility Study developed in 2008.
		General Comments	BH-Gas intends to apply to the available funds in order to provide necessery documentation such as FS, ESIA and Preliminary Design (WBIF)

# Interconnection Croatia-Bosnia and Herzegovina (west)

TRA-N-303	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		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.		
PRJ Code - PRJ Name	PRJ-G-015 - West Interconnection of BiH and Croatia		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
D. I	Plinacro Ltd	2026	BA	HR	81.00 GWh/d
Rakovica (HR) / Trzac (BA)	Plinacro Ltd	2026	HR	BA	81.00 GWh/d
Spancars	Conoral Information		NDD and	I DCI Information	

Sponsors			General Information	NDP and	PCI Information
Croatian part		Promoter	Plinacro Ltd	Part of NDP	Yes (2018-2027)
Plinacro d.o.o.	100%	Operator	Plinacro Ltd	NDP Number	1.35 and 1.36
part in B&H		Host Country	Croatia	NDP Release Date	15/12/2018
BH Gas	100%	Status	Planned	NDP Website	<u>NDP URL</u>
511 003	10070	Website	<u>Project's URL</u>	Currently PCI	No
				Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	02/2026	05/2026
FEED	05/2026	05/2027
Permitting	05/2025	05/2027
Supply Contracts		11/2027
FID		01/2027
Construction	11/2027	11/2028
Commissioning	2026	2026
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Lička Jesenica-Rakovica		500	20		2028
Rakovica-Bihać		500	10		2028
	Total		30		

Evpoctod	Gas Sourcing	
EXDECTED	das sourcina	

### Caspian Region, LNG (HR,QA)

Benefits			
Main Driver	Market Demand		
Main Driver Explanatio	on 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 brances 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.		

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Ba	rrı	ers	:

Barrier Type Description

Market Lack of market maturity

Market Lack of market support

Interd	overnmenta	I Ac	iraamants
IIILEIG	overninenta	IAU	freements

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

No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not

Submissin Date
Decision Date

Website

Decision

Countries Affected

Countries Net Cost Bearer

**Additional Comments** 

Fir	nancial Assistance
Applied for CEF	(3) No, we have not applied for CEF
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	
Other Financial Assistance	No
Comments	
General Comments	

# Gas Interconnection Poland-Lithuania (GIPL) (Lithuania's section)

TRA-F-341	Project	Pipeline including CS	FID
Update Date	18/11/2019		Advanced
Description	The project is aimed to establish a well-functioning new bidirectional interconnectintegrate the isolated gas markets of the Baltic States and Finland into the EU gas States. By implementing the project a 165 km-long and 700 mm-diameter pipelin constructed on Lithuania's side.	grid, by introducing an alternative gas sup	ply route to the Baltic
PRJ Code - PRJ Name	PRJ-G-017 - Gas Interconnection Poland-Lithuania (GIPL)		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
The state of the s	AB Amber Grid	2021	LT	PL	58.30 GWh/d
Interconnector PL-LT	AB Amber Grid	2021	PL	LT	73.90 GWh/d
Sponsors	General Information		NDP and	PCI Information	

Sponsors		General Information NDP and PCI Information			P and PCI Information
AB Amber Grid	100%	Promoter	AB Amber Grid	Part of NDP	Yes (Network Development Plan 2018-
		Operator	AB Amber Grid		2027)
		Host Country	Lithuania	NDP Number	n/a
		Status	In Progress	NDP Release Date	23/08/2018
		Website	<u>Project's URL</u>	NDP Website	<u>NDP URL</u>
				Currently PCI	Yes (8.5 (2020))
				Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		12/2012
Feasibility	02/2012	02/2013
FEED	05/2015	09/2016
Permitting	07/2016	09/2016
Supply Contracts		06/2021
FID		05/2018
Construction	11/2019	06/2021
Commissioning	2021	2021
Grant Obtention Date	15/10/2015	15/10/2015

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Border PL/LT - Jauniunai		700	165		0
	Total		165		

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

It is one of the key projects in the area of infrastructure providing security of supplies, being of significant importance for the energy security of the EU. The project will contribute to the sustainability as well as increase of competition and diversification of the sources in the region.

#### Delays since last TYNDP

Delay Since Last TYNDP

**Delay Explanation** 

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Main Driver Market Demand

Main Driver Explanation

Benefit Description

It will integrate gas markets of the Baltic states and Finland into a common EU gas market, diversify access to alternative gas supply sources, routes, counterparties and increase of competition, enhance security and reliability of gas supply – both in terms of additional interconnection capacity and possibility to apply solidarity measures between Member States of the EU in case of emergency, enable more flexible and efficient use of LNG terminals and transmission infrastructure in Poland and Lithuania, and increase the liquidity of gas trade in the Polish and Baltic trade zones as well as strengthen their regional role.

	CBCA
Decision	Yes, we have submitted an investment request and have received a decision
Submissin Date	31/10/2013
Decision Date	11/08/2014
Website	<u>CBCA URL</u>
Countries Affected	Estonia, Latvia, Lithuania
Countries Net Cost Bearer	Poland
Additional Comments	

	Financial Assistance
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Grants for studies	Yes
Grants for studies amount	Mln EUR 2.5
Grants for works	Yes
Grants for works amount	Mln EUR 57.9
Intention to apply for CEF	
Other Financial Assistance	No
Comments	
General Comments	

# Gas Interconnection Poland-Lithuania (GIPL) - PL section

TRA-F-212	Project Project	Pipeline including CS	FID
Update Date	03/08/2020		Advanced
Description	GIPL aims to connect the gas transmission systems in Poland and Lithuania and, contributed the Baltic States (and Finland) with the Polish and EU gas markets. This will contributed to competition and the security of gas supply. The project will also provide an access in Świnoujście. The construction of GIPL, except the above benefits for security and to connect the Baltic States to the CEE countries, thus providing strategic link betwoof the project on the Polish side covers Hołowczyce - PL-LT border pipeline, CS Gu	ute to the creation of a regional gas marke to the global LNG market for the Baltic Sta I diversification of gas supplies in the Balti een the BEMIP and North-South East prio	et, enhancement of ates via the LNG terminal c region, will also allow rity corridors. The scope
PRJ Code - PRJ Name	PRJ-G-017 - Gas Interconnection Poland-Lithuania (GIPL)		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Interconnector DL LT	GAZ-SYSTEM S.A.	2021	LT	PL	58.30 GWh/d
Interconnector PL-LT	GAZ-SYSTEM S.A.	2021	PL	LT	73.90 GWh/d

Sponsors	General Information		NDP and PCI Information			
Gas Transmission Operator GAZ-SYSTEM S.A.	100%	Promoter	GAZ-SYSTEM S.A.	Part of NDP	Yes (National Ten-Year Transmission	
		Operator	GAZ-SYSTEM S.A.	Tare of IVD	System Development Plan 2018-2027)	
		Host Country	Poland	NDP Number	N/A	
		Status	Planned	NDP Release Date		
		Website	Project's URL	NDP Website	NDP URL	
				Currently PCI	Yes (8.5 (2020))	
				Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	12/2016	09/2017
FEED	06/2015	11/2019
Permitting	12/2015	10/2019
Supply Contracts		
FID		05/2018
Construction	09/2019	06/2021
Commissioning	2021	2021
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
CS Gustorzyn				16	0
CS Hołowczyce - modernization					0
GIPL - Polish section		700	343		0
	Total		343	16	

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#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Market integration: - Completing a missing interconnection between PL and LT; - Connection of the gas markets in the East Baltic region with the continental gas market, lifting the isolation of the East Baltic region; - Creation of a well-integrated and functioning market in the East Baltic region. SoS: - Access to new sources of supply in the Baltic States and FI; - Mitigation of exposure to supply disruption via BY in the Baltic Specific Criteria Fulfilled Comments States; - Diversification of supply sources, routes and counterparts by bringing EU spot gas and NO supplies to the Baltic States and FI; -Reduction of dependence on gas supplies from RU in the Baltic States and FI. Competition: - Reduction of price differences between the East Baltic region and North-West regions. Sustainability: - Reduction of emissions in PL and the East Baltic region by promoting natural gas in national economies.

#### **Delays since last TYNDP**

Delay Since Last TYNDP

Yes

**Delay Explanation** 

	Benefits
Main Driver	Others
Main Driver Explanation	n Regulation SoS, market integration, sustainability
Benefit Description	The objective of the project is the integration of the isolated gas markets of the Baltic States into the EU gas grid by introducing an alternative gas supply route to the Baltic States. This interconnection will diversify the gas supply sources, increase the security of supply and enhance competition on the gas market in the Baltic States. For the Baltic States, GIPL will provide the access both to EU gas spot market and to the global LNG market via LNG terminal in Świnoujście. The implementation of the project will also contribute to creating better conditions for the use of the Latvian Inčukalns UGS for Lithuania's and, in future, for Poland's gas market participants. Also through GIPL, gas could be supplied to currently non-gasified areas in Poland and Lithuania.
	Dawiere

Barriers					
Barrier Type	Description				
Permit Granting	Efficient permitting procedures are necessary for timely implementation of the project.				
Political	Lack of guarantees of covering entire project costs when the project is not commercially viable in all market scenarios (SoS project).				
Others	Lack of guarantees of covering entire project costs when the project is not commercially viable in all market scenarios (SoS project). Risk of the lack of interest in capacity booking in the first period of operation due to immaturity of the gas markets in the Baltic States.				
Market	Lack of market maturity				

	CBCA		Financial Assistance
Decision	Yes, we have submitted an investment request and have received a decision	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Submissin Date	31/10/2013	Grants for studies	Yes
Decision Date	11/08/2014	Grants for studies amount	Mln EUR 8.0
Website	<u>CBCA URL</u>	Grants for works	Yes
Countries Affected	Estonia, Latvia, Lithuania	Grants for works amount	Mln EUR 240.3
Countries Net Cost Bearer	Poland	Intention to apply for CEF	No, we do not plan to apply
Additional Comments		Other Financial Assistance	Yes
		Comments	TEN-E: Study: Identification of the business case and feasibility study for the Gas Interconnection Poland- Lithuania.  TEN-E: Environmental Impact Assessment documentation up to environmental decision obtainment for the Gas Interconnection Poland - Lithuania.
		General Comments	

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# Additional transport of gas volumes to the Netherlands

TRA-A-808	Project	Pipeline including CS	Non-FID
Update Date	25/08/2020		Non-Advanced
Description	This Project extends the capacity towards the Netherlands via the new IP Zone Oude process and divided into two offer level.  In the first expansion step the capacities were reallocated from the IP "Bunde (DE) / which is described in the project: "Reallocation H-Gas towards NL: Bunde/Oude to Z The measure is an optimization of the GUD export infrastructure.  The new IP offers the potential to increase the capacity with moderate technical measure.	Oude Statenzijl (H) (NL) (GUD)" to the Zoone Oude Statenzijl H" ( TRA-N-809).	, ,
PRJ Code - PRJ Name	PRJ-G-018 - Additional capacity at Oude Statenzijl from Germany to the Netherlands	5	

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Zone Oude Statenzijl H	Gasunie Deutschland Transport Services GmbH	2025	DEg	IB-NLg	175.20 GWh/d
			Com	ment: Offer Level	1

Sponsors		General Information		NDP and PCI Information		
Compressor station Holtum - Reverse flow (only offer level 2)		Promoter	Gasunie Deutschland Transport Services GmbH	Part of NDP	No ((1) the NDP was prepared at an earlier date and the project will be	
Gasunie Deutschland Transport Services GmbH	62%	Operator	Gasunie Deutschland Transport Services GmbH	NDP Number	proposed for inclusion in the next NDP)	
Open Grid Europe GmbH	38%	Host Country	Germany	NDP Release Date		
Expansion Measurement Station Emden (Knock)		Status	Planned	NDP Website		
Gasunie Deutschland Transport Services GmbH	100%	Website		Currently PCI	No	
Expansion Measurement Station Folmhusen				Priority Corridor(s)		
Gasunie Deutschland Transport Services GmbH	100%					

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	01/2017	01/2017
FEED	01/2017	01/2018
Permitting	01/2018	07/2019
Supply Contracts		
FID		
Construction		
Commissioning	2025	2025
Grant Obtention Date		

Regulated
Regulated
No
Not Relevant
0.00%
0.00%

# **Expected Gas Sourcing**

### Russia

		Benefits	
Main Driver	Market Demand		
Main Driver Explanat	ion		
Benefit Description			

	CBCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or
	not
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF	No decision yet taken			
Other Financial Assistance	No			
Comments				
General Comments				

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# Increase of Gas Transport to the Netherlands

TRA-A-496	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Advanced
Description	For security of supply reasons additional Gas volumes and capacities at the Dutch Further earthquakes in the Netherlands force a reduction of the dutch L-Gas prod supply. Additional H-gas volumes could be blended in the Netherlands and provid The closure of an H-Gas undergrund storage in the Netherlands reduces the dutch demand could be covered by an earlier realiszation of the incremental of	luction. This could decrease the security of t ded as L-gas to Germany. h H-Gas capacity.	
PRJ Code - PRJ Name	PRJ-G-018 - Additional capacity at Oude Statenzijl from Germany to the Netherlar	nds	

Point	Operator		Year From Gas	System To Gas Sy	ystem Capacity
Zone Oude Statenzijl H	Gasunie De GmbH	eutschland Transport Services	2022 DEg	g IB-NL	.g <b>175.20 GWh/d</b>
Sponsors	G	General Information		NDP and PCI Inform	nation
	Promoter	Gasunie Deutschland Transport Service GmbH	Part of NDP		IDP was prepared at an e and the project will be
	Operator	Gasunie Deutschland Transport Services GmbH	NDP Number	proposed for inc	clusion in the next NDP)
	Host Country	Germany	NDP Release Date		
	Status	Planned	NDP Website		
	Website		Currently PCI		No
			Priority Corridor(s		NSIW

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	01/2017	01/2017
FEED	01/2017	01/2018
Permitting	01/2018	01/2019
Supply Contracts		
FID		
Construction		
Commissioning	2022	2022
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

### **Fulfilled Criteria**

Specific Criteria Fulfilled

Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes

Specific Criteria Fulfilled Comments

### **Expected Gas Sourcing**

Norway, Russia

	Benefits
Main Driver	Others
Main Driver Explanation	Further earthquakes in the Netherlands force a reduction of the L-Gas production. This could decrease the security of the german L-Gas supply. Additional H-gas volumes could be blended in the Netherlands and provided as L-gas to Germany. The closure of an H-Gas undergrund storage in the Netherlands reduces the dutch H-Gas capacity.
Benefit Description	

СВСА			
No, we have not submitted an investment request ye and we have not yet decided whether we will submit on the submitted an investment request ye			
Submissin Date			
Decision Date			
Website			
Countries Affected			
Countries Net Cost Bearer			
Additional Comments			

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF				
Other Financial Assistance	No			
Comments				
General Comments				

# Reallocation H-Gas towards NL: Bunde/Oude to Zone Oude Statenzijl H

TRA-N-809	Project	Pipeline including CS	Non-FID
Update Date	10/10/2019		Non-Advanced
Description	This project reallocates the H-Gas exit capacity towards the netherlands from the IP "But The operating licence for the compressor station Bunde will exeed due to emmission la compressor units or a new construction of the units becomes necessary. In order to avoig as will be provided via Emden (Zone Oude). This alternative routing will be realized by The implementation of these projects is a requirement for the projects regarding the Internation of these projects is a requirement for the projects regarding the Internation of these projects is a requirement for the projects regarding the Internation of these projects is a requirement for the projects regarding the Internation of these projects is a requirement for the projects regarding the Internation of these projects is a requirement for the projects regarding the Internation of the Internation of these projects is a requirement for the projects regarding the Internation of the	w at the end of 2024. An overhaul of oid an overhaul or a new build of the output three smaller projects in GUD grid.	the station/ the compressor station, the
PRJ Code - PRJ Name	PRJ-G-018 - Additional capacity at Oude Statenzijl from Germany to the Netherlands		

Capacity Incren	nents Variant For Modelling					
	Variant : Reallocation SOS	Reallocation of Capacities Exit NL NDP for	SOS case			
Point		Operator	Year	From Gas System	To Gas System	Capacity
Bunde (DE) / O	ude Statenzijl (H) (NL) (GUD)	Gasunie Deutschland Transport Services GmbH	2022	DEg	IB-NLg	-57.30 GWh/
Zone Oude Sta	tenzijl H	Gasunie Deutschland Transport Services GmbH	2022	DEg	IB-NLg	57.30 GWh/c
Capacity Incren	nents Variant(s) For Information Only					
	Variant : Reallocation	Reallocation of Capacities Exit NL NDP				
Point		Operator	Year	From Gas System	To Gas System	Capacity
Bunde (DE) / O	ude Statenzijl (H) (NL) (GUD)	Gasunie Deutschland Transport Services GmbH	2025	DEg	IB-NLg	-57.30 GWh/
				Comn	nent: Timeline NDF	<b>O</b>
Zone Oude Sta	tenzijl H	Gasunie Deutschland Transport Services GmbH	2025	DEg	IB-NLg	57.30 GWh/c
				Comn	nent: Timeline NDI	<b>D</b>

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Sponsors		General Information		NDP and PCI Information	
Compressor Station Rysum - Reverse Flow Gasunie Deutschland Transport Services GmbH 73	Promoter %	Gasunie Deutschland Transport Services GmbH	Part of NDP	Yes (Netzentwicklungsplan Gas 2018- 2028)	
	% Operator	Gasunie Deutschland Transport Services GmbH	NDP Number	ID504-01a; ID504-01b; ID504-01c	
Measuring Station Folmhusen - Reverse Flow	Host Country	Germany	NDP Release Date NDP Website	20/03/2019 NDP URL	
Gasunie Deutschland Transport Services GmbH 10	)% Status	Planned	Currently PCI	No	
New IP Knock ( Zone Oude)	Website		Priority Corridor(s)	NSIW	
Gasunie Deutschland Transport Services GmbH 10	0%				

Schedule	Start Date	End Date
Pre-Feasibility		01/2016
Feasibility	06/2016	12/2016
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2022	2022
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

### **Fulfilled Criteria**

Specific Criteria Fulfilled Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes Specific Criteria Fulfilled Comments

### **Expected Gas Sourcing**

Norway, Russia

Benefits

**General Comments** 

Main Driver Market Demand

Main Driver Explanation

Benefit Description

No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not

Submissin Date

**Decision Date** 

Website

Decision

Countries Affected

Countries Net Cost Bearer

**Additional Comments** 

Financial Assistance	
Applied for CEF	(3) No, we have not applied for CEF
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	No decision yet taken
Other Financial Assistance	No
Comments	

Current TYNDP : TYNDP 2020 - Annex A Page 97 of 773

# Additional import at Oude StatenZijl area

TRA-N-873	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Non-Advanced
Description	This projects enables additional flow at the interconnection point between TTF and Gaspool. Investment measures are foreseen at Emden. Project part of the incremental capacy process 2017.		een at Emden. Project is
PRJ Code - PRJ Name	PRJ-G-018 - Additional capacity at Oude Statenzijl from Germany to the Netherlands		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Virtual Ips (GTS) NL-DE (Gaspool)	Gasunie Transport Services B.V.	2022	IB-NLg	NL	228.00 GWh/d
	Gasunie Transport Services B.V.	2025	IB-NLg	NL	60.00 GWh/d
Zone Oude Statenzijl H	Gasunie Transport Services B.V.	2022	DEg	IB-NLg	228.00 GWh/d
	Gasunie Transport Services B.V.	2025	DEg	IB-NLg	60.00 GWh/d

Sponsors		General Information		ND	P and PCI Information
Gasunie Transport Services B.V.	100%	Promoter	Gasunie Transport Services B.V.	Part of NDP	Yes (Netwerk Ontwikkelingsplan 2017)
		Operator	Gasunie Transport Services B.V.	NDP Number	6.5.4.
		Host Country	Netherlands	NDP Release Date	30/11/2017
		Status	Planned	NDP Website	<u>NDP URL</u>
		Website		Currently PCI	No
				Priority Corridor(s)	NSIW

	12: 2020 7:::::	0,1,7,1
Schedule	Start Date	End Date
Pre-Feasibility		08/2019
Feasibility	08/2019	10/2019
FEED	01/2020	12/2021
Permitting	01/2021	12/2022
Supply Contracts		12/2024
FID		07/2019
Construction	02/2025	04/2025
Commissioning	2022	2025
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

### **Fulfilled Criteria**

Specific Criteria Fulfilled

Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes

Specific Criteria Fulfilled Comments

	Benefits
Main Driver	Market Demand
Main Driver Explanation	on
Benefit Description	

	СВСА
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or
	not
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF				
Other Financial Assistance	No			
Comments				
General Comments				

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# H-gas exit OSZ GTG Nord

TRA-F-307	Project	Pipeline including CS	FID		
Update Date	18/11/2019		Advanced		
Description	Due to the reduction of production from the Groningen field, L-gas export from flow of H-gas via the existing L-gas border station Oude Statenzijl. This project is		s projects enables the		
	Capacity will not be available separately, but will be marketed through a VIP as of the start of operations				
PRJ Code - PRJ Name	PRJ-G-018 - Additional capacity at Oude Statenzijl from Germany to the Netherla	ands			

Capacity Increments Variant For Modelling						
Point	Operator	Year	From Gas System	To Gas System	Capacity	
Bunda (DE) / Ouda Statemaii (II) (AII) (CTC Naud)	Gasunie Transport Services B.V.	2020	IB-NLg	DEg	25.40 GWh/d	
Bunde (DE) / Oude Statenzijl (H) (NL) (GTG Nord)	Gasunie Transport Services B.V.	2027	IB-NLg	DEg	76.20 GWh/d	
Virtual Inc (CTC) NIL DE (Cooperal)	Gasunie Transport Services B.V.	2020	NL	IB-NLg	25.40 GWh/d	
Virtual Ips (GTS) NL-DE (Gaspool)	Gasunie Transport Services B.V.	2027	NL	IB-NLg	76.20 GWh/d	

Sponsors	Ge	General Information		P and PCI Information
	Promoter	Gasunie Transport Services B.V.	Part of NDP	Yes (Netwerk Ontwikkelingsplan 2017)
	Operator	Gasunie Transport Services B.V.	NDP Number	6.5.1
	Host Country	Netherlands	NDP Release Date	
	Status	Planned	NDP Website	<u>NDP URL</u>
	Website		Currently PCI	No
			Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	11/2017	02/2018
FEED	04/2018	12/2018
Permitting	05/2019	09/2019
Supply Contracts		08/2019
FID		02/2019
Construction	10/2019	01/2020
Commissioning	2020	2027
Grant Obtention		
Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Benefits				
Main Driver	Market Demand			
Main Driver Explanation	Due to the reduction of production from the Groningen field, L-gas export from the Netherlands to Germany is reduced. This projects enables the flow of H-gas via the existing L-gas border station Oude Statenzijl. This project is linked to a initiative of GTG Nord.			
Benefit Description				

	CBCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or
	not
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF				
Other Financial Assistance	No			
Comments				
General Comments				

Current TYNDP : TYNDP 2020 - Annex A Page 103 of 773

# Transferring L-gas infrastructure to H-gas

TRA-N-882	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Non-Advanced
Description	Due to the reduction of production from the Groningen field, L-gas export from t flow of H-gas via the existing L-gas border station Oude Statenzijl. Other IPs may Deutschland. For GTG nord had been submitted separetly, as this project has already taken FID	follow in the future. This project is linked to	
PRJ Code - PRJ Name	PRJ-G-018 - Additional capacity at Oude Statenzijl from Germany to the Netherla	nds	

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Bunde (DE) / Oude Statenzijl (H) (NL) (GUD)	Gasunie Transport Services B.V.	2020	IB-NLg	DEg	57.30 GWh/d
	Gasunie Transport Services B.V.	2030	IB-NLg	DEg	135.00 GWh/d
Vistoral Inc. (CTC) All. DF. (Coorder)	Gasunie Transport Services B.V.	2020	NL	IB-NLg	57.30 GWh/d
Virtual Ips (GTS) NL-DE (Gaspool)	Gasunie Transport Services B.V.	2030	NL	IB-NLg	135.00 GWh/d

Sponsors			General Information	NE	PP and PCI Information
Gasunie Transport Services	100%	Promoter	Gasunie Transport Services B.V.	Part of NDP	Yes (Netwerk Ontwikkelingsplan 2017)
		Operator	Gasunie Transport Services B.V.	NDP Number	6.5.1
		Host Country	Netherlands	NDP Release Date	
		Status	Planned	NDP Website	<u>NDP URL</u>
		Website		Currently PCI	No
				Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2020	2030
Grant Obtention		
Date		

Third-Party Access Regim	e
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

	Benefits
Main Driver	Market Demand
Main Driver Explanation	Due to the reduction of production from the Groningen field, L-gas export from the Netherlands to Germany is reduced. This projects enables the flow of H-gas via the existing L-gas border station Oude Statenzijl. Other IPs may follow in the future. This project is linked to an initiative of Gasunie Deutschland.
Benefit Description	

	CBCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or
	not
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance		
Applied for CEF	(3) No, we have not applied for CEF	
Grants for studies	No	
Grants for studies amount	Mln EUR 0.0	
Grants for works	No	
Grants for works amount	Mln EUR 0.0	
Intention to apply for CEF		
Other Financial Assistance	No	
Comments		
General Comments		

Current TYNDP : TYNDP 2020 - Annex A Page 106 of 773

# Baltic Pipe project – onshore section in Denmark

TRA-A-780	Project	Pipeline including CS	Non-FID
Update Date	24/01/2020		Advanced
Description	Reinforcement of the Danish Transmission System for transporting approx. 10 bcm/year from Norrwegian tie-in to the Danish upstream syst (TRA-N-394) to the Baltic Pipe entry/exit point in DK. The project consists of construction of a new onshore pipeline from Egtved to the Little construction of a new offshore pipeline across the Little Belt, construction of a new pipeline over Fyn from the Little Belt to Nyborg, construction of a new pipeline on Zealand from Kongsmark to the Baltic Sea offshore landfall at the southeastern part of Zealand and a compressor station or Zealand.  - Former project name: "Nybro-Interconnector PL-DK - reinforcement"  - The project TRA-N-428 "(Mirror) Baltic Pipe" is included in this project.		tved to the Little Belt, lyborg, construction of a
PRJ Code - PRJ Name	PRJ-G-021 - Baltic Pipe Project		

Capacity Increments Variant For Mo	odelling						
Point		Operator		Year	From Gas System	To Gas System	Capacity
Interconnector DI DV		Energinet		2022	DK	PL	306.80 GWh/d
Interconnector PL-DK		Energinet		2022	PL	DK	91.10 GWh/d
Sponsors		Genera	l Information		NDP and	PCI Information	
Energinet	100%	Promoter	Energinet	Part c	of NDP N	o ((2) no NDP exis	ts in the country)
		Operator	Energinet	NDP I	Number		
		Host Country	Denmark	NDP I	Release Date		
		Status	Planned	NDP	Website		
		Website	<u>Project's URL</u>	Curre	ntly PCI		Yes (8.3.1 (2020))
				Priori	ty Corridor(s)		

Current	TYNDP:	<b>TYNDP</b>	2020 -	Annex A

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	09/2015	12/2016
FEED	06/2018	02/2020
Permitting	12/2017	07/2019
Supply Contracts		10/2017
FID		11/2018
Construction	03/2020	10/2022
Commissioning	2022	2022
Grant Obtention Date		

Third-Party Access Regime		
Considered TPA Regime	Regulated	
Considered Tariff Regime	Regulated	
Applied for Exemption	No	
Exemption Granted	No	
Exemption in entry direction	0.00%	
Exemption in exit direction	0.00%	

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Baltic Pipe project – onshore section in De	nmark	1,000	210	36	2022
	Total		210	36	
	Fulfilled Criteria				

#### Competition inter alia through divers

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

Market integration: - Creation of a well-integrated and functioning market in the West Baltic region; - Completing a missing interconnection between PL and DK. SoS: - Diversification of supply sources, routes and counterparts by bringing Norwegian gas to the West Baltic and CEE regions and by allowing to import gas from the LNG terminal in Świnoujście in DK and SE; - Reduction of dependence on a single supply source in the CEE region; - Mitigation of exposure to supply disruption in the West Baltic and CEE regions; - Mitigation of negative impact linked to decreasing indigenous production in DK. Competition: - Reduction of price differences between the BEMIP and North-West regions. Sustainability: - Reduction of emissions in the BEMIP and CEE regions by promoting natural gas in national economies.

Current TYNDP : TYNDP 2020 - Annex A Page 108 of 773

### **Expected Gas Sourcing**

		Benefits
Main Driver	Market Demand	
Main Driver Explanat	ion	
Benefit Description		
		Barriers
Barrier Type	Description	
Regulatory	Limitations on duration of capacity contracts (15 years	s) increase project risks and thus impact investment incentives for project promoters
Permit Granting	All necessary permits from relevant authorities in seve	oral countries should be granted in time

Current TYNDP: TYNDP 2020 - Annex A Page 109 of 773

	CBCA		Financial Assistance
Decision	Yes, we have submitted an investment request and have received a decision	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Submissin Date	27/10/2017	Grants for studies	Yes
Decision Date	27/02/2018	Grants for studies amount	Mln EUR 0.0
Website	<u>CBCA URL</u>	Grants for works	No
Countries Affected	Denmark, Poland, Sweden	Grants for works amount	Mln EUR 0.0
Countries Net Cost Bearer		Intention to apply for CEF	
	The Danish NRA (DERA) approved the CBCA on the	Other Financial Assistance	No
	27 February 2018. The Polish NRA (URE) approved the	Comments	
	CBCA on the 12 March 2018.	General Comments	
	The Danish decision can be found here:		
	http://energitilsynet.dk/gas/afgoerelser/tilsynsafgoerels		
Additional Comments			
Additional Comments	er/2018/godkendelse-af-omkostningsfordelingen- mellem-polen-og-danmark-for-baltic-pipe-projektet/		
	The Polish decision can be found here:		
	https://bip.ure.gov.pl/bip/taryfy-i-inne-decyzje/inne- decyzje-informacj/3634,Inne-decyzje-informacje-		

search=3253

sprawozdania-opublikowane-w-2018-r.html?

# Poland - Denmark interconnection (Baltic Pipe) - offshore section

TRA-A-271	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Advanced
Description	The projects in the group aim at connecting the gas transmission systems in Poland countries in the Baltic Sea region and Central-Eastern Europe. The project will also be diversify their supply potential (deliveries of LNG from the terminal in Świnoujście) in North Sea.  The project is composed of the following investments that are mutually dependent a Baltic Pipe project: Baltic Pipe (offshore section); onshore receiving terminal in Poland transmission system.	ring the opportunity for the Danish and the context of declining production in a and hence each necessary for the benefit	Swedish markets to the Danish part of the ts and realization of the
PRJ Code - PRJ Name	PRJ-G-021 - Baltic Pipe Project		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Interconnector DL DV	GAZ-SYSTEM S.A.	2022	DK	PL	306.80 GWh/d
Interconnector PL-DK	GAZ-SYSTEM S.A.	2022	PL	DK	91.10 GWh/d

Sponsors			General Information	NDP and PCI Information		
GAZ-SYSTEM S.A.	100%	Promoter	GAZ-SYSTEM S.A.	Part of NDP	Yes (National Ten-Year Transmission	
		Operator	GAZ-SYSTEM S.A.	Tare of ND1	System Development Plan 2018-202	
	Host Country Poland NDP Number			N/A		
				NDP Release Date		
		Website	<u>Project's URL</u>	NDP Website	NDP URL	
				Currently PCI	Yes (8.3.2 (2020))	
				Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	03/2016	01/2017
FEED	08/2017	11/2019
Permitting	08/2017	04/2020
Supply Contracts		
FID		11/2018
Construction	04/2020	09/2022
Commissioning	2022	2022
Grant Obtention Date	15/04/2019	15/04/2019

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Baltic Pipe (offshore section)	The length ie estiamated between 260 -310km	900	280		0
Onshore pipeline connecting offshore pipeline with the national grid			40		0
Onshore receiving terminal in Poland					0
	Total		320		

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#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

Market integration: - Creation of a well-integrated and functioning market in the West Baltic region; - Completing a missing interconnection between PL and DK. SoS: - Diversification of supply sources, routes and counterparts by bringing Norwegian gas to the West Baltic and CEE regions and by allowing to import gas from the LNG terminal in Świnoujście in DK and SE; - Reduction of dependence on a single supply source in the CEE region; - Mitigation of exposure to supply disruption in the West Baltic and CEE regions; - Mitigation of negative impact linked to decreasing indigenous production in DK. Competition: - Reduction of price differences between the BEMIP and North-West regions. Sustainability: - Reduction of emissions in the BEMIP and CEE regions by promoting natural gas in national economies.

#### **Delays since last TYNDP**

Delay Since Last TYNDP

Delay Explanation

	Benefits
Main Driver	Others
Main Driver Explanatio	Regulation SoS, market integration and competition, sustainability
Benefit Description	Baltic Pipe will have a significant impact on: increasing security of supply in the CEE and Baltic Sea regions by diversifying supply routes, sources and counterparts; creating well-interconnected gas infrastructure in the Baltic Sea region; enhancing competition on the regional markets (CEE and the Baltic region); promoting natural gas as a reliable, competitive and environmentally-friendly source of energy e.g. in the power generation and transport sectors. Baltic Pipe contributes also to the NSI EAST and BEMIP priority corridors, as the project will allow to transport gas from North Sea deposits to the CEE countries, namely to the CZ, SK and UA (via the North-South corridor in Poland, PL-CZ, PL-SK and PL-UA interconnections) and to the Baltic region (via GIPL to the East Baltic region). Since the project is bidirectional it will also provide the security of supply benefits for DK and SE (access to LNG).
	Barriers
Barrier Type	Description
Permit Granting	Efficient permitting procedures are necessary for timely implementation of the project.

nitted an investment request and have received a decision 27/10/201
27/10/201
12/03/201

Financial Assistance					
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision				
Grants for studies	Yes				
Grants for studies amount	Mln EUR 0.0				
Grants for works	No				
Grants for works amount	Mln EUR 0.0				
Intention to apply for CEF					
Other Financial Assistance	Yes				
Comments	TEN-E: "Baltic Pipe - Gas pipeline from Denmark to Poland - Pre-investment studies and authority process" TEN-E: "Baltic Pipe - Gas pipeline from Denmark to Poland – Geotechnical offshore survey, environmental monitoring programme and onshore gas quality study and receiving terminal in Poland"				
General Comments					

## Poland - Denmark interconnection (Baltic Pipe) - onshore section in Poland

TRA-A-1173	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Advanced
Description	The project aims at connecting the gas transmission systems in Poland and De the Baltic Sea region and Central-Eastern Europe. The project will also bring the supply potential (deliveries of LNG from the terminal in Świnoujście) in the corn The project is composed of the following investments that are mutually dependent Pipe project: Goleniów – Lwówek pipeline, CS Gustorzyn, CS Goleniów, C	ne opportunity for the Danish and Swedish mar ntext of declining production in the Danish par ndent and hence each necessary for the benefit	kets to diversify their t of the North Sea.
PRJ Code - PRJ Name	PRJ-G-021 - Baltic Pipe Project		

Capacity Increments Variant For Modelling

Point			Year	From Gas System	To Gas System	Capacity	
Aggregated Distribution (PL)			2022	DScPL	PL	0.00 GWh/d	
Sponsors			NDP and PCI Information				
Gas Transmission Operator GAZ-SYSTEM S.A.	.A. 100% Promote	Promoter	GAZ-SYSTEM S.A	Part of	NII )P	Yes (National Ten-Year Transmission System Development Plan 2018-2020)	
		Operator	GAZ-SYSTEM S.A		Sys		
		Host Country	Poland	A NDP N	umber		N/A
		Status	Planned	ndp r	elease Date		
		Website	Project's URI	NDP W	/ebsite		NDP URL
			-	Curren	tly PCI		Yes (8.3.2 (2020))
				Priority	/ Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	03/2016	01/2017
FEED	12/2017	02/2020
Permitting	12/2017	01/2020
Supply Contracts		
FID		11/2018
Construction	08/2020	09/2022
Commissioning	2022	2022
Grant Obtention Date	15/04/2019	15/04/2019

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
CS Goleniów				12	0
CS Gustorzyn				15	0
CS Odolanów				14	0
Goleniów – Lwówek pipeline		1,000	191		0
	Total		191	41	

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#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

The project is an internal enabler for the Baltic Pipe project - offshore section. The implementation of the project will have an impact on: Market integration: - Creation of a well-integrated and functioning market in the West Baltic region; - Completing a missing interconnection between PL and DK. SoS: - Diversification of supply sources, routes and counterparts by bringing Norwegian gas to the West Baltic and CEE Specific Criteria Fulfilled Comments regions and by allowing to import gas from the LNG terminal in Świnoujście in DK and SE; - Reduction of dependence on a single supply source in the CEE region; - Mitigation of exposure to supply disruption in the West Baltic and CEE regions; - Mitigation of negative impact linked to decreasing indigenous production in DK. Competition: - Reduction of price differences between the BEMIP and North-West regions. Sustainability: - Reduction of emissions in the BEMIP and CEE regions by promoting natural gas in national economies.

#### **Delays since last TYNDP**

Delay Since Last TYNDP **Delay Explanation** 

	Benefits
Main Driver	Others
Main Driver Explanat	on Regulation SoS, market integration and competition
Benefit Description	Baltic Pipe will have a significant impact on: increasing security of supply in the CEE and Baltic Sea regions by diversifying supply routes, sources and counterparts; creating well-interconnected gas infrastructure in the Baltic Sea region; enhancing competition on the regional markets (CEE and the Baltic region); promoting natural gas as a reliable, competitive and environmentally-friendly source of energy e.g. in the power generation and transport sectors. Baltic Pipe contributes also to the NSI EAST and BEMIP priority corridors, as the project will allow to transport gas from North Sea deposits to the CEE countries, namely to the CZ, SK and UA (via the North-South corridor in Poland, PL-CZ, PL-SK and PL-UA interconnections) and to the Baltic region (via GIPL to the East Baltic region). Since the project is bidirectional it will also provide the security of supply benefits for DK and SE (access to LNG).
	Barriers
Barrier Type	Description
Permit Granting	Efficient permitting procedures are necessary for timely implementation of the project.

CBCA				
Yes, we have submitted an investment request and have received a decision				
27/10/2016				
12/03/2018				

Financial Assistance				
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision			
Grants for studies	Yes			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF				
Other Financial Assistance	No			
Comments				
General Comments				

Current TYNDP : TYNDP 2020 - Annex A Page 118 of 773

## Czech-Polish Gas Interconnector (CPI)

TRA-A-136	Project	Pipeline including CS	Non-FID
Update Date	22/11/2019		Advanced
Description	The subject of the project (Czech part) is the construction of the DN 1000 gas pipeli and Polish transmission systems. It also includes upgrade of the existing compresso construct the robust bidirectional interconnector between Poland and the Czech Re operators of the Czech Republic (NET4GAS s.r.o.) and Poland (GAZ-SYSTEM S.A.) The Czech part of the CPI consists of the following subprojects:  1) Poland-Czech Republic interconnector (STORK II; PCI project No. 6.2.10), and 2) Tvrdonice-Libhošť pipeline, including upgrade of CS Břeclav (PCI project No. 6.2.2)	or station Břeclav on the Czech side. The a epublic. Project is jointly coordinated by th	im of the project is to
PRJ Code - PRJ Name	PRJ-G-022 - Poland - Czech Republic Interconnection		

Capacity Increments Variant For Mod	elling				
Point	Operator	Year	From Gas System	To Gas System	Capacity
	NET4GAS, s.r.o.	2023	CZ	PL	219.10 GWh/d
Hať			Comment: Exit from CZ to PL		
	NET4GAS, s.r.o.	2023	PL	CZ	153.20 GWh/d
			Comment: E	ntry from PL to CZ	7

Sponsors	General Information		NDP and PCI Information		
Czech Republic		Promoter	NET4GAS, s.r.o.	Part of NDP	Yes (CZ NDP 2019-2028 (approved))
NET4GAS, s.r.o.	100%	Operator	NET4GAS, s.r.o.	NDP Number	TRA-N-136
Poland		Host Country	Czechia	NDP Release Date	31/10/2018
Operator Gazociągów Przesyłowych GAZ-SYSTEM		Status	Planned	NDP Website	<u>NDP URL</u>
S.A.	100%	Website	<u>Project's URL</u>	Currently PCI	No
				Priority Corridor(s)	NSIE

Schedule	Start Date	End Date
Pre-Feasibility		08/2011
Feasibility	01/2009	12/2012
FEED	11/2014	10/2017
Permitting	02/2016	09/2021
Supply Contracts		11/2021
FID		
Construction	07/2021	08/2023
Commissioning	2023	2023
Grant Obtention Date	02/05/2018	02/05/2018

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Tvrdonice (CZ) - Hať (CZ/PL)	The pipeline length at CZ side is approx. 207.4 km (Tvrdonice-Hat). Upgrade of the existing compressor station Břeclav (CZ) is needed.	1,000	207	24	2023
	Total		207	24	

**Fulfilled Criteria** 

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

	Delays since last TYN	NDP

Delay Since Last TYNDP 4 years

Delay Explanation The delay was caused by lengthy permitting processes.

Current TYNDP : TYNDP 2020 - Annex A Page 120 of 773

### **Expected Gas Sourcing**

Norway, Russia, LNG (HR,PL)

Benefits Benefits		
Main Driver	Others	
Main Driver Explanation	Competition, Market Integration, Others	
Benefit Description	The Project benefits: (a) Increase cross-border capacity between PL and CZ by establishing a large corridor allowing flexible transport of gas in CEE in direction North-South; (b) Increase security of gas supply and reliability, providing the overall flexibility for CEE region and diversifying supply routes for the region; (c) Create a robust, well-functioning internal market in CZ and PL; (d) Contribute to the creation of integrated and competitive gas market in CEE region and thus decrease gas prices (d) the security of supply in the Northern Moravian and Silesian region where there is a capacity bottleneck. There is not enough transmission capacity in the area to cover winter peak demand (now covered also by gas from commercial UGS). Due to current low demand for storage capacity, operating the regional UGS might not be commercially viable in future. Without filled UGS and realization of the project, there would be 4-6 mcm/d of gas missing.	
	Parriage	

Barriers		
Barrier Type	Description	
Permit Granting	Lengthy permitting process at the Ministry of Regional Development not reflecting the TEN-E regulation (EU) 347/2013.	
Political	Change of political decisions, please see the MoUs in the Intergovernmental Agreement section.	
Regulatory	Low rate of return	
Regulatory	Lack of proper transposition of EU regulation	
Market	Lack of market support	

Intergovernmental Agreements				
Agreement	Agreement Description	Is Signed	Agreement Signature Date	
Memorandum of understanding	On the cooperation in the natural gas sector aimed at implementation of the Czech Republic-Poland Interconnection Project	Yes	06/09/2016	
Memorandum of understanding	On project of expanded interconnection between gas transmission system of Republic of Poland and Czech Republic (STORK II)	Yes	12/12/2016	
Memorandum of understanding	On the cooperation in the natural gas sector aimed at implementation of the Czech Republic-Poland Interconnection Project	Yes	20/04/2015	

CBCA				Financial Assistance
Decision	Yes, we have submitted an investment request and have received a decision		Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Submissin Date	31/10/2013		Grants for studies	Yes
Decision Date	17/10/2014		Grants for studies amount	Mln EUR 1.0
Website	<u>CBCA URL</u>		Grants for works	No
Countries Affected	Czechia, Poland		Grants for works amount	Mln EUR 0.0
Countries Net Cost Bearer	Czechia;#Poland		Intention to apply for CEF	No decision yet taken
Additional Comments			Other Financial Assistance	Yes
			Comments	TEN-E, 371 622 EUR
			General Comments	

Current TYNDP : TYNDP 2020 - Annex A Page 122 of 773

## Poland - Czech Republic Gas Interconnection (PL section)

TRA-A-273	Project Pipeline inc		Non-FID
Update Date	22/11/2019		Advanced
Description	The project aims to increase the cross-border capacity between Poland and the Czech Republic by establishing a large transportation corridor will allow flexible transport of gas in Central-Eastern Europe within the North-South corridor. The development of the project will contribute reinforcement of the effective operation of the gas transmission systems, efficient gas exchange between the markets, as well as increase of t security of supply not only for Poland and the Czech Republic, but also for the CEE region by enabling the supply link with global LNG marketerminal in Świnoujście and Norwegian gas via the Baltic Pipe project.		will contribute to l as increase of the
PRJ Code - PRJ Name	PRJ-G-022 - Poland - Czech Republic Interconnection		

Capacity Increments Variant For Modelling						
Point	Оре	erator	Year	From Gas System	To Gas System	Capacity
Harr	GAZ	GAZ-SYSTEM S.A.		CZ	PL	219.10 GWh/d
Hať	GAZ	GAZ-SYSTEM S.A.		PL	CZ	153.20 GWh/d
Sponsors		General Information		NDP and	PCI Information	
Cas Transmission Operator CA7 SVSTEM SA	00/ Dramatar	C47.6V	CTEM C A	V-	s (National Ton V	u Tu-u-u-i-si-u

Sponsors	General Information		NDP and PCI Information		
Gas Transmission Operator GAZ-SYSTEM S.A.	100%	Promoter	GAZ-SYSTEM S.A.	Part of NDP	Yes (National Ten-Year Transmission
		Operator	GAZ-SYSTEM S.A.		System Development Plan 2018-2027)
		Host Country	Poland	NDP Number	N/A
		Status	Planned	NDP Release Date	
		Website	Project's URL	NDP Website	<u>NDP URL</u>
				Currently PCI	No
				Priority Corridor(s)	NSIE

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED	07/2015	12/2017
Permitting	07/2016	12/2017
Supply Contracts		
FID		
Construction		
Commissioning	2023	2023
Grant Obtention Date		
Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
PL-CZ Interconnection - Polish section		1,000	53		0
	Total		53		

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

#### **Expected Gas Sourcing**

LNG ()

Current TYNDP : TYNDP 2020 - Annex A Page 124 of 773

Benefits				
Main Driver	Others			
Main Driver Explanation Regulation SoS and market integration, sustainability				
Benefit Description	Implementation of Poland-Czech Republic Interconnection will have an impact on: providing overall flexibility for the CEE region, diversifying the supply sources and routes for the CEE region; increasing the security and reliability of the cross-border gas transmission between the Czech Republic and Poland; creating a robust, well-functioning internal market in the Czech Republic and Poland and promoting the competition.			

	CBCA	
Decision	Yes, we have submitted an investment request and have received a decision	App
Submissin Date	31/10/2013	Gra
Decision Date	24/06/2014	Gra
Website	<u>CBCA URL</u>	Gra
Countries Affected		Gra
Countries Net Cost Bearer		Inte
Additional Comments		Oth

	Financial Assistance
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Grants for studies	Yes
Grants for studies amount	Mln EUR 0.6
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	
Other Financial Assistance	No
Comments	
General Comments	

Current TYNDP : TYNDP 2020 - Annex A Page 125 of 773

## **LNG Terminal Brunsbuettel**

LNG-A-1198	Project	LNG Terminal	Non-FID
Update Date	15/08/2019		Non-Advanced
	Construction of the first German LNG Terminal in Brunsbuettel (Hamburg Area), a full stacked LNG services.	ervice terminal which includes regas,	reloading and small
Description	The Terminal project aims to take FID end of 2019-early 2020.		
	The connecting projects will be part of the upcoming NEP.		
PRJ Code - PRJ Name	PRJ-G-023 - LNG Terminal Brunsbuettel		

Capacity Increments Variant For Modelling

Point	Operator			s System	To Gas System	Capacity			
Brunsbuettel (DE)	uettel (DE) GermanLNG Terminal GmbH		cel (DE) GermanLNG Terminal GmbH 2021		GermanLNG Terminal GmbH 2023 LNG_T		2023 LNG_Tk_DEg DEg 2		256.20 GWh/d
Sponsors		General Information		NDP and PCI Information					
	Promoter	GermanLNG Terminal GmbH		No ((4	4) there is no oblig	ation at national			
	Operator	GermanLNG Terminal GmbH	Part of NDP	level	level for such a project to be part of the				
	Host Country	Germany	NDDN			NDP)			
	Status	Planned							
	Website	Project's URL	NDP Release Da	te					
		•	NDP Website						
			Currently PCI			No			
			Priority Corridor	(s)					

Schedule	Start Date	End Date
Pre-Feasibility		12/2016
Feasibility	01/2017	03/2018
FEED	04/2018	06/2019
Permitting	08/2019	10/2020
Supply Contracts		12/2019
FID		12/2019
Construction	10/2020	05/2023
Commissioning	2023	2023
Grant Obtention		
Date		

Third-Party Access Regime	
Considered TPA Regime	Not Applicable
Considered Tariff Regime	Negotiated
Applied for Exemption	Yes
Exemption Granted	Not Yet
Exemption in entry direction	100.00%
Exemption in exit direction	0.00%

Technical Information (LNG)							
Regasification Facility	Reloading Ability Project Phase	Expected Increment Ship Size (bcm/y) (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 LNG)	Comments	Commissioning Loa Year	d Factor (%)
LNG Terminal Brunsbüttel (German LNG)	No One	8.0 267,000	21.40	240,000	Tank Capacity	2023	50

Fyro o ot o ol	Gas Sourcing
Expected	Gas Sourcing

LNG (WO)

	Benefits Programme Control of the Co
Main Driver	Market Demand
Main Driver Explanation	Regasification capacity adds liquidity, competition and security of supply in the German market by import diversification; the small scale services help to increase the market demand of LNG as a fuel towards the reduction of CO2 emissions in transport applications.
Benefit Description	See above

Current TYNDP: TYNDP 2	020 - Annex A		Page 127 of 773
	СВСА		Financial Assistance
Decision  Submissin Date  Decision Date  Website  Countries Affected  Countries Net Cost Bearer	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not	Applied for CEF Grants for studies Grants for studies amount Grants for works Grants for works amount Intention to apply for CEF Other Financial Assistance	(3) No, we have not applied for CEF  No  MIn EUR 0.0  No  MIn EUR 0.0  No decision yet taken  No
Additional Comments		Comments  General Comments	We are discussion the application for funding under the "GRW, Koordinierungsrahmen der Gemeinschaftsaufgabe der regionalen Wirtschaftsstruktur", a decision can be expected by the end of 2019.

Current TYNDP : TYNDP 2020 - Annex A Page 128 of 773

# LNG Terminal Brunsbuettel - Grid Integration

TRA-A-1199	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Non-Advanced
Description	Construction of the first German LNG Terminal in Brunsbuettel (Hamburg Area). This project shows the measures for the integration of the LNG Terminal in the GUD of station at the connecting point to the GUD grid and an extension of an existing meas		•
PRJ Code - PRJ Name	PRJ-G-023 - LNG Terminal Brunsbuettel		

Capacity Increments Variant For Modell	ing					
Point	Operato	r	Year	From Gas System	To Gas System	Capacity
Brunsbuettel (DE)	Gasunie GmbH	Gasunie Deutschland Transport Services GmbH		LNG_Tk_DEg	DEg	256.20 GWh/d
Sponsors		General Information		NDP and	I PCI Information	
	Promoter	Gasunie Deutschland Transp Service Gn	sport Part of NDP Yes (Netzentwicklung		gsplan Gas 2018- 2028)	

	Promoter	Gasunie Deutschland Transport Service GmbH	Part of NDP	Yes (Netzentwicklungsplan Gas 2018- 2028)
	Operator	Gasunie Deutschland Transport	NDP Number	ID300-01
		Services GmbH	NDP Release Date	20/03/2019
	Host Country	Germany	NDP Website	NDP URL
	Status	Planned	Currently PCI	No
	Website	<u>Project's URL</u>	Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		07/2018
Feasibility	07/2018	03/2019
FEED	04/2019	06/2020
Permitting	07/2020	08/2021
Supply Contracts		01/2020
FID		10/2020
Construction	08/2021	10/2022
Commissioning	2023	2023
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations		
Pipeline Section	Pipeline Comment	Diameter Length Compressor Power Comissioni (mm) (km) (MW) Year
Brunsbuettel-Hetlingen		800 57 2022
	Total	57

Expected	<b>Gas Sourcing</b>	

LNG (WO)

	Benefits	
Main Driver	Market Demand	
Main Driver Explanatio	n	
Benefit Description		

	СВСА			
No, we have not submitted an investment request yet Decision and we have not yet decided whether we will submit on				
	no			
Submissin Date				
Decision Date				
Website				
Countries Affected				
Countries Net Cost Bearer				
Additional Comments				

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF				
Other Financial Assistance	No			
Comments				
General Comments				

Current TYNDP : TYNDP 2020 - Annex A Page 131 of 773

## Poland - Ukraine Gas Interconnection (PL section)

TRA-A-621	Project	Pipeline including CS	Non-FID
Update Date	20/09/2019		Advanced
Description	The objective of the project is to create a large transportation corridor between Pothe construction of a new gas pipeline between the Hermanowice gas node on the of the Project on the Polish side: Hermanowice-PL/UA border pipeline; Metering s development in: extensiion of CS Strachocina	e Polish side and Bliche Volytsia UGS on th	e Ukrainian side. Scope
PRJ Code - PRJ Name	PRJ-G-028 - Poland - Ukraine Gas Interconnection		

Capacity Increments Variant For Modelling						
Point	Operator	Year	From Gas System	To Gas System	Capacity	
PL>UA Interconnector	GAZ-SYSTEM S.A.	2022	PL	UAe	153.20 GWh/d	
UA>PL Interconnector	GAZ-SYSTEM S.A.	2022	UA	PL	153.20 GWh/d	

Sponsors	General Information		NDP and PCI Information			
Gas Transmission Operator GAZ-SYSTEM S.A. 100%		Promoter	GAZ-SYSTEM S.A.	Part of NDP	Yes (National Ten-Year Transmission	
		Operator	GAZ-SYSTEM S.A.		System Development Plan 2018-2027)	
		Host Country	Poland	NDP Number	N/A	
		Status	Planned	NDP Release Date		
		Website	Project's URL	NDP Website	NDP URL	
				Currently PCI	No	
				Priority Corridor(s)	NSIE	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED	09/2016	06/2019
Permitting	10/2016	02/2019
Supply Contracts		
FID		
Construction		
Commissioning	2022	2022
Grant Obtention		
Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Hermanowice Node - PL/UA border pipeline	The exact length - 1,5km	1,000	2		0
Metering station in Poland					0
	Total		2		

l l	Fulfill	ed	Cri	ter

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

#### Delays since last TYNDP

Delay Since Last TYNDP

Delay Explanation

The dialogue between the TSOs of both countries is ongoing in order to establish grounds for taking the positive FID for implementation of the PL-UA interconnection. Therefore, launching of the construction works is postponed until the FID is taken.

Current TYNDP : TYNDP 2020 - Annex A Page 133 of 773

### **Expected Gas Sourcing**

LNG ()

Benefits Benefits					
Main Driver	Others				
Main Driver Explanation					
Benefit Description	The project will contribute towards: establishment of a well-integrated gas market in the region (PL, UA, CZ, SK, HU, RO, MD); diversification of gas routes and sources for Ukraine; enhancement of security of gas supply for Ukraine; reducing dependency on single gas supplier for Ukraine; strengthening energy solidarity between EU Energy Community and EU contracting countries; access to the gas storages in Ukraine for Poland and EU countries.				

	CBCA			
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it			
Submissin Date				
Decision Date				
Website				
Countries Affected				
Countries Net Cost Bearer				
Additional Comments				

Finan	cial Assistance
Applied for CEF	(3) No, we have not applied for CEF
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	
Other Financial Assistance	No
Comments	
General Comments	

Current TYNDP : TYNDP 2020 - Annex A Page 134 of 773

## Poland-Ukraine Interconnector (Ukrainian section)

TRA-A-561	Project	Pipeline including CS	Non-FID
Update Date	15/06/2020		Advanced
Description	The objective of the project is to create a large transportation corridor between Pothe construction of a new gas pipeline between the Hermanowice gas node on the of the Project on the Polish side: Pipeline Hermanowice-PL/UA border; Metering statransmission system development in Poland: Pipeline Hermanowice-Strachocina; PiTworzeń; Pipeline Tworóg-Tworzeń. Scope of the project on the Ukrainian side: PL/	Polish side and Bliche Volytsia UGS on the ation in Poland; Extenstion of CS Strachoc ipeline Strachocina-Pogórska Wola; Pipelin	e Ukrainian side. Scope ina; Necessary additional ne Pogórska Wola-
PRJ Code - PRJ Name	PRJ-G-028 - Poland - Ukraine Gas Interconnection		

Capacity Increments Variant For Modelling							
Point Operator			or	Year F	From Gas System	To Gas System	Capacity
PL>UA Interconnector		LLC Gas TSO of Ukraine 20			PL	UAe	153.20 GWh/d
UA>PL Interconnector		LLC Gas TSO of Ukraine 2		2022	UA	PL	153.20 GWh/d
Sponsors			General Information	NDP and PCI Information			
Ukrtransgaz	100%	0% Promoter LLC Gas TSO of Ukraine Part of NDP No ((2) no NDP exists i		ts in the country)			

		General information	INDI	and i ci information
%	Promoter	LLC Gas TSO of Ukraine	Part of NDP	No ((2) no NDP exists in the country)
	Operator		NDP Number	
	Host Country	Ukraine	NDP Release Date	
	Status	Planned	NDP Website	
	Website		Currently PCI	No
			Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		02/2016
Feasibility	01/2015	12/2016
FEED	12/2016	07/2018
Permitting	12/2016	09/2018
Supply Contracts		
FID		
Construction	08/2018	03/2020
Commissioning	2022	2022
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Drozdovychi - Bilche Volytsya		1,000	99	0	2022
	Total		99	0	

Freeze a art a al	Gas Sourci	
Expected	Gas Sourci	

Norway, LNG (PL)

	Benefits				
Main Driver	Regulation SoS				
Main Driver Explanation	Main Driver Explanation Competition, Market Integration, Security of Supply, Sustainability				
Benefit Description	The project will contribute towards: establishment of a well integrated gas market in the region (PL, UA, CZ, SK, HU, RO, MD); diversification of gas routes and sources for Ukraine; enhancement of security of gas supply for Ukraine; reducing dependency on single gas supplier for Ukraine; strengthening energy solidarity between the EU and Energy Community contracting countries; access to the gas storages in Ukraine for Poland and EU countries.				

CBCA		Financial Assistance		
Decision Submissin Date Decision Date Website Countries Affected Countries Net Cost Bearer Additional Comments	No, we have not submitted an investment request yet, but we do plan to submit it	Applied for CEF Grants for studies Grants for studies amount Grants for works Grants for works amount Intention to apply for CEF Other Financial Assistance Comments General Comments	Assistance  (3) No, we have not applied for CEF  No  MIn EUR 0.0  No  MIn EUR 0.0  No, we do not plan to apply  No	

Current TYNDP : TYNDP 2020 - Annex A Page 137 of 773

## **Embedding CS Folmhusen in H-Gas**

TRA-A-951	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Non-Advanced
Description	Embedding of the Compressor Station Folmhusen in H-Gas. This project is linked to the L-the GTS project "TRA-N-882".	- to H-Gas conversion in Germany.	The project is linked to
PRJ Code - PRJ Name	PRJ-G-030 - Transferring L-gas infrastructure to H-gas		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Bunde (DE) / Oude Statenzijl (H) (NL) (GUD)	Gasunie Deutschland Transport Services GmbH	2020	IB-NLg	DEg	57.30 GWh/d
Bunde (DE) / Oude Statenzijl (L) (NL) (GUD)	Gasunie Deutschland Transport Services GmbH	2020	IB-NLg	DEgL	-57.30 GWh/d

Sponsors	General Information		NDP and PCI Information		
	Promoter	Gasunie Deutschland Transport Services GmbH	Part of NDP	Yes (NEP Gas 2015; NEP Gas 2016-2026; NEP Gas 2018-2028)	
	Operator	Gasunie Deutschland Transport		ID 300-02	
	Operator	Services GmbH	NDP Release Date	20/03/2019	
	Host Country	Germany	NDP Website	NDP URL	
	Status	Planned	Currently PCI	No	
	Website		Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		01/2015
Feasibility	01/2015	01/2015
FEED	01/2016	12/2016
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2020	2020
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	Not Relevant
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

## **Expected Gas Sourcing**

## Norway, Russia

		Benefits
Main Driver	Others	
Main Driver Explanati	ion	
Benefit Description		

	СВСА
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or
	not
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance			
Applied for CEF	(3) No, we have not applied for CEF		
Grants for studies	No		
Grants for studies amount	Mln EUR 0.0		
Grants for works	No		
Grants for works amount	Mln EUR 0.0		
Intention to apply for CEF			
Other Financial Assistance	No		
Comments			
General Comments			

Current TYNDP : TYNDP 2020 - Annex A Page 140 of 773

## GUD: Complete conversion to H-gas

TRA-N-955	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Non-Advanced
Description	Complete conversion of the grid from L- to H-gas in the year 2030. Use of the e project "H-Gas conversion of L-Gas export boarder point (TRA-N-882)". On the excisting infrastructure will be used.  This project does not cover the conversion of the appliances.	. ,	
PRJ Code - PRJ Name	PRJ-G-030 - Transferring L-gas infrastructure to H-gas		

Capacity Increments Variant For Modelling						
Point	Operator		Year	From Gas Syster	n To Gas System	Capacity
Bunde (DE) / Oude Statenzijl (H) (NL) (GUD)	Gasunie I GmbH	Deutschland Transport Services	2030	IB-NLg	DEg	135.00 GWh/d
Bunde (DE) / Oude Statenzijl (L) (NL) (GUD)	Gasunie I GmbH	Deutschland Transport Services	2030	IB-NLg	DEgL	-135.00 GWh/d
HCC Leaves	Gasunie I GmbH	Deutschland Transport Services	2021	STcDEgL	DEgL	-48.90 GWh/d
UGS Lesum	Gasunie I GmbH	Deutschland Transport Services	2021	DEgL	STcDEgL	-10.70 GWh/d
Zone L-Gas GUD/OGE	Gasunie [ GmbH	Deutschland Transport Services	2027	DEgL	DEnL	-42.00 GWh/d
Sponsors		General Information		NDP a	nd PCI Information	
	Promoter	Gasunie Deutschland Transpor Services Gmb	Part	of NDP Ye.	s (NEP Gas 2014; NE Gas 2016-2026; NEF	
	Operator	Gasunie Deutschland Transpor		Number	ID 221-01 ID; ID 2	22-02; ID 223-01
	Орегасог	Services Gmb	H NDP	Release Date		20/03/2019
	Host Country	German	NDP	Website		NDP URL
	Status	In Progres	s Curre	ently PCI		No
	Website		Prior	ity Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction	01/2019	12/2029
Commissioning	2021	2030
Grant Obtention		
Date		

9
Regulated
Regulated
Not Relevant
Not Relevant
0.00%
0.00%

Evpoctod	Gas Sourcing	
EXDECTED	das sourcina	

Norway, Russia

		Benefits	
Main Driver	Others		
Main Driver Explana	ation		
Benefit Description			

	CBCA		
No, we have not submitted an investment request  Decision and we have not yet decided whether we will submit			
	not		
Submissin Date			
Decision Date			
Website			
Countries Affected			
Countries Net Cost Bearer			
Additional Comments			

Financial Assistance			
Applied for CEF	(3) No, we have not applied for CEF		
Grants for studies	No		
Grants for studies amount	Mln EUR 0.0		
Grants for works	No		
Grants for works amount	Mln EUR 0.0		
Intention to apply for CEF	No decision yet taken		
Other Financial Assistance	No		
Comments			
General Comments			

# Oude(NL)-Bunde(DE) GTG H-Gas

TRA-F-949	Project	Pipeline including CS	FID
Update Date	18/11/2019		Non-Advanced
Description	This projects creates a new interconnection point for H-Gas between the Netherlands and Germany and provide blendingcapac Gas. The new H-Gas-capacities helps for the L-H-Gas conversion in Germany		pacities from H- to L-
PRJ Code - PRJ Name	PRJ-G-030 - Transferring L-gas infrastructure to H-gas		

Point	Operator	Year	From Gas System	To Gas System	Capacity
	Gastransport Nord GmbH	2020	IB-NLg	DEg	25.40 GWh/d
	Comment: The H-Gas capacity is onl	ly used for blendir	ng and can not be trar	nsported without L- Gas flow	
	Gastransport Nord GmbH	2021	IB-NLg	DEg	25.40 GWh/d
	Comment: The H-Gas capacity is onl	ly used for blendir	ng and can not be trar	nsported without L- Gas flow	
	Gastransport Nord GmbH	2022	IB-NLg	DEg	25.40 GWh/d
	Comment: The H-Gas capacity is onl	ly used for blendir	ng and can not be trar	nsported without L- Gas flow	
	Gastransport Nord GmbH	2023	IB-NLg	DEg	25.40 GWh/d
Bunde (DE) / Oude Statenzijl (H) (NL) (GTG Nord)	Comment: The H-Gas capacity is onl	ly used for blendir	ng and can not be trar	nsported without L- Gas flow	
	Gastransport Nord GmbH	2024	IB-NLg	DEg	25.40 GWh/d
	Comment: The H-Gas capacity is onl	ly used for blendir	ng and can not be trar	nsported without L- Gas flow	
	Gastransport Nord GmbH	2025	IB-NLg	DEg	25.40 GWh/d
	Comment: The H-Gas capacity is onl	ly used for blendir	ng and can not be trar	nsported without L- Gas flow	
	Gastransport Nord GmbH	2026	IB-NLg	DEg	25.40 GWh/d
	Comment: The H-Gas capacity is only	ly used for blendir	ng and can not be tran	nsported without L- Gas flow	

Sponsors

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Bunde (DE) / Oude Statenzijl (H) (NL) (GTG Nord)

Gastransport Nord GmbH

2027

IB-NLg

DEg

76.20 GWh/d

General Information	
Promoter	Gastransport Nord GmbH
Operator	Gastransport Nord GmbH
Host Country	Germany
Status	Planned
Website	

	NDP and PCI Information		
1	Part of NDP	Yes (Netzentwicklungsplan Entwurf 2018 -2028)	
,	NDP Number	432-02b	
1	NDP Release Date	20/03/2019	
	NDP Website	<u>NDP URL</u>	
	Currently PCI	No	
	Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		01/2016
Feasibility	01/2016	01/2017
FEED	01/2017	01/2018
Permitting	01/2018	01/2019
Supply Contracts		06/2019
FID		04/2018
Construction	07/2019	12/2019
Commissioning	2020	2027
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	Yes
Exemption Granted	Yes
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

**Expected Gas Sourcing** 

Norway, Russia

	Benefits	
Main Driver	Market Demand	
Main Driver Explanation	on	
Benefit Description		

Barriers

**Barrier Type** 

Description

Others

The H-Gas capacity is used for blending into the L-Gas flow. If the gasquality changes to a higher Wobbe, the capacity of H-Gas blending will be lower.

January 1	
	CBCA
Decision	No, we have submitted an investment request, but not received a decision yet
Submissin Date	30/03/2018
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF				
Other Financial Assistance	No			
Comments				
General Comments				

Current TYNDP : TYNDP 2020 - Annex A Page 146 of 773

# Capacity4Gas – DE/CZ

TRA-F-752	Project Project	Pipeline including CS	FID
Update Date	18/11/2019		Advanced
Description	The project "Capacity4Gas – DE/CZ" is a subproject of the overall project Capacity4 realization of an additional regulated entry capacity into the Czech gas transmission interconnection point at the German-Czech border, upgrade of existing compressor pipeline infrastructure. The project is jointly coordinated by the transmission system (EUGAL shareholders). The project results from capacity bookings from the binding	on system. Those measures are in particular or stations, building a new compressor stat m operators of the Czech Republic (NET4G.	r: establishing a new iion and extending the
PRJ Code - PRJ Name	PRJ-G-034 - More capacity – DE/CZ Capacity4Gas Project		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	NET4GAS, s.r.o.	2019	Y-CZb	CZ	665.00 GWh/d
VIP Brandov-GASPOOL (N4G)	Comment: Stage 1. The ii		resents approx. entry he market areas of DE		
	NET4GAS, s.r.o.	2021	Y-CZb	CZ	454.00 GWh/d
				Comment: Stage 2	) 

Sponsors		General Information	NDF	and PCI Information	
Czech Republic		Promoter	NET4GAS, s.r.o.	Part of NDP	Yes (CZ NDP 2019-2028 (approved))
NET4GAS, s.r.o.	100%	Operator	NET4GAS, s.r.o.	NDP Number	TRA-F-752
Germany		Host Country	Czechia	NDP Release Date	31/10/2018
EUGAL (shareholders: GASCADE, Fluxys DE,		Status	In Progress	NDP Website	<u>NDP URL</u>
Gasunie DE, ONTRAS)	100%	Website	<u>Project's URL</u>	Currently PCI	No
				Priority Corridor(s)	

#### Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		03/2017
Feasibility	03/2017	10/2017
FEED	07/2017	06/2019
Permitting	07/2017	12/2019
Supply Contracts		01/2020
FID		03/2017
Construction	06/2018	09/2021
Commissioning	2019	2021
Grant Obtention Date		
Grant Obtention Date		

Third-Party Access Regim	ne e
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations						
Pipeline Section		Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
HSK-Přimda		Stage 1. The project comprises several technical measures, which factually leads to increase of entry capacity between DE (Gaspool) and CZ.	1,400	2	25	2019
		Stage 2.	1,400	150		2021
	Total			152	25	

	Expected Gas Sourcing	
Norway, Russia		

	Benefits	
Main Driver Market Demand		
Main Driver Explanation Result of the capacity au	tion.	

Decision Date  Website  Countries Affected  Countries Net Cost Bearer  Additional Comments  Grants for studies and Grants for works  Grants for works  Intention to apply for Gountries Net Cost Bearer  Other Financial Assista		CBCA	
Decision Date  Website  Countries Affected  Countries Net Cost Bearer  Additional Comments  Grants for works  Grants for works amou  Intention to apply for O  Other Financial Assista	Decision		
Website  Countries Affected  Countries Net Cost Bearer  Additional Comments  Grants for works amount in the properties of the properties o	Submissin Date		Grants for studies amo
Countries Affected Intention to apply for Countries Net Cost Bearer Other Financial Assista Additional Comments	Decision Date		Grants for works
Countries Affected Intention to apply for Countries Net Cost Bearer Other Financial Assista Additional Comments Comments	Website		Grants for works amou
Countries Net Cost Bearer Other Financial Assista Additional Comments Comments	Countries Affected		
Additional Comments Comments	Countries Net Cost Bearer		Other Financial Assista
General Comments	Additional Comments		Comments
			General Comments

Financial Assistance						
Applied for CEF	(3) No, we have not applied for CEF					
Grants for studies	No					
Grants for studies amount	Mln EUR 0.0					
Grants for works	No					
Grants for works amount	Mln EUR 0.0					
Intention to apply for CEF	No, we do not plan to apply					
Other Financial Assistance	No					
Comments						
General Comments						

# **EUGAL** - Europaeische Gasanbindungsleitung (European Gaslink)

TRA-F-763	Project	Pipeline including CS	FID			
Update Date	18/09/2020		Advanced			
	This project includes the Receiving Terminal Lubmin II, the pipeline EUGAL, a pipeline link between EUGAL an NEL with a station (for gas pressure regulation and measuring), a compressor station near Radeland, and a station (for gas pressure regulation, heating and measuring) by Deutschneudorf.					
Description	h Mecklenburg-Western Pomerania ar ransported gas enters the existing Ger	9				
PRJ Code - PRJ Name	PRJ-G-034 - More capacity – DE/CZ Capacity4Gas Project					

Capacity Increments Variant For Modelling	On sureton	\/ -	Fuerra Cara Court	To Coo Coot	Commit	
Point	Operator	Year	From Gas System	To Gas System	Capacity	
	GASCADE Gastransport GmbH	2019	DEg	Y-CZb	598.36 GWh/d	
		Co	omment: Level 1 (excl.	reservation quota	)	
	GASCADE Gastransport GmbH	2020	DEg	Y-CZb	408.95 GWh/d	
Deutschneudorf EUGAL Brandov	Comment: Level 2, on top of Le	evel 1 - in total	1,007.31 GWh/d (excl.	reservation quota	)	
	GASCADE Gastransport GmbH	2022	DEg	Y-CZb	-111.92 GWh/d	
	Comment: Reduction on Level 2 due to	Comment: Reduction on Level 2 due to increase of reservation quota according to NC CAM - in total 895.39 GWh/d				
	GASCADE Gastransport GmbH	2019	RU/NO2	DEg	962.42 GWh/d	
Lukasia II		Comment: Level 1				
Lubmin II	GASCADE Gastransport GmbH	2020	RU/NO2	DEg	778.94 GWh/d	
	Comr	Comment: Level 2, on top of Level 1 - in total 1741.38 GWh/d				
Mallnow	GASCADE Gastransport GmbH	2020	DEg	PL/YAM	146.33 GWh/d	
	GASCADE Gastransport GmbH	2019	DEg	Y-CZb	66.48 GWh/d	
VIP Brandov-GASPOOL	Comment: Level 1, due to the dual system in Germany, capacity out of reservation quota is					
		shifted	d and market via VIP I	Brandov-GASPOOL	_	

**VIP Brandov-GASPOOL** 

Date

# GASCADE Gastransport GmbH 2020 DEg Y-CZb 45.44 GWh/d Comment: Level 2, due to the dual system in Germany, capacity out of reservation quota is shifted and market via VIP Brandov-GASPOOL GASCADE Gastransport GmbH 2022 DEg Y-CZb 111.92 GWh/d

Comment: Increase on Level 2, due to the dual system in Germany, capacity out of reservation quota is shifted and market via VIP Brandov-GASPOOL

Sponsors			General Information	ND	P and PCI Information
GASCADE Gastransport GmbH Fluxys Deutschland GmbH		50% Promoter 16%	GASCADE Gastransport/Fluxys  Deutschland GmbH / GUD	Part of NDP	Yes (Netzentwicklungsplan Gas 2018- 2028)
Gasunie Deutschland GmbH & Co. KG		16% Operator	GmbH&Co.KG / ONTRAS GmbH GASCADE Gastransport GmbH	NDF Nullibel	412-03, 507-01a,b,c,d,e,f 20/03/2019
ONTRAS Gastransport GmbH		Host Countr	, , , , , , , , , , , , , , , , , , ,	INDI WEDSILE	NDP URL
		Status Website	In Progress <u>Project's URL</u>	Currently I Ci	No
Schedule Start Date	End Date			,	d-Party Access Regime
Pre-Feasibility				Considered TPA Regin	me Regulated

Schedule	Start Date	End Date	Third-Party Access	Regime
Pre-Feasibility			Considered TPA Regime	Reg
Feasibility			Considered Tariff Regime	Reg
FEED			Applied for Exemption	
Permitting			Exemption Granted	Not Re
Supply Contracts				
FID		06/2018	Exemption in entry direction	
Construction			Exemption in exit direction	(
Commissioning	2019	2022		
Grant Obtention				

Current TYNDP : TYNDP 2020 - Annex A Page 151 of 773

Pipelines and Compressor Stat	ions					
Pipeline Section		Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
AL NEL		the following project is related to it: - Gas pressure control and measuring station Lubmin-NEL	1,000	1		2019
EUGAL		the following projects are related to it: - Gas pressure control and measuring stations Radeland II, and Deutschneudorf-EUGAL - CS Radeland II - Receiving Terminal Lubmin II; Partially commissioning year 2020	1,400	484	75	2019
	Tota	al		485	75	

## **Expected Gas Sourcing**

## Russia, VHP GASPOOL

Benefits					
Main Driver	Market Demand				
Main Driver Explanation	The project will satisfy market demand that was expressed through binding capacity bookings in the context of "more capacity". The market demand is proven by the successful auctioning of the new capacities in the yearly auctions of 2017 that also proves the economic viability of the project.				
Benefit Description	The "more capacity" projects - especially in combination with the other projects within PRJ group "More capacity - DE/CZ Capacity4Gas Project" - will enhance market integration, security of supply, sustainability, and competition within Europe.				

	CBCA
Decision	No, we have not submitted an investment request yet and we do not plan to submit
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance						
Applied for CEF	(3) No, we have not applied for CEF					
Grants for studies	No					
Grants for studies amount	Mln EUR 0.0					
Grants for works	No					
Grants for works amount	Mln EUR 0.0					
Intention to apply for CEF	No, we do not plan to apply					
Other Financial Assistance	No					
Comments						
General Comments						

Current TYNDP : TYNDP 2020 - Annex A Page 152 of 773

# Upgrade for IP Deutschneudorf et al. for More Capacity

TRA-F-814	Project	Pipeline including CS	FID
Update Date	18/11/2019		Non-Advanced
Description	<ol> <li>New PRMS Kienbaum II incl. connection to EUGAL pipeline with two metering/contrgas from EUGAL pipeline; due Dec. 2019.</li> <li>Upgrade of pressure security system at Börnicke PRMS by installing a second controdownstream grid for increasing transit from East (Kienbaum) to West, due end of 2019.</li> <li>Upgrade of PRMS at Steinitz with an additional metering/control system for gas transinterconnector, due Dec. 2019.</li> <li>Upgrade of Groß Köris PRMS with new metering/control system for gas transmissions. Renewal of Sayda compressor station to ensure increasing transit and pressure level</li> </ol>	oll system to ensure operating pressure of to IP Deutschneudorf, due Dec. 2019	level of max. 84 bar in rds NETRA
PRJ Code - PRJ Name	PRJ-G-034 - More capacity – DE/CZ Capacity4Gas Project		

Sponsors		G	eneral Information	NDP and PCI Information	
Compressor station Sayda		Promoter	ONTRAS Gastransport GmbH	Part of NDP	Yes (Netzentwicklungsplan Gas 2018-
ONTRAS Gastransport GmbH	100%	Operator	ONTRAS Gastransport GmbH	Tart of NDI	2028)
Pressure reduction & metering station at Börnicke	е	Host Country	Germany	NDP Number	507-01 g, 507-01 h, ID 507-02 i, 507- 01 j, 507-01 m
ONTRAS Gastransport GmbH	100%	Status	In Progress	NDP Release Date	20/03/2019
Pressure reduction & metering station at Groß Köris		Website	<u>Project's URL</u>	NDP Website	NDP URL
ONTRAS Gastransport GmbH	100%			Currently PCI	No
Pressure reduction & metering station at Kienbau connection to EUGAL	ım with			Priority Corridor(s)	
ONTRAS Gastransport GmbH	100%				
Pressure reduction & metering station at Steinitz					
ONTRAS Gastransport GmbH	50%				

#### Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		03/2016
Feasibility	07/2017	10/2017
FEED	10/2017	12/2017
Permitting	01/2018	12/2018
Supply Contracts		
FID		12/2018
Construction	01/2019	12/2023
Commissioning	2023	2023
Grant Obtention Date		

	•
Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	Not Relevant
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations		
Pipeline Section	Pipeline Comment	Diameter Length Compressor Power Comissioning (mm) (km) (MW) Year
Connection Kienbaum-EUGAL	Pipeline length 0.1 km	700 2019
	Total	

## **Expected Gas Sourcing**

#### Russia

	Benefits	
Main Driver	Market Demand	
Main Driver Explanation	see Market Survey "More Capacity" (see https://www.more-capacity.eu)	
Benefit Description		

	СВСА
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Fina	ancial Assistance
Applied for CEF	(3) No, we have not applied for CEF
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	
Other Financial Assistance	No
Comments	
General Comments	

# 3rd IP between Portugal and Spain (pipeline Celorico-Spanish border)

TRA-A-283	Project	Pipeline including CS	Non-FID
Update Date	22/09/2020		Advanced
Description	The 3RD Interconnection Point (IP) PORTUGAL-SPAIN is located in the priority corri Spain by crossing the border between both Member States. This project will connect both gas systems between Celorico da Beira (Portugal) and		J
PRJ Code - PRJ Name	PRJ-G-036 - Interconnection ES-PT (3rd interconnection)		

Point	Operator	Year	From Gas System	To Gas System	Capacity
	REN - Gasodutos, S.A.	2025	PT	ES	70.00 GWh/c
			Co	mment: According	
				to the best	
				available	
				data of the	
				Joint	
				Technical	
VID IDEDICO				Study.	
/IP IBERICO	REN - Gasodutos, S.A.	2025	ES	PT	85.00 GWh/d
			Co	mment: According	
				to the best	
				available	
				data of the	
				Joint	
				Technical	
				Study.	

Sponsors			Gene	General Information		NDP and PCI Information	
REN Gasodutos		100%	Promoter	REN-Gasodutos, S.A.	Part of NDP	Yes (PDIRGN 2018 - 2027)	
			Operator	REN - Gasodutos, S.A.	NDP Number	-	
			Host Country	Portugal	NDP Release Date	19/12/2018	
			Status	Planned	NDP Website	NDP URL	
			Website	<u>Project's URL</u>	Currently PCI	No	
					Priority Corridor(s)	NSIW	
Schedule	Start Date	End Date			Third-Party	Access Regime	
Pre-Feasibility		03/2015			Considered TPA Regime	Regulated	

Schedule	Start Date	End Date
Pre-Feasibility		03/2015
Feasibility	07/2019	04/2020
FEED	08/2020	07/2021
Permitting	05/2021	10/2024
Supply Contracts		10/2023
FID		05/2023
Construction	10/2024	12/2025
Commissioning	2025	2025
Grant Obtention Date	14/07/2015	14/07/2015

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Celorico-Spanish border	First Step of the 3rd Interconnection Point (IP) PORTUGAL-SPAIN.	700	162		2025
	Total		162		

Current TYNDP: TYNDP 2020 - Annex A Page 157 of 773

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 6711	Crite	Art s

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

	Delays since last TYNDP
Delay Since Last TYNDP	3 years
Delay Explanation	In the last edition of the TYNDP, REN was in the permitting process phase, waiting for the Environmental Impact Declaration to be issued by the Competent Authorities. At this moment, REN already received the declaration with a unfavorable decision. As a consequence, it will be necessary to make an adjustment to the initial route, maintaining the same point of interconnection with Spain. Furthermore, the project of the 3rd Interconnection between Portugal and Spain was rescheduled due to the activities that are being developed in the High Level Group for the development of the interconnections between France, Spain and Portugal. It's important to notice that the Portuguese project has its decision dependent on the STEP project's decision.

#### **Expected Gas Sourcing**

Norway, Russia, Other LNG sources from the diversification of supply are expected, namely from the result of the integration of the Iberian m

	Benefits
Main Driver	Market Demand
Main Driver Explanation	The Project, provides a significant increase in the interconnection capacity between Portugal and Spain, firm and bidirectional. The contribution of this project to the potential market integration of the Portuguese and Spanish markets is however not captured by the modest results of the project in ENTSOG's modelling. The capacity provided by Project, firm and bidirectional, would nonetheless be fundamental for the market integration of the Portuguese and Spanish markets, playing an enabling role, in case of an eventual market merger between the two countries, shall the political will demand it.
Benefit Description	This PCI will contribute to the implementation of the internal energy market and it will also bring other benefits, particularly: increase NG market liquidity between Portugal and Spain systems, by providing new infrastructure access alternatives to market players in the Iberian Peninsula; Reinforce the security of supply in case of failure in any one of the two gas systems, given the total reversibility of the new interconnection; Allow operational integration between the underground storage facilities of Carriço (Portugal) and Yela (Spain), by increasing storage capacity accessibility between both gas systems; Increase the flexibility and support of gas infrastructure to gas fired power generation in both countries; Step towards the integration of the European gas infrastructures in the context of the Gas Regional Initiative – South, by providing increased interconnection capacity and diversification of supply sources on an Internal Gas Market perspective.

	Barriers
Barrier Type	Description
Regulatory	In simple terms and according to the current Portuguese regulation, the revenue stream respecting the part of the project allocated to Portuguese consumers (after the CBCA decision by the regulators of Portugal and Spain) will be obtained by the remuneration of the net invested capital of the project plus the amortization recovery and the opex cost recovery (subject to a mix of price cap and revenue cap regimes). Nevertheless, it's important to notice that it is not possible to predict if, when and to what extent any changes to this model may occur.
Permit Granting	REN submitted the project of the 3rd IP PT-ES to the Environmenatl Impact Assessment on February 2016. Two years later, on February 2018, REN received from APA - Agência Portuguesa do Ambiente (Competent Environmental Authority), the Environmental Impact Declaration with unfavorable decision. As a consequence, it will be necessary to: 1) Make an adjustment to the initial route, maintaining the same point of interconnection with Spain; 2) Prepare a new FEED; 3) Restart the environmental permitting process.
Political	Enagás & REN are collaborating under the HLG for South West interconnections. It's important to notice that the Portuguese project has its decision dependent on the STEP project's decision.
Market	Regarding the market survey, the 3rd interconnection between the gas systems of Portugal and Spain is regarded as commercially non-viable as has been demonstrated by the responses of the stakeholders to the public consultation process on the gas sector TYNDP for Portugal held in 2013, 2015 and 2017 in what concerns this specific project, meaning that its potential users are not willing to make any prior commitments in terms of capacity booking. Additionally, Market test was performed in April 2017 according to chapter V of Regulation 2017/459, and the conclusions were the same as the indicated consultation processes.

	Intergovernmental Agreements		
Agreement	Agreement Description	Is Signed	Agreement Signature Date
Lisbon Declaration	European Commission, France, Portugal and Spain signed Lisbon Declaration on Friday 27th July at the Second Energy Interconnections summit.	Yes	27/07/2018
Madrid Declaration	European Comission, Portugal, France and Spain	Yes	04/03/2015

STEP project's decision.

	CBCA
Decision	No, we have not submitted an investment request yet, but we do plan to submit it
Submissin Date	01/09/2020
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	The project of the 3rd Interconnection between Portugal and Spain was rescheduled due to the activities that are being developed in the High Level Group for the development of the interconnections between France, Spain and Portugal. It's important to notice that the Portuguese project has its decision dependent on the

Financial Assistance			
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision		
Grants for studies	Yes		
Grants for studies amount	Mln EUR 0.5		
Grants for works	No		
Grants for works amount	Mln EUR 0.0		
Intention to apply for CEF	Yes, for studies and works		
Other Financial Assistance	No		
Comments			
General Comments			

Current TYNDP : TYNDP 2020 - Annex A Page 160 of 773

## Eastring - Bulgaria

TRA-A-654	Project	Pipeline including CS	Non-FID
Update Date	22/11/2019		Non-Advanced
Description	Eastring-BG is subproject located in Bulgaria and is essential part of the Eastring projectation at Veľké Zlievce in the territory of Slovakia with a new IP at an external borde secure supplies in case of RU disruption and therefore it will increase gas SoS in the laternative gas sources for Central, Western & Southern Europe and (iii) mean step to	r of the EU in the territory of Bulgaria. Tl broader Central-South-East EU region, (i	ne project would (i)
PRJ Code - PRJ Name	PRJ-G-041 - Pipeline system from Bulgaria via Romania and Hungary to Slovakia [cur	rrently known as "Eastring"	

Point	Operator	Year	From Gas System	To Gas System	Capacity
	Bulgartransgaz EAD	2025	BGn	BG/EAR	200.00 GWh/d
Forthing BC Demonstic Brief	Comment: Entry/Exit capacity at deal Exit capacities from domestic sy		,		
Eastring BG Domestic Point	Bulgartransgaz EAD	2025	BG/EAR	BGn	200.00 GWh/d
	Comment: Entry/Exit capacity at deal Exit capacities from domestic sy				
	Bulgartransgaz EAD	2025	BG/EAR	RO/EAR	617.00 GWh/d
	Comment: Phase 1 New IP				
	Bulgartransgaz EAD	2025	RO/EAR	BG/EAR	617.00 GWh/d
Eastring Cross-Border BG/EAR <> RO/EAR			Comme	ent: Phase I New IF	
Easting Cross-Border BdyEAR <> ROYEAR	Bulgartransgaz EAD	2030	BG/EAR	RO/EAR	617.00 GWh/d
				Comment: Phase I	1
	Bulgartransgaz EAD	2030	RO/EAR	BG/EAR	617.00 GWh/d
				Comment: Phase I	1
	Bulgartransgaz EAD	2025	BG/EAR	TRe	617.00 GWh/d
Eastring Cross-Border BG/EAR>TR	Comment: Transmission between Eastring -Bulgaria and Turkey via new IP at BG/TR border.				
	Bulgartransgaz EAD	2030	BG/EAR	TRe	617.00 GWh/d

Date

Comment: Phase II

	Bulgartransgaz EAD	2025	TRi	BG/EAR	617.00 GWh/d
Eastring Cross-Border TR>BG/EAR	Bulgartransgaz EAD	2030	TRi	BG/EAR	617.00 GWh/d
				Comment: Phase	<i>II</i>

Sponsors			General Information	NE	OP and PCI Information
Bulgartransgaz EAD	100%	Promoter	Bulgartransgaz EAD	Part of NDP	Yes (2019-2028 Ten-year network
		Operator	Bulgartransgaz EAD		development plan of BTG)
		Host Country	Bulgaria	NDP Number	Section 5.1 (5.1.2)
		Status	Planned	NDP Release Date	23/04/2019
		Website	Project's URL	NDP Website	NDP URL
			,	Currently PCI	No
				Priority Corridor(s)	NSIE

Schedule	Start Date End Date Thir			
Pre-Feasibility		08/2016	Considered TPA Regime	
easibility	09/2017	09/2018	Considered Tariff Regime	
ED	01/2019	08/2020	Applied for Exemption	
ermitting	03/2020	06/2020	Exemption Granted	
pply Contracts		01/2020		
		09/2020	Exemption in entry direction	
nstruction	02/2023	04/2025	Exemption in exit direction	
ommissioning	2025	2030		
nt Obtention	12/05/2017	12/05/2017		

Current TYNDP: TYNDP 2020 - Annex A Page 162 of 773

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Eastring-BG-2	Data refers to the first stage - capacity 617 GWh/d, in case of increase of capacity up to 1234 GWh/d in 2030 compressor power at level of 310 MW will be needed	), 1,400	262	93	2025
	Total		262	93	

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

#### **Delays since last TYNDP**

**Delay Since Last TYNDP** 

**Delay Explanation** 

Time schedule in the last TYNDP was estimated according to the data from the pre-feasibility study with lower level of details.

## **Expected Gas Sourcing**

Caspian Region, Norway, Russia, LNG (IR,IQ,IL,KW,QA,TR,UK), Iraq, Iran, Egypt, Israel, Turkmenistan, Kazakhstan, Cyprus, Azerbaijan, Any gas available at Turkish/European HUBs including

	Benefits					
Main Driver	Others					
Main Driver Explanatio	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. Decrease of market concentration on producers side; price convergence; Decrease of carbon emissions.					
Benefit Description	- Physical alternative for providing 100% of all Balkan countries' consumption; enhancing market development and liquidity of the region; - 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, etcprice convergence of Balkan region to EU West - Decrease of market concentration on producers side					

Barriers Control of the Control of t				
Barrier Type	Description			
Regulatory	Capacity quotas			
Regulatory	Low rate of return			
Market	Lack of market maturity			

Financing Availability of funds and associated conditions

Intergovernmental Agreements					
Agreement	Agreement Description	Is Signed A	Agreement Signature Date		
Declaration	Governmental declaration	No	21/05/2015		
Memorandum of Understanding	Memorandum of Understanding	No	13/07/2016		

	CBCA	Financial Assistance			
Decision	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF		
Decision	but we do plan to submit it	Grants for studies	No		
Submissin Date		Grants for studies amount	Mln EUR 0.0		
Decision Date		Grants for works	No		
Website		Grants for works amount	Mln EUR 0.0		
Countries Affected		Intention to apply for CEF	Yes, for studies and works		
Countries Net Cost Bearer		Other Financial Assistance	No		
Additional Comments		Comments	Eustream applied and was granted Financial support for feasibility study execution from CEF.		
		General Comments			

# Eastring - Hungary

TRA-A-656	Project	Pipeline including CS	Non-FID
Update Date	18/09/2020		Non-Advanced
Description	A Eastring-HU is subproject located in Hungary and is essential part of the Eastring following routing options: via HU, (new pipeline) from RO-HU border (Csanadpalota secure supplies in case of RU disruption and therefore it will increase gas SoS in the latternative gas sources for Central, Western Southern Europe and (iii) mean step tow	n) to HU/SK border (Balassagyarmat).  Th broader Central-South-East EU region, (i	ne project would (i)
PRJ Code - PRJ Name	PRJ-G-041 - Pipeline system from Bulgaria via Romania and Hungary to Slovakia [cui	rrently known as "Eastring"	

Point	Operator	Year	From Gas System	To Gas System	Capacity	
	FGSZ Ltd.	2025	HU/EAR	SK/EAR	617.00 GWh/d	
		Comment: I.phase of the project				
	FGSZ Ltd.	2025	SK/EAR	HU/EAR	617.00 GWh/d	
Footsing Cross Bondon III I / FAD. 12 CV / FAD.			Comment: I.p	hase of the project	t	
Eastring Cross-Border HU/EAR <> SK/EAR	FGSZ Ltd.	2030	HU/EAR	SK/EAR	617.00 GWh/d	
		Comment: II.phase of the Project			t	
	FGSZ Ltd.	2030	SK/EAR	HU/EAR	617.00 GWh/d	
			Comment: II.p	hase of the Project	t	
	FGSZ Ltd.	2025	HU/EAR	RO/EAR	617.00 GWh/d	
		Comment: I.phase of the project			t	
	FGSZ Ltd.	2025	RO/EAR	HU/EAR	617.00 GWh/d	
Factring Cross Parder PO/EAD (> HII/EAD			Comment: I.phase of the project			
Eastring Cross-Border RO/EAR <> HU/EAR	FGSZ Ltd.	2030	HU/EAR	RO/EAR	617.00 GWh/d	
			Comment: II.p	hase of the Project	t	
	FGSZ Ltd.	2030	RO/EAR	HU/EAR	617.00 GWh/d	
			Comment: II.p	hase of the Project	t	
Factring HII Demostic Point	FGSZ Ltd.	2025	HU	HU/EAR	310.00 GWh/d	
Eastring HU Domestic Point	FGSZ Ltd.	2025	HU/EAR	HU	310.00 GWh/d	

Sponsors		General Information		NDP and PCI Information	
Eastring B.V. (to be discussed later) 100%		Promoter	FGSZ Ltd.	Part of NDP	Yes (National Development Plan 2018)
		Operator	FGSZ Ltd.	NDP Number	12.13.
		Host Country	Hungary	NDP Release Date	19/12/2018
		Status	Planned	NDP Website	<u>NDP URL</u>
		Website	<u>Project's URL</u>	Currently PCI	No
				Priority Corridor(s)	NSIE

Schedule	Start Date	End Date
Pre-Feasibility		08/2016
Feasibility	09/2017	06/2018
FEED	01/2019	08/2020
Permitting	11/2021	06/2022
Supply Contracts		01/2021
FID		09/2020
Construction	02/2023	01/2025
Commissioning	2025	2030
Grant Obtention Date	12/05/2017	12/05/2017

Third-Party Access Regime				
Considered TPA Regime	Regulated			
Considered Tariff Regime	Regulated			
Applied for Exemption	No			
Exemption Granted	Not Relevant			
Exemption in entry direction	0.00%			
Exemption in exit direction	0.00%			

Pipelines and Compressor Stations						
Pipeline Section	Pipeline Comment	Diameter Length Compressor Power Comissioning (mm) (km) (MW) Year				
Eastring - HU	Data refer to the first phase capacity 617 GWh/	/d 1,400 283 2025				
	Total	283				

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#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

#### **Delays since last TYNDP**

Delay Since Last TYNDP

**Delay Explanation** 

Time schedule in the last TYNDP was estimated according to the data from the pre-feasibility study with lower level of details.

#### **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. Decrease of market concentration on producers side; price convergence; Decrease of carbon emissions	
Benefit Description	- Physical alternative for providing 100% of all Balkan countries' consumption; enhancing market development and liquidity of the region; - 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, etcprice convergence of Balkan region to EU West - Decrease of market concentration on producers side	
	Barriers	
Barrier Type	Description	
Regulatory	Low rate of return	
Regulatory	Capacity quotas	
Financing	Availability of funds and associated conditions	
Market	Lack of market maturity	

Intergovernmental Agreements					
Agreement	Is Signed Agreement Signature Date				
Declaration	Government declaration	No	21/05/2015		
Memorandum of Understanding	Memorandum of Understanding	Yes	13/07/2016		
Memorandum of Understanding	Memorandum of Understanding	Yes	30/10/2017		

	gg			. 00	.0,0.,=0.0	
Memorandum of Understanding	g Memorandum of Understanding			Yes	30/10/2017	
	CBCA		Financial As	sistance		
Decision	No, we have not submitted an investment request yet,	Applied for CEF		(3) No, w	e have not applied for CEF	
Bedision	but we do plan to submit it	Grants for studies				
Submissin Date		Grants for studies amount			Mln EUR 0.0	
Decision Date		Grants for works			No	
Website		Grants for works amount			Mln EUR 0.0	
Countries Affected		Intention to apply for CEF			No decision yet taken	
Countries Net Cost Bearer		Other Financial Assistance			No	
Additional Comments		Comments			EUR financial support for the whole SK-HU-RO-BG route from CEF.	
		General Comments				

Current TYNDP : TYNDP 2020 - Annex A Page 168 of 773

# Eastring - Romania

TRA-A-655	Project	Pipeline including CS	Non-FID
Update Date	22/11/2019		Non-Advanced
Description	Eastring-RO is the subproject located in Romania and is an essential part of the Ea Compressor station at Veľké Zlievce in the territory of Slovakia with a new IP at an would (i) secure supplies in case of RU disruption and therefore it will increase gas to alternative gas sources for Central, Western Southern Europe and (iii) mean ste	external border of the EU in the territory of SoS in the broader Central-South-East EU	of Bulgaria. The project
PRJ Code - PRJ Name	PRJ-G-041 - Pipeline system from Bulgaria via Romania and Hungary to Slovakia [o	currently known as "Eastring"	

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	SNTGN Transgaz S.A.	2025	BG/EAR	RO/EAR	617.00 GWh/d
				Comment: Phase 1	1
	SNTGN Transgaz S.A.	2025	RO/EAR	BG/EAR	617.00 GWh/d
Factoring Cross Bondon BC/FAD (2) BO/FAD				Comment: Phase 1	1
Eastring Cross-Border BG/EAR <> RO/EAR	SNTGN Transgaz S.A.	2030	BG/EAR	RO/EAR	617.00 GWh/d
				Comment: Phase 2	2
	SNTGN Transgaz S.A.	2030	RO/EAR	BG/EAR	617.00 GWh/d
				Comment: Phase 2	2
	SNTGN Transgaz S.A.	2025	HU/EAR	RO/EAR	617.00 GWh/d
				Comment: Phase 1	1
	SNTGN Transgaz S.A.	2025	RO/EAR	HU/EAR	617.00 GWh/d
Factoring Cross Bondon BO/FAD (> LILL/FAD				Comment: Phase 1	1
Eastring Cross-Border RO/EAR <> HU/EAR	SNTGN Transgaz S.A.	2030	HU/EAR	RO/EAR	617.00 GWh/d
				Comment: Phase 2	2
	SNTGN Transgaz S.A.	2030	RO/EAR	HU/EAR	617.00 GWh/d
				Comment: Phase 2	2
Eastring BO Domostic Point	SNTGN Transgaz S.A.	2025	RO	RO/EAR	150.00 GWh/d
Eastring RO Domestic Point	SNTGN Transgaz S.A.	2025	RO/EAR	RO	150.00 GWh/d

Current TYNDP: TYNDP 2020 - Annex A Page 169 of 773

Sponsors		Gener	al Information	NI	OP and PCI Information		
Transgaz S.A.	100% Promoter		SNTGN Transgaz SA		No ((1) the NDP was prepared at an		
		Operator	SNTGN Transgaz S.A.		earlier date and the project will be		
		Host Country	Romania		proposed for inclusion in the next NDP)		
		Status	Planned	NDP Number			
		Website	<u>Project's URL</u>	NDP Release Date NDP Website			
				Currently PCI	No		

			Priority Corridor(s)
chedule	Start Date	End Date	Third-Party Access
easibility		08/2016	Considered TPA Regime
lity	09/2017	09/2018	Considered Tariff Regime
	01/2019	08/2020	Applied for Exemption
tting	11/2021	06/2022	Exemption Granted
ly Contracts		01/2021	
		09/2020	Exemption in entry direction
nstruction	02/2023	01/2025	Exemption in exit direction
mmissioning	2025	2030	
nt Obtention			

Pipelines and Compressor Stations						
Pipeline Section		Pipeline Comment	Diameter (mm)	Length (km)	ssor Power MW)	Comissioning Year
Eastring RO/Phase 1		Data refers to the first phase capacity 617 GWh/d for a new route via SK,HU,RO,BG with commissioning in 2025.	1,400	646	93	2025
	Total			646	93	

Current TYNDP: TYNDP 2020 - Annex A Page 170 of 773

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

#### **Delays since last TYNDP**

Delay Since Last TYNDP

Delay Explanation Time schedule in the last TYNDP was estimated according to the data from the pre-feasibility study with lower level of details.

#### **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. Decrease of market concentration on producers side; price convergence; Decrease of carbon emissions
Benefit Description	Physical alternative for providing 100% of all Balkan countries' consumption; enhancing market development and liquidity of the region; - 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, etcprice convergence of Balkan region to EU West - Decrease of market concentration on producers side
	Barriers
Barrier Type	Description
Regulatory	Capacity quotas
Regulatory	Low rate of return
Financing	Availability of funds and associated conditions
Market	Lack of market maturity

Intergovernmental Agreements						
Agreement	Agreement Description	Is Signed	Agreement Signature Date			
Declaration	The government officials of Slovakia, Hungary, Romania and Bulgaria confirmed their support for the implementation of interconnection and substantial bi-directional capacity of existing infrastructure for natural gas supply on the territory of the Republi	Yes	21/05/2015			
1. Memorandum of Understanding	1. MoU was signed by and between Slovak Economy Minister Peter Žiga and Hungarian Minister of Foreign Affairs Péter Szijjártó . The document was signed in the presence of Slovak Prime Minister Robert Fico in Košice. The Parties of the Memorandum articulat	Yes	30/10/2017			
Memorandum of Understanding	Peter Žiga, Minister of Economy of the Slovak Republic, and Žečo Stankov, State Secretary of the Ministry of Energy of the Bulgarian Republic, signed the Memorandum of Understanding on the Eastring project.	Yes	13/07/2016			

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	CBCA
Decision	No, we have not submitted an investment request yet, but we do plan to submit it
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

	Financial Assistance
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Grants for studies	Yes
Grants for studies amount	Mln EUR 1.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	Yes, for studies and works
Other Financial Assistance	No
Comments	
General Comments	

Current TYNDP : TYNDP 2020 - Annex A Page 172 of 773

# Eastring - Slovakia

TRA-A-628	Project	Pipeline including CS				
Update Date	22/09/2020		Advanced			
Description	Eastring-SK is the subproject located in Slovakia and is an essential part of the Eastr Compressor station at Veľké Zlievce in the territory of Slovakia with a new IP at an e would (i) secure supplies in case of RU disruption and therefore it will increase gas S (ii) allow access to alternative gas sources for Central, Western & Southern Europe a	external border of the EU in the territory of SoS in the broader Central-South-East EU	of Bulgaria. The project region,			
PRJ Code - PRJ Name	ode - PRJ Name PRJ-G-041 - Pipeline system from Bulgaria via Romania and Hungary to Slovakia [currently known as "Eastring"					

Point		Operator		Year Fr	om Gas System	To Gas System	Capacity
		Eastring B.V.		2025	HU/EAR	SK/EAR	617.00 GWh/d
			Comment: I.phase of the project				
		Eastring B.V.		2025	SK/EAR	HU/EAR	617.00 GWh/d
Footsing Cross Bondon IIII/FAD (> CV/FAD					Comment: I. p	hase of the project	
Eastring Cross-Border HU/EAR <> SK/EAR		Eastring B.V.		2030	HU/EAR	SK/EAR	617.00 GWh/d
					Comment: II. p	phase of the project	
		Eastring B.V.		2030	SK/EAR	HU/EAR	617.00 GWh/d
					Comment: II.p	hase of the Project	
Sponsors		Gener	al Information		NDP and	PCI Information	
Eastring B.V.	100%	Promoter	eustream, a.s. (a joint stock			The second secon	ment plan of the
				Part of N	DP transi	mission system of e	eustream, a.s. for Fiod 2019 - 2028)
		Operator	eustream, a.s.	NIDD Ni	a la seu	the per	
		Host Country	Slovakia				None
		Status	Planned	NDP Rele	ease Date		30/11/2018
		Website	<u>Project's URL</u>	NDP Web	osite		NDP URL
				Currently	DCI		No
				Currently	PCI		INO

#### Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		08/2016
Feasibility	09/2017	09/2018
FEED	01/2019	08/2020
Permitting	11/2021	06/2022
Supply Contracts		01/2021
FID		09/2020
Construction	02/2023	01/2025
Commissioning	2025	2030
Grant Obtention Date	12/05/2017	12/05/2017

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Eastring-SK	Data refers to the first phase capacity 617 GWh/d for a new route via SK,HU,RO,BG with commissioning in 2025.	1,400	17	93	2025
	Total		17	93	

#### Fulfilled Criteria

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

Delay	s since	last T	VNIDE
DCIG		IUSL I	

Delay Since Last TYNDP no

Delay Explanation Time schedule in the last TYNDP was estimated according to the data from the pre-feasibility study with lower level of details.

## **Expected Gas Sourcing**

Caspian Region, Russia, 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. Decrease of market concentration on producers side; price convergence; Decrease of carbon emissions		
Benefit Description	- Physical alternative for providing 100% of all Balkan countries' consumption; enhancing market desecurity of supply for 100% of all Balkan countries' consumption; - Additional utilization for CZ, SK, Western shippers with possibility to supply Balkan countries and even Turkey from NCG/Gaspool/B Europe from alternative sources – AGRI, TANAP, Caspian, Iran, Iraq, Egypt, Israel, Cyprus, Turkey, etc. Decrease of market concentration on producers side	PL, UA, RO, BG transit and s Baumgarten; - Corridor read	storage assets; - Providing y for future gas imports to
	Barriers		
Barrier Type	Description		
Regulatory	Capacity quotas		
Regulatory	Low rate of return		
Financing	Availability of funds and associated conditions		
Market	Lack of market maturity		
	Intergovernmental Agreements		
Agreement	Agreement Description	Is Signed	Agreement Signature Date
Memorandum of Unders	tanding Memorandum of Understanding	Yes	30/10/2017
Memorandum of Unders	tanding Memorandum of Understanding	Yes	13/07/2016
Declaration Governmental declaration Yes		Yes	21/05/2015

СВСА		
Decision	No, we have not submitted an investment request yet, but we do plan to submit it	
Submissin Date		
Decision Date		
Website		
Countries Affected		
Countries Net Cost Bearer		
Additional Comments		

	Financial Assistance
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Grants for studies	Yes
Grants for studies amount	Mln EUR 1.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	Yes, for studies and works
Other Financial Assistance	Yes
Comments	Financial support for feasibility study execution from CEF
General Comments	

# **Enhancement of Transmission Capacity of Slovak-Hungarian interconnector**

TRA-N-524	Project	Pipeline including CS	Non-FID
Update Date	11/08/2020		Non-Advanced
Description	Enhancement of Exit transmission capacity with 102 GWh/day in HU>SK direction and in SK>HU direction at Balassagyarmat with new compressors on Szada Compressor so the the same in both direction at the Slovak-Hungarian interconnector.		
PRJ Code - PRJ Name	PRJ-G-045 - Enhancement of the capacity at SK-HU interconnector		

Point		Operator		Year From Ga	as System	To Gas System	Capacity
Balassagyarmat (HU) / Velké Zlievce (SK)		MGT Hungarian Gas Tr	ransit Ltd.	2022 H	HU	SK	102.00 GWh/d
		MGT Hungarian Gas Tr	ransit Ltd.	2022	SK .	HU	26.00 GWh/d
Sponsors		General Info	rmation		NDP and	PCI Information	
FGSZ Ltd.	100%	Promoter	FGSZ Ltd.	Part of NDP	Yes (	(National Developi	
		Operator	FGSZ Ltd.	Tare of NDI		10 Year De	evelopment Plan
		Host Country	Hungary	NDP Number	TRA-N	I-524 (new nr will I	
		Status	Planned	NIDD D. I. D.		pro	oject is approved
		Website	Project's URL	NDP Release Da	ate		
				NDP Website			<u>NDP UR</u>
				Currently PCI		Y	es (6.2.13 (2020)
				Priority Corrido	r(s)		

## Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		12/2018
Feasibility	01/2018	12/2018
FEED	10/2019	10/2020
Permitting	10/2019	10/2020
Supply Contracts		
FID		08/2019
Construction	08/2020	10/2022
Commissioning	2022	2022
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	Yes
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Szada CS					0
				16	0

	Fulfilled Criteria
Specific Criteria Fulfilled	Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes
Specific Criteria Fulfilled Comments	This capacity project is to promote the diversified procurement of gas and the security of supply the member states of the EU. The project will increase price convergence of the HU gas market to the EU markets. As part of the north-south axis it will contribute also to handling of the SoS issues identified in the CEE and SEE region. Furthermore, to better utilise the existing assets of the domestic natural gas system and to improve the transit routes in order to improve transit services, while providing for the expected quality of the natural gas on the connecting systems. The project shall result in the operational efficiencies -linking of the 75 bar transit systems (RO-HU, HR-HU, Srb-HU, SK-HU, Ukr-HU, AT-HU).

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## **Expected Gas Sourcing**

Norway, Russia, LNG (HR,PL), Romania- pipeline

#### Benefits

Main Driver

Market Demand

As part of the north-south axis it will contribute also to handling of the SoS issues identified in the CEE and SEE region. Furthermore, to better utilise the Main Driver Explanation existing assets of the domestic natural gas system and to improve the transit routes in order to improve transit services, while providing for the expected quality of the natural gas on the connecting systems

Benefit Description

**Additional Comments** 

CBCA					
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or				
	not				
Submissin Date					
Decision Date					
Website					
Countries Affected					
Countries Net Cost Bearer					

Financial Assistance					
Applied for CEF	(3) No, we have not applied for CEF				
Grants for studies	No				
Grants for studies amount	Mln EUR 0.0				
Grants for works	No				
Grants for works amount	Mln EUR 0.0				
Intention to apply for CEF	Yes, for studies and works				
Other Financial Assistance	No				
Comments					
General Comments					

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# Firm transmission capacity increase at the IP Veľké Zlievce

TRA-N-1235	Project	Pipeline including CS	Non-FID
Update Date	19/03/2020		Non-Advanced
Description	Expansion of the capacity at the SK-HU interconnection point developing the interruptible capacity to non-interruptible (firm) capacity in order to enhance direction switch operation time, security of gas supplies in the affected count as a complementary effect.	flexibility, interoperability, operational efficience	cy reducing the flow
PRJ Code - PRJ Name	PRJ-G-045 - Enhancement of the capacity at SK-HU interconnector		

Capacity Increment	s Variant For Modelling							
	Variant : Variant SK-1	Pipeline section - Border delive Agreement in force	Pipeline section - Border delivery pressure at current level without Extra Pressure Agreement in force					
Point		Operator	Year	From Gas System	To Gas System	Capacity		
Balassagyarmat (HU) / Velké Zlievce (SK)		eustream, a.s.	2022	HU	SK	102.20 GWh/d		
		eustream, a.s.	2022	SK	HU	25.40 GWh/d		
<b>Capacity Increment</b>	s Variant(s) For Information Only							
	Variant : Variant SK-2	Pipeline section-Border delivery force	Pipeline section-Border delivery pressure at current level with Extra Pressure Agreement in force					
Point		Operator	Year	From Gas System	To Gas System	Capacity		
Balassagyarmat (HU) / Velké Zlievce (SK)		eustream, a.s.	2022	HU	SK	102.20 GWh/d		
		eustream, a.s.	2022	SK	HU	25.40 GWh/d		

Sponsors			General I	nformation	NDP and PCI Information		
eustream,a.s.		100%	Promoter	eustream,a.s.	Part of NDP	Yes (National Development Plan 2018 -	
			Operator	eustream, a.s.	Tare of ND1	2027)	
			Host Country	Slovakia	NDP Number	4.1.1.3 Firm transmission capacity increase at the IP Veľké Zlievce	
			Status	Planned	NIDD D. I.		
			Website	Project's URL	NDP Release Date	30/11/2017	
				·	NDP Website	<u>NDP URL</u>	
					Currently PCI	No	
					Priority Corridor(s)	NSIE	
Schedule	Start Date	End Date			Third-Party Access Regime		
Pre-Feasibility					Considered TPA Regin	me Regulated	
Feasibility					Considered Tariff Reg	ime Regulated	
FEED					Applied for Exemption	n <i>No</i>	
Permitting					<b>Exemption Granted</b>	No	
Supply Contracts							
FID					Exemption in entry di	rection 0.00%	
Construction	10/2020	06/2022			Exemption in exit dire	ection 0.00%	
Commissioning	2022	2022					
Grant Obtention Date							

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Firm capacity increase at the IP Veľké Zlievce				10	2022
	Total			10	

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#### **Fulfilled Criteria**

Specific Criteria Fulfilled

**Benefit Description** 

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

Expected Gas Sourcing				
Caspian Region, Russia				
Benefits				
Main Driver	Market Demand			
Main Driver Explanation	Increase of interoperability and flexibility of the system between Slovakia and Hungary in order to ensure prerequisite for security of supply enhancement in the region and to increase capacities to the level of the expected market demand.			

in the region and to increase capacities to the level of the expected market demand. This capacity project is to promote the diversified procurement of gas and the security of supply the member states of the EU. The project will increase price convergence of the HU gas market to the EU markets. As part of the northsouth axis it will contribute also to handling of the SoS issues identified in the CEE and SEE region. Furthermore, to better utilise the existing assets of the domestic natural gas system and to improve the transit routes in order to improve transit services, while providing for the expected quality of the natural gas on the connecting systems. The project improvements shall result in the operational efficiencies -linking of the 75 bar transit systems (RO-HU, HR-HU, Srb-HU, SK-HU, Ukr-HU, AT-HU).

**Barriers** 

Barrier Type	Description
Financing	Availability of funds and associated conditions
Regulatory	Capacity quotas
Regulatory	Low rate of return

	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF				
Other Financial Assistance	No			
Comments				
General Comments				

## Romanian-Hungarian reverse flow Hungarian section 1st stage

TRA-F-286	Project	Pipeline including CS	FID
Update Date	22/11/2019		Advanced
Description	A new compressor station at Csanádpalota with 2 units (4.5 MW each) - necessary 1.75 bcm/a from and towards Romania.	to create pressure conditions for the trans	sportation capacity of
PRJ Code - PRJ Name	PRJ-G-047 - RO-HU Transmission Corridor		

<b>Capacity Increments Variant For</b>	Modelling							
Point		Operat	or		Year	From Gas System	To Gas System	Capacity
Csanadpalota		FGSZ L	td.		2019	RO	HU	48.90 GWh/d
Sponsors		General Information				NDP and	PCI Information	
FGSZ Ltd.	100%	Promoter		FGSZ Ltd.	Part of	f NDP	Yes (Hungari	an TYNDP 2018)
		Operator		FGSZ Ltd.	NDP N	lumber		12.5
		Host Country		Hungary	NDP R	Release Date		31/01/2019
		Status		In Progress	NDP V	Vebsite		NDP URL
		Website		Project's URL	Currer	ntly PCI		No
					Priority	y Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		06/2014
Feasibility	09/2016	07/2017
FEED	07/2018	10/2018
Permitting	07/2018	09/2018
Supply Contracts		12/2018
FID		06/2017
Construction	10/2018	12/2019
Commissioning	2019	2019
Grant Obtention Date	14/10/2015	14/10/2015

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Csanadpalota				9	0
	Total			9	

## Delays since last TYNDP

Delay Since Last TYNDP

Delay Explanation

## **Expected Gas Sourcing**

Romanian sources and/or other available sources from Bulgaria direction

		Benefits	
Main Driver	Others		
Main Driver Explan	ation		
Benefit Description	1		

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	CBCA		Financial Assistance
Decision	Yes, we have submitted an investment request and have received a decision	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Submissin Date		Grants for studies	Yes
Decision Date	16/10/2015	Grants for studies amount	Mln EUR 2.3
Website		Grants for works	No
Countries Affected	Hungary, Romania	Grants for works amount	Mln EUR 0.0
Countries Net Cost Bearer		Intention to apply for CEF	No, we do not plan to apply
Additional Comments		Other Financial Assistance	No
		Comments	
		General Comments	

## Romanian-Hungarian reverse flow Hungarian section 2nd stage

TRA-A-377	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Advanced
Description	A third compressor unit (4.5 MW) is needed at Csanádpalota to reach the increased 4.	4 bcm/a capacity of the corridor at the	RO/HU border.
PRJ Code - PRJ Name	PRJ-G-047 - RO-HU Transmission Corridor		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Conneductor	FGSZ Ltd.	2022	HU	RO	76.50 GWh/d
Csanadpalota	FGSZ Ltd.	2022	RO	HU	76.50 GWh/d

Sponsors			General Information	NDP and PCI Information		
FGSZ Ltd.	100%	Promoter	FGSZ Ltd.	Part of NDP	Yes (Hungarian TYNDP 2018)	
	/	Operator	FGSZ Ltd.	NDP Number	12.5	
		Host Country	Hungary	NDP Release Date	31/01/2019	
		Status	Planned	NDP Website	NDP URL	
		Website	<u>Project's URL</u>	Currently PCI	Yes (6.24.4.6 (2020))	
				Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		06/2014
Feasibility	09/2016	07/2017
FEED	12/2019	01/2020
Permitting	02/2020	08/2020
Supply Contracts		05/2020
FID		10/2019
Construction	09/2020	12/2022
Commissioning	2022	2022
Grant Obtention Date	27/04/2016	27/04/2016

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Csanádpalota	+1 Compressor unit 4.5MW			4	0
	Total			4	
Fulfilled Criteria					

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments The pipeline enables to increase capacity of Csanádpalota (RO>HU) and Csanádpalota (HU>RO).

### Delays since last TYNDP

Delay Since Last TYNDP

**Delay Explanation** 

0

100

**Expected Gas Sourcing** 

Caspian Region, Black Sea

		Benefits
Main Driver	Market Demand	
Main Driver Explanatio	n	
Benefit Description		

Barriers

Barrier Type Description

Regulatory Low rate of return

	CBCA		Financial Assistance
Decision	Yes, we have submitted an investment request and have received a decision	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Submissin Date	10/04/2015	Grants for studies	Yes
Decision Date	16/10/2015	Grants for studies amount	Mln EUR 2.3
Website		Grants for works	No
Countries Affected	Hungary, Romania	Grants for works amount	Mln EUR 0.0
Countries Net Cost Bearer		Intention to apply for CEF	No decision yet taken
Additional Comments		Other Financial Assistance	No
		Comments	
		General Comments	

# Development on the Romanian territory of the NTS (BG-RO-HU-AT)-Phase II

TRA-A-1322	Project Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Advanced
Description	The project consists in the extension of the gas transmission pipeline constructed GMS and the extension of the compressor stations, as follows:  • Podişor – Recaş 32" x 63 bar gas transmission pipeline approximately 50 km lor  • extension of the three gas compressor stations (Podişor CS, Bibeşti CS and Jupa  • extension of the Horia GMS .  After the implementation of the project the following transmission capacities w  • towards Hungary: 4.4 bcm/year;  • towards Bulgaria:1.5 bcm/year.	ng; a CS) by mounting an additional compressor	-
PRJ Code - PRJ Name	PRJ-G-047 - RO-HU Transmission Corridor		

Capacity Increments Variant For Mo	odelling						
Point		Operator		Year	From Gas System	To Gas System	Capacity
Csanadpalota	SNTGN Transgaz S.A.		2022	HU	RO	78.12 GWh/d	
	SNTGN Transgaz S.A.		2022	RO	HU	75.88 GWh/d	
Sponsors		General Info	ormation		NDP and	d PCI Information	
SNTGN Transgaz SA	100%	Promoter	SNTGN Transgaz SA			Yes (The Develop	
		Operator	SNTGN Transgaz S.A.	Part of	f NDP Nati	ional Gas Transmis	-
		Host Country	Romania			- 20	
		Status	Plannea	1	lumber		7.1.2
		Website		NDP R	Release Date	14/12/2	
		VVCDSICE		NDP V	Vebsite		NDP URI
				Currer	ntly PCI	Yes	(6.24.4.4 (2020))
				Priorit	y Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		12/2013
Feasibility	01/2014	09/2015
FEED	07/2015	11/2018
Permitting	01/2016	
Supply Contracts		
FID		
Construction		12/2022
Commissioning	2022	2022
Grant Obtention Date	18/05/2015	18/05/2015

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Station	s				
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Recaș - Horia		800	50	14	2022
	Total		50	14	

## Fulfilled Criteria

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments Market integration, Sustainability, Competition

### **Delays since last TYNDP**

Delay Since Last TYNDP

Delay Explanation Delayed, in order to respond to the market demand as a result of the Open Season Procedure at IP Csandodpalota

### **Expected Gas Sourcing**

Caspian Region, LNG (), Black Sea

### Benefits

Main Driver Market Demand

Main Driver Explanation

Benefit Description

Decision

Website

Submissin Date

Countries Affected

Countries Net Cost Bearer

**Additional Comments** 

**Decision Date** 

### **CBCA**

No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not

### **Financial Assistance**

(1) Yes, we have applied for CEF and we have received a decision

Yes

Grants for studies

Mln EUR 1.5

Grants for studies amount

No

Grants for works

Applied for CEF

Mln EUR 0.0

Grants for works amount

Intention to apply for CEF
Other Financial Assistance

No

Comments

**General Comments** 

# Developments for Fosmax (Cavaou) LNG 8.25 bcm expansion

TRA-N-269	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Non-Advanced
Description	Only core system developments are needed to offer firm capacity for this expansion station already fits the potential extension.	as the connection between terminal and	l St-Martin de Crau
	In case both Midcat project and the Fos Cavaou terminal expansion are decided add	itional developments may be required.	
PRJ Code - PRJ Name	PRJ-G-049 - Fos Cavaou LNG Terminal Expansion		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
For (Tonkin (Course))	GRTgaz	2026	LNG_Tk_FRs	IB-FR4	327.00 GWh/d
Fos (Tonkin/Cavaou)			Comment: for a	8.5 bcm expansior	1

Sponsors		General	Information	NI	DP and PCI Information
GRTgaz	100%	Promoter	GRTgaz		Yes (Plan décennal de développement
		Operator	GRTgaz	Part of NDP	du réseau de transport de GRTgaz 2018-
		Host Country	France		2027)
		Status	Planned	NDP Number	Extension du terminal de Fos Cavaou à 16,5 Gm³/an
		Website	<u>Project's URL</u>	NDP Release Date	04/02/2019
				NDP Website	<u>NDP URL</u>
				Currently PCI	No
				Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction	01/2024	11/2026
Commissioning	2026	2026
Grant Obtention		
Date		

	9
Third-Party Access Regi	me
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipeline Section	Pipeline Comment			Compressor Power	_
	1	(mm)	(km)	(MW)	Year
Arc Lyonnais		1,200	150		0
Eridan		1,200	220		0
Palleau CS				50	0
Perche		900	63		0
St-Avit CS				15	0
St-Martin de Crau CS				30	0
	Total		433	95	

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Delay Since Last TYNDP 2 years

Delay Explanation Waiting for LNG terminal decision

Current TYNDP : TYNDP 2020 - Annex A Page 194 of 773

## **Expected Gas Sourcing**

LNG ()

Benefits

Main Driver Others

Main Driver Explanation This project enables to offer firm capcity to meet the developments planned by Fosmax at the LNG terminal of Fos Cavaou

Benefit Description

Barriers

Barrier Type Description

Others The current context of LNG in Europe isn't favorable to the developements of LNG capacities

Market Lack of market support

	СВСА		Financial Assistance
Decision	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF
Decision	and we do not plan to submit it	Grants for studies	No
Submissin Date		Grants for studies amount	Mln EUR 0.0
Decision Date		Grants for works	No
Website		Grants for works amount	Mln EUR 0.0
Countries Affected		Intention to apply for CEF	No decision yet taken
Countries Net Cost Bearer		Other Financial Assistance	No
Additional Comments		Comments	
		General Comments	

Current TYNDP : TYNDP 2020 - Annex A Page 195 of 773

# Fos Cavaou LNG Terminal Expansion

LNG-N-227	Project	LNG Terminal	Non-FID
Update Date	15/08/2019		Non-Advanced
Description	The project aims to expand the Fos Cavaou LNG terminal capacity from 8.25 bcm/y up to	16.5 bcm/y, with an intermediate s	step at 11bcm/y.
PRJ Code - PRJ Name	PRJ-G-049 - Fos Cavaou LNG Terminal Expansion		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	Fosmax LNG	2023	LNG_Tk_FRs	IB-FR4	110.00 GWh/d
Fac (Tarkin (Causau)		Comment: intermedi	ate phase at 11 bcm/y	/ (i.e. +2.75 bcm/y,	)
Fos (Tonkin/Cavaou)	Fosmax LNG	2025	LNG_Tk_FRs	IB-FR4	330.00 GWh/d
		Comment: corre	esponds to 16.5 bcm/y	(i.e. + 8.25 bcm/y	)

Sponsors		General Information	N	DP and PCI Information
Fosmax LNG 100%	Promoter	Fosmax LNG	Part of NDP	Yes (GRTgaz Ten Year Development plan
	Operator	Fosmax LNG		2018-2027)
	Host Country	France	NDP Number	Fos Cavaou Extension
	Status	Planned	NDP Release Date	04/02/2019
	Website	Project's URL	NDP Website	<u>NDP URL</u>
		•	Currently PCI	No
			Priority Corridor(s)	NSIW

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		06/2021
Construction	06/2021	06/2025
Commissioning	2023	2025
Grant Obtention Date		

	•
Third-Party Access Regime	e
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Technical Information (LNG)							
Regasification Facility	Reloading Ability Project Phase	Expected Increment Ship Size (bcm/y) (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 LNG)	Comments	Commissioning Load Year	l Factor (%)
Fos Cavaou LNG Terminal	Yes small scale	0.0 0	0.00	0	see below	0	0

	Fulfilled Criteria
Specific Criteria Fulfilled	Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

Delays since la	st TYNDP
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Delay Since Last TYNDP

Delay Explanation market was not there, but situation may change soon

Current TYNDP : TYNDP 2020 - Annex A Page 197 of 773

## **Expected Gas Sourcing**

LNG (DZ,CA,CY,LNG,NO,QA,RU,US,WO), LNG diverted from, or reloaded in other European LNG terminals (Spain for example).

	Benefits Benefits
Main Driver	Market Demand
Main Driver Explanation	Market based investments avoid future stranded assets and thus ensure the best use of money, in particular when public money is involved.
Benefit Description	If there is a need to develop new infrastructures in Europe to allow the access of larger LNG quantities to where it is needed as well as to improve the LNG contribution to security of supply, the extension of Fos Cavaou LNG terminal is an excellent project, thanks to its location and its marginal cost. Indeed, Fos Cavaou is the best entry gate for LNG from Mediterranean, Middle East and Atlantic toward the core of European mainland gas market. The expansion of Fos Cavaou will strongly contribute to market integration, competition, SoS and sustainability in the NSW corridor. It is a high efficient alternative to the project of a third gas pipeline through the Pyreneans. Moreover, it should contribute to the energy transition in the maritime transport, with the development of LNG as an clean alternative fuel, to the benefit of all neighboring countries and beyond.

	Barriers
Barrier Type	Description
Political	Discrimination aiming at preventing the project to be recognized as an efficient alternative to a third gas pipeline through the Pyreneans.

	CBCA	Finan	Financial Assistance			
	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF			
Decision	and we have not yet decided whether we will submit or	Grants for studies	No			
Submissin Date	not	Grants for studies amount	Mln EUR 0.0			
		Grants for works	No			
Decision Date		Grants for works amount	Mln EUR 0.0			
Website		Intention to apply for CEF	No decision yet taken			
Countries Affected		Other Financial Assistance	Yes			
Countries Net Cost Bearer		Comments	small scale studies and works			
Additional Comments		General Comments				

Current TYNDP : TYNDP 2020 - Annex A Page 198 of 773

## Developments for Montoir LNG terminal 2.5 bcm expansion

TRA-N-258	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Non-Advanced
Description	This entry capacity increase at Montoir needs specific developments and core system developments	opments (Looping of Artère du P	erche).
PRJ Code - PRJ Name	PRJ-G-050 - Montoir LNG Terminal Expansion		

Point		Operator		Year	From Gas Sys	tem To Gas System	Capacity
Montoir de Bretagne		GRTgaz 2		2023	LNG_Tk_FR	n IB-FR3	100.00 GWh/d
Sponsors		General In	formation		NDI	P and PCI Information	
GRTgaz	100%	Promoter	GRTgaz	7.		Yes (Plan décennal de	développement
		Operator	GRTgaz	Part	of NDP	du réseau de transport d	•
		Host Country	France	?		A	2027)
		Status	Planned	NDP	Number	Augmentation des cap partir du terminal de	
		Website	<u>Project's UR</u>			paren ad terminat de	12,5 Gm³/an
				NDP	Release Date		04/02/2019
				NDP	Website		NDP URL
				Curr	ently PCI		No
				Prio	rity Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		12/2011
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction	01/2024	12/2026
Commissioning	2023	2023
Grant Obtention		
Date		

9	
Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Artère du Maine	Ending the looping of the pipeline	1,050	200		0
Artère du Perche	Ending the looping of the pipeline	900	63		0
Auvers-le-Hamon CS	Station adaptation			0	0
	Total		263	0	

Delays since last TYNDP
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Delay Since Last TYNDP 2 years

Delay Explanation Waiting for terminal promoter decision

## **Expected Gas Sourcing**

LNG ()

	Benefits Programme Benefits			
Main Driver	Others			
Main Driver Explanation Developments of GRTgaz network required to offer firm capacity to the planned expansion of the LNG terminal at Montoir de Bretagne				
Benefit Description				

## Barriers

**Barrier Type** 

Description

Market Lack of market support

СВСА		Financial Assistance		
Decision	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF	
	and we do not plan to submit it	Grants for studies	No	
Submissin Date		Grants for studies amount	Mln EUR 0.0	
Decision Date		Grants for works	No	
Website		Grants for works amount	Mln EUR 0.0	
Countries Affected		Intention to apply for CEF		
Countries Net Cost Bearer		Other Financial Assistance	No	
Additional Comments		Comments		
		General Comments		

Current TYNDP : TYNDP 2020 - Annex A Page 201 of 773

# Montoir LNG Terminal Expansion

LNG-N-225	Project	LNG Terminal	Non-FID
Update Date	15/08/2019		Non-Advanced
Description	The project aims to expand the Montoir de Bretagne LNG terminal capacity from 10 bcm/y.	0 bcm/y up to 16.5 bcm/y, with an interm	nediate step at 12.5
PRI Code - PRI Name	PRI-G-050 - Montoir LNG Terminal Expansion		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	Elengy	2023	LNG_Tk_FRn	IB-FR3	100.00 GWh/d
Mantain de Protestra		Comment: intermedia	ate phase at 12.5 bcm	/y (i.e. +2,5 bcm/y,	)
Montoir de Bretagne	Elengy	2025	LNG_Tk_FRn	IB-FR3	260.00 GWh/d
		Comment: corr	responds to 16.5 bcm/	/y (i.e. + 6.5 bcm/y,	)

Sponsors		General Information		NDP and PCI Information		
Elengy	100%	Promoter	Elengy	Part of NDP	Yes (GRTgaz Ten Year Development plan	
		Operator	Elengy		2018-2027)	
		Host Country	France	NDP Number	Montoir Extension	
		Status		NIDD D I D I	04/02/2019	
		Website	<u>Project's URL</u>	NDP Website	NDP URL	
				Currently PCI	No	
				Priority Corridor(s)	NSIW	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		06/2021
Construction	06/2021	06/2025
Commissioning	2023	2025
Grant Obtention Date		

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Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Technical Information (LNG)							
Regasification Facility	Reloading Ability Project Phase	Expected Increment Ship Size (bcm/y) (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 LNG)	Comments	Commissioning Year	Load Factor (%)
Montoir LNG Terminal	Yes small scale	0.0 0	0.00	0	sea below	0	0

	Fulfilled Criteria
Specific Criteria Fulfilled	Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

Delays since last TYNDF

Delay Since Last TYNDP

Delay Explanation market was not there, but situation may change soon

Current TYNDP : TYNDP 2020 - Annex A Page 203 of 773

## **Expected Gas Sourcing**

LNG (DZ,CA,CY,LNG,NO,QA,RU,US,WO), LNG diverted from, or reloaded in other European LNG terminals (Spain for example).

	Benefits
Main Driver	Market Demand
Main Driver Explanation	Market based investments avoid future stranded assets and thus ensure the best use of money, in particular when public money is involved.
Benefit Description	If there is a need to develop new infrastructures in Europe to allow the access of larger LNG quantities to where it is needed as well as to improve the LNG contribution to security of supply, the extension of Montoir LNG terminal is an excellent project, thanks to its location and its marginal cost. Indeed, Montoir is one of the best entry gates for LNG from all over the world, in particular from USA, toward the core of European mainland gas market. The expansion of Montoir will strongly contribute to market integration, competition, SoS and sustainability in the NSW corridor. It is a high efficient alternative to the project of a third gas pipeline through the Pyreneans. Moreover, it should contribute to the energy transition in the maritime transport, with the development of LNG as an clean alternative fuel, to the benefit of all neighboring countries and beyond.
	Barriers

Barrier Type	Description
Political	Discrimination aiming at preventing the project to be recognized as an efficient alternative to a third gas pipeline through the Pyreneans.

	CBCA	Financial Assistance		
	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF	
Decision	and we have not yet decided whether we will submit or	Grants for studies	No	
Submissin Date	not	Grants for studies amount	Mln EUR 0.0	
Decision Date		Grants for works	No	
Website		Grants for works amount	Mln EUR 0.0	
Countries Affected		Intention to apply for CEF	No decision yet taken	
Countries Net Cost Bearer		Other Financial Assistance	Yes	
Additional Comments		Comments	small scale studies and work	
Additional Comments		General Comments		

Current TYNDP : TYNDP 2020 - Annex A Page 204 of 773

## Entry capacity expansion GATE terminal

TRA-N-192	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Non-Advanced
Description	Expansion of entry capacity into GTS network The project consists of an additional pipeline on a section of the existing route between Wijngaarden	the GATE terminal and the compress	sor station at
PRJ Code - PRJ Name	PRJ-G-054 - LNG		

Point		Operator		Year	From Gas System	To Gas System	Capacity
Gate Terminal (I)		Gasunie T	ransport Services B.V.	2022	LNG_Tk_NL	NL	121.00 GWh/d
Sponsors			General Information		NDP an	d PCI Information	
Gas Transport Services	100%	Promoter	Gasunie Transport Services B.V.	Part o	of NDP Ye	es (Netwerk Ontwikk	celingsplan 2017)
		Operator	Gasunie Transport Services B.V.	NDP	Number		6.5.2
		Host Country	Netherlands	NDP	Release Date		
		Status	Planned	NDP	Website		NDP URL
		Website		Curre	ently PCI		No
				Priori	ity Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2022	2022
Grant Obtention		
Date		

9
Regulated
Regulated
No
Not Relevant
0.00%
0.00%

Pipelines and Compressor Stations							
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year		
Maasvlakte - Wijngaarden		1,200	25		0		
	Total		25				

		Benefits
Main Driver	Market Demand	
Main Driver Explanation	on	
Benefit Description		

	CBCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not
Submissin Date	not
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance					
Applied for CEF	(3) No, we have not applied for CEF				
Grants for studies	No				
Grants for studies amount	Mln EUR 0.0				
Grants for works	No				
Grants for works amount	Mln EUR 0.0				
Intention to apply for CEF					
Other Financial Assistance	No				
Comments					
General Comments					

Current TYNDP : TYNDP 2020 - Annex A Page 207 of 773

## Gate terminal phase 3

LNG-A-50
Update Date
Description
Project
LNG Terminal
Non-FID
Non-Advanced
Non-Advanced
Non-Advanced

PRJ Code - PRJ Name PRJ-G-054 - LNG

Capacity Increments Variant For Modelling							
Point	Operator	Year	From Gas System	To Gas System	Capacity		
	Gate Terminal B.V.	2022	LNG_Tk_NL	NL	60.00 GWh/d		
Cata Tamainal (I)			Comment: Phase 1				
Gate Terminal (I)	Gate Terminal B.V.	2024	LNG_Tk_NL	NL	61.00 GWh/d		
				Comment: Phase 2	)		

Sponsors	General Information		NDP and PCI Information	
0%	Promoter	Gate	Part of NDP	Yes (GTS)
	Operator	Gate Terminal B.V.	NDP Number	unknown see GTS
	Host Country	Netherlands	NDP Release Date	01/03/2018
	Status	Planned	NDP Website	NDP URL
	Website	<u>Project's URL</u>	Currently PCI	No
			Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		06/2010
Feasibility	06/2018	06/2018
FEED	06/2020	06/2020
Permitting	06/2009	06/2009
Supply Contracts		06/2020
FID		06/2020
Construction	06/2020	06/2022
Commissioning	2022	2024
Grant Obtention Date	31/12/2007	31/12/2007

Third-Party Access Regime					
Considered TPA Regime	Not Applicable				
Considered Tariff Regime	Not Applicable				
Applied for Exemption	Yes				
Exemption Granted	Yes				
Exemption in entry direction	0.00%				
Exemption in exit direction	100.00%				

Delays since last TYNDP	Dela	vs since l	ast TYNDP
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Delay Since Last TYNDP

2 years

Delay Explanation

more time for the market to develop and finalise commercial discussions.

## **Expected Gas Sourcing**

LNG ()

## Comments about the Third-Party Access Regime

The exemption was applied for in March 2006; the exemption has been granted by the Dutch Minister on 14 July 2007; the EC gave its approval on 2 October 2007. Was not sure what to fill in regulated or negotiated. It is exempted

	Benefits
Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	o SoS o Market Integration (Increase of competition) Gate terminal obtained an exempted ex Art 22 Gas Directive 2003/55/EC. In order to obtain an exemption it needed to be demonstrated that Gate terminal enhanced both security of supply and the competition on the gas market.

СВСА				
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not			
Submissin Date				
Decision Date				
Website				
Countries Affected				
Countries Net Cost Bearer				
Additional Comments				

Financial Assistance					
Applied for CEF	(3) No, we have not applied for CEF				
Grants for studies	No				
Grants for studies amount	Mln EUR 0.0				
Grants for works	No				
Grants for works amount	Mln EUR 0.0				
Intention to apply for CEF					
Other Financial Assistance	No				
Comments					
General Comments					

# LNG terminal in northern Greece / Alexandroupolis - LNG Section

LNG-N-62	Project	LNG Terminal	Non-FID
Update Date	22/09/2020		Advanced
Description	Please note that this part refers only to LNG section of the Project, i.e. the floating termin Project is addressed in TRA-N-063. The project consists of an LNG offshore Floating Storage Regasification Unit, a Mooring connecting the floating unit to the Greek National Natural Gas System at the area of Am TSO, will build and operate a metering & regulating station. The floating unit, will be stationed in the sea of Thrace, 17.6km SW of Alexandroupolis in nearest shore. It will have up to 170,000m3 LNG storage capacity and a gas send out cap	& a Pipeline system (24km Subsea a fitriti, 5.5km NE of Alexandroupolis n NE Greece, at an offshore distance	and 4km Onshore), where, DESFA, the NNGS of 5.4 n.m. from the
PRJ Code - PRJ Name	PRJ-G-055 - LNG terminal in northern Greece / Alexandroupolis		

Point		Operator		Year	From Gas System	To Gas System	Capacity
Alexandroupolis LNG		Gastrade S.A.	Gastrade S.A. 20		LNG_Tk_GR	GRa	253.10 GWh/c
			Comment: Increment available 100% at operation start-up.				
Sponsors		General Information		NDP and PCI Information			
LNG-N-062		Promoter	Gastrade S.A.	Part o	f NDP No (	(6) others - please	comment below
GASTRADE S.A.	100%	Operator	Gastrade S.A.	NDP N	Number		
TRA-N-063		Host Country	ost Country Greece NDP Release Date		Release Date		
GASTRADE S.A.	100%	Status	Planned	NDP V	Website		
G/13/10/10/2 3.71.	10070	Website	<u>Project's URL</u>	Currer	ntly PCI		Yes (6.9.1 (2020),
				Priorit	y Corridor(s)		

Current	TY	NDP	:	<b>TYNDP</b>	2020	-	Annex A
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Schedule	Start Date	End Date
Pre-Feasibility		12/2010
Feasibility	01/2014	06/2014
FEED	12/2020	12/2020
Permitting	12/2020	12/2020
Supply Contracts		
FID		03/2020
Construction	04/2020	10/2021
Commissioning	2022	2022
Grant Obtention Date	01/04/2020	01/04/2020

Third-Party Access Regime	
Considered TPA Regime	Not Applicable
Considered Tariff Regime	Not Applicable
Applied for Exemption	Yes
Exemption Granted	Not Yet
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Technical Information (LNG)								
Regasification Facility	Reloading Ability Project Phase	Expected Increment Ship Size (bcm/y) (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 LNG)	Comments	Commissioning Load Factor Year (%)		
LNG terminal in northern Greece / Alexandroupolis	Yes LNG terminal	8.3 170,000	22,600,000.00	170,000	The increments correspond to the maximum flowrates	2022 40		

	Fulfilled Criteria
Specific Criteria Fulfilled	Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas
Specific Criteria Fulfilled Comments	Market Integration - Regional (SEE + Serbia + North Macedonia) 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, North Macedonia, 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.

Current TYNDP: TYNDP 2020 - Annex A Page 212 of 773

#### **Delays since last TYNDP**

Delay Since Last TYNDP 24 months in commissioning date / 30 months delay in FID compare to TYNDP2015 time schedule

Permitting phase completed 1Q2015 and FEED completed in Sept. 2017. Final negotiations with Bulgartransgaz and Public Gas Corporation (DEPA) for acquiring stakes in GASTRADE is estimated to be completed by 3Q2019. GASTRADE initiated a Market Test in October 2018 and critical mass terminal use agreements are anticipated by Oct.2019. The first phase of the Market Test (EoI) was successfully completed on 31.12.2018 where 20 participants from SEE Europe & beyond expressed their interest for booking up to 12.2 bcm/y regasification capacity. Completion of financing agreements and EPC contract awards (subject to FID) required for FID. GASTRADE initiated on 21.09.2018 the Tendering procedure for the supply of the FSRU and for the EPCI of the pipeline. The first phase of the Tenders (Pre-qualification and EoI) was completed in April 2019. Evaluation procedure has been concluded and second phase of the Tender (RfP) will launch in Q3 2019. FID is planned for 1Q 2020 & COD 1Q 2022.

### **Expected Gas Sourcing**

LNG (WO), Multi-sourced supply

**Delay Explanation** 

#### Comments about the Third-Party Access Regime

GASTRADE on 28.06.2018 submitted an Application for TPA Exemption to the NRA. According to par. 6 of Article 36 of the EU Directive 73/2009/EC, a Market Test has to be conducted in order to seek the interest of the market for the Project. On 29.06.2018 GASTRADE submitted to RAE the draft Guidelines for the first phase of the Market Test (Expression of Interest). The Guidelines were approved by RAE on 25.09.2018. Following this GASTRADE submitted to RAE for approval the draft Eol Notice which was approved on 18.10.2018. GASTRADE issued the Invitation for Expression of Interest for regasification capacity reservation in the Project on 30.10.2018. The procedure was completed on 31.12.2018 with a positive outcome. Twenty companies from SEE Europe and beyond expressed their interest for a total regasification capacity of up to 12.2 bcm/year. The second phase (request for Binding offers) will be launched once the relevant Guidelines and Notice are approved by RAE (3Q2019).

	Benefits
Main Driver	Regulation SoS
Main Driver Explanation	Main drivers: 1. Expressed requirement for diversification of supply sources and routes for SEE markets (Bulgaria, Serbia, Norh Macedonia, Romania, Hungary and Ukraine) enhancing security of supply, competition and pricing options potentially resulting in energy costs reduction creates market / demand opportunities for the project 2. Possible discontinuation of gas flows transmitted through Ukraine to the SEE markets. 3. Regional demand growth
Benefit Description	LNG terminal in northern Greece will: Secure new natural gas quantities for the supply of the Greek and the SEE markets, hence enhancing 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, N. Macedon, Hungary, Ukraine) and to this extent lift existing isolation with an aim to reduce dependency on Russian gas whilst providing access to multiple sources both existing and new such as US and East Med gas 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 possibility for LNG-reloading ability for the purpose of supporting LNG bunkering activities and and will contribute to the decrease of CO2 emissions from power production and elimination of the harmful SOX, NOX and PM.

Current TYNDP : TYNDP 2020 - Annex A Page 213 of 773

	Barriers Control of the Control of t
Barrier Type	Description
Regulatory	Tariff levels for the Project should enjoy the same regulatory regime as the one applied for other competitive regulated infrastructures in the area in order for the Project to be commercially attractive to potential regional offtakers and therefore financially viable. Tariff levels will determine the required financing structure (equity/grant/debt ratios) and will be decided upon release of the TPA Exemption decision.
Permit Granting	Completed
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, Bulgaria, Romania and Serbia. Political stability in the region of the Project's direct influence will support commercial viability of the Project. Both Greece and Bulgaria have included the Project in their Energy Strategies mentioning the benefits of security of supply, diversification of routes, price convergence and sustainability.
Others	Delays in the implementation/start up of new regional gas infrastructures (IGB, IBS, BRUA) and in the upgrade of existing ones including reverse flow availability. The most critical one is the timing of start-up of the Interconnector Greece-Bulgaria (IGB). Also, availability of capacity in the Greek, Bulgarian and Romanian Transmission Systems and reverse flow capacity in Trans Balkan enabling flows from the Project 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 is eligible to receive grants from the Greek structural programs (NSRF). Award of such Public financing for works will be critical for the Project's commercial viability.
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. Recent interconnection agreements at the border IPs between EU member states in SE Europe are enhancing Project commercialization opportunities. Critical to the success of the Project are the transmission tariff structures and levels. The ability for LNG to penetrate markets without direct access to LNG terminals (e.g. Bulgaria, Serbia, Romania, Ukraine, Hungary, etc.) relates directly to the competitiveness of the landed prices of LNG into these markets vis-a-vis pipeline gas. To this extent, gas transmission tariffs from LNG terminal evacuation pipelines all the way through to end consumers should be reduced to allow for competitive pricing at end consumer level.
Financing	The Project has been awarded with grants for studies (CEF 2014 Call). The Project has secured the incentive to apply for grants within the National structural funds (NSRF - National Strategic Reference Framework). Award of such Public financing will be critical for the Project's commercial viability. Project's CBA has been prepared and consultated with JASPERS. The CBA will be submitted officially to DG Comp through the Ministry of Economy & Development within July 2019 (Notification for State Aid). The company has already signed a Mandate Letter with a major commercial bank of Greece for the total amount of dept. The target is that the terms of the debt financing agreement will be finalized before FID. The debt financing will be determined by contractual agreements regarding capacity reservation at the Project.
Market	Lack of market maturity
Financing	Availability of funds and associated conditions

	CBCA		Financial Assistance
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Submissin Date		Grants for studies	Yes
Decision Date		Grants for studies amount	Mln EUR 0.6
Website		Grants for works	No
Countries Affected		Grants for works amount	Mln EUR 0.0
Countries Net Cost Bearer		Intention to apply for CEF	Yes, for studies only
Additional Comments	CBCA is non applicable for the Project	Other Financial Assistance	No
		Comments	
		General Comments	The project is included in the Major Project List of the Operational Programme; eligible for grant financing from the National Strategic Reference Framework (NSRF). Notification for State Aid for the Project's financing to be submitted to DG Comp within July. Gastrade has already consulted with Jaspers the Cost Benefit Analysis (CBA) for the Project. The CBA will be submitted to DG Comp within the Notification documentation.

## LNG terminal in northern Greece / Alexandroupolis - Pipeline Section

TRA-N-63	Project	Pipeline including CS	Non-FID
Update Date	22/09/2020		Advanced
Description	Please note that this part refers only to the pipeline section of the Project. The The project consists of an LNG offshore Floating Storage Regasification Unit, a connecting the floating unit to the Greek National Natural Gas System at the a TSO, will build and operate a metering regulating station. The floating unit, wi NE Greece, at an offshore distance of 5.4 n.m. from the nearest shore. It will ha of up to 900,000 Nm3/h corresponding to 8.3 bcm/y.	Mooring a Pipeline system (24km Subsea and rea of Amfitriti, 5.5km NE of Alexandroupolis vII be stationed in the sea of Thrace, 17.6km SV	d 4km Onshore), where, DESFA, the NNGS V of Alexandroupolis in
PRJ Code - PRJ Name	PRJ-G-055 - LNG terminal in northern Greece / Alexandroupolis		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Alexandra va alia Amarkitaiti	Gastrade S.A.	2022	GRa	IB-GRk	253.10 GWh/d
Alexandroupolis Amphitriti	Co	Comment: Increment available 100% at operation start-up.			
Sponsors	General Information		NDP and	PCI Information	

Sponsors		General Information		NDP and PCI Information		
LNG-N-062		Promoter	Gastrade S.A.	Part of NDP	No ((6) others - please comment below)	
GASTRADE S.A.	100%	Operator	Gastrade S.A.	NDP Number		
TRA-N-063		Host Country	Greece	NDP Release Date		
GASTRADE S.A.	100%	Status	Planned	NDP Website		
	.0070	Website	<u>Project's URL</u>	Currently PCI	Yes (6.9.1 (2020))	
				Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		12/2010
Feasibility	01/2014	06/2014
FEED	01/2020	01/2020
Permitting	01/2020	01/2020
Supply Contracts		
FID		03/2020
Construction	04/2020	10/2021
Commissioning	2022	2022
Grant Obtention Date	01/04/2020	01/04/2020

Third-Party Access Regime	
Considered TPA Regime	Not Applicable
Considered Tariff Regime	Not Applicable
Applied for Exemption	Yes
Exemption Granted	Not Yet
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Sta	ations				
Pipeline Section	Pipeline Comment		Length (km)	Compressor Power (MW)	Comissioning Year
Alexandroupolis LNG terminal	I - M/R Amfitriti	762	28	0	2021
Total			28	0	
	Fulfilled Criteria				
Specific Criteria Fulfilled	Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through reappropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reemissions, supporting intermittent renewable generation and enhancing deployment of renewable gas				
	Market Integration - Regional (SEE + Serbia + North Macedonia) and beyond (e.g. Hungary and through across the NSI gas corridor) Security				

Specific Criteria Fulfilled Comments of Supply through inter alia source and route diversification- Greece, Bulgaria, Serbia, North Macedonia, 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.

Current TYNDP: TYNDP 2020 - Annex A Page 217 of 773

#### **Delays since last TYNDP**

Delay Since Last TYNDP 24 months in commissioning date / 30 months delay in FID compare to TYNDP2015 time schedule

Permitting phase completed 1Q2015 and FEED completed in Sept. 2017. Final negotiations with Bulgartransgaz and Public Gas Corporation (DEPA) for acquiring stakes in GASTRADE is estimated to be completed by 3Q2019. GASTRADE initiated a Market Test in October 2018 and critical mass terminal use agreements are anticipated by Oct.2019. The first phase of the Market Test (EoI) was successfully completed on 31.12.2018 where 20 participants from SEE Europe beyond expressed their interest for booking up to 12.2 bcm/y regasification capacity. Completion of financing agreements and EPC contract awards (subject to FID) required for FID. GASTRADE initiated on 21.09.2018 the Tendering procedure for the supply of the FSRU and for the EPCI of the pipeline. The first phase of the Tenders (Pre-qualification and EoI) was completed in April 2019. Evaluation procedure has been concluded and second phase of the Tender (RfP) will launch in Q3 2019. FID is planned for 1Q 2020 and COD for 1Q 2022.

## **Expected Gas Sourcing**

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

**Delay Explanation** 

#### Comments about the Third-Party Access Regime

GASTRADE on 28.06.2018 submitted an Application for TPA Exemption to the NRA. According to par. 6 of Article 36 of the EU Directive 73/2009/EC, a Market Test has to be conducted in order to seek the interest of the market for the Project. On 29.06.2018 GASTRADE submitted to RAE the draft Guidelines for the first phase of the Market Test (Expression of Interest). The Guidelines were approved by RAE on 25.09.2018. Following this GASTRADE submitted to RAE for approval the draft Eol Notice which was approved on 18.10.2018. GASTRADE issued the Invitation for Expression of Interest for regasification capacity reservation in the Project on 30.10.2018. The procedure was completed on 31.12.2018 with a positive outcome. Twenty companies from SEE Europe and beyond expressed their interest for a total regasification capacity of up to 12.2 bcm/year. The second phase (request for Binding offers) will be launched once the relevant Guidelines and Notice are approved by RAE (3Q2019).

Benefits				
Main Driver	Regulation SoS			
Main Driver Explanation	Main drivers: 1. Expressed requirement for diversification of supply sources and routes for SEE markets (Bulgaria, Serbia, Norh Macedonia, Romania, Hungary and Ukraine) enhancing security of supply, competition and pricing options potentially resulting in energy costs reduction creates market / demand opportunities for the project 2. Possible discontinuation of gas flows transmitted through Ukraine to the SEE markets. 3. Regional demand growth			
Benefit Description	LNG terminal in northern Greece will: Secure new natural gas quantities for the supply of the Greek and the SEE markets, hence enhancing 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, N. Macedon, Hungary, Ukraine) and to this extent lift existing isolation with an aim to reduce dependency on Russian gas whilst providing access to multiple sources both existing and new such as US and East Med gas 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 possibility for LNG-reloading ability for the purpose of supporting LNG bunkering activities and and will contribute to the decrease of CO2 emissions from power production and elimination of the harmful SOX, NOX and PM.			

Current TYNDP : TYNDP 2020 - Annex A Page 218 of 773

	Barriers Control of the Control of t
Barrier Type	Description
Regulatory	Tariff levels for the Project should enjoy the same regulatory regime as the one applied for other competitive regulated infrastructures in the area in order for the Project to be commercially attractive to potential regional offtakers and therefore financially viable. Tariff levels will determine the required financing structure (equity/grant/debt ratios) and will be decided upon release of the TPA Exemption decision.
Permit Granting	Completed
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, Bulgaria, Romania and Serbia. Political stability in the region of the Project's direct influence will support commercial viability of the Project. Both Greece and Bulgaria have included the Project in their Energy Strategies mentioning the benefits of security of supply, diversification of routes, price convergence and sustainability.
Others	Delays in the implementation/start up of new regional gas infrastructures (IGB, IBS, BRUA) and in the upgrade of existing ones including reverse flow availability. The most critical one is the timing of start-up of the Interconnector Greece-Bulgaria (IGB). Also, availability of capacity in the Greek, Bulgarian and Romanian Transmission Systems and reverse flow capacity in Trans Balkan enabling flows from the Project 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 is eligible to receive grants from the Greek structural programs (NSRF). Award of such Public financing for works will be critical for the Project's commercial viability.
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. Recent interconnection agreements at the border IPs between EU member states in SE Europe are enhancing Project commercialization opportunities. Critical to the success of the Project are the transmission tariff structures and levels. The ability for LNG to penetrate markets without direct access to LNG terminals (e.g. Bulgaria, Serbia, Romania, Ukraine, Hungary, etc.) relates directly to the competitiveness of the landed prices of LNG into these markets vis-a-vis pipeline gas. To this extent, gas transmission tariffs from LNG terminal evacuation pipelines all the way through to end consumers should be reduced to allow for competitive pricing at end consumer level.
Financing	The Project has been awarded with grants for studies (CEF 2014 Call). The Project has secured the incentive to apply for grants within the National structural funds (NSRF - National Strategic Reference Framework). Award of such Public financing will be critical for the Project's commercial viability. Project's CBA has been prepared and consultated with JASPERS. The CBA will be submitted officially to DG Comp through the Ministry of Economy Development within July 2019 (Notification for State Aid). The company has already signed a Mandate Letter with a major commercial bank of Greece for the total amount of dept. The target is that the terms of the debt financing agreement will be finalized before FID. The debt financing will be determined by contractual agreements regarding capacity reservation at the Project.
Financing	Availability of funds and associated conditions
Market	Lack of market maturity

	CBCA		Financial Assistance
Pecision	No, we have not submitted an investment request yet, and we do not plan to submit it	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
ubmissin Date		Grants for studies	Yes
Decision Date		Grants for studies amount	Mln EUR 0.6
Vebsite		Grants for works	No
Countries Affected		Grants for works amount	Mln EUR 0.0
Countries Net Cost Bearer		Intention to apply for CEF	Yes, for studies only
Additional Comments	CBCA is non applicable for the Project	Other Financial Assistance	No
dutional Comments		Comments	
		General Comments	The project is included in the Major Project List of the Operational Programme; eligible for grant financing from the National Strategic Reference Framework (NSRF). Notification for State Aid for the Project's financing to be submitted to DG Comp within July. Gastrade has already consulted with Jaspers the Cost Benefit Analysis (CBA) for the Project. The CBA will be submitted to DG Comp within the Notification documentation.

# Slovenian-Hungarian interconnector

TRA-N-325	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Advanced
Description	Plinovodi, Snam Retegas and FGSZ agreed to create a new bidirectional gas route in transmission route between the three countries. The shippers submitted higher capa two stage project was suggested. Phase 1 DN600 pipeline between Nagykanizsa and Nagykanizsa and Kozármisleny (150 km) and one compressor station at Nagykanizsa transmission corridor was suggested.	city demand, therefore the TSO-s reconsi d Tornyiszentmiklós (41 km), phase 2 DNo	dered the project and 600 pipeline between
PRJ Code - PRJ Name	PRJ-G-060 - Hungary – Slovenia interconnection		

Capacity Increments Variant For Modelling						
Point	Operator	Year	From Gas System	To Gas System	Capacity	
	FGSZ Ltd.	2023	HU	SI	12.80 GWh/d	
				Comment: phase I.		
	FGSZ Ltd.	2023	SI	HU	12.80 GWh/d	
Dings (SI) / Townsoroutesikles (HII)		Comment: phase I.				
Pince (SI) / Tornyszentmiklos (HU)	FGSZ Ltd.	2025	HU	SI	46.50 GWh/d	
		Comment: ¡	ohase II. total capacity	up to 59,3 GWh/d		
	FGSZ Ltd.	2025	SI	HU	46.50 GWh/d	
		Comment: ¡	phase II. total capacity	up to 59,3 GWh/d		

Sponsors		General Information		NDP and PCI Information	
FGSZ Ltd.	100%	Promoter	FGSZ Ltd.	Part of NDP	Yes (Hungarian TYNDP 2017)
		Operator	FGSZ Ltd.	NDP Number	12.12.
		Host Country	Hungary	NDP Release Date	19/12/2018
		Status	Planned	NDP Website	<u>NDP URL</u>
		Website	Project's URL	Currently PCI	Yes (6.23 (2020))
				Priority Corridor(s)	

#### Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		12/2015
Feasibility	05/2016	10/2019
FEED	03/2021	02/2022
Permitting	01/2021	03/2022
Supply Contracts		04/2022
FID		08/2020
Construction	03/2022	10/2025
Commissioning	2023	2025
Grant Obtention Date		

Third-Party Access Regime			
Considered TPA Regime	Regulated		
Considered Tariff Regime	Regulated		
Applied for Exemption	No		
Exemption Granted	Not Relevant		
Exemption in entry direction	0.00%		
Exemption in exit direction	0.00%		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Nagykanizsa-Kozármisleny	phase II.	600	150	12	2025
Nagykanizsa-Tornyiszentmiklós	phase I.	600	41		2023
	Total		191	12	

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Infrastructure to enable reverse flow and to increase diversification of entry points and use of regional storage capacities Increase of flexibility Specific Criteria Fulfilled Comments and diversification of routes and gas sources. Infrastructure allowing the increase of security of supply for the region. Price convergence and market integration.

## **Expected Gas Sourcing**

Algeria, Caspian Region, Libya, Russia, LNG (HR,IT), Romania

	Benefits
Main Driver	Others
Main Driver Explanation	on
Benefit Description	Infrastructure to enable reverse flow and to increase diversification of entry points and use of regional storage capacities Increase of flexibility and diversification of routes and gas sources. Infrastructure allowing the increase of security of supply for the region. Price convergence and market integration.
	Barriers
Barrier Type	Description
Financing	Availability of funds and associated conditions
Regulatory	Low rate of return
Market	Lack of market maturity
	Intergovernmental Agreements

Intergovernmental Agreements				
Agreement	Agreement Description	Is Signed A	greement Signature Date	
Memorandum of Understanding (MOU)		No	26/11/2009	

CBCA		Financial Assistance		
Decision	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF	
Decision	but we do plan to submit it	Grants for studies	No	
Submissin Date		Grants for studies amount	Mln EUR 0.0	
Decision Date		Grants for works	Yes	
Website		Grants for works amount	Mln EUR 0.0	
Countries Affected		Intention to apply for CEF	No decision yet taken	
Countries Net Cost Bearer		Other Financial Assistance	No	
Additional Comments		Comments		
		General Comments		

# R15/1 Pince - Lendava - Kidričevo

TRA-N-112	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Advanced
Description	Interconnector with the transmission system of the Hungarian TSO. Cross-bord for Slovenian gas suppliers, enabling access to LNG terminals in northern Adrid Hungarian and Slovenian gas market and improving of N-1 infrastructure stan PCI 6.23. Hungary – Slovenia interconnection (Nagykanizsa - Tornyiszentmikló	atic and other gas sources for Hungarian gas s ndard for SI and HU.	
PRJ Code - PRJ Name	PRJ-G-060 - Hungary – Slovenia interconnection		

Capacity Increm	nents Variant For Modelling					
	Variant : Variant1 (Default)	Most likely scenario				
Point		Operator	Year	From Gas System	To Gas System	Capacity
		Plinovodi d.o.o.	2023	HU	SI	12.90 GWh/d
					Comment: Phase 1	
		Plinovodi d.o.o.	2023	SI	HU	12.90 GWh/d
					Comment: Phase 1	
		Plinovodi d.o.o.	2025	HU	SI	36.10 GWh/d
Pince (SI) / Tornyszentmiklos (HU)					Comment: Phase 2	
				Total cap	pacity is 49 GWh/d.	
		Plinovodi d.o.o.	2025	SI	HU	36.10 GWh/d
					Comment: Phase 2	
				Total cap	pacity is 49 GWh/d.	
Capacity Increm	nents Variant(s) For Information Only					
	Variant : Variant2	Increased DN				
Point		Operator	Year	From Gas System	To Gas System	Capacity
		Plinovodi d.o.o.	2026	HU	SI	59.30 GWh/d
Pince (SI) / Tor	nyszentmiklos (HU)				Comment: DN600	
		Plinovodi d.o.o.	2026	SI	HU	59.30 GWh/d

Comment: DN600

Sponsors		General Information		NDP and PCI Information		
Plinovodi	100%	Promoter	Plinovodi d.o.o.	Part of NDP	Yes (TYNDP for the period 2019-2028)	
	J.C.	Operator	Plinovodi d.o.o.	NDP Number	C3	
		Host Country	Slovenia	NDP Release Date	26/11/2018	
		Status	Planned	NDP Website	<u>NDP URL</u>	
		Website	Project's URL	Currently PCI	Yes (6.23 (2020))	
				Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		04/2010
Feasibility	11/2014	02/2015
FEED	09/2020	12/2023
Permitting	09/2020	07/2024
Supply Contracts		10/2025
FID		09/2020
Construction	04/2022	10/2025
Commissioning	2023	2025
Grant Obtention Date		

Third-Party Access Regime			
Considered TPA Regime	Regulated		
Considered Tariff Regime	Regulated		
Applied for Exemption	No		
Exemption Granted	No		
Exemption in entry direction	0.00%		
Exemption in exit direction	0.00%		

Pipelines and Compressor Stations						
Variant1 (De	efault)	Most likely scenario				
Pipeline Section		Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
R15/1 Pince - Lendava - Kidričevo			500	73	6	2025
	Total			73	6	
<b>Pipelines and Compressor Stations</b>	- Alternative Variant					
Variant	2	Increased DN				
Pipeline Section		Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
R15/1 Pince - Lendava - Kidričevo			600	73	6	2026
	Total			73	6	
		Fulfilled Criteria				
Specific Criteria Fulfilled  Specific Criteria Fulfilled Comments	Sustainability, inter alia througas  The project will enable a new Slovenian gas suppliers, enables	chrough appropriate connections and diversification gh reducing emissions, supporting intermittent rene interconnection between Slovenia and Hungary, encling access to LNG terminals in northern Adriatic and the control of the contr	wable generation abling access to u d other gas sourc	and enh indergrou	ancing deployment of und storages in Hung Ingarian gas suppliers	of renewable ary for s, contributing
		rt sources and routes and the security of supply for l proving of N-1 infrastructure standard for SI and HU		will enab	ie the connection of i	hungarian and

# **Expected Gas Sourcing**

Algeria, Caspian Region, Russia, LNG (HR,IT), UGS in Hungary

	Benefits
Main Driver	Market Demand
Main Driver Explanation	Also essential contribution to Security of supply.
Benefit Description	Cross-border transmission, enabling access to underground storages in Hungary for Slovenian gas suppliers, enabling access to LNG terminals in nort Adriatic and other gas sources for Hungarian gas suppliers, connection of Hungarian and Slovenian gas market and improving of N-1 infrastructure standard for SI and HU.

_				
- 2		rr		rs
	ΙσΙ		Lei	

**Barrier Type** 

Decision

Website

Submissin Date

**Decision Date** 

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 Description

Is Signed Agreement Signature Date

27/11/2009

Memorandum of Understanding (MOU)

Financial Assistance

CBCA

No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or

Applied for CEF

(1) Yes, we have applied for CEF and we have received a

Yes

decision

Yes

*not* Grants for studies

Mln EUR 0.3

Grants for studies amount

No

Grants for works

Mln EUR 0.0

Grants for works amount Intention to apply for CEF

No decision yet taken

Other Financial Assistance

No

Comments

**General Comments** 

Countries Net Cost Bearer Additional Comments

Countries Affected

Current TYNDP : TYNDP 2020 - Annex A Page 227 of 773

# GCA 2015/08: Entry/Exit Murfeld

TRA-N-361	Project	Pipeline including CS	Non-FID
Update Date	01/10/2019		Advanced
Description	The Project enables incremental capacity at the IP Murfeld in both directions (AT->SI, Murfeld is achieved.	SI->AT). Moreover, physical RF capacit	y at the Entry Point
PRJ Code - PRJ Name	PRJ-G-066 - Bidirectional gas route Austria-Slovenia		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	Gas Connect Austria GmbH	2023	AT	SI	105.20 GWh/d
Monfald (AT) (Carrate (CI)	Comment: conversion from Nm³/h to kwh/h with a GCV of 11.19				
Murfeld (AT) / Ceršak (SI)	Gas Connect Austria GmbH	2023	SI	AT	166.50 GWh/d
	Comment: conversion from Nm³/h to kwh/h with a GCV of 11.19				

Sponsors	General Information		NDP a	and PCI Information
	Promoter	GAS CONNECT AUSTRIA GmbH	Part of NDP	Yes (NDP 2019-2028)
	Operator	Gas Connect Austria GmbH	NDP Number	GCA 2015/08
	Host Country	Austria	NDP Release Date	11/02/2019
	Status	Planned	NDP Website	NDP URL
	Website	<u>Project's URL</u>	Currently PCI	Yes (6.26.1.4 (2020))
			Priority Corridor(s)	

Current	<b>TYNDP:</b>	<b>TYNDP</b>	2020 -	Annex A
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Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting	07/2020	12/2020
Supply Contracts		03/2021
FID		11/2020
Construction	05/2021	08/2023
Commissioning	2023	2023
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations						
Pipeline Section		Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Loop Murfeld - Cersak		Further scope of investment: - Extension of Weitendorf and Murfeld metering stations (Filter separator, metering routes,regulation, piping); -New Murfeld CS (gas driven)	500	2		0
Loop SOL pipeline		Further scope of investment: - Extension of Weitendorf and Murfeld metering stations (Filter separator, metering routes,regulation, piping); -New Murfeld CS (gas driven)	600	26		0
	Total			28		

Fulfilled Criteria

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

This project aims at covering the projected additional demand for capacity at the IP Murfeld entry and exit points. It will enable reverse flow. This strengthhens security of supply, competition and market integration. In addition, the project contributes to sustainability.

Current TYNDP : TYNDP 2020 - Annex A
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Benefits				
Main Driver	Market Demand			
Main Driver Explanatio	n			
Benefit Description				

	CBCA	Finar	ncial Assistance
Decision	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF
Decision	and we do not plan to submit it	Grants for studies	No
Submissin Date		Grants for studies amount	Mln EUR 0.0
Decision Date		Grants for works	No
Website		Grants for works amount	Mln EUR 0.0
Countries Affected		Intention to apply for CEF	No, we do not plan to apply
Countries Net Cost Bearer		Other Financial Assistance	No
Additional Comments		Comments	
		General Comments	

# Upgrade of Murfeld/Ceršak interconnection (M1/3 Interconnection Ceršak)

TRA-N-389	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Advanced
Description	Adjustment of operating parameters of the Austrian and Slovenian transmission systems, increasing the transmission capacity and enabling bidirectional operation in the frame of the bidirectional gas route Austria - Slovenia - Croatia.  The project is a part of the PCI 6.26 Cluster Croatia - Slovenia - Austria at Rogatec.		
PRJ Code - PRJ Name	PRJ-G-066 - Bidirectional gas route Austria-Slovenia		

Capacity Increments Variant For Mode	elling						
Point		Operator		Year	From Gas System	To Gas System	Capacity
Murfeld (AT) / Ceršak (SI)		Plinovodi d.o.o.		2023	AT	SI	78.50 GWh/d
		Plinovodi d.o.o.		2023	SI	AT	162.00 GWh/d
Sponsors		General Infor	mation		NDP and	PCI Information	
Plinovodi	100%	Promoter	Plinovodi d.o.o.	Part o	f NDP Yes	(TYNDP for the po	eriod 2019-2028)
		Operator	Plinovodi d.o.o.	NDP N	Number		C4
		Host Country	Slovenia	NDP F	Release Date		26/11/2018
		Status	Planned	NDP \	Website		NDP URL
		Website	<u>Project's URL</u>	Curre	ntly PCI	Yes	(6.26.1.5 (2020))
				Priorit	y Corridor(s)		

#### Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		01/2015
Feasibility	04/2015	05/2015
FEED	07/2020	07/2022
Permitting	07/2021	12/2022
Supply Contracts		12/2023
FID		09/2021
Construction	07/2022	12/2023
Commissioning	2023	2023
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Upgrade of Murfeld/Ceršak interconnection	Pipeline length: 160m.	800	0		0
	Total		0		

# **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes

The Project enables incremental capacity at the IP Murfeld/Ceršak in both directions (from AT to SI and from SI to AT) and contributes to the Specific Criteria Fulfilled Comments common benefits of removing bottlenecks, improving N-1 for the Slovenian TSO, improving SoS for Austria, Slovenia and Croatia and will serve as a base for future gas evacuation for Croatia through Slovenia to Austria.

## **Expected Gas Sourcing**

Caspian Region, Russia, LNG (HR)

Current TYNDP : TYNDP 2020 - Annex A Page 232 of 773

# BenefitsMain DriverMarket DemandMain Driver ExplanationAlso essential contribution to Security of supply.Benefit Description

	CBCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance			
Applied for CEF	(3) No, we have not applied for CEF		
Grants for studies	No		
Grants for studies amount	Mln EUR 0.0		
Grants for works	No		
Grants for works amount	Mln EUR 0.0		
Intention to apply for CEF	No decision yet taken		
Other Financial Assistance	No		
Comments			
General Comments			

# Djewels

ETR-N-396	Project	Energy Transition Related Project	Non-FID		
Update Date	25/08/2020		Advanced		
Description	The project is a significant step towards scaling up the electrolysis technology, (co-) develop, own and operate a large scale electrolyser, offering conversion services (electricity à hydrogen) to market parties, contribution to the development of a hydrogen economy in (North-) Netherlands, particularly in the chemical industry and mobility sector.				
PRJ Code - PRJ Name	PRJ-G-105 - Hydrogen network northwest Europe				

**General Information** 

•				
			Promoter	Nouryon
			Operator	Gasunie Transport Services B.V.
			Host Country	Netherlands
			Status	Planned
			Website	
Schedule	Start Date	End Date		
Pre-Feasibility		12/2019		
Feasibility	01/2020	12/2020		
FEED	01/2021	12/2021		
Permitting				
Supply Contracts				
FID				
Construction				
Commissioning	2030	2030		
Grant Obtention Date				
Dute				

Sponsors



PRJ Code - PRJ Name

# Hydrogen transmission backbone Netherlands

ETR-N-370	Project	Energy Transition Related Project	Non-FID
Update Date	15/08/2019		Advanced
Description	This project aims to create a nationwide hydrogen transmission grid. It connects Ruhrgebied and Dutch underground gas storage. The hydrogen transmission Transmission capacity can be at least 10 GW (240 GWh/d) in 2030 for all x-bores.	backbone will be build with existing as well as ne	

Sponsors			General Information	
			Promoter	N.V. Nederlandse Gasuni
			Operator	Gasunie Transport Services B.\
			Host Country	Netherland
			Status	Planne
			Website	
Schedule	Start Date	End Date		
Pre-Feasibility		09/2018		
Feasibility	07/2019	10/2019		
FEED	07/2019	07/2021		
Permitting	07/2019	07/2023		
Supply Contracts		01/2025		
FID		01/2025		
Construction	01/2025	12/2029		
Commissioning	2030	2030		
Grant Obtention Date				

PRJ-G-105 - Hydrogen network northwest Europe



# North Sea Wind Power Hub

ETR-N-322	Project	Energy Transition Related Project	Non-FID
Update Date	24/09/2020		Advanced
Description	An opportunity for internationally coordinated, large scale, far offshore wind at competitive prices around 2030 and facilitate meeting the Paris agreement economic beneficial and reliable offshore infrastructure, including possible cointerconnections between markets.  Average daily production of H2 is 30 GWh/d.	t. Therefore we are committed to explore and de	evelop regional socio-
PRJ Code - PRJ Name	PRJ-G-105 - Hydrogen network northwest Europe		

**General Information** 

	V		Promoter	N.V. Nederlandse Gasunie
			Operator	Gasunie Transport Services B.V.
			Host Country	Netherlands
			Status	Planned
			Website	
Schedule	Start Date	End Date		
Pre-Feasibility		12/2020		
Feasibility		12/2021		
FEED		12/2026		
Permitting		12/2025		
Supply Contracts				
FID				
Construction		12/2030		
Commissioning	2032	2032		
Grant Obtention Date				

Sponsors



Current TYNDP : TYNDP 2020 - Annex A Page 239 of 773

# P2G Velke Kapusany

ETR-A-312	Project	Energy Transition Related Project	Non-FID
Update Date	14/08/2020		Advanced
Description	Project P2G Velke Kapusany aims to store renewable energy in form of the h storage. The unique structure as well as the location of the UGS with all the neighbouring countries. That's capacity will allow to install and use more rer grid as well as will provide energy safety of supply. The project counts to ins of the natural gas with the renewable hydrogen could be the possibility how	planned interconnection will allow to store and dinewable energy in region without any negative imstall the electrolysis units to transform the electric	istribute H2 for npact to the electrical ity to gas (H2). Mixing
PRJ Code - PRJ Name	PRJ-G-107 - UGS Velke Kapusany		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
LICS Valka Varusaru	NAFTA a.s.	2023	STcSK	SK	1.23 GWh/d
UGS Velke Kapusany		Cor	mment: hydrogen to b	e injected into UGS	

Sponsors		General Information		
NAFTA a.s.	100%	Promoter	NAFTA a.s. (joint stock company)	
		Operator	NAFTA a.s.	
		Host Country	Slovakia	
		Status	Planned	
		Website	<u>Project's URL</u>	

# Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		08/2019
Feasibility	09/2019	01/2020
FEED	02/2020	04/2021
Permitting	11/2017	04/2021
Supply Contracts		09/2020
FID		01/2020
Construction	06/2021	06/2023
Commissioning	2023	2023
Grant Obtention		
Date		

Technical Information (ETR)				
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year	
P2G Velke Kapusany	The projects expects to install P2G technology with power about 78 MW. Produced hydrogen will be injected into planned UGS Velke Kapusany at rate about 1,23 GWh/day. Compressor units as well as other infrastructure will be used from the UGS Velke Kapusany. The power of compressor unit should be around 8400 kW.	none	2023	

Current TYNDP : TYNDP 2020 - Annex A Page 241 of 773

# Underground Gas Storage Velke Kapusany

UGS-A-356	Project	Storage Facility	Non-FID
Update Date	15/08/2019		Advanced
Description	The Underground Gas Storage Velke Kapusany project aims to construct an undergin close vicinity of Ukraine (1 km), Hungary (15 km) and Poland (70 km). The storage Kapusany, and at the center of the soon-to-be NSI East Gas corridor.  The projected working gas volume of the UGS Velke Kapusany is 340 mcm with injective a number of purposes, such as:  - Providing security of supply to countries with insufficient storage capacities along countries as well as providing domestic security of supply  - Enhancing liquidity and facilitating gas trading at an emerging "gas hub" at the in-limproving physical load factor of the existing and future gas transmission infrastructure.	e is located directly at the Ukraine-Slovakia ection and withdrawal rate set at 3.75 mcm the north-south interconnector, mainly Po	d entry/exit point Velke  /d. This capacity will  pland and the Balkan
PRJ Code - PRJ Name	PRJ-G-107 - UGS Velke Kapusany		

	Variant : Default	Default variant for use in modeling						
Point		Operator	Year	From Gas System	To Gas System	Capacity		
		NAFTA a.s.	2023	STcSK	SK	37.05 GWh/d		
LICC Valles Kanssans		Comment: exit from UGS into TS	O. Total Capa	city includes natural g	as in mixture with hydrogen			
UGS Velke Kapusany		NAFTA a.s.	2023	SK	STcSK	37.05 GWh/d		
		Comment: entry from TSO into UGS. Total Capacity includes natural gas in mixture with hydrogen						
Capacity Increments	Variant(s) For Information Only							
	Variant : Hydrogen	Variant for P2G technology usage						
Point		Operator	Year	From Gas System	To Gas System	Capacity		
		NAFTA a.s.	2023	STcSK	SK	1.23 GWh/d		
LICS Valles Kanusany		Comment: hydrogen to be supplied to the TSO						
UGS Velke Kapusany		NAFTA a.s.	2023	SK	STcSK	1.23 GWh/d		
			C	omment: hydrogen to	be injected in UGS			

Date

Sponsors				General Information	NDF	and PCI Information
NAFTA a.s.		100%	Promoter Operator	NAFTA a.s. (joint stock company)  NAFTA a.s.	Part of NDP	Yes (Ten-Year Network Development Plan of the transmission system of the
			Host Country	Slovakia	NDP Number	company Eustream)
			Status	Planned	NDP Release Date	chapter 3.3 30/11/2017
			Website	<u>Project's URL</u>	NDP Website	NDP URL
					Currently PCI	No
					Priority Corridor(s)	NSIE
Schedule	Start Date	End Date			Third	I-Party Access Regime
Pre-Feasibility		11/2017			Considered TPA Regir	ne Negotiated
Feasibility	04/2019	09/2019			Considered Tariff Reg	ime Negotiated
FEED	02/2020	04/2021			Applied for Exemption	n No
Permitting	11/2017	04/2021			Exemption Granted	Not Relevant
Supply Contracts		09/2020				
FID		01/2020			Exemption in entry dir	rection 0.00%
Construction	06/2021	06/2023			Exemption in exit dire	ction 0.00%
Commissioning	2023	2023				
Grant Obtention						

Technical Information (UGS)									
Storage Facility	Storage Facility Type	Multiple-cycle Facility	Project Phase	Working Volume (mcm)	Withdrawal Capacity (mcm/d)			Comments	Commisioning Year
Underground Gas Storage Velke Kapusany	Depleted Field	Yes	Commissioning	340	3.8	3.8	100	none	2023

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## **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

## **Expected Gas Sourcing**

Caspian Region, Norway, Russia, LNG (PL)

	Benefits
Main Driver	Others
Main Driver Explanation	UGS Velke Kapusany aims at reinforcing the security of gas supplies in the CEE region and enhancing the market integration of EU member states, namely Poland, Slovakia, Hungary and Ukraine as well. Along with the security of supply, the project will also help to promote sustainability by reducing CO2 emissions and usage of RES.
Benefit Description	Enabling reverse gas flow to Ukraine led to a sharp increase in trading at Slovak virtual trading point and Ukraine scored a number of new gas suppliers from Western Europe. As the PL-SK interconnector is moving ahead, we can expect a similar scenario with Poland – another country that is relentlessly pursuing its goal of source diversification. Higher number of trading counterparties is, however, only possible when there is enough flexibility from storag and if the storage is close to the point of destination. With the NSI East Gas corridor and Eastring in the works, this can become a competition on a higher scale as natural gas from the North Sea, Caspian, Central Asia, Iran, the Middle East or LNG from multiple locations will have doors open to the region that had long suffered from isolation and market stagnation.
	Barriers
Barrier Type	Description
Market	Lack of market support
Market	Lack of market maturity

	CBCA	
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not	Applied for
Submissin Date		Grants fo
Decision Date		Grants fo
Website		Grants fo Intention
Countries Affected		Other Fin
Countries Net Cost Bearer		
Additional Comments		Commen
		General C

Financial	Assistance
Applied for CEF	(3) No, we have not applied for CEF
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	Yes, for studies and works
Other Financial Assistance	No
Comments	
General Comments	

# Connecting pipe to LNG terminal in Latvia

TRA-N-1181	Project	Pipeline including CS	Non-FID
Update Date	12/06/2020		Non-Advanced
Description	Currently Latvia has only one direct source of gas supply-by pipeline from Russia and Even having an underground gas storage, which has sufficient capacity to supply expreached only when necessary volumes of gas are injected in the storage because resolved the Skulte LNG terminal will be located only around 30 km from Inčukalns UGS storage considerably decreasing costs of construction and operation. In order to deliver gas km onshore and 4 km offshore) has to be built.	entire country for more than a year, reliabil eceiving gas by pipeline from Russia in wi e, and therefore will not need any storage	ity of supply can be nter is problematic. capacities at site thus
PRJ Code - PRJ Name	PRJ-G-108 - LNG terminal in Latvia		

Capacity Increments Variant For Modelling						
Point	Operat	or	Year From Gas	System	To Gas System	Capacity
Skulte (LV)	Conexu	ıs Baltic Grid	2021 LNG_T	k_LV	LV	170.00 GWh/d
Sponsors		General Information		NDP and	PCI Information	
JSC "Conexus Baltic Grid" 100%	Promoter	JSC "Conexus Baltic Grid"		No ((4)	) there is no obligo	ation at national
	Operator	Conexus Baltic Grid	Part of NDP	level ;	for such a project	
	Host Country	Latvia				NDP)
	Status	Planned				
	Website	Project's URL	NDP Release Date	е		
			NDP Website			
			Currently PCI			No
			Priority Corridor(s	5)		BEMIP

## Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		05/2019
Feasibility	09/2019	12/2019
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2021	2021
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

		Technical Information (LN	IG)			
Regasification Facility	Reloading Ability Project Phase	Expected Increment Ship Size (bcm/y) (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 LNG)	Comments	Commissioning Load Factor Year (%)
	No				No storage capacities needed	2021 60

## **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes

Specific Criteria Fulfilled Comments

## **Expected Gas Sourcing**

LNG ()

Current TYNDP : TYNDP 2020 - Annex A Page 247 of 773

	Benefits			
Main Driver	Regulation SoS			
Main Driver Explanation	In order to secure gas supplies to Latvia and other Baltic countries Inčukalns UGS shall be filled with sufficient volume of gas. Since at precent it can be done mainly by pipeline from Russia and limited amounts from Klaipeda LNG terminal it is important to create additional source of supply which due to geografic location only can be LNG import terminal. In order to deliver gas from LNG terminal to Incukalns UGS the connecting pipeline has to be built.			
Benefit Description	enefit Description This is the most cost efficient solution for the regional LNG terminal and connecting pipeline			
	Barriers			
Barrier Type	Description			
Political	There is no agreement of the Baltic Countries on the regional LNG terminal			
inancing	Availability of funds and associated conditions			
Market	Lack of market maturity			

CBCA		Financial Assistance		
Decision	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF	
Decision	but we do plan to submit it	Grants for studies	No	
Submissin Date	01/03/2020	Grants for studies amount	Mln EUR 0.0	
Decision Date		Grants for works	Yes	
Website		Grants for works amount	Mln EUR 13.0	
Countries Affected		Intention to apply for CEF	Yes, for work only	
Countries Net Cost Bearer		Other Financial Assistance	No	
Additional Comments		Comments		
		General Comments		

Current TYNDP : TYNDP 2020 - Annex A
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# Skulte LNG

LNG-N-912	Project	LNG Terminal	Non-FID
Update Date	20/09/2019		Non-Advanced
Description	The purpose of the project is to build cost effective LNG FRU solution which will have directly facilities providing considerable flexibility and low price spread with European gas hubs	linked to Latvia Incukalns unde	erground storage
PRJ Code - PRJ Name	PRJ-G-108 - LNG terminal in Latvia		

Capacity Increments Variant For Modelling							
Point		Operat	or	Year	From Gas System	To Gas System	Capacity
Skulte (LV)		AS Skul	te LNG Terminal	2023	LNG_Tk_LV	LV	150.00 GWh/d
Sponsors			General Information		NDP an	d PCI Information	
Full project		Promoter	AS Skulte LNG Terminal	<i>l</i> Part o	of NDP No	((6) others - please	comment below)
Nacionala gazes terminala biedriba (National Gas	56%	Operator	AS Skulte LNG Terminal	l NDP	Number		
Terminal Society)	3070	Host Country	Latvia	NDP	Release Date		
Arnfinn Unum	16%	Status	Plannea	/ NDP	Website		
Peter Ragauss	16%	Website	<u>Project's URL</u>	<u>Curre</u>	ently PCI		No
reter Rayauss	1076			Priori	ity Corridor(s)		BEMIP
SIA DIGAS	10%						

## Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		03/2015
Feasibility	03/2015	05/2016
FEED	09/2019	08/2020
Permitting	04/2020	06/2021
Supply Contracts		02/2023
FID		12/2020
Construction	07/2021	09/2023
Commissioning	2023	2023
Grant Obtention Date	30/03/2020	30/03/2020

Third-Party Access Regime					
Considered TPA Regime	Regulated				
Considered Tariff Regime	Regulated				
Applied for Exemption	No				
Exemption Granted	No				
Exemption in entry direction	100.00%				
Exemption in exit direction	100.00%				

	Technical Information (LNG)							
Regasification Facility	Reloading Ability Project Phase	Expected Increment (bcm/y)	Ship Size (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 LNG)	Comments	Commissioning Year	Load Factor (%)
FRU	Yes Pre feed	1.5	170,000	17.00	700,000	Reloading will be available	2023	30

## **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

Delays since last i mor	Dela	ys since	last TYNDP
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Delay Since Last TYNDP

**Delay Explanation** 

The project was delayed due to lack of political support. Current government is very supportive and we have proceeded with EIA process. By political support we mean government instruction to Latvenergo (state own electricity company) to sign offtake agreement for 0.3bcm annual consumption on ToP basis. EIA process is the key issue now as the pipeline is crossing 156 land properties.

Current TYNDP: TYNDP 2020 - Annex A Page 250 of 773

# **Expected Gas Sourcing**

LNG ()

	Benefits					
Main Driver	Market Demand					
Main Driver Explanation	Spot market, low cost LNG entry point, seasonal benefits with the use of Incukalns UGS					
Benefit Description	Low cost LNG terminal with direct link to UGS - provides felixibility of supply.					
	Barriers					
Barrier Type	Description					
Political	Project needs Latvenergo as the main offtaker for 0.3bcm. Annual ToP payment - 2.0mio EUR is very competetitive.					
Market	Lack of market maturity					
Regulatory	Lack of proper transposition of EU regulation					

	СВСА		Financial Assistance
Decision	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF
Decision	but we do plan to submit it	Grants for studies	No
Submissin Date	01/09/2020	Grants for studies amount	Mln EUR 0.0
Decision Date		Grants for works	No
Website		Grants for works amount	Mln EUR 0.0
Countries Affected	Estonia, Finland, Latvia, Lithuania	Intention to apply for CEF	Yes, for studies and works
Countries Net Cost Bearer	Estonia;#Finland;#Latvia	Other Financial Assistance	No
Additional Comments		Comments	
		General Comments	

Current TYNDP : TYNDP 2020 - Annex A Page 251 of 773

# Athos

ETR-N-432	Project	Energy Transition Related Project	Non-FID
Update Date	15/08/2019		Advanced
Description	Development of an open CO2 backbone and offshore storage in the North sea channel	el region for large industry	

		General Information		
7		Promoter	N.V. Nederlandse Gasunie	
		Operator	Gasunie Transport Services B.V.	
		Host Country	Netherlands	
		Status	Planned	
		Website		
Start Date	End Date			
	12/2018			
01/2019	06/2019			
01/2021	04/2021			
01/2020	04/2020			
	01/2021			
	10/2023			
10/2023	01/2026			
2026	2026			
	01/2019 01/2021 01/2020 10/2023	12/2018 01/2019 06/2019 01/2021 04/2021 01/2020 04/2020 01/2021 10/2023 10/2023 01/2026	Promoter Operator Host Country Status Website  Start Date 12/2018 01/2019 01/2021 01/2020 01/2021 10/2023 10/2023 01/2026	

PRJ-G-115 - CCS/U Netherlands

PRJ Code - PRJ Name

Current TYNDP : TYNDP 2020 - Annex A Page 253 of 773

## Porthos

ETR-A-430	Project	Energy Transition Related Project	Non-FID
Update Date	15/08/2019		Advanced
Description	Development of an open CO2 backbone in the Port of Rotterdam with a offsho	re (permanent) CO2 storage with total storage	capacity of ca 37 MT
PRJ Code - PRJ Name	PRJ-G-115 - CCS/U Netherlands		

**General Information** 

•				
	<i>y</i> :		Promoter	N.V. Nederlandse Gasunia
			Operator	Gasunie Transport Services B.V
			Host Country	Netherland
			Status	Planne
			Website	
Schedule	Start Date	End Date		
Pre-Feasibility		02/2018		
Feasibility	04/2018	04/2018		
FEED	04/2019	12/2020		
Permitting	01/2020	07/2021		
Supply Contracts		01/2020		
FID		12/2020		
Construction	10/2021	04/2023		
Commissioning	2023	2023		
Grant Obtention Date				

Sponsors



Current TYNDP : TYNDP 2020 - Annex A Page 255 of 773

# Biomethane: Reverse flow projects

ETR-N-624	Project	Energy Transition Related Project	Non-FID
Update Date	15/08/2019		Advanced
Description	The scattered production of renewable gas will take an increasing part in the backhaul facilities will allow the excess energy to be absorbed when supply enough the framework of the scenario of the Energy Transition law for which renewable producers connected to the distribution network would amount to about 1,3 backhaul installations and mutualised compressors –90% in D/T (Distribution Transmission infrastructures) – would be re-quired, i.e. a financial envelope of These network adaptations will enable to maximize the volume of biometham gas (10% of gas consumption in 2030)	xceeds local demand. vable gas injections would reach 22 TWh by 2028 00. Under these assumptions, it can be estimated n/Transmission) and 10% in T/T (Regional Transr f €435 million by 2030.	8, the number of d that around 37 mis-sion/Principal
PRJ Code - PRJ Name	PRJ-G-118 - Biomethane: reverse flow projets in France		

Operator	Year	From Gas System	To Gas System	Capacity
GRTgaz	2028	NPcFRg	FR	70.00 GWh/d
		Comment: potential †	for 22 TWh in 2028	}
		4,000	GRTgaz 2028 NPcFRg	

Sponsors	General Info	rmation
	Promoter	GRTgaz
	Operator	GRTgaz
	Host Country	France
	Status	Planned
	Website	Project's URL

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2028	2028
Grant Obtention		
Date		

Current TYNDP : TYNDP 2020 - Annex A Page 257 of 773

# West Grid Synergy

ETR-F-587	Project	Energy Transition Related Project	FID
Update Date	11/06/2020		Advanced
Description	The biomethane production is significantly increasing since 2016. In France, in the distribution and transmission gas system. However, in many cases, the integrate such production. Furthermore, decentralized production has significant maintenance, coordination with the stakeholders). In order to adapt the distribution has launched a demonstrator and a major industrial program.  3 gas utilities (GRTgaz, GRDF and SOREGIES) investigate this issue together. Morbihan Energies) through an operational demonstrator named West Grid of territories with important biomethane production projects and very	e injection capacity of the local distribution system icant impacts on the gas infrastructure operation ( istribution and transmission system to those struct with public actors (3 Departmental Offices for Ene	is not enough to (monitoring, tural changes, GRTgaz ergy : SIéML, SYDEV and
PRJ Code - PRJ Name	PRJ-G-118 - Biomethane: reverse flow projets in France		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Forecast Production France GRTgaz	GRTgaz	2019	NPcFRg	FR	0.40 GWh/d

Sponsors	Genera	I Information
	Promoter	GRTgaz
	Operator	GRTgaz
	Host Country	France
	Status	In Progress
	Website	<u>Project's URL</u>

## Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		01/2018
Feasibility	01/2018	01/2019
FEED	01/2019	01/2020
Permitting		
Supply Contracts		
FID		07/2018
Construction	08/2018	04/2019
Commissioning	2019	2019
Grant Obtention		
Date		

# Interconnection between the RO and the UA gas transmission systems

TRA-N-596	Project	Pipeline including CS	Non-FID
Update Date	19/09/2019		Advanced
Description	The project entails the achievement of the gas transmission infrastructure in the direction with Ukraine.	n Gheraesti - Siret in order to create	a new interconnection
PRJ Code - PRJ Name	PRJ-G-121 - Romania - Ukraine Gas Interconnection		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
C: + (DO) / (// + - // / / / / / / / / / / / / / / /	SNTGN Transgaz S.A.	2025	RO	UAe	58.10 GWh/d
Siret (RO) / Khotyn (UA)	SNTGN Transgaz S.A.	2025	UA	RO	87.10 GWh/d

Sponsors			General Information	NDP and PCI Information		
SNTGN Transgaz SA	100%	Promoter	SNTGN Transgaz SA		Yes (The Development Plan of the	
		Operator	SNTGN Transgaz S.A.	Part of NDP	National Gas Transmission System 2018	
		Host Country	Romania	NIDD Ni wala au	- 2027)	
		Status	Planned	NDP Number	7.9	
		Website		NDP Release Date	14/12/2018	
		vvebsite		NDP Website	NDP URL	
				Currently PCI	No	
				Priority Corridor(s)	NSIE	

Schedule	Start Date	End Date
Pre-Feasibility		11/2018
Feasibility	01/2019	06/2020
FEED	07/2020	12/2021
Permitting	07/2020	12/2021
Supply Contracts		
FID		12/2021
Construction	01/2022	12/2024
Commissioning	2025	2025
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor	Stations				
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Gheraesti - Siret		700	146	10	2025
	Total		146	10	

### **Fulfilled Criteria**

Specific Criteria Fulfilled

Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes

Specific Criteria Fulfilled Comments

### **Expected Gas Sourcing**

LNG (), Black Sea, EU Hubs

#### Benefits

Main Driver **Regulation SoS** 

Main Driver Explanation

Benefit Description

Decision

Website

Submissin Date

Countries Affected

Countries Net Cost Bearer

**Additional Comments** 

**Decision Date** 

No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not

### **Financial Assistance**

(3) No, we have not applied for CEF

No

Mln EUR 0.0

Grants for works No

Mln EUR 0.0 Grants for works amount

Intention to apply for CEF No decision yet taken Other Financial Assistance No

Comments

Applied for CEF

Grants for studies

Grants for studies amount

**General Comments** 

## Interconnector Romania - Ukraine

TRA-N-502	Project	Pipeline including CS	Non-FID
Update Date	15/06/2020		Advanced
Description	Building new pipeline between Ukraine and Romania in the region of Khotyn in order Ukraine and Romania.	to increase interconnectivity, market in	tegration and SoS of
PRJ Code - PRJ Name	PRJ-G-121 - Romania - Ukraine Gas Interconnection		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Siret (RO) / Khotyn (UA)	LLC Gas TSO of Ukraine	2025	RO	UAe	58.10 GWh/d
	LLC Gas TSO of Ukraine	2025	UA	RO	87.10 GWh/d

Sponsors		Gene	ral Information	NDP and PCI Information		
Romanian part SNTGN Transgaz SA	100%	Promoter Operator	LLC Gas TSO of Ukraine	Part of NDP	No ((4) there is no obligation at national level for such a project to be part of the	
Ukrainian part JSC "Ukrtransgaz"	Status	Ukraine Planned	NDP Number NDP Release Date	NDP)		
		Website		NDP Website Currently PCI Priority Corridor(s)	No	

## Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		12/2019
Feasibility	01/2020	12/2020
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2025	2025
Grant Obtention		
FID Construction Commissioning	2025	20

Regulated
Regulated
No
No
0.00%
0.00%

Pipelines and Compressor Station	ns				
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Ukrainian part		700	30		2025
	Total		30		

Evported	<b>Gas Sourcing</b>	
LXPECTEU	Gas Sourcing	4

## LNG ()

	Benefits	
Main Driver	Regulation SoS	
Main Driver Explanation	Ensuring additional SoS for the TSOs of Ukraine and Romania	
Benefit Description	- access to Black Sea offshore gas for UA and the EU markets; - access to PL LNG for Romania	
	Barriers	
Barrier Type	Description	
Regulatory	Lack of proper transposition of EU regulation	

Current TYNDP : TYNDP 2020 - Annex A Page 264 of 773

	CBCA	Financial Assistance			
Decision Submissin Date Decision Date Website Countries Affected Countries Net Cost Bearer Additional Comments	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not	Applied for CEF Grants for studies Grants for studies amount Grants for works Grants for works amount Intention to apply for CEF Other Financial Assistance Comments General Comments	(3) No, we have not applied for CEF No MIn EUR 0.0 MIn EUR 0.0 No decision yet taker No		

# **Compressor Station Kipi Increment**

TRA-N-1129	Project	Pipeline including CS	Non-FID			
Update Date	15/08/2019		Non-Advanced			
Description	This project represents the necessary increment for the Kipi compressor station (TRA-N-128) to reach the capacity needed to ensure the supply with gas of the Komotini-Thesprotia pipeline (TRA-N-014).					
PRJ Code - PRJ Name	PRJ-G-122 - Incremental capacity between Greece and Italy					

Capacity Increments Variant For Mo	odelling						
Point		Operat	or	Ye	ar From Gas Systen	To Gas System	Capacity
Kipi (TR) / Kipi (GR)		DESFA	S.A.	202	24 TRi	IB-GRk	275.20 GWh/d
Sponsors			General Information		NDP a	nd PCI Information	
DESFA S.A.	100%	Promoter	DESF	A S.A. p	art of NDP	Yes (Development F	Plan NNGS 2017-
		Operator	DESF		art of NDI		2026)
		Host Country	G	Greece N	IDP Number		2.2.1.2
		Status	Pla	anned N	IDP Release Date		21/02/2019
		Website	Project's	s URL N	IDP Website		NDP URL
					urrently PCI		No
				Р	riority Corridor(s)		SGC

Schedule	Start Date	End Date
Pre-Feasibility		07/2017
Feasibility	08/2017	07/2020
FEED	07/2020	03/2021
Permitting	12/2020	12/2021
Supply Contracts		01/2022
FID		01/2022
Construction	10/2022	12/2024
Commissioning	2024	2024
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Station	ns				
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
1				20	0
	Total			20	

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

### **Expected Gas Sourcing**

Caspian Region, Russia

		Benefits	
Main Driver	Market Demand		
Main Driver Explanation	1		
Benefit Description			

Barriers

**Barrier Type** Description

Lack of market support Market

	CBCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF	No decision yet taken			
Other Financial Assistance	No			
Comments				
General Comments				

# Komotini-Thesprotia pipeline

TRA-N-14	Project	Pipeline including CS	Non-FID			
Update Date	15/08/2019		Non-Advanced			
Description	High pressure pipeline from Komotini to Thesprotia area near Ionian coast along with 3 compressor stations and 1 operation & maintenance centre.					
PRJ Code - PRJ Name	PRJ-G-122 - Incremental capacity between Greece and Italy					

Point			Operato	or	Year	From Gas System	To Gas System	Capacity
IP Greece - Italy			DESFA S	S.A.	2025	GR	IB-ITs	357.70 GWh/d
Sponsors				General Information		NDP and	I PCI Information	
DESFA S.A.		100%	Promoter	DESFA S.A.	Part of	f NDP	es (Development F	
	7		Operator	DESFA S.A.	1 41 ( 01	1101		2026)
			Host Country	Greece	, NDP N	lumber		2.2.1.5
			Status	Planned	NDP R	Release Date		22/02/2019
			Website	<u>Project's URL</u>	NDP V	Vebsite		NDP URL
					Curren	ntly PCI		No
					Priority	y Corridor(s)		SGC
Schedule	Start Date	End Date				Third-Par	ty Access Regime	
Pre-Feasibility		10/2018			Consid	lered TPA Regime		Regulated
Feasibility	10/2018	03/2020			Consid	lered Tariff Regime		Regulated
FEED	06/2020	12/2020			Applie	d for Exemption		No
Permitting	12/2020	12/2021			Exemp	tion Granted		Not Relevant
Supply Contracts		03/2022						
FID		01/2022			Exemp	tion in entry directio	on	0.00%
Construction	05/2022	07/2025			Exemp	tion in exit direction		0.00%
	2025	2025						
Commissioning	2025	2025						

<b>Pipelines and Compressor</b>	Stations				
Pipeline Section	Pinalina Comment	Diameter	Length	Compressor Power	Comissioning
Pipeline Section	Pipeline Comment	(mm)	(km)	(MW)	Year
Komotini-Thesprotia		1,067	620	126	2025
7	Total		620	126	

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

#### Delays since last TYNDP

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	on
Benefit Description	The project, together with Greece-Italy interconnector project TRA-N-1246 (sponsored by SNAM), will establish one more energy corridor between Eastern 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

Intergovernmental Agreement between Greece and Italy for the implementation of the Interconnection Greece Italy.

Agreement Description

The Agreement was ratified by the Greek Parliament in 2006 (Law 3441/Government Gazette A' 39/27.02.2006).

Yes

04/11/2005

Is Signed Agreement Signature Date

#### **CBCA**

Decision No, we have not submitted an investment request yet, and we do not plan to submit it

Submissin Date

**Decision Date** 

Website

Countries Affected

Countries Net Cost Bearer

**Additional Comments** 

ΗI	n	a١	ne	Clá	al	A	SSI	S	ta	n	ce	

(1) Yes, we have applied for CEF and we have received a decision

Yes

No

Grants for studies

Grants for studies amount Mln EUR 0.3

Grants for works

Applied for CEF

Mln EUR 0.0

Grants for works amount
Intention to apply for CEF

Other Financial Assistance

No

Financial support for studies was granted from Trans
Comments European Energy Networks, (TEN) in 2005 (Decision 2004

- G114/04 - TREN/05/TEN E - S07.51845).

**General Comments** 

# **Greece - Italy interconnection**

TRA-N-1246	Project	Pipeline including CS	Non-FID
Update Date	17/09/2020		Non-Advanced
Description	The project is the result of the incremental capacity cycle started in 2017 and consists offshore infrastructure.	s of the interconnection from Greece to	Italy through an
PRJ Code - PRJ Name	PRJ-G-122 - Incremental capacity between Greece and Italy		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
IP Greece - Italy	Snam Rete Gas S.p.A.	2025	GR	IB-ITs	357.70 GWh/d
Sponsors	General Information		NDP and	PCI Information	

Sponsors	Ge	eneral Information	NDP and PCI Information		
	Promoter	Snam Rete Gas S.p.A.		Yes (Ten-year development plan of the	
	Operator	Snam Rete Gas S.p.A.	Part of NDP	natural gas transmission network 2018-	
	Host Country	Italy	NDDN	2027)	
	Status	Planned	NDP Number	not applicable	
	Website	Project's URL	NDP Release Date	30/11/2018	
			NDP Website	<u>NDP URL</u>	
			Currently PCI	No	
			Priority Corridor(s)		

## Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		07/2017
Feasibility	08/2017	07/2020
FEED	07/2020	02/2023
Permitting	07/2020	04/2024
Supply Contracts		04/2024
FID		07/2019
Construction	11/2022	07/2025
Commissioning	2025	2025
Grant Obtention Date		

3	
Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
All the project	The specific information are still to be defined at this stage				2025
	Total				

	Benefits				
Main Driver	Market Demand				
Main Driver Explanati	on				
Benefit Description					

	СВСА	Finan	icial Assistance
Decision	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF
Decision	and we do not plan to submit it	Grants for studies	No
Submissin Date		Grants for studies amount	Mln EUR 0.0
Decision Date		Grants for works	No
Website		Grants for works amount	Mln EUR 0.0
Countries Affected		Intention to apply for CEF	No decision yet taken
Countries Net Cost Bearer		Other Financial Assistance	No
Additional Comments		Comments	
		General Comments	

# Biomethane plants development

ETR-F-523	Project	Energy Transition Related Project	FID
Update Date	21/09/2020		Advanced
Description	The project consist in the realization of >40 MW biomethane plants all ove country	r Italy and it is an important contribution to energy	transition of the
PRJ Code - PRJ Name	PRJ-G-127 - Italian biomethane production		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
IT - Indigenous Production	Snam4Environment	2023	NPcIT	IT	0.70 GWh/d

Sponsors			General Information
Snam4environment	100%	Promoter	Snam4environment
		Operator	Snam4Environment
		Host Country	Italy
		Status	In Progress
		Website	<u>Project's URL</u>

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		11/2018
Construction		
Commissioning	2023	2023
Grant Obtention Date		

	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
All the project	The project consists in the realization of 5 plants with a potention about 60 kScm/day	al of	2022

# Project to facilitate biomethane production plants inteconnection

ETR-N-617	Project	Energy Transition Related Project	Non-FID		
Update Date	17/09/2020		Advanced		
Description	The project consists of developing all the facilities needed to guarantee better conditions to make possible new biomethane plants to be connected to the gas network				
PRJ Code - PRJ Name	PRJ-G-127 - Italian biomethane production				

Sponsors			General Information
Snam Rete Gas S.p.A.	100%	Promoter	Snam Rete Gas
		Operator	Snam Rete Gas S.p.A.
		Host Country	Italy
		Status	Planned
		Website	

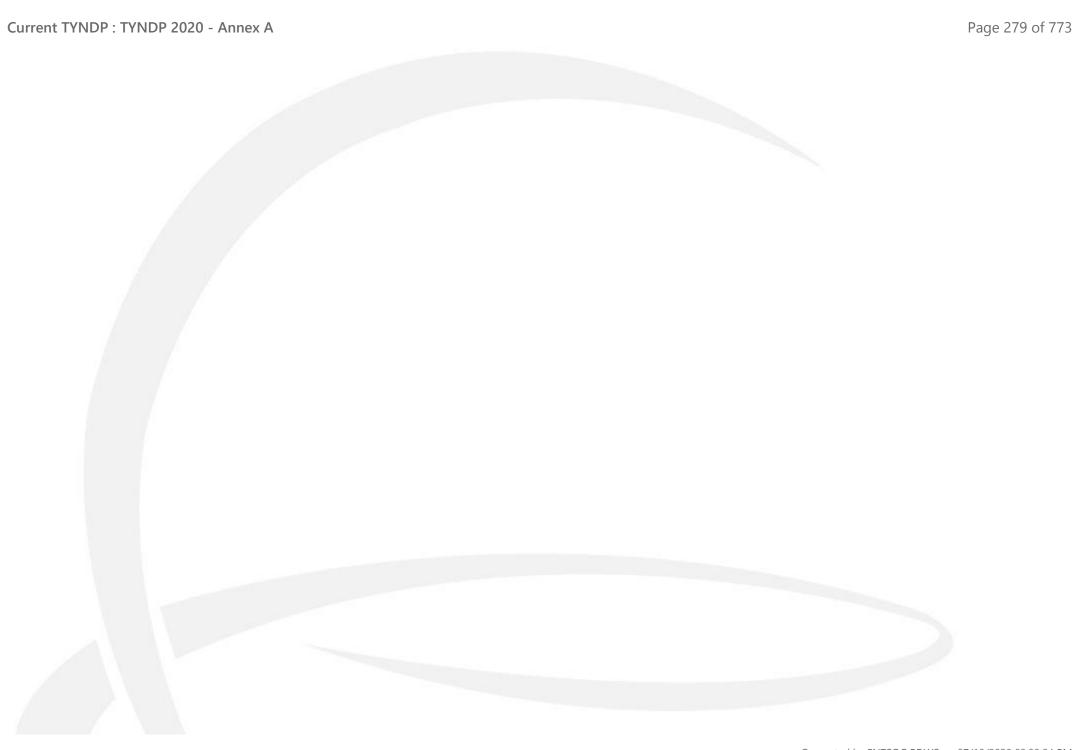
Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2022	2022
Grant Obtention		
Date		

# Measures for achieving hydrogen blending readiness of the transmission syst

ETR-N-916	Project	Energy Transition Related Project	Non-FID			
Update Date	11/06/2020		Advanced			
Description	Achievement of hydrogen blending readiness in metering and leakage detection is part of a package of projects that will enable hydrogen transmission within the natural gas transmission system of Slovakia. It's focus is on raising protection of metering and leakage detection equipment against negative effects of hydrogen.					
PRJ Code - PRJ Name	PRJ-G-132 - Eustream ETR projects					

Sponsors			General Information	
eustream, a.s.	100%	Promoter	eustream	ı, a.s.
		Operator	eustream	ı, a.s.
		Host Country	Slov	⁄akia
		Status	Plan	nned
		Website		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED	01/2022	06/2022
Permitting	07/2022	03/2023
Supply Contracts		06/2023
FID		12/2022
Construction	07/2023	12/2024
Commissioning	2024	2024
Grant Obtention Date		



# Modification of NP23 MW turboset to a hydrogen-ready low-emissions at CS04

ETR-N-913	Project	Energy Transition Related Project	Non-FID		
Update Date	11/06/2020		Advanced		
Description	Modification of the NP23MW turbo-set to a hydrogen-ready low-emissions system is a part of a package of projects that will enable hydrogen transmission within the natural gas transmission system of Slovakia. The low-emissions system will cause a decrease of gaseous pollutants emitted from the turbo-set in order to comply with stricter environmental standards.				
PRJ Code - PRJ Name	PRJ-G-132 - Eustream ETR projects				

Sponsors			General Information
eustream, a.s.	100%	Promoter	eustream, a.s.
		Operator	eustream, a.s.
		Host Country	Slovakia
		Status	Plannea
		Website	

Schedule	Start Date	End Date
Pre-Feasibility		12/2019
Feasibility	01/2020	12/2020
FEED	05/2021	09/2021
Permitting	07/2021	03/2022
Supply Contracts		12/2022
FID		12/2021
Construction	01/2023	12/2023
Commissioning	2023	2023
Grant Obtention Date		

	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissi ning Yea
Basic Variant	Modification of compressor power output 23 MW		2023

# Hydrogen import via Oude

ETR-N-904	Project	Energy Transition Related Project	Non-FID		
Update Date	15/06/2020		Advanced		
Description	This project is the German part of a hydrogen interconnection point between Germany and the Netherlands as planned by the german national development plan.				
PRJ Code - PRJ Name	PRJ-G-139 - Hydrogen interconnection Netherland Germany				

**General Information** 

			Promoter	Gasunie Deutschland Transport Services GmbH	
			Operator	Gasunie Deutschland Transport Services GmbH	
			Host Country	Germany	
			Status	Planned	
			Website	<u>Project's URL</u>	
Schedule	Start Date	End Date			
Pre-Feasibility		07/2020			
Feasibility					
FEED					
Permitting					
Supply Contracts					
FID					
Construction					
Commissioning	2030	2030			
Grant Obtention Date					

Sponsors

Technical Information (ETR)				
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year	
Hydrogen IP	Creating a hydrogen interconnection between the Netherlands and Germany at Oude Statenzijl (NL) / Bunde (DE) with an capacity of 48 GWh/d.		2030	

# Hydrogen export/import Oude Statenzijl

ETR-N-956	Project Energy Transition Project	Related Non-FID
Update Date	14/07/2020	Advanced
Description	This project is the Dutch part of a hydrogen interconnection point between Germany and the Netherland.	

PRJ Code - PRJ Name PRJ-G-139 - Hydrogen interconnection Netherland Germany

Sponsors			G	ieneral Information
A	7		Promoter	Gasunie Transport Services B.V
			Operator	Gasunie Transport Services B.V
			Host Country	Netherland.
			Status	Planned
			Website	
Schedule	Start Date	End Date		
Pre-Feasibility	7	01/2020		
Feasibility	07/2020	07/2020		
FEED				
Permitting				
Supply Contracts				
FID				
Construction				
Commissioning	2030	2030		
Grant Obtention Date				

Current TYNDP : TYNDP 2020 - Annex A		Pag	e 285 of 773
	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
Hydrogen IP	Creating a hydrogen interconnection between the Netherlands and Germany at Oude Statenzijl with a capacity of 48 GWh/d		2030

Current TYNDP : TYNDP 2020 - Annex A Page 286 of 773

# IAEF - Vlora ccgt

TRA-A-1303	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Advanced
Description	The TAP Albania Exit Point to Vlora CCGT pipeline is the first Priority Project as per the transmission pipeline that will as per your PID:  1. Creates the Gas Market in Albania 2. Enabler project 3. Connect an Anchor client 4. Support intermitent renewables 5. Provide the basis for PiP2 and PiP3 which are of European Relevance 6. The work has already started on the FEED 7. International tender launched. Results on Feb. 28 2019	approved Gas Master Plan for Albania	a. It is a 40km
PRJ Code - PRJ Name	-		

Point	Operator	,	Year From Gas S	System 1	Γο Gas System	Capacity
Fier (AL) / (GR)	Albgaz Sha	a 2	2020 AL/TA	\P	AL	0.01 GWh/d
Sponsors		General Information	N	NDP and P	CI Information	
	Promoter	Albgaz Sha	Part of NDP	Yes (Plar	ni 10 Vjecar i Zhv	
	Operator	Albgaz Sha				TYNDP))
	Host Country	Albania	NDP Number			PiP1
	Status	Planned	NDP Release Date			15/02/2018
	Website	Project's URL	NDP Website			NDP URL
		•	Currently PCI			No
			Priority Corridor(s)			SGC

**Capacity Increments Variant For Modelling** 

#### Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		02/2017
Feasibility	03/2017	02/2018
FEED	09/2018	09/2018
Permitting	11/2018	03/2019
Supply Contracts		06/2019
FID		09/2019
Construction	11/2019	11/2020
Commissioning	2020	2020
Grant Obtention Date	28/01/2016	28/01/2016

Third-Party Access Regime				
Considered TPA Regime	Regulated			
Considered Tariff Regime	Regulated			
Applied for Exemption	No			
Exemption Granted	No			
Exemption in entry direction	10.00%			
Exemption in exit direction	10.00%			

Pipelines and Compress	sor Stations				
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
IAEF - Vlora CCGT		400	40		2020
	Total		40		

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

### **Delays since last TYNDP**

Delay Since Last TYNDP

**Delay Explanation** 

## **Expected Gas Sourcing**

Caspian Region, Potential for new indigenous gas discoveries by Shell.

Current TYNDP : TYNDP 2020 - Annex A Page 288 of 773

Benefits				
Main Driver	Market Demand			
Main Driver Explanation	The TAP Albania exit point to Vlora CCGT pipeline is the first Priority Project as per the approved Gas Master Plan for Albania. It is a 40km transmission pipeline that will as per your PID: 1. Create the Gas Market in Albania 2. Connect an Anchor client 3. Support intermitent renewables 4. Provide the basis for PiP2 and PiP3 which are of European Relevance. 5. The work has already started on the FEED			
Benefit Description	The TAP Albania exit point to Vlora CCGT pipeline is the first Priority Project as per the approved Gas Master Plan for Albania. It is a 40km transmission pipeline that will as per your PID: 1. Create the Gas Market in Albania 2. Connect an Anchor client 3. Support intermitent renewables 4. Provide the basis for PiP2 and PiP3 which are of European Relevance. 5. The work has already started on the FEED			
	Barriers			

		Barrier
Barrier Type	Description	

Financing Availability of funds and associated conditions

Regulatory

CCGT cooling developments.

CBCA		
Decision	No, we have submitted an investment request, but not received a decision yet;#No, we have not submitted an investment request yet, but we do plan to submit it	
Submissin Date	21/03/2018	
Decision Date		
Website	<u>CBCA URL</u>	
Countries Affected	Albania	
Countries Net Cost Bearer	Albania	
Additional Comments	We expect a positive decision any day by the National Regulatory Entity (ERE).	

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF	No decision yet taken			
Other Financial Assistance	No			
Comments				
General Comments				

Current TYNDP : TYNDP 2020 - Annex A Page 289 of 773

## GCA Mosonmagyaróvár

TRA-N-423 Project Pipeline including CS Non-FID
Update Date 22/11/2019 Advanced

Current planning based on market indications. Potential connection to new gas sources from e.g. the Black Sea. Project will enable reverse flow.

Description

PRJ Code - PRJ Name

Capacity Increments Va	ariant For Modelling					
	Variant : Base	GCA 2015/05 Entry Mosonmagyarovar				
Point		Operator	Year	From Gas System	To Gas System	Capacity
Mosonmagyarovar		Gas Connect Austria GmbH	2024	HU	AT	153.10 GWh/d
Capacity Increments Va	ariant(s) For Information Only					
	Variant : Plus	GCA 2017/01 Entry Mosonmagyaróvár Plus				
Point		Operator	Year	From Gas System	To Gas System	Capacity
Mosonmagyarovar		Gas Connect Austria GmbH	2024	HU	AT	266.90 GWh/d

Sponsors	General Information		NDP and PCI Information	
	Promoter	GAS CONNECT AUSTRIA GmbH	Part of NDP	Yes (NDP 2019 - 2028)
	Operator	Gas Connect Austria GmbH	NDP Number	GCA 2015/05
	Host Country	Austria	NDP Release Date	11/02/2019
	Status	Planned	NDP Website	NDP URL
	Website	<u>Project's URL</u>	Currently PCI	No
			Priority Corridor(s)	NSIE

Current	<b>TYNDP</b>	: TYNDP	2020 -	Annex A
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Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting	05/2021	10/2021
Supply Contracts		02/2022
FID		08/2021
Construction	02/2022	07/2024
Commissioning	2024	2024
Grant Obtention Date		

Third-Party Access Regime			
Considered TPA Regime	Regulated		
Considered Tariff Regime	Regulated		
Applied for Exemption	No		
Exemption Granted	No		
Exemption in entry direction	0.00%		
Exemption in exit direction	0.00%		

Pipelines and Compressor S	tations					
	Base	GCA 2015/05 Entry Mosonmagyarovar				
Pipeline Section		Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
HAG MS, Baumgarten		No pipieline foressen Scope of investment: - Modification HAG MS: Filter separator, metering routes, regulation, piping - New HAG CS (electric driven) - Extension of the Baumgarten node				0
	To	tal				
Pipelines and Compressor S	itations - Alternative Variant					
	Plus	GCA 2017/01 Entry Mosonmagyaróvár Plus				
Pipeline Section		Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Loop of the HAG pipeline		Further scope of investment: - New HAG CS (electric driven) - Extension of the Baumgarten node including construction of new metering routes	800	46		0
	To	tal		46		
		Fulfilled Colonia				

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

#### **Delays since last TYNDP**

Delay Since Last TYNDP

**Delay Explanation** 

The project proposal for HUAT has been submitted to the involved NRA's for joint approval. Due to the lack of a joint approval by both NRAs, ACER got involved. According to ACER decision No 05/2019 of 09 April 2019 the Agency approved to carry out a binding phase (auction) for selling of incremental capacity.

Current TYNDP : TYNDP 2020 - Annex A Page 292 of 773

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	Strenthening the establishment of a potential diversification of sources e.g. Black Sea Gas.			

CBCA			
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it		
Submissin Date			
Decision Date			
Website			
Countries Affected			
Countries Net Cost Bearer			
Additional Comments			

Financial Assistance			
Applied for CEF	(3) No, we have not applied for CEF		
Grants for studies	No		
Grants for studies amount	Mln EUR 0.0		
Grants for works	No		
Grants for works amount	Mln EUR 0.0		
Intention to apply for CEF	No, we do not plan to apply		
Other Financial Assistance	No		
Comments			
General Comments			

Current TYNDP : TYNDP 2020 - Annex A Page 293 of 773

## P2G4A

ETR-N-896	Project	Energy Transition Related Project	Non-FID
Update Date	11/08/2020		Advanced
Description	The underlying (sandbox) project represents a Power-to-Gas project at a stra electricty into hydrogen and to inject it into the existing gas grid. The expect	· ·	
PRJ Code - PRJ Name			

Sponsors	Gen	eral Information
	Promoter	Gas Connect Austria GmbH
	Operator	Gas Connect Austria GmbH
	Host Country	Austria
	Status	Planned
	Website	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning		
Grant Obtention Date		

Current TYNDP : TYNDP 2020 - Annex A Page 294 of 773

	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
	Due to the currently missing national and European reframework, a provision of concrete and reliable technical appears difficult. However, in order to comply with the criteria please find an indication below, which is based condition:	ical parameters ne technical	
Phase	<ul> <li>The current assumption is based on the operation of excess electricity is gener-ated from wind energy.</li> <li>The excess electricity is generated by a wind turbine 1800 hours per year.</li> <li>In this calculation, the plant is operated grid-support synergies with PV plants and other excess energy proof factored in.</li> <li>Estimates are currently difficult because the legal fra (national and European) is still lacking.</li> </ul>	operation of tive. Hence, ducers are not	
	According to the aforementioned conditions a potention production in the amount of approx. 50.5 GWh/a has		

Current TYNDP : TYNDP 2020 - Annex A Page 295 of 773

## TAG Reverse Flow

TRA-F-954	Project	Pipeline including CS	FID
Update Date	18/11/2019		Advanced
Description	The objective of the planning project TAG Reverse Flow is to create a reverse flow existing entry DZK capacity to entry FZK capacity at the IP Arnoldstein/Tarvisio an Ceršak/Murfeld from the Slovenian to the Austrian gas transportation system. This Italian and Slovenian gas system to the Austrian Virtual Trading Point and to improsupply routes and sources of supply. By enabling additional possibilities for physical directions, this project is of strategic interest for the Austrian, Italian and Slovenian	d additionally by allowing potential entry F s project would grant access under all conc rove local security of supply and liquidity th cal reverse flow to be offered in the south-	ZK capacity at the IP litions from and between rough diversification of
PRJ Code - PRJ Name			

Point	Operator	Year	From Gas System	To Gas System	Capacity
	TAG GmbH	2020	IB-ITe	AT	0.00 GWh/d
Tarvisio (IT) / Arnoldstein (AT)	Comment: The implementation of Eggendorf compressor stations a will guarantee physical trans reverse flow along the TAG-syst kWh/h (1,000,000 Nm³/h, (0°C); GC the Austrian side and supports at 11,19 kWh/Nm³/h (0°C)] at the system of Gas Connect Austria. The entry point towards Italy or from the	nd all necessary mode port of at least 17,90 em up to the CS stat V 11,19 kWh/Nm³/h the same time 6,714 Murfeld entry point project will also end	difications to the static 04,000 kWh/h (1,600,0 tion Baumgarten, i.e. of 1 (0°C)] at the Arnolds 1,000 kWh/h [600,000 of the interconnected able physical operation point towards Sloveni	on control systems, 200 Nm³/h, 0°C) in at least 11,190,000 tein entry point on Nm³/h (0°C); GCV gas transportation on from the Murfeld	

irrent TYNDP : TYNDP 2020 - Annex A	4				Page 296 of 7/3
Sponsors		G	eneral Information	NDF	and PCI Information
Trans Austria Gasleitung GmbH	100%	Promoter Operator Host Country Status Website	Trans Austria Gasleitung GmbH TAG GmbH Austria Planned	NDP Number NDP Release Date NDP Website	Yes (Coordinated Network Development Plan 2018-2027) TAG 2016-01 19/01/2018 <u>NDP URL</u>
Schedule Start Date	End Date			Currently PCI Priority Corridor(s)  Third	No d-Party Access Regime
Pre-Feasibility				Considered TPA Regin	me Regulated
Feasibility				Considered Tariff Regi	ime Regulated
FEED				Applied for Exemption	n No
Permitting Supply Contracts				Exemption Granted	Not Relevant
FID	09/2016			Exemption in entry dir	rection 0.00%
Construction				Exemption in exit dire	ction 0.00%

Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
CS Eggendorf/Weitendorf	The project foresees the creation of connection lines between the outlet and the inlet in two compression stations enabling compressed reverse flow. No				2020
	additional compressor power are foreseen; The length of the conjnection pipes are below 1 km.				

Commissioning

Grant Obtention

Date

2020

2020

Current TYNDP : TYNDP 2020 - Annex A Page 297 of 773

## Delays since last TYNDP

Delay Since Last TYNDP

Delay Explanation Internal re-planning due to external constraints

Benefits					
Main Driver	Others				
Main Driver Explanation	The planning project is 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 Murfeld. As a consequence, TAG GmbH also assesses an upgrade of existing entry DZK capacity to entry FZK capacity at the IP Arnoldstein.				
Benefit Description	This project would grant access under all conditions from and between Italian and Slovenian gas system to the Austrian Virtual Trading Point and to improve local security of supply and liquidity through diversification of supply routes and sources of supply. By enabling additional possibilities for physical reverse flow to be offered in the south-north and south-east directions, this project is of strategic interest for the Austrian, Italian and Slovenian market area and the NSI East region.				

	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit i
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance						
Applied for CEF	(3) No, we have not applied for CEF					
Grants for studies	No					
Grants for studies amount	Mln EUR 0.0					
Grants for works	No					
Grants for works amount	Mln EUR 0.0					
Intention to apply for CEF	No, we do not plan to apply					
Other Financial Assistance	No					
Comments						
General Comments						

Current TYNDP : TYNDP 2020 - Annex A Page 298 of 773

# South Caucasus Pipeline Future Expansion (SCPFX)

TRA-N-1138	Project	Pipeline including CS	Non-FID
Update Date	18/10/2019		Advanced
Description	SCP started gas deliveries to Georgia and Turkey in 2006. Current capacity: 7.4 bcma, I SCPX objective (being a part of the Southern Gas Corridor) to expand the existing SCP (+16bcma (plateau annual average) delivered to the Georgia-Turkey border. This is to parallel with the existing SCP. The total length of the line loop is approximately 489km SCPX/TANAP interconnection at the Georgia-Turkey border). In Georgia two new inter and CSG2). SCPFX is the next phase of further expansion, which will also be a part of S to increase transported volumes of natural gas to EU markets up to additional 5 bcma	gas transportation system capacity from be accomplished by building a new 48" (424km in Azerbaijan, 63km in Georgia mediate compressor stations have been CP gas transportation system, and which	pipeline loop in and 2km for the a constructed (CSG1
PRJ Code - PRJ Name			

Capacity Increments Variant For Modelling							
Point		Operator Y		Year	From Gas System	To Gas System	Capacity
Türkgözü		SOCAR Midstream Operations 20		2024	GE/SCP	TR/TNP	150.70 GWh/d
Sponsors			General Information		NDP and	I PCI Information	
ВР	28%	Promoter	SOCAR Midstream Operations		NDP No	((5) the country is	not EU member)
TPAO	19%		LLC	NDFN	umber		
	1370	Operator	SOCAR Midstream Operations	NDP R	elease Date		
SOCAR affiliates	16%	Host Country	Azerbaijan	NDP W	/ebsite		
Petronas	15%	Status	Plannea	Curren	tly PCI		Yes (7.1.1 (2020))
Lukoil	10%	Website	<u>Project's URL</u>	- Priority	Corridor(s)		
NICO	10%						

## Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		01/2020
Feasibility	01/2020	07/2020
FEED	07/2020	09/2021
Permitting	07/2020	09/2021
Supply Contracts		09/2021
FID		12/2013
Construction	03/2022	03/2024
Commissioning	2024	2024
Grant Obtention Date	01/01/2022	01/01/2022

Third-Party Access Regime	
Considered TPA Regime	Negotiated
Considered Tariff Regime	Negotiated
Applied for Exemption	Not Relevant
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

<b>Pipelines and Compressor Stations</b>					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
South Caucasus Pipeline Future Exp.	SCPFX consists of three loops (29km, 43km and 21km) to be built in Georgia and one compressor station with 79.5 MW to be built in Azerbaijanian section.	1,219	93	80	2024
	Total		93	80	
	Fulfilled Criteria				
Specific Criteria Fulfilled	Competition, inter alia through diversification of supply sources, supplying counterparts appropriate connections and diversification of supply sources, supplying counterparts a emissions, supporting intermittent renewable generation and enhancing deployment of	nd routes,	Sustainab		
Specific Criteria Fulfilled Comments	SCPFX is an integral part of the Sothern Gas Corridor value chain, which connects huge with giant market for natural gas in the EU, in particular in the East and South-East. The Companies, have been contributing their technical experience and resources as well as i has a significant political support of involved governments.	consortium	n of share	holders, mostly Inter	national Oil

## Delays since last TYNDP

Delay Since Last TYNDP 6 months

Delay Explanation

_			
- FXI	nected	(aas S	ourcing
^	Beeteu	<b>-</b> 045 5	our cirrig

## Caspian Region

	belletits
Main Driver	Market Demand
	The South Caucasus Pipeline (SCP) currently transports 7.46 bcma from the Shah Deniz Gas Field in the Caspian Sea via Azerbaijan and Georgia to Turkey, where it connects to the Turkish domestic gas network. The transportation of the additional gas quantities through Georgia and Azerbaijan is currently
Main Driver Explanation	being realized through an extension of the South Caucasus Pipeline (SCPX) in Azer-baijan and Georgia and through the new Trans Anatolian Pipeline (TANAP) in Turkey. The further development of the Absheron Gas Field in the Caspian will create the need to transport an additional capacity of + 5 bcma. This expansion of the SCPX system is known under the name SCPFX (future expansion).

## Benefit Description

	Barriers Control of the Control of t
Barrier Type	Description
	Each of customers for Azerbaijani gas has the demand of certain volumes. SCP System by itself (within Azerbaijan, Georgia and up to the Turkish border) has enough gas for buyers along its route. It is the setting of the Southern Gas Corridor with new customers in Turkey, EU that requires expansions of SCP.
Political	Majors buyers are far. Many local requirements and national interests should be considered en route for SCP/Shah Deniz to be profitable. Competitive pipeline route from other regions should also be taken into account. Therefore, the SGC value chain will need further political support from governments and other stakeholders, which will eventually safeguard investments and mitigate risks.
Others	Market uncertainty

	Intergovernmental Agreements		
Agreement	Agreement Description	Is Signed	Agreement Signature Date
Azerbaijan-Turkey Intergovernmental Agreement		No	12/03/2001
Azerbaijan-Georgia Intergovernmental Agreement		Yes	29/09/2001

	CBCA
Decision	No, we have not submitted an investment request yet, but we do plan to submit it
Submissin Date	22/01/2020
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial	Assistance
Applied for CEF	(3) No, we have not applied for CEF
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	Yes, for studies and works
Other Financial Assistance	No
Comments	
General Comments	

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# Antwerp@C

ETR-N-401	Project	Energy Transition Related Project	Non-FID
Update Date	24/06/2020		Advanced
Description	The climate target of getting Belgian CO2 emissions 35% lower by 2030 is a form infrastructure operator Fluxys believe strongly that carbon capture, storage and change. They are therefore teaming up to take further practical steps that will he After a first opportunity analysis, both project partners have decided to perform infrastructure connecting the Antwerp port region to storage sites abroad and us being investigated. If the results of the feasibility study are positive then the aim	reuse by industry is an important weapon in the elp give shape to the energy transition.  a feasibility study for open access CO2 transpusage sites in the region. Both transport by pipe	ne fight against climate port and storage
PRJ Code - PRJ Name	_		

Promoter  Operator  Host Country	Fluxys and Antwerp Port Authority
Host Country	Fluxys and Port of Antwerp
nost country	Belgium
Status	Plannea
Website	<u>Project's URL</u>

Schedule	Start Date	End Date
Pre-Feasibility		03/2019
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2026	2026
Grant Obtention		
Date		

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## **Carbon Connect Delta**

ETR-N-929	Project	Energy Transition Related Project	Non-FID
Update Date	24/06/2020		Advanced
Description	Capturing CO2 then reusing it or storing it underground is one way to meet clir border consortium of companies comprising Fluxys is taking the first step towar Sea Port, the Belgian-Dutch area covering the ports of Ghent, Terneuzen & Vliss Carbon Capture & Utilisation/Storage (CCUS) may make it possible to cut CO2 and the other members of the consortium have launched the Carbon Connect CCUS.  The consortium expects to complete its feasibility study in late 2020 with the fir doing, Carbon Connect Delta would make a major contribution towards meeting European Green Deal.	rds using this approach to significantly reduce singen. emissions in the North Sea Port area by 30% booleta project, which will initially set out to examinal goal to capture up to 6.5 million tonnes a year	y 2030. Hence, Fluxys nine the feasibility of ear by 2030. In so
PRJ Code - PRJ Name	-		

Sponsors	Gene	eral Information
	Promoter	Smart Delta Resources
	Operator	to be decided
	Host Country	Belgium
	Status	In Progress
	Website	

Schedule	Start Date	End Date
Pre-Feasibility		06/2020
Feasibility	06/2020	04/2021
FEED	04/2021	04/2022
Permitting	04/2021	04/2022
Supply Contracts		
FID		04/2022
Construction	04/2022	01/2025
Commissioning	2025	2025
Grant Obtention		

Current TYNDP : TYNDP 2020 - Annex A Page 306 of 773

# **H2-Import Coalition**

ETR-N-938	Project	Energy Transition Related Project	Non-FID
Update Date	24/06/2020		Advanced
Description	Hydrogen has an important role to play in the mix of solutions to achieve CO2 emi Fluxys, Port of Antwerp, Port of Zeebrugge and WaterstofNet have launched a joint chain, which will serve as a basis to coordinate concrete projects. Crucial to the viability of a hydrogen economy is the generation of sufficient renew energy will likely not cover the entire energy demand in Belgium, and so part of the economic solutions for the import, transport and storage of hydrogen require spec players and public stakeholders have brought their expertise together to assess the	t study to investigate the entire hydrogen in vable electricity for the production of hydrogen e necessary renewable energy must be imposific expertise. This is why the abovemention	gen. Wind and solar orted. Efficient and
PRJ Code - PRJ Name	-		

Sponsors	Ge	eneral Information
	Promoter	Deme, Engie, Exmar, Fluxys, Port of Antwerp, Port of Zeebrugge, WaterstofNet
	Operator	to be decided
	Host Country	Belgium
	Status	In Progress
	Website	

Schedule	Start Date	End Date
Pre-Feasibility		10/2020
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2020	2020
Grant Obtention Date		

Current TYNDP : TYNDP 2020 - Annex A Page 308 of 773

# HyOffWind Zeebrugge

ETR-N-300	Project	Energy Transition Related Project	Non-FID
Update Date	08/09/2020		Advanced
	Eoly, part of Colruyt Group, Fluxys and Parkwind have set up a collaboration to ambition is to build an industrial-scale power-to-gas installation that converts stored in the existing natural gas infrastructure.		•
Description	With the project, Eoly, Parkwind and Fluxys are taking a new step towards solur installation will be more closely examined. Unlike demonstration projects elsew Belgium one of the first industrial-scale power-to-gas facilities. The aim is to be electricity into green hydrogen which can be marketed as carbon-free fuel or form	where in Europe, Eoly, Parkwind and Fluxys envisuild a power-to-gas installation that can conver	sage to realise in
PRJ Code - PRJ Name	-		

Sponsors	Gen	eral Information
	Promoter	Fluxys, Eoly, Parkwind
	Operator	Eoly & Parkwind
	Host Country	Belgium
	Status	Planned
	Website	<u>Project's URL</u>

## Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2022	2022
Grant Obtention Date		

Technical Information (ETR)				
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year	
Industrial-scale power-to-gas installation	Feasibility study for an industrial scale power-to-gas facility to convert a load of 25 MW electricity from wind into green hydrogen (0.4 GWh/d).		2022	

# Interconnected hydrogen network

ETR-N-923	Project	Energy Transition Related Project	Non-FID
Update Date	24/06/2020		Advanced
Description	Fluxys proposes to link industrial clusters through an interconnected hydrogen backbone aiming to support the development of the hydrogen economy. Clean hydrogen import gates in maritime ports and interconnections with adjacent countries are foreseen to ensure security of supply and flexibility. Retrofitting existing infrastructure is put forward in order to reduce the system cost of the hydrogen chain.		
PRJ Code - PRJ Name			

Sponsors			General	Information
			Promoter	Fluxys Belgium
			Operator	Fluxys Belgium
			Host Country	Belgium
			Status	Plannea
			Website	
Schedule	Start Date	End Date		
Pre-Feasibility				
Feasibility				
FEED				
Permitting				
Supply Contracts				
FID				
Construction				
Commissioning	2025	2025		
Grant Obtention Date				

Current TYNDP : TYNDP 2020 - Annex A Page 312 of 773

# L/H Conversion Belgium

TRA-F-500	Project Project	Pipeline including CS	FID
Update Date	21/09/2020		Non-Advanced
Description	The timetable for reducing L-gas exports from the Netherlands to Belgium, France of 2012: the gradual reduction of L-gas exports to Belgium (and therefore to France and end in 2030. The reason behind this announcement is the forecasted decline expected as from 2020). Most of the L-gas used in France transits through Belgium conversion is done in France. For the Fluxys Belgium grid, infrastructure modification zones in Belgium and in NW Europe.	ce as L gas is also exported to France), will of the L-gas Groningen gas field (10%/yearn meaning that L-gas transit capacity need	begin in October 2024 production decline to be ensured until
PRJ Code - PRJ Name			

Sponsors		Ger	General Information		NDP and PCI Information	
Fluxys Belgium	100%	Promoter	Fluxys Belgium		Yes (Ten-Year Indicative Investment	
		Operator	Fluxys Belgium	Part of NDP	Programme Fluxys Belgium & Fluxys	
		Host Country	Belgium		LNG 2017-2026)	
		Status	In Progress	NDP Number	L/H Conversion	
		Website	Project's URL	NDP Release Date		
		Website	FTOJECES ONL	NDP Website	<u>NDP URL</u>	
				Currently PCI	Yes (5.21 (2020))	
				Priority Corridor(s)		

#### Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		12/2017
Feasibility	01/2018	06/2018
FEED	07/2018	10/2018
Permitting	03/2019	08/2019
Supply Contracts		02/2019
FID		12/2018
Construction	06/2019	05/2026
Commissioning	2026	2026
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	Not Relevant
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Security of supply Without this project, the energy demand cannot be covered as soon as 2021 The security of supply of the L-gas area will be brought up to the level already reached in North West Europe, and even be improved. Competition Diversity in the L-gas area will reach the same level as the North West region, instead of depending solely on Dutch supply and producers. Moreover, maintaining the use of natural Specific Criteria Fulfilled Comments gas for heating will be a lot cheaper than converting to electricity (the price of electricity for the households in 2020 could be up to 4 times more expensive than gas. Market integration The L-gas area will go from an energy island (a single supply, through a single route) to a deeply interconnected market. Sustainability It would avoid building new energy infrastructures, new transmission and distribution capacities and new heating appliances.

		Benefits	
Main Driver	Others		
Main Driver Explan	ation		
Benefit Description			

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	CBCA		Financial Assistance
Decision	Yes, we have submitted an investment request and have received a decision	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Submissin Date	11/10/2018	Grants for studies	No
Decision Date	04/10/2018	Grants for studies amount	Mln EUR 0.0
Website	<u>CBCA URL</u>	Grants for works	Yes
Countries Affected		Grants for works amount	Mln EUR 0.0
Countries Net Cost Bearer		Intention to apply for CEF	No decision yet taken
Additional Comments		Other Financial Assistance	No
		Comments	
		General Comments	

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## Power to Methanol Antwerp

ETR-N-924	Project	Energy Transition Related Project	Non-FID
Update Date	24/06/2020		Advanced
Description	ENGIE, Fluxys, Indaver, INOVYN, Oiltanking, Port of Antwerp and the Flemish Envisustainable production of methanol, an essential multi-purpose raw material used integrated energy and chemical cluster in the region. The aim of the consortium combination with sustainably produced hydrogen.  In May 2020 a formal consortium called 'Power to Methanol Antwerp BV' was set construction of a demonstration plant. In the subsequent phase, due to start in 2 the Scheldelaan. The demonstration plant could produce up to 8000 tonnes of su an equivalent volume of CO2 emissions can be avoided.	d by industry in the Port of Antwerp being the is to produce sustainable methanol by reusing tup in order to take the necessary steps towa 2022, a demonstration plant will be built on the	e largest European g captured CO2 in rds the expected se INOVYN site along
PRJ Code - PRJ Name	-		

Promoter Operator Host Cou	
	or Power to Methanol Antwerp BV
Host Cou	
	ountry Belgium
Status	Planned
Website	

## Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	01/2019	10/2019
FEED	04/2020	04/2021
Permitting	04/2020	04/2021
Supply Contracts		
FID		04/2021
Construction		
Commissioning	2022	2022
Grant Obtention		
Date		

## Interconnection Bulgaria - Serbia

TRA-N-137	Project	Pipeline including CS	Non-FID
Update Date	10/01/2020		Advanced
Description	Interconnection Bulgaria-Serbia aims to connect the national gas transmission construction of a gas pipeline from Novi Iskar to Kalotina with branch to Slivnit Dimitrovgrad on Serbian territory. The project on Bulgarian territory includes the construction of GMS Kalotina at a joint site with a reverse pigging station of the The project is part of the Balkan Gas Hub concept. Along with the projects IGB supply and competition by opening a new bidirecitonal supply route.	tsa and Dragoman on Bulgarian territory and a g he construction of 2 AGRS at Slivnitsa and Drago ne gas pipeline.	gas pipeline Nis to oman and the
PRJ Code - PRJ Name	• ·		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	IBS Future Operator	2022	BGn	RS	58.50 GWh/d
Interconnector BG RS	Comment: In 2018 the commitment regarding the condessignated a project promoter and	struction of the intere	connection and Bulgar	rtransgaz EAD was	
	IBS Future Operator	2022	RS	BGn	58.50 GWh/d
	Comment: In 2018 the Republic of Bulgaria and the Republic of Serbia signed a joint commitment regarding the construction of the interconnection and Bulgartransgaz EAD was designated a project promoter and operator of the future gas pipeline on the Bulgarian territory.				

Sponsors		General Information		NDP and PCI Information	
Bulgarian section		Promoter	Bulgartransgaz EAD	Part of NDP	Yes (2019-2028 Ten-year network
Bulgartransgaz EAD	100%	Operator	IBS Future Operator		development plan of BTG)
Serbian section		Host Country	Bulgaria	NDP Number	Sectin 5.2 (5.2.3)
	1000/	Status	Planned	NDP Release Date	23/04/2019
Serbijagas	100%	Website		NDP Website	<u>NDP URL</u>
				Currently PCI	Yes (6.10 (2020))
				Priority Corridor(s)	
				Priority Corridor(s)	

#### Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		02/2011
Feasibility	12/2011	12/2012
FEED		
Permitting		
Supply Contracts		03/2020
FID		
Construction	10/2020	04/2022
Commissioning	2022	2022
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Bulgarian territory	1.8 bcm/y maximum capacity	700	62		0
Serbian territory	1.8 bcm/y maximum capacity	700	108		0
	Total		170		

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

IBS will connect the networks of Bulgaria and Serbia. The interconnection is a prerequisite for natural gas market development, improving market integration and promoting competition. All this includes utilization of both potential and existing gas infrastructure on the territory of Bulgaria and Serbia, the capacity of Chiren UGS, Banatski Dvor UGS and Banatski Itebej. IBS will contribute significantly to SoS, diversification of supply routes and sources, increasing the transported volumes and liquidity in the regional gas market as well as integration with the EU's gas network in line with the EU regulations. Bulgaria will benefit from alternative natural gas supplies through Baumgarten Hub, and Serbia will have access to natural gas from South-east through Bulgarian interconnections with Turkey and Greece.

## **Delays since last TYNDP**

Delay Since Last TYNDP

Delay Explanation Changed project promoter. Delay in transferring of the project from the Ministry of Energy to Bulgartransgaz.

## **Expected Gas Sourcing**

Norway, Russia, LNG ()

	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 (better connection 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	
Joint Commitment on the construction of gas interconnector Bulgaria-Serbia	Bulgaria and Serbia declare their irrevocable commitment to build gas interconnection which shall be commissioned in May 2022 at the latest.	Yes	17/05/2018	
Memorandum of Understanding between Bulgaria and Serbia	Memorandum of Understanding signed in Sofia between Bulgaria and Serbia in 2005	Yes	08/04/2005	
Memorandum of Understanding between Bulgaria and Serbia	Memorandum of Understanding between Bulgaria and Serbia	Yes	19/01/2017	
Memorandum of Understanding between Bulgaria and Serbia	Memorandum of Understanding signed in Brussels between Bulgaria and Serbia in 2012	Yes	14/12/2012	

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	СВСА		Financial Assistance
Decision Submissin Date Decision Date	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not	Applied for CEF Grants for studies Grants for studies amount Grants for works Grants for works amount	(3) No, we have not applied for CEF No Mln EUR 0.0 No Mln EUR 0.0
Website Countries Affected Countries Net Cost Bearer Additional Comments		Intention to apply for CEF Other Financial Assistance Comments	No decision yet taken  Yes  IBS is developed by the Ministry of Energy (ME), beneficiary of Operational Programme Competitiveness (2007-2013 and 2014-2020). Funding source is the European Regional Development Fund. As a new project promoter, Bulgartransgaz EAD is an eligible beneficiary for preparatory activities prior to the start of the interconnection construction under Operational Programme Innovation and Competitiveness following the amendment of the operational programme as of December 2018.
		General Comments	

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## Interconnector Greece-Bulgaria (IGB Project)

TRA-F-378	Project Project	Pipeline including CS	FID
Update Date	25/11/2019		Advanced
Description	Construction of a bi-directional gas interconnector between the high pressure nat capacity of up to 3bcm/y, capable to be increased to up to 5 bcm/y with the instal demonstrated.		
PRJ Code - PRJ Name	-		

Capacity Increments Variant For Modelling						
Point	Operator	Year	From Gas System	To Gas System	Capacity	
	ICGB a.d.	2020	2020 GR/TAP		90.00 GWh/d	
Komotini - TAP / IGB	ICGB a.d.	2025	GR/TAP	BG/IGB	60.00 GWh/d	
Kemeum Wa 7 leb	Comment: GB will be techni	, , , , , , , , , , , , , , , , , , , ,	pacity upgrade from u Yy with installation of			
	ICGB a.d.	2020	IB-GRk	BG/IGB	90.00 GWh/d	
Komotini (DESFA) - GR / IGB	ICGB a.d.	2025	IB-GRk	BG/IGB	60.00 GWh/d	
Kemetini (22317) GK7 IGB	Comment: IGB will be technically ready for a forward capacity upgrade from up to 3bcm/y to up to 5 bcm/y with installation of compressor station					
	ICGB a.d.	2020	BG/IGB	BGn	90.00 GWh/d	
Stara Zagora	ICGB a.d.	2025	BG/IGB	BGn	60.00 GWh/d	
Stara Lagora	Comment: IGB will be technically ready for a forward capacity upgrade from up to 3bcm/y to up to 5 bcm/y with installation of compressor station					

Sponsors	
BEH EAD	50%
IGI Poseidon	50%

General Information	
Promoter	ICGB a.d.
Operator	ICGB a.d.
Host Country	Bulgaria
Status	In Progress
Website	Project's URL

NDP and PCI Information		
Part of NDP	Yes (Included in both the TYNDPs of Greece and Bulgaria)	
NDP Number	not applicable	
NDP Release Date		
NDP Website	NDP URL	
Currently PCI	Yes (6.8.1 (2020))	
Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility	1	04/2009
Feasibility	05/2009	07/2009
FEED	08/2020	08/2020
Permitting	08/2020	08/2020
Supply Contracts		08/2019
FID		12/2015
Construction	06/2019	12/2020
Commissioning	2020	2025
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Not Applicable
Considered Tariff Regime	Not Applicable
Applied for Exemption	Yes
Exemption Granted	Yes
Exemption in entry direction	50.00%
Exemption in exit direction	50.00%

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Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissionin Year
		813	182		2020
GB	IGB will be technically ready for a forward capacity upgrade from up to 3bcm/y to up to 5 bcm/y with installation of compressor station. Capacity upgrade will depend on market committments and development of neighbouring systems.	813	182	12	2025
	Total		364	12	
	Fulfilled Criteria				
Specific Criteria Fulfilled	Competition, inter alia through diversification of supply sources, supplying counterparts appropriate connections and diversification of supply sources, supplying counterparts a emissions, supporting intermittent renewable generation and enhancing deployment of	nd routes, S	Sustainab		_
Specific Criteria Fulfilled Comments	The project strategic objectives and role in Bulgaria and SE-CE markets are: • enhancement disruptions); by securing added volumes the project will increase significantly the entry the SEE region; • increase of transit capacity to the SEE countries taking advantage of ot diversification of imported gas from Greece by additional supply sources from the Casp terminals (existing and new in Greece and/or Turkey).	capacity of her interco	Bulgaria nnection	and diversify the ent s with Romania and S	ry routes to Serbia; and •

Delays since last TYNDP				
Delay Since Last TYNDP	1 year			
Delay Explanation	Appeals against the tender procedures, during the opening phase there are no restriction on the parties who can appeal against the procedures. At the current stage all the tender procedures are completed and award decisions are taken, there is just one appeal outstanding against the award decision for the selected contractor under the tender for Line pipes manufacture and supply. We are waiting for the decision of Supreme Administrative Court, ecpected by the end of July 2019.			

### **Expected Gas Sourcing**

Algeria, Caspian Region, Libya, Norway, Russia, LNG (DZ,AZ,EU,GR,IT,NO,QA,TAP,TR,AE,US), USA

### Comments about the Third-Party Access Regime

On 8th of August 2018 the National Regulators of Bulgaria and Greece issued a Joint Decision on the exemption of IGB from the requirements under article 36 of the European Gas Directive 2009/73/EC. The decision taken confirms the measures requested by the project company in the application filed, in particular: -Exemption from the rules for third-party access for the capacity booked under the Market test completed (almost 50% of the total capacity) -Exemption from regulated tariff for all the gas pipeline capacity for a period of 25 years. -Exemption from ownership unbundling for a period of 25 years.

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	Benefits Sensitive Sensiti			
Aain Driver	Market Demand			
Main Driver Explanation	The committments from the market have been assessed by the signing of the Advance Reservation Capacity Agreements, proposed after the capacity allocation that was authorized by the National Regulatory Authorites in the conducted Market Test (see above information on Exemption Application). ARCAs signature will be followed by Gas Transportation Agreements execution within 2019 (as per provisions of the ARCAs).			
Benefit Description	The pipeline can interact with alternative supply sources - such as, Southern Corridor pipeline gas, LNG through Greece/ Turkey. The current market tes outcomes confirm a committment at least from Caucasian area and LNG. Other sources that can be served by the pipeline are expected as well, as soor TAP and other pipelines will start to operate.			
	Barriers			
Barrier Type	Description			
Regulatory	Regulatory approvals have to ensure more streamlined process for decisions on the IGB tariff and network code, as well as the licensing of the pipeline.			
Permit Granting	Affected by delays in respect to the Greek section, however the permits are expected to be obtained by the end of March 2019.			
Political	Government support expected on issues such as streamlined permitting and regulatory decisions on commercial development, and the interconnection with the other TSOs.			
Others	Public procurement procedures may be significantly delayed by appeals.			
Market	Development of the networks of neighboring gas TSOs to be interconnected with IGB should be incentivised to e expected additional flows. Better integration of the gas transmission networks in the overall region affected by IG supply gas from IGB to the wider SEE region. The procedures for gaining access to transmission services in the ne should be more streamlined and transparent.	B must also be	e achieved in order to	
	Intergovernmental Agreements			
Agreement	Agreement Description	Is Signed	Agreement Signature Date	
	The Intergovernmental Agreement that shall be signed between Greece and Bulgaria will establish the applicable Tax Framework for the Project.	No	16/01/2019	

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	CBCA		Financial Ass	istance
Decision	No, we have not submitted an investment request yet,	Applied for CEF		(3) No, we have not applied for CEF
	and we do not plan to submit it	Grants for studies		No
ubmissin Date		Grants for studies amount		Mln EUR 0.0
ecision Date		Grants for works		No
/ebsite		Grants for works amount		Mln EUR 0.0
ountries Affected		Intention to apply for CEF		No, we do not plan to apply
ountries Net Cost Bearer		Other Financial Assistance		Yes
dditional Comments		Comments	amount of  Additional EUR 39  project under t  Competitiveness,	nce has been approved for the IGB in the 45 mln. EUR under the European Energy Programme for Recovery (EEPR) I mln grant financing is approved for the the Operational Program Innovation and the funding is provided by the European stment Funds (ESIF) allocated to Bulgaria
		General Comments	process of negotice EIB, secured by provided by Bulg be concluded by will be trnasferred condtions and Further an Interg between Gree a All the listed med state id clearar	ian shareholder of the company is in the ation a EUR 110 mln loan financing with by a state guarantee in the same amount garia. The loan agreement is expected to by the end of February 2019 and the loan d to the Project company upon the same parameters via an onlendign agreement governmental Agreement shall be signed acce and Bulgaria, which will establish the applicable Tax Framework for the Project. It is sures were subject to a notification for a face. The decision of the EC was issued on 1018 and all the measures are considered compatible with the state aid rules

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# Modernization and rehabilitation of the Bulgarian GTS

TRA-F-298	Project	Pipeline including CS	FID
Update Date	21/11/2019		Advanced
Description	A multicomponent project which consists of different actions for rehabilitation, mo infrastructure in Bulgaria and includes activities on: CSs modernization, inspections existing network and implementation of systems for optimization of the manageme 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 find Phase 2: Includes actions initiated in 2016. They represent logic continuation of the Phase 1.  Phase 3: Conditional infrastructure necessary after taking the FID for stage 2 of the concept for the Balkan Gas Hub.	, repair and replacement of pipeline section ent process of the network technical conc d: alized in a short term. e overall realization of the project followin	ons, expansion of the lition. Taking into g the implementation of
PRJ Code - PRJ Name	-		

Capacity Increments Variant For Modelling						
Point	Operator	Year	From Gas System	To Gas System	Capacity	
	IBS Future Operator	2024	BGn	RS	19.36 GWh/d	
Interconnector BG RS	Comment: Conditional infrastructure necessary after taking the FID for stage 2 of the Interconnection Bulgaria – Serbia.					
interconnector bd KS	IBS Future Operator	2024	RS	BGn	19.36 GWh/d	
	Comment: Conditional (	nfrastructure necessa		) for stage 2 of the n Bulgaria – Serbia.		
Kulata (BG) / Sidirokastron (GR)	Bulgartransgaz EAD	2021	BGg/BGT	GR	13.78 GWh/d	
Strandzha (BG) / Malkoclar (TR)	Bulgartransgaz EAD	2021	BGg/BGT	TRe	58.08 GWh/d	

Current TYNDP : TYNDP 2020 - Annex A Page 327 of 773

Sponsors		Gene	ral Informatio
Bulgartransgaz EAD	100%	Promoter	В
		Operator	В
		Host Country	

Status Website

NDP and PCI Information			
Part of NDP	Yes (2019-2028 Ten-year network development plan of BTG)		
NDP Number	Section 5.5.		
NDP Release Date	23/04/2019		
NDP Website	NDP URL		
Currently PCI	Yes (6.8.2 (2020))		
Priority Corridor(s)			

Schedule	Start Date	End Date
Pre-Feasibility		12/2016
Feasibility	08/2008	08/2017
FEED	04/2013	02/2020
Permitting	09/2009	10/2020
Supply Contracts		02/2021
FID		01/2018
Construction	09/2014	06/2022
Commissioning	2021	2024
Grant Obtention Date	27/04/2016	27/04/2016

Third-Party Access Regime			
Considered TPA Regime	Not Applicable		
Considered Tariff Regime	Not Applicable		
Applied for Exemption	Not Relevant		
Exemption Granted	Not Relevant		
Exemption in entry direction	0.00%		
Exemption in exit direction	0.00%		

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Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
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	0
Lozenets-Nedyalsko		1,000	20		0
PF Beglej - VA Dermantsi - VA Batultsi - VA Kalugerovo		700	58		0
Valchi Dol - Preselka		700	23		0
To	otal		120	20	

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

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 Specific Criteria Fulfilled Comments 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.

Delays since last TYNDP			
Delay Since Last TYNDP	yes		
Delay Explanation	Revision of the PCI Phase 2 implementation schedule to ensure consistency in the execution of construction activities for the sections, subsections and compressor stations involved in this phase.		

#### **Expected Gas Sourcing**

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

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- 12	$\Delta n$	ıΔt	its
	CII	-	ILO

#### Main Driver

Others

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

# Main Driver Explanation

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 and risk management optimization. It is directly related to the planned two new interconnections - with Greece (IGB), and Serbia (IBS) as well as to the IBR (operational); with the utilization of the UGS Chiren's capacity in relation to the project for its expansion; 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.

	CBCA		Financial Assistance
Decision	Yes, we have submitted an investment request and have received a decision	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Submissin Date	09/08/2018	Grants for studies	Yes
Decision Date	09/10/2018	Grants for studies amount	Mln EUR 1.0
Website	<u>CBCA URL</u>	Grants for works	Yes
Countries Affected	Bulgaria	Grants for works amount	Mln EUR 27.2
Countries Net Cost Bearer	Bulgaria	Intention to apply for CEF	No decision yet taken
Additional Comments		Other Financial Assistance	Yes
		Comments	Phase 1, consisting of activities undertaken in the period 2013-2015, was funded by Bulgartransgaz EAD. Stage 1 of the modernization of compressor stations (part of Phase 1) was included in the National Investment Plan (NIP) and, in this respect, in 2017 and 2018 Bulgartransgaz EAD received national funding for CS Petrich, CS Ihtiman, CS Strandzha and CS Lozenets to the total amount of EUR 41.9 million.
		General Comments	

# Necessary expansion of the Bulgarian gas transmission system

TRA-F-592	Project	Pipeline including CS	FID
Update Date	10/12/2019		Advanced
Description	The project aims at construction of the following necessary infrastructure for compipelines from the Turkish border to compressor station (CS) Strandza and from P Strandza; and two new CSs – Nova Provaida and Rasovo.  The Balkan Gas Hub concept includes several key elements, which together comp transmission system; modernization and expansion of the existing gas transmission interconnections with neighboring countries and new infrastructure for the hub; coliquid natural gas exchange and the necessary amendments and additions in the content of the service	rovadia to the Serbian border; one new gar lete the project: new supply sources; utiliza on system and expansion of UGS Chiren; co reating the required trading and regulatory	tion of the existing gas
PRJ Code - PRJ Name	-		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Kireevo (BG) / Zaychar (RS)	Bulgartransgaz EAD	2022	BGg/BGT	RS	395.20 GWh/d
Strandzha 2 (BG) / Malkoclar (TR)	Bulgartransgaz EAD	2019	TR/STR	BGg/BGT	577.10 GWh/d

Sponsors	General Information		ND	P and PCI Information	
	Promoter	Bulgartransgaz EAD	Part of NDP	Yes (2019-2028 Ten-year network	
	Operator	Bulgartransgaz EAD		development plan of BTG)	
	Host Country	Bulgaria	NDP Number	Section 5.1. (5.1.1)	
	Status	Planned	NIDD D. I.	23/04/2019	
	Website		NDP Website	NDP URL	
			Currently PCI	No	
			Priority Corridor(s)	NSIE	

#### Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	03/2018	11/2018
FEED	01/2018	03/2020
Permitting	01/2018	06/2020
Supply Contracts		10/2019
FID		01/2019
Construction	02/2019	06/2022
Commissioning	2019	2022
Grant Obtention Date	17/05/2017	17/05/2017

Third-Party Access Regime				
Considered TPA Regime	Regulated			
Considered Tariff Regime	Regulated			
Applied for Exemption	No			
Exemption Granted	No			
Exemption in entry direction	0.00%			
Exemption in exit direction	0.00%			

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
New gas pipeline from CS Provadia to the Bulgarian-Serbian border	New gas pipeline from CS Provadia to the Bulgarian- Serbian border, two new compressor stations	1,200	474	64	2022
New gas pipeline from the BG-TR border to GMS Strandzha	New gas pipeline from the BG-TR border to GMS Strandzha and new GMS Strandzha	1,200	11		2019
Tota	al Company		485	64	

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

#### **Delays since last TYNDP**

Delay Since Last TYNDP

**Delay Explanation** 

Current TYNDP : TYNDP 2020 - Annex A Page 332 of 773

### **Expected Gas Sourcing**

Algeria, Caspian Region, Libya, Russia, LNG (GR,TR), Black sea shelf gas; Domestic production;

Benefits					
Main Driver	Others				
Main Driver Explanation	The concept of establishing a gas distribution centre (hub) on the territory of Bulgaria is based on the idea significant natural gas quantities from various sources to enter at certain real physical points for further transportation. Meanwhile, a gas trading venue - hub is also being organized, where each market participant will carry out natural gas transactions on a market-based principle. The idea of building a regional gas hub is based on the strategic geographical location of Bulgaria, the well-developed existing gas transmission and storage infrastructure and the interconnections projects with the neighbouring countries.				
Benefit Description	The purpose of the Balkan Gas Hub project (PCI 6.25.4) is to connect the markets of the countries of the Balkan region, Central and Eastern Europe with the Western European markets by construction of the necessary gas infrastructure and providing commercial and regulatory environment, including a liquid gas exchange. Fully developed in pursuance of the policy and priorities for establishing an interconnected and integrated pan-European gas market of the EU, the gas hub concept is in line with the Southern Gas Corridor development projects and in full compliance with the plans for development of the European gas infrastructure aimed at improving security of supply and diversifying the natural gas supply sources. The project corresponds to the needs of the region, identified by the High Level Group on Energy Connectivity in Central and South-East Europe (CESEC), as well as the European Strategy for Energy Union.				

	CBCA		Financial Assistance
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision;#(2) Yes, we have applied for CEF, but we have not received a decision yet
Submissin Date		Grants for studies	Yes
Decision Date		Grants for studies amount	Mln EUR 0.9
Website		Grants for works	No
Countries Affected		Grants for works amount	Mln EUR 0.0
Countries Net Cost Bearer		Intention to apply for CEF	No decision yet taken
Additional Comments		Other Financial Assistance	Yes
		Comments	2018 Bulgartransgaz EAD submitted a Request for support under the Structural Reform Support Programme of the European Union, with subject Balkan Gas Hub Trading Model. The Project Request aims to build on the results from the Feasibility Study by granting additional expert support under the Programme. The Project Request amounts up to EUR 300 000 and is included in the Cooperation and Support Plan to 2019 Structural Reform Support Programme.
		General Comments	Grant Agreement dated 17 May 2017 for implementing Balkan Gas Hub Feasibility Study amounting to EUR 920 500.  In June 2019 Bulgartransgaz EAD applied for financing within the CEF Energy call 2019 with a project proposal for design of two compressor stations — (CS Rasovo and CS Nova Provadia). Design and construction of each of the two compressor stations is a separate stage of Phase 1 of the project for the construction of Balkan Gas Hub (PCI 6.25.4). Ranking results are expected in September 2019.

# **UGS Chiren Expansion**

UGS-A-138	Project	Storage Facility	Non-FID
Update Date	22/09/2020		Advanced
Description	Capacity increase of the only gas storage facility on the territory of Bulgaria in order to pressures and higher daily average injection and withdrawal flowrates. The project is increase in the working gas volume up to 1 bcm and increase in the injection and with the injecti	part of the concept for Balkan Gas Hub	
PRJ Code - PRJ Name			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	Bulgartransgaz EAD	2025	STcBGn	BGn	48.90 GWh/d
			Co	omment: Withdraw	,
	Bulgartransgaz EAD	2025	BGn	STcBGn	51.07 GWh/d
CMS Chiran			(	1	
GMS Chiren	Bulgartransgaz EAD (SSO)	2025	STcBGn	BGn	48.90 GWh/d
			Co	omment: Withdraw	,
	Bulgartransgaz EAD (SSO)	2025	BGn	STcBGn	51.07 GWh/d
			(	Comment: Injection	

Sponsors	Gene	General Information		NDP and PCI Information	
Bulgartransgaz EAD 100%	Promoter	Bulgartransgaz EAD	Part of NDP	Yes (2019-2028 Ten-year network	
	Operator	Bulgartransgaz EAD	Tare of MD1	development plan of BTG)	
	Host Country	Bulgaria	NDP Number	Section 5.3 (5.3.1)	
	Status	Planned	NDP Release Date	23/04/2019	
	Website	Project's URL	NDP Website	NDP URL	
			Currently PCI	Yes (6.20.2 (2020))	
			Priority Corridor(s)		

### Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		06/2011
Feasibility	03/2015	03/2020
FEED	02/2022	01/2024
Permitting	06/2021	02/2024
Supply Contracts		02/2022
FID		04/2021
Construction	07/2022	06/2025
Commissioning	2025	2025
Grant Obtention Date	23/10/2015	23/10/2015

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	Not Relevant
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Technical Information (UGS)									
Storage Facility	Storage Facility Type	Multiple-cycle Facility	Project Phase	Working Volume (mcm)	Withdrawal Capacity (mcm/d)	Injection Capacity (mcm/d)	(%)	Comments	Commisioning Year
UGS Chiren	Depleted Field	Yes	UGS Chiren Expansion	450	4.6	4.8	75	The expected load factor for the first 3 years after the commissioning.	

Current TYNDP: TYNDP 2020 - Annex A Page 336 of 773

#### **Fulfilled Criteria**

#### Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes

Specific Criteria Fulfilled Comments

The project aims at creating conditions to guarantee the security of supplies for Bulgaria and the region, and to develop the UGS as commercial gas storage in an interconnected regional and European market. UGS Chiren expansion is part of the concept for development of the Balkan Gas Hub and a key instrument for the functioning of the gas market in Bulgaria and a prerequisite for market development, diversification and enhancement of the market integration, thus contributing to increased capacities for natural gas transmission of the intercons (IGB, IBR, IBS) and increased N-1 Indicator in terms of SoS. 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.

# Delays since last TYNDP

Delay Since Last TYNDP

yes

Delay Explanation

Commissioning: 2025 The delay of the overall PCI implementation is due to delay in the in the implementation of 3D seismic studies. The reasons are that within the tender procedure, the Selection Decision was appealed by one of the bidders and that hindered its successful completion. In the mean time new standard templates for tender procedures were approved by the Bulgarian Ministry of Finance, which from our side let to delay in the preparation of new tender documentation for the 3D seismic studies tendering, which afterwards needed to be relaunch. Another reason is delay in the process of granting access to the lands / propertis within the survey area, due to difficulties in obtaining Right of Way Agreements from the users of agricultural properties to perform seismic activities.

#### **Expected Gas Sourcing**

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

Current TYNDP: TYNDP 2020 - Annex A Page 337 of 773

#### **Benefits** Main Driver **Regulation SoS** 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 Main Driver Explanation 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. 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, as part of the Balkan Gas Hub concept, in an interconnected regional and Europe-wide market. The project contributes for market development, diversification and enhancement of the market integration, thus contributing to **Benefit Description** increased capacities for natural gas transmission of the interconnectors (IGB, IBR, IBS). In terms of SoS and the related Competition the expansion of the UGS Chiren will increase the N-1 Indicator. It also has considerable contribution to congestion management and seasonal optimization of the use of gas transmission systems. **Barriers Barrier Type** Description Obstacles related to granting access of the equipment to the lands falling within the scope of the 3D seismic surveys: disagreement to sign Right of Way **Permit Granting**

	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Agreement on behalf of the landowners / users in the survey area.

	Financial Assistance
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Grants for studies	Yes
Grants for studies amount	Mln EUR 3.9
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	Yes, for studies and works
Other Financial Assistance	No
Comments	
General Comments	

Current TYNDP : TYNDP 2020 - Annex A Page 338 of 773

# Cyprus Gas2EU

LNG-A-1146	Project	LNG Terminal	Non-FID
Update Date	22/09/2020		Non-Advanced
	CyprusGas2EU project (7.5 in the 3rd PCI list) is the only candidate PCI project that ends the Southern Gas Corridor.	the isolation of an EU Member State	e and it is necessary for

PRJ Code - PRJ Name

**Capacity Increments Variant For Modelling** 

Point	Operat	tor	Year Fr	om Gas System	To Gas System	Capacity
Terminal 2 Vassiliko - Lemesos Port	Cygas		2022	LNG_Tk_CY	CY	40.00 GWh/d
Sponsors		General Information	e Part of NDP N		and PCI Information	
	Promoter	Ministry of Energy, Commerce and Industry (MECI			No ((2) no NDP exis	sts in the country)
	Operator	Natural Gas Public Company (DEFA LTD	NDP Rele	ase Date		
	Host Country	Cyprus	NDP Web	osite		
	Status	In Progress	Currently	PCI		Yes (7.5 (2020))
	Website	<u>Project's URL</u>				

### Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		02/2017
Feasibility	04/2017	10/2017
FEED	05/2017	09/2018
Permitting	10/2019	01/2022
Supply Contracts		01/2022
FID		11/2019
Construction	11/2019	03/2022
Commissioning	2022	2022
Grant Obtention Date	25/01/2018	25/01/2018

Third-Party Access Regime	
Considered TPA Regime	Not Applicable
Considered Tariff Regime	Not Applicable
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

	Fulfilled Criteria
Specific Criteria Fulfilled	Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas
Specific Criteria Fulfilled Comments	The project will contribute to market integration as it will enable Cyprus to connect with the European gas network. It will improve Cyprus's security of energy supply and diversification of imported energy sources and fuels. The project will support objectives of sustainability as it will contribute to the reduction of GHG emissions in the island and prepare a low carbon economy.

### Delays since last TYNDP

Delay Since Last TYNDP

Delay Explanation

### **Expected Gas Sourcing**

LNG (), Cyprus

#### Benefits

Main Driver Regulation SoS

Main Driver Explanation

Benefit Description End the isolation of a Member State and allow market integration with other Member States

	CBCA
Decision	Yes, we have submitted an investment request and have received a decision
Submissin Date	14/08/2017
Decision Date	13/10/2017
Website	CBCA URL
Countries Affected	Cyprus, Greece
Countries Net Cost Bearer	Cyprus
Additional Comments	

	Financial Assistance
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	Yes
Grants for works amount	Mln EUR 101.3
Intention to apply for CEF	
Other Financial Assistance	Yes
Comments	From CEF Synergy Call 2017
General Comments	www.Cynergy-project.eu

Current TYNDP: TYNDP 2020 - Annex A Page 341 of 773

### Capacity4Gas – CZ/SK

TRA-F-918	Project	Pipeline including CS	FID	
Update Date	18/12/2019		Advanced	
Description	The project "Capacity4Gas – CZ/SK" is a subproject of the overall project Capacity4Ga the interconnection point Lanžhot between the Czech Republic and Slovakia. The pro of the Czech Republic (NET4GAS, s.r.o.) and Slovakia (eustream, a.s.) The project resu	oject is jointly coordinated by the transm	nission system operators	

PRJ Code - PRJ Name

auction in March 2017.

Point Operator Year From Gas System To Gas System Capacity

NET4GAS, s.r.o. 2019 CZ SK 333.00 GWh/d

Lanžhot Comment: The project is planned to be completed by the end of 2019 and put into operation on 1.1.2020. The incremental capacity represents approx. exit capacity extension at the CZ/SK border.

Sponsors			General Information	NDP and PCI Information		
Czech Republic		Promoter	NET4GAS, s.r.o.	Part of NDP	Yes (CZ NDP 2019-2028 (approved))	
NET4GAS, s.r.o.	100%	Operator	NET4GAS, s.r.o.	NDP Number	TRA-F-918	
Slovakia		Host Country	Czechia	NDP Release Date	31/10/2018	
eustream, a.s.	100%	Status	In Progress	NDP Website	<u>NDP URL</u>	
	.0070	Website	<u>Project's URL</u>	Currently PCI	No	
				Priority Corridor(s)		

### Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		04/2017
Feasibility		
FEED	04/2017	06/2018
Permitting	03/2018	08/2018
Supply Contracts		02/2019
FID		03/2017
Construction	05/2019	12/2019
Commissioning	2019	2019
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Capacity4Gas - CZ/SK	The project is planned to be completed by the end of 2019 and put into operation on 1.1.2020.				2020
	Total				

	Expected Gas Sourcing
Norway, Russia	

		Benefits	
Main Driver	Market Demand		
Main Driver Explan	ation Result of the capacity auction.		
Benefit Description			

Current TYNDP : TYNDP 2020	) - Annex A
	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit is
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance		
Applied for CEF	(3) No, we have not applied for CEF	
Grants for studies	No	
Grants for studies amount	Mln EUR 0.0	
Grants for works	No	
Grants for works amount	Mln EUR 0.0	
Intention to apply for CEF	No, we do not plan to apply	
Other Financial Assistance	No	
Comments		
General Comments		

Current TYNDP : TYNDP 2020 - Annex A Page 344 of 773

# Greening of Gas (GoG)

ETR-N-306	Project	Energy Transition Related Project	Non-FID
Update Date	25/09/2019		Advanced
Description	The aim of the project is to realise a demonstration facility of Power2Gas tectime in the Czech Republic thanks to this unique technology. The project commethanization) with an electrolyser, that is, the production of hydrogen by esynthetic methane. The operator of the facility has not been decided yet.	nsists of a combination of biogas purification tech	nnology (bio
PRJ Code - PRJ Name	- /		

	Variant : Variant A	Hydrogen production				
Point		Operator	Year	From Gas System	To Gas System	Capacity
GoG (C7)		NET4GAS, s.r.o.	2023	NPcCZ	CZ	0.01 GWh/d
GoG (CZ)			Comment: Hydrogen pro	duction (Exit from ETR	and Entry to TSO).	
Capacity Increme	ents Variant(s) For Information Only					
	Variant : Variant B	Biomethane production				
Point		Operator	Year	From Gas System	To Gas System	Capacity
GoG (CZ)		NET4GAS, s.r.o.	2023	NPcCZ	CZ	0.01 GWh/d
G0G (CZ)			Comment: Biomethane pro	duction (Exit from ETR	and Entry to TSO).	
Sponsors		General Informati	on			
GasNet	50%	Promoter	NET4GAS, s.r.o.			
NET4GAS	50%	Operator	NET4GAS, s.r.o.			
	50.0	Host Country	Czechia			
		Status	Planned			

Website

### Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		12/2018
Feasibility	01/2019	12/2019
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2023	2023
Grant Obtention		
Date		

	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
Greening of Gas	Production of hydrogen (2400 m3 H2/d) or synthetic metan (1200 m3 CH4/d).	Building and connecting a facility to demonstrate the operational and industrial feasibility of such projects.	2023

# **Compressor Station Krummhoern**

TRA-F-1271	Project	Pipeline including CS	FID
Update Date	18/11/2019		Advanced
Description	Extension of the existing OGE compressor station Krummhoern near Emden in Lower Saxo compressed gas into the connected transmission pipelines.	ony. The compressor station Krumr	nhoern is used to feed
PRJ Code - PRJ Name	-		

Sponsors				General Information	NDP :	and PCI Information
CS Krummhoern ex	tension step 1		Promoter	Open Grid Europe GmbH	Part of NDP	Yes (Netzentwicklungsplan Gas 2018
Open Grid Europe G	SmbH	100%	6 Operator	Open Grid Europe GmbH	Tare of NDI	(German NDP 2018))
CS Krummhoern ex	tension sten 2		Host Country	Germany	NDP Number	414-01 an 415-01
Open Grid Europe G		100%	Status	Planned	NDP Release Date	20/03/2019
Open ond Ediope C		1007	Website	<u>Project's URL</u>	NDP Website	<u>NDP URL</u>
					Currently PCI	No
					Priority Corridor(s)	
Schedule	Start Date	End Date			Third-	Party Access Regime
Pre-Feasibility					Considered TPA Regime	e Regulated
Feasibility					Considered Tariff Regin	ne Regulated
FEED	07/2016	06/2019			Applied for Exemption	No
Permitting	11/2016	06/2019			Exemption Granted	No
Supply Contracts						
FID		01/2017			Exemption in entry dire	ction 0.00%
Construction	06/2017	04/2021			Exemption in exit direct	on 0.00%
Commissioning	2022	2022				
Grant Obtention Date						

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Pipelines and Compressor Stations				
Pipeline Section	Pipeline Comment	Diameter Length (mm) (km)	Compressor Power (MW)	Comissioning Year
CS Krummhoern extension step 1			13	2019
CS Krummhoern extension step 2			13	2022
	Total		26	

### **Expected Gas Sourcing**

Norway

		Benefits
Main Driver	Market Demand	
Main Driver Explanati	on	

Benefit Description

CBCA		Financial Assistance		
Decision	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF	
Decision	and we do not plan to submit it	Grants for studies	No	
Submissin Date		Grants for studies amount	Mln EUR 0.0	
Decision Date		Grants for works	No	
Website		Grants for works amount	Mln EUR 0.0	
Countries Affected		Intention to apply for CEF	No, we do not plan to apply	
Countries Net Cost Bearer		Other Financial Assistance	No	
Additional Comments		Comments		
		General Comments		

# Conversion of Natural-Gas-Pipelines to Hydrogen-Pipelines

ETR-N-945	Project	Energy Transition Related Project	Non-FID	
Update Date	22/06/2020		Advanced	
Description	Thyssengas plans to convert three Natural-Gas-Pipelines to Hydrogen-Pipelines to develop together with other german TSO a hydrogen grid in North-Western Germany. The projects are descriped in the NDP (ID 711, 712 and 713).			
PRJ Code - PRJ Name				

Sponsors		General Information	
Umstellung Leitungssystem Elten-Sonsbeck (l	NETG)	Promoter	Thyssengas GmbH
Thyssengas GmbH	50%	Operator	Thyssengas GmbH
Umstellung Leitungssystem Kalle-Ochtrup		Host Country	Germany
Thyssengas GmbH	100%	Status	Planned
Umstellung Leitungssystem Sonsbeck-Hambo	orn	Website	
Thyssengas GmbH	50%		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2025	2025
Grant Obtention		

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ection/Phase Name			
cettory i mase rearrie	Main Technical Parameters	Technical Information Comment	Commissio ning Year
Conversion until 2025	Pipeline Kalle - Ochtrup: length 49 km, diameter DN 600 Pipeline Elten - Sonsbeck: length 42 km, diameter DN 900		
Conversion until 2030	Pipeline Sonsbeck - Hamborn: length 34 km, diameter DN 500		

# Coversion of Natural Gas pipelines to Hydrogen

ETR-N-903	Project	Energy Transition Related Project	Non-FID	
Update Date	24/06/2020		Advanced	
Description	This project represents the conversion of natural gas pipelines of Gasunie Deutschland to the transport of hydrogen according to the German NDP 2020.  In the German NDP the TSO developed a hydrogen grid which connects the supply with the demand based on a market survey.			
PRJ Code - PRJ Name				

Sponsors				General Information
	7		Promoter	Gasunie Deutschland Transport Services GmbH
			Operator	Gasunie Deutschland Transport Services GmbH
			Host Country	Germany
			Status	Planned
			Website	<u>Project's URL</u>
Schedule	Start Date	End Date		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2030	2030
Grant Obtention		
Date		

Technical Information (ETR)						
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year			
NEP ID: 704_01	Conversion Mitte Weser - Kolshorn 28 km; D700; MOP 70 bar	Total length 93 km (30% GUD Share)	2030			
NEP ID: 714_01	Conversion Elbe Süd - Heidenau 41 km; D600; MOP 70 bar		2025			
NEP ID: 715_01	Conversion Eckel - Achim 73 km; D450; MOP 70 bar		2025			
NEP ID: 716_01	Conversion Oude Statenzijl - Ganderkersee 89 km; D600; MOP 70 bar		2030			
NEP ID: 717_01	Conversion Ganderkersee - Achim 41 km; D600; MOP 70 bar		2025			
NEP ID: 718_01	Conversion Ganderkersee - Bremen 17 km; D400; MOP 70 bar		2025			
NEP ID: 719_01	Conversion Folmhusen - Nuettermoor 18 km; D400; MOP 70 bar		2030			
NEP ID: 720_01	Conversion Barßel - Rheine 108 km; D1000; MOP 38 bar		2030			
NEP ID: 721_01	Conversion Ganderkersee - Drohne 80 km; D600; MOP 70 bar		2030			

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# CS Elten

TRA-F-1254	Project	Pipeline including CS	FID
Update Date	18/11/2019		Non-Advanced
Description	Compressor station project to support the changeover from low-calorific gas to high-calori	fic gas in Germany.	
PRJ Code - PRJ Name			

Sponsors				General Information	NDP and PCI Information	
Open Grid Europe		50%	Promoter	Open Grid Europe GmbH and Thyssengas GmbH	Yes (German NDP 2018 - 2028 2018 -	
Thyssengas GmbH		50%	Operator	Thyssengas GmbH	NDP Number	422/01
			Host Country	Germany	NDP Release Date	20/03/2019
			Status	Planned	NDP Website	<u>NDP URL</u>
			Website	<u>Project's URL</u>	Currently PCI	No
					Priority Corridor(s)	
Schedule	Start Date	End Date			Third-Party Access Regime	
Pre-Feasibility					Considered TPA Regime	Regulated
Feasibility	10/2018	06/2019			Considered Tariff Regime	Regulated
FEED	07/2017	01/2019			Applied for Exemption	No
Permitting	10/2019	12/2020			Exemption Granted	No
Supply Contracts						
FID		03/2016			Exemption in entry direction	0.00%
Construction	06/2022	11/2022			Exemption in exit direction	0.00%
Commissioning	2022	2022				
Grant Obtention Date						

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Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
CS Elten				11	2022
	Total			11	

### **Expected Gas Sourcing**

Norway, LNG (BE,FR,NL,UK)

Benefits						
Main Driver	Market Demand					
Main Driver Explanation	Changeover of regions currently supplied by low-calorific gas to high-calorific gas due to declining availability of low-calorific gas.					
Benefit Description	Availability of low-calorific gas is declining in Germany. The regions currently supplied by low-calorific gas will need to switch supply from low-calorific gas to high-calorific gas. The project is needed to transport high-calorific gas to the regions currently supplied by low-calorific gas.					

	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit i
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance						
Applied for CEF	(3) No, we have not applied for CEF					
Grants for studies	No					
Grants for studies amount	Mln EUR 0.0					
Grants for works	No					
Grants for works amount	Mln EUR 0.0					
Intention to apply for CEF	No, we do not plan to apply					
Other Financial Assistance	No					
Comments						
General Comments						

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# CS Rimpar

TRA-F-755	Project	Pipeline including CS	FID			
Update Date	18/11/2019		Non-Advanced			
Description	New construction of a compressor station at the existing site of Rimpar on the MEGAL gas transport system allowing the neccessary H-gas flows to the North of Germany replacing disappearing L-gas quantities. This project has no impact of increment capacity.					
PRJ Code - PRJ Name	-					

Sponsors				General Information	NDP and PCI Information	
GRTgaz Deutschland	d GmbH	55%	Promoter	GRTgaz Deutschland GmbH	H Part of NDP Yes (Netzentwicklungsplan Go	
Open Grid Europe G	SmbH	44%	Operator	GRTgaz Deutschland GmbH und	NDP Number	312-02
open ona zarope c		1170	Орегатог	Open Grid Europe GmbH	NDP Release Date	20/03/2019
			Host Country	Germany	NDP Website	<u>NDP URL</u>
			Status	Planned	Currently PCI	No
			Website		Priority Corridor(s)	
Schedule	Start Date	End Date			Third-Party Access Regime	
Pre-Feasibility					Considered TPA Regime	Regulated
Feasibility					Considered Tariff Regime	e Regulated
FEED					Applied for Exemption	Not Relevant
Permitting	01/2019	12/2019			Exemption Granted	Not Relevant
Supply Contracts		04/2020				
FID		07/2018			Exemption in entry direct	tion 0.00%
Construction	01/2020	12/2023			Exemption in exit direction	on 0.00%
Commissioning	2023	2023				
Grant Obtention Date						

Current TYNDP : TYNDP 2020 - Annex A Page 355 of 773

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
CS Rimpar / MEGAL		0	0	30	2023
	Total		0	30	

### **Expected Gas Sourcing**

#### Russia

	Benefits
Main Driver	Others
Main Driver Explanatio	Replacement of disappearing L-gas quantities by H-gas

Benefit Description

	CBCA	Finan	cial Assistance
Decision	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF
	and we do not plan to submit it	Grants for studies	No
Submissin Date		Grants for studies amount	Mln EUR 0.0
Decision Date		Grants for works	No
Website		Grants for works amount	Mln EUR 0.0
Countries Affected		Intention to apply for CEF	No, we do not plan to apply
Countries Net Cost Bearer		Other Financial Assistance	No
Additional Comments		Comments	
		General Comments	

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# **CS** Wertingen

TRA-F-340	Project	Pipeline including CS	FID
Update Date	18/11/2019		Advanced
Description	VDS Wertingen is a new compressor station project including 3 compressor units redundancy unit.	s of 11 MW each. One of the compressor un	its will serve as a
PRJ Code - PRJ Name	-		

Sponsors		General Information		NDP and PCI Information		
bayernets GmbH	<i>y</i>	55%	Promoter	bayernets GmbH	Part of NDP	Yes (Netzentwicklungsplan Gas 2018-
Open Grid Europe G	SmbH	45%	Operator	bayernets GmbH	Tare of Mor	2028)
open ona zarope c		1370	Host Country	Germany	NDP Number	036-04
			Status	In Progress	NDP Release Date	01/04/2018
			Website	<u>Project's URL</u>	NDP Website	<u>NDP URL</u>
					Currently PCI	No
					Priority Corridor(s)	
Schedule	Start Date	End Date			Third-Party Access Regime	
Pre-Feasibility		06/2019			Considered TPA Regir	me Regulated
Feasibility	07/2015	11/2015			Considered Tariff Reg	ime Regulated
FEED	03/2016	03/2016			Applied for Exemption	n No
Permitting	04/2016	04/2017			Exemption Granted	Not Relevant
Supply Contracts		08/2017				
FID		05/2016			Exemption in entry dir	rection 0.00%
Construction	09/2017	12/2019			Exemption in exit dire	ction 0.00%
Commissioning	2019	2019				
Grant Obtention						

Date

Current TYNDP : TYNDP 2020 - Annex A Page 357 of 773

Benefits					
Main Driver	Others				
Main Driver Explanation	The project results from the modelling of National Development Plan (so called "Netzentwicklungsplan Gas") 2012, 2013, 2014, 2015, 2016 and 2018 in Germany.				
Benefit Description					

	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance					
Applied for CEF	(3) No, we have not applied for CEF				
Grants for studies	No				
Grants for studies amount	Mln EUR 0.0				
Grants for works	No				
Grants for works amount	Mln EUR 0.0				
Intention to apply for CEF	No, we do not plan to apply				
Other Financial Assistance	No				
Comments					
General Comments					

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# **Element Eins**

ETR-N-452	Project	Energy Transition Related Project	Non-FID
Update Date	27/09/2019		Advanced
	The grid operators TenneT, Gasunie Deutschland and Thyssengas have put for advancing the energy transition. The three grid operators are planning to buil 100 megawatts, it will be one of the largest of its kind in Germany.		0 0
Description	The "Element Eins" pilot project will give the companies first experiences with plant will be connected to the grid gradually. By converting green electricity is the partners ultimately hope to achieve a comprehensive coupling of the energreen electricity will be transported from the North Sea to the Ruhr region the sector.	into gas, it will develop new storage capacities for ergy, transport and industrial sectors. Gas that has	renewable energies. been produced from
PRJ Code - PRJ Name	-		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	Thyssengas GmbH	2022	NPcDEn	DEn	0.72 GWh/d
	Thyssengas GmbH	2024	NPcDEn	DEn	1.08 GWh/d
			Comment: Start of conversion to		
Ostfriesland (Element Eins)				CH4	
	Thyssengas GmbH	2028	NPcDEn	DEn	1.80 GWh/d
			Comment: Need of conversion to		
			C	H4 for 1.08 GWh/d	

Sponsors	General Information		
Elecrical Grid connection TenneT TSO GmbH	100%	Promoter	Thyssengas GmbH, Gasunie Deutschland Transport Services GmbH, Tennet TSO Gm
Gas Grid connection		Operator	Thyssengas GmbH
Gasunie Deutschland Transport Services GmbH	50%	Host Country	Germany
Thyssengas GmbH	50%	Status	Planned
Power to Gas Plant		Website	<u>Project's URL</u>
Gasunie Deutschland Transport Services GmbH	50%		
Thyssengas GmbH	50%		

Schedule	Start Date	End Date
Pre-Feasibility		10/2019
Feasibility	10/2019	12/2019
FEED		
Permitting		
Supply Contracts		
FID		
Construction	01/2022	12/2022
Commissioning	2022	2028
Grant Obtention Date		

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Technical Information (ETR)				
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year	
using separate infrastructure	electrical input of 100 megawatts new entry point: not defined yet Capacity H2: 1.8 GWh/d		2030	
addition to natural gas	Injektion of hydrogen to existing natural gas pipelines; electrical input of 40 megawatts new entry point: not defined yet Capacity H2: 0,72 GWh/d		2023	

# Energy Park Bad Lauchstädt

ETR-N-562	Project	Energy Transition Related Project	Non-FID
Update Date	15/06/2020		Advanced
Description	Hydrogen is produced by a 35 MW electrolyzer, which is directly connected to a wind fa cavern. The transport between the underground storage and the end users for the hydroconverted natural gas pipeline.	. , , ,	

Sponsors	Ge	General Information	
	Promoter	ONTRAS Gastransport GmbH	
	Operator	ONTRAS Gastransport GmbH	
	Host Country	Germany	
	Status	Planned	
	Website	<u>Project's URL</u>	

Schedule	Start Date	End Date
Pre-Feasibility		04/2019
Feasibility	05/2019	04/2021
FEED	06/2019	05/2021
Permitting	01/2020	12/2020
Supply Contracts		
FID		
Construction		
Commissioning	2023	2023
Grant Obtention Date		

PRJ Code - PRJ Name

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	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
Feasibility	capacity increment: 26.000 kWh/h; 0,60 GWh/d	hydrogen is injected in a converted natural gas pipeline	2023

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#### GETH2-ETR 1

ETR-N-633	Project	Energy Transition Related Project	Non-FID
Update Date	28/05/2020		Advanced
	Start for the Germany-wide hydrogen infrastructure:		
	Germany has set itself the target of reducing CO2 emissions by 80-95 percent (compare greatest possible efficiency, other key technologies are needed in addition to the expare infrastructure.		
Description	The conversion of electricity from renewables to hydrogen (H2) - power-to-gas - is sucl	h a key to a successful energy transition	on.
	The principle: - Electricity from renewable energies is converted to H2 - The green H2 is distributed via the existing gas infrastructure - In the industrial, transport, energy and heating sectors, green H2 is used as a CO2-fre - H2 that is not used directly is stored in underground caverns especially for dark doldr		
PRJ Code - PRJ Name	-		

Sponsors	Ge	eneral Information
	Promoter	Nowega GmbH & Open Grid Europe GmbH
	Operator	Nowega GmbH
	Host Country	Germany
	Status	Planned
	Website	<u>Project's URL</u>

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2022	2022
Grant Obtention Date		

	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
GET H2	919,8 GWh/y max	919,8 GWh/y max	2022

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# Green Hydrogen Hub Ahaus-Epe

ETR-N-852	Project	Energy Transition Related Project	Non-FID
Update Date	14/08/2020		Advanced
Description	Production of hydrogen via electrolysis and storage of hydrogen in salt caverns. GHH AE salt deposits suitable for creation of caverns capable of large-scale storage of hydrogen infrastructure: high-voltage electricity transmission grid, gas transmission network, multi Seas Region. Electrolysis capacity: Year 2027-300 MW Year 2031-1 GW Hydrogen storage capacity: Year 2027-200 GWh Year 2031-400 GWh. The results of ETR Large-scale electrolysis optimises the value of RES-E & co-location with large-scale hydrobust hydrogen supply chain.ETR-N-828 illustrates sector coupling potential as express entities engaged in transport,construction & industry.	are present. The location is close to e ple gas storage caverns and wind reso -N-828 show that project benefits exc ogen storage maximises the technolo	existing energy ources in the Northern ceed project costs. ogy benefits ensuring a

Sponsors			General Information
Corre Energy Limited	100%	Promoter	Corre Energy Limited
		Operator	Corre Energy Storage Ltd
		Host Country	Germany
		Status	Planned
		Website	

PRJ Code - PRJ Name

Schedule	Start Date	End Date
Pre-Feasibility		11/2021
Feasibility	12/2021	01/2022
FEED	02/2022	09/2022
Permitting	05/2022	05/2024
Supply Contracts		05/2024
FID		06/2024
Construction	09/2024	08/2026
Commissioning	2026	2026
Grant Obtention		
Date		

	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
Planning	Power-to-hydrogen electrolysis system with a capacity of up to 1,000 MW - Salt cavern storage of up to 130 million Nm3 (400 GWh) of hydrogen producing 2.712 GWh/day of Green Hydrogen		2026

Current TYNDP : TYNDP 2020 - Annex A Page 367 of 773

# Green Hydrogen Hub Etzel

ETR-N-894	Project	Energy Transition Related Project	Non-FID
Update Date	14/08/2020		Advanced
Description	Production of hydrogen via electrolysis and storage of hydrogen in salt can deposits suitable for creation of caverns capable of large-scale storage of hinfrastructure: high-voltage electricity transmission grid, gas transmission resease Region.  Electrolysis capacity: Year 2027 - 300 MW Year 2031 - 1,000 MW Hydroger of ETR-N-828 show that project benefits exceed project costs. Large-scale hydrogen storage maximises the technology benefits ensuring a robust hydrogen of interest for green hydrogen have been received from entities.	nydrogen are present. The location is close to existing network, multiple gas storage caverns and wind resount storage capacity: Year 2027 - 200 GWh Year 2031 - electrolysis optimises the value of RES-E & co-location drogen supply chain.ETR-N-828 illustrates sector cou	g energy urces in the Northern 400 GWh. The results on with large-scale
PRJ Code - PRJ Name	-		

Sponsors			General Information
Corre Energy Limited	100%	Promoter	Corre Energy Limited
		Operator	Corre Energy Storage Ltd
		Host Country	Germany
		Status	Planned
		Website	

Schedule	Start Date	End Date
Pre-Feasibility		11/2021
Feasibility	12/2021	01/2022
FEED	02/2022	09/2022
Permitting	05/2022	05/2024
Supply Contracts		05/2024
FID		06/2024
Construction	09/2024	08/2024
Commissioning	2026	2026
Grant Obtention		
Date		

Technical Information (ETR)				
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year	
Planning	Power-to-hydrogen electrolysis system with a capacity of up to 1,000 MW - Salt cavern storage of up to 130 million Nm3 (400 GWh) of hydrogen producing 2.712 Gwh/day of Green Hydrogen		2027	

Current TYNDP: TYNDP 2020 - Annex A Page 369 of 773

#### Green Hydrogen Hub Harsefeld

ETR-N-846	Project	Energy Transition Related Project	Non-FID
Update Date	14/08/2020		Advanced
	Production of hydrogen via electrolysis and storage of hydrogen in salt caverns. G	GHH DW is located in the Municipality of Hard	sefeld DE where salt

Description

Production of hydrogen via electrolysis and storage of hydrogen in salt caverns. GHH DW is located in the Municipality of Harsefeld, DE, where salt deposits suitable for creation of caverns capable of large-scale storage of hydrogen are present. The location is close to existing energy infrastructure: high-voltage electricity transmission grid, gas transmission network and wind resources in the Northern Seas Region. Electrolysis capacity: Year 2027 - 200 GWh Year 2031 - 400 GWh. The results of ETR-N-828 show that project benefits exceed project costs. Large-scale electrolysis optimises the value of RES-E & co-location with large-scale hydrogen storage maximises the technology benefits ensuring a robust hydrogen supply chain.ETR-N-828 illustrates sector coupling potential as expressions of interest for green hydrogen have been received from entities engaged in transport, construction & industry.

PRJ Code - PRJ Name

Sponsors			General Information
Corre Energy Limited	100%	Promoter	Corre Energy Limited
		Operator	Corre Energy Storage Ltd
		Host Country	Germany
		Status	Planned
		Website	

Schedule	Start Date	End Date
Pre-Feasibility		11/2021
Feasibility	12/2021	01/2022
FEED	02/2022	09/2022
Permitting	05/2022	05/2024
Supply Contracts		05/2024
FID		06/2024
Construction	09/2024	08/2026
Commissioning	2026	2026
Grant Obtention		
Date		

Technical Information (ETR)			
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
Planning	Power-to-hydrogen electrolysis system with a capacity of up to 1,000 MW - Salt cavern storage of up to 130 million Nm3 (400 GWh) of hydrogen producing 2.712 GWh/day of Green Hydrogen		2026

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#### Green Hydrogen Hub Moeckow

ETR-N-883	Project	Energy Transition Related Project	Non-FID
Update Date	14/08/2020		Advanced
	Production of hydrogen via electrolysis & storage of hydrogen in salt caverns. Geometric where salt deposits suitable for creation of caverns capable of large-scale storage infrastructure; high-voltage electricity transmission grid, gas transmission netwo	ge of hydrogen are present. The location is clo	se to existing energy

Description

where salt deposits suitable for creation of caverns capable of large-scale storage of hydrogen are present. The location is close to existing energy infrastructure: high-voltage electricity transmission grid, gas transmission network, multiple gas storage caverns & wind resources in the Northern Seas Region. Electrolysis capacity: Year 2027-300 MW Year 2031-1,000 MW Hydrogen storage capacity: Year 2027-200 GWh Year 2031-400 GWh. The results of ETR-N-828 show that project benefits exceed project costs. Large-scale electrolysis optimises the value of RES-E & co-location with large-scale hydrogen storage maximises the technology benefits ensuring a robust hydrogen supply chain.ETR-N-828 illustrates sector coupling potential as expressions of interest for green hydrogen have been received from entities engaged in transport,construction & industry

PRJ Code - PRJ Name

Sponsors			General Information
Corre Energy Limited	100%	Promoter	Corre Energy Limited
		Operator	Corre Energy Storage Ltd
		Host Country	Germany
		Status	Planned
		Website	

Schedule	Start Date	End Date
Pre-Feasibility		11/2021
Feasibility	12/2021	01/2022
FEED	02/2022	09/2022
Permitting	05/2022	05/2024
Supply Contracts		05/2024
FID		06/2024
Construction	09/2024	08/2026
Commissioning	2026	2026
Grant Obtention		
Date		

	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
Planning	Power-to-hydrogen electrolysis system with a capacity of up to 1,000 MW - Salt cavern storage of up to 130 million Nm3 (400 GWh) of hydrogen producing 2.712 GWh/day of Green Hydrogen		2026

#### **H2morrow Steel**

ETR-N-939	Project	Energy Transition Related Project	Non-FID					
Update Date	25/06/2020		Advanced					
Description	hydrogen will be produced from natural gas by reforming in an autotherm	H2morrow Steel aims to provide hydrogen to the steel plant in Duisburg. In order to allow for a continuous and secure supply of hydrogen, the hydrogen will be produced from natural gas by reforming in an autothermal reformer. The resulting CO2 will be sequestrated and stored permanently. The produced hydrogen is transported from the production site to the steel plant via new built or converted hydrogen pipelines.						
PRJ Code - PRJ Name								

**General Information** 

Sportsors			OC.	
	7		Promoter	Open Grid Europe GmbH; Thyssengas GmbH
			Operator	Open Grid Europe GmbH
			Host Country	Germany
			Status	Plannea
			Website	<u>Project's URL</u>
Schedule	Start Date	End Date		
Pre-Feasibility		03/2020		
Feasibility				
FEED				
Permitting				
Supply Contracts				
FID				
Construction				
Commissioning	2026	2026		
Grant Obtention Date				

Sponsors

Current TYNDP : TYNDP 2020 - Annex A Page 374 of 773

Technical Information (ETR)					
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year		
-	capacity increment: 65 GWh/day		g . can		

Current TYNDP: TYNDP 2020 - Annex A Page 375 of 773

#### hybridge - gas grid infrastructure

ETR-N-406	Project	Project	Non-FID
Update Date	03/09/2019		Advanced
	Amprion and OGE want to advance sector coupling. The goal of the project pa system-oriented use of a power-to-gas plant can thus avoid bottlenecks in the	transmission grid. From 2023, the plant will co	onvert up to 100 MW of

Description

Amprion and OGE want to advance sector coupling. The goal of the project partners is to optimally coordinate the electricity and gas systems. The system-oriented use of a power-to-gas plant can thus avoid bottlenecks in the transmission grid. From 2023, the plant will convert up to 100 MW of electricity into hydrogen. The aim is to trial all future uses of hydrogen. Part of Open Grid Europe's existing gas pipeline system will be converted to transport pure hydrogen. Companies with a need for hydrogen can connect to this network. The mobility sector and converted gas storage facilities can also be integrated. The addition of hydrogen to natural gas grids and methanisation are also part of the hybridge concept. This means that the green gas can also be used for other purposes, such as heating. The project can be considered in two parts, the electrolysis (realized by Amprion) and the gas grid infrastructure (realized by OGE). This project only includes the gas grid infrastructure part.

PRJ Code - PRJ Name

Capacity Increments Variant For Modelling							
Point	Operator	Year	From Gas System	To Gas System	Capacity		
Production (OGE) (DE)	Open Grid Europe GmbH	2023	NPcDEn	DEn	2.00 GWh/d		

General Information	Gei	sors
Open Grid Europe GmbH	Promoter	
Open Grid Europe GmbH	Operator	
Germany	Host Country	
Planned	Status	
<u>Project's URL</u>	Website	

Schedule	Start Date	End Date
Pre-Feasibility		03/2019
Feasibility	01/2019	03/2020
FEED	01/2020	12/2020
Permitting	01/2021	12/2021
Supply Contracts		
FID		01/2020
Construction	01/2022	06/2023
Commissioning	2023	2023
Grant Obtention		
Date		

**Sponsors** 

## Hydrogen pipeline system conversion projects of german gas NDP 2020-2030

ETR-N-952	Project	Energy Transition Related Project	Non-FID
Update Date	25/06/2020		Advanced
Description	Hydrogen pipeline system conversion projects of german gas NDP 2020-2030 (are not included); IDs german gas NDP: 705, 706, 707 (share OGE: 50%), 708 (sh		• •
PRJ Code - PRJ Name			

**General Information** 

	4		Promoter	Open Grid Europe GmbH
			Operator	Open Grid Europe GmbH
			Host Country	Germany
			Status	Planned
			Website	
Schedule	Start Date	End Date		
Pre-Feasibility				
Feasibility				
FEED				
Permitting				
Supply Contracts				
FID				
Construction				
Commissioning	2030	2030		
Grant Obtention Date				

#### Technical Information (ETR)

Section/Phase Name

Main Technical Parameters

**Technical Information Comment** 

Commissio ning Year

pipeline length: 262 km (total length) pipeline diameters: 400-900 mm

capacity increment: 72,05 GWh/day (including new pipeline and

conversion projects)

## New hydrogen pipeline projects of german gas NDP 2020-2030

ETR-N-948	Project	Energy Transition Related Project	Non-FID
Update Date	25/06/2020		Advanced
Description	All new hydrogen pipeline projects of german gas NDP 2020-2030 (new pipelinare not included); IDs german gas NDP: 731, 732, 733, 734, 735, 743	ne projects only; new facilities and pipeline syste	em conversion projects
PRJ Code - PRJ Name			

Sponsors				General Information
	7		Promoter	Nowega GmbH; Open Grid Europe GmbH; Thyssengas GmbH
			Operator	Open Grid Europe GmbH
			Host Country	Germany
			Status	Planned
			Website	
Schedule	Start Date	End Date		
Pre-Feasibility	11			
Feasibility				
FEED				
Permitting				
Supply Contracts				
FID				
Construction				
Commissioning	2030	2030		
Grant Obtention				
Date				

Current TYNDP : TYNDP 2020 - Annex A Page 380 of 773

	Technical Information (ETR)					
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year			
-	pipeline length: 93,1 km pipeline diameters: 300-600 mm capacity increment: 72,05 GWh/day (including new pipeline and conversion projects)					

Current TYNDP : TYNDP 2020 - Annex A Page 381 of 773

#### Nord Stream 2

TRA-F-937	Project	Pipeline including CS	FID
Update Date	18/11/2019		Advanced
Description	Transport of natural gas from Russia through the Baltic Sea to the EU network on the supply of natural gas, strengthen the internal market and support EU climate goals.		ance the EU's security of
PRJ Code - PRJ Name	-		

Capacity Increments Varia	t For Modelling				
Point	Operator	Year	From Gas System	To Gas System	Capacity
Lubmin II	Nord Stream 2 AG	2019	RU/NO2	DEg	1,750.00 GWh/d
	Comment: Two additional route options pro	ovided for l	Denmark. Permit expe	cted anytime soon.	

Sponsors		Gener	al Information	N	DP and PCI Information	
Nord Stream 2 AG	100%	Promoter	Nord Stream 2 AG		No ((4) there is no obligation at national	
		Operator	Nord Stream 2 AC	2.40	Part of NDP	level for such a project to be part of the
		Host Country	Germany	NDDN	NDP)	
		Status	In Progress	NDP Number		
		Website	<u>Project's URL</u>	NDP Release Date		
				NDP Website		
				Currently PCI	No	
				Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	01/2012	10/2012
FEED		
Permitting		
Supply Contracts		12/2016
FID		09/2015
Construction	02/2018	12/2019
Commissioning	2019	2019
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Not Applicable
Considered Tariff Regime	Not Applicable
Applied for Exemption	Not Relevant
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Nord Stream 2		1,153	1,200		0
	Total		1,200		

<b>Expected Gas Sourcin</b>	g
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#### Russia

Benefits				
Main Driver	Market Demand			
Main Driver Explanation				
Benefit Description Nord Stream 2 will enhance the EU's security of supply of natural gas, strengthen the internal market and support EU climate goals.				

Current TYNDP : TYNDP 2020 - Annex A Page 383 of 773

# Barrier Type Description Permit Granting Two additional route options provided for Denmark. Construction permit expected anytime soon. Political Two additional route options provided for Denmark. Construction permit expected anytime soon.

	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF	No, we do not plan to apply			
Other Financial Assistance	No			
Comments				
General Comments				

Current TYNDP : TYNDP 2020 - Annex A Page 384 of 773

## **NOWAL - Nord West Anbindungsleitung**

TRA-F-291	Project	Pipeline including CS	FID		
Update Date	18/11/2019		Advanced		
Description	It is necessary to increase the capacity of the pipeline NOWAL between the networks of OGE (market area of NCG) and GASCADE (Market area of GASPOOL). Given information describes the part of the project that is not commissioned yet, i.e. the upgrade of the stations GDRM-Anlage Reh and GDRM-Anlage Drohne. This will increase the capacity at interconnection point Drohne NOWAL to ensure the supply to South-West German				
PRJ Code - PRJ Name	-				

Capacity Increments Variant For Modelling	g				
Point	Operator	Year	From Gas System	To Gas System	Capacity
	GASCADE Gastransport GmbH	2020	DEg	DEn	200.00 GWh/d
Drohne NOWAL	Comment: Level 2, on top of Level 1. In to		/d. Increment due to u lage Rehden and GDF	, ,	

Sponsors		General Information		NDP and PCI Information	
GASCADE Gastransport GmbH	100%	Promoter	GASCADE Gastransport GmbH	Part of NDP	Yes (Netzentwicklungsplan Gas 2018-
		Operator	GASCADE Gastransport GmbH	Tall OF NDI	2028)
		Host Country	Germany	NDP Number	410-01a and 410-01b
		Status	Planned	NDP Release Date	20/03/2019
		Website	<u>Project's URL</u>	NDP Website	NDP URL
				Currently PCI	No
				Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting	01/2014	01/2016
Supply Contracts		
FID		05/2019
Construction	04/2020	10/2020
Commissioning	2020	2020
Grant Obtention Date		

Third-Party Access Regime			
Considered TPA Regime	Regulated		
Considered Tariff Regime	Regulated		
Applied for Exemption	No		
Exemption Granted	Not Relevant		
Exemption in entry direction	0.00%		
Exemption in exit direction	0.00%		

#### **Expected Gas Sourcing**

#### VHP GASPOOL

	Benefits
Main Driver	Market Demand
Main Driver Explanation	Part of the German National Development Plan 2018-2028: 410-01a, 410-01b
Benefit Description	Ensures additional flows to NCG required due to transition from L-gas to H-gas.

urrent TYNDP : TYNDP 202	20 - Annex A		Page 386 of 773
	CBCA	Financial As	ssistance
Decision	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF
	and we do not plan to submit it	Grants for studies	No
Submissin Date		Grants for studies amount	Mln EUR 0.0
Decision Date		Grants for works	No
Website		Grants for works amount	Mln EUR 0.0
Countries Affected		Intention to apply for CEF	No, we do not plan to apply
Countries Net Cost Bearer		Other Financial Assistance	No
Additional Comments		Comments	
		General Comments	

Current TYNDP : TYNDP 2020 - Annex A Page 387 of 773

## Renewable Hydrogen according to NEP2020

ETR-N-622	Project	Energy Transition Related Project	Non-FID
Update Date	15/06/2020		Advanced
Description	The upcoming NDP will include two concrete scenarios for the integration of rene • For 2025 a market survey was performed by the German TSOs to collect concrete Projects could either provide directly hydrogen or methane via an addition metha • For 2030 a total of 7.5 GW_el of P2G will be considered. The German TSOs see la This scenario should support the ramp up of the development.  This project is covering the hydrogen infeed as envisioned in the NDP 2020. It coverenewable gas projects, that have not been put individually into the TYNDP.	e projects for the supply of renewable gas from an ation process.  arge need for P2G installations for an efficient of the survey of the surve	t path towards 2050.
	The "towards 2050"-path is including the (additional) P2G installations considered	I in the NDP2020 for the 2030 scenario.	
PRJ Code - PRJ Name	-		

Point	Operator	Year	From Gas System	To Gas System	Capacity
	Gasunie Deutschland Transport Services GmbH	2020	NPcDEg	DEg	1.20 GWh/d
	Gasunie Deutschland Transport Services GmbH	2021	NPcDEg	DEg	0.90 GWh/d
Production (DE) (GUD) H-Gas-Summe Produktion	Gasunie Deutschland Transport Services GmbH	2022	NPcDEg	DEg	3.20 GWh/d
	Gasunie Deutschland Transport Services GmbH	2023	NPcDEg	DEg	4.20 GWh/d
	Gasunie Deutschland Transport Services GmbH	2024	NPcDEg	DEg	1.40 GWh/d
	Gasunie Deutschland Transport Services GmbH	2025	NPcDEg	DEg	6.00 GWh/d

Production (DE) (GUD) H-Gas-Summe Produktion

Gasunie Deutschland Transport Services 2030 NPcDEg DEg **0.90 GWh/d** 

oonsors	General Information
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Promoter	Gasunie Deutschland Transport Services GmbH
Operator	Gasunie Deutschland Transport Services GmbH
Host Country	Germany
Status	Planned
Website	<u>Project's URL</u>

Schedule	Start Date	End Date
Pre-Feasibility	4	01/2021
Feasibility	01/2019	01/2023
FEED	01/2022	01/2024
Permitting	01/2021	01/2024
Supply Contracts		01/2022
FID		01/2023
Construction	01/2023	01/2025
Commissioning	2020	2030
Grant Obtention Date		

Technical Information (ETR)				
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year	
Phase 1	4 Projects; 67 MW(el); 1.2 GWh/d H2 capacity		2020	
Phase 2	7 Projects; 119 MW(el); 2.1 GWh/d H2 capacity		2021	
Phase 3	17 Projects; 300 MW(el); 5.4 GWh/d H2 capacity		2022	
Phase 4	26 Projects; 530 MW(el); 9.6 GWh/d H2 capacity		2023	
Phase 5	27 Projects; 67 MW(el); 11 GWh/d H2 capacity		2024	
Phase 6	32 Projects; 950 MW(el); 17.1 GWh/d H2 capacity		2025	
Phase 7	32 Projects; 1000 MW(el); 18 GWh/d H2 capacity		2030	

Current TYNDP : TYNDP 2020 - Annex A Page 390 of 773

## Renewable Methane according to NEP2020

ETR-N-616	Project	Energy Transition Related Project	Non-FID
Update Date	11/08/2020		Advanced
Description	The upcoming NDP will include two concrete scenarios for the integration of re • For 2025 a market survey was performed by the German TSOs to collect conce Projects could either provide directly hydrogen or methane via an additionl me • For 2030 a total of 7.5 GW_el of P2G will be considered. The German TSOs se This scenario should support the ramp up of the development.	crete projects for the supply of renewable gas fro ethanation process.	
PRJ Code - PRJ Name	This project is covering the renewable methane infeed from P2G as envisioned supply from renewable gas projects, that have not been put individually into the		y"-path the total

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Production (DE) (GUD) H-Gas-Summe Produktion	Gasunie Deutschland Transport Services GmbH	2023	NPcDEg	DEg	0.26 GWh/d
	Gasunie Deutschland Transport Services GmbH	2025	NPcDEg	DEg	0.60 GWh/d

Sponsors	G	General Information
	Promoter	Gasunie Deutschland Transport Services GmbH
	Operator	Gasunie Deutschland Transport Services GmbH
	Host Country	Germany
	Status	Planned
	Website	<u>Project's URL</u>

Schedule	Start Date	End Date
Pre-Feasibility		01/2020
Feasibility	01/2019	01/2023
FEED	01/2022	01/2024
Permitting	01/2021	01/2025
Supply Contracts		01/2022
FID		01/2023
Construction	01/2023	01/2025
Commissioning	2023	2025
Grant Obtention		
Date		

	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
Phase 1	100MW PtG; hydrogen + biomethane		2023

Current TYNDP : TYNDP 2020 - Annex A Page 392 of 773

#### **Reverse Flow TENP Germany**

TRA-F-208	Project	Pipeline including CS	FID
Update Date	22/11/2019		Advanced
Description	The project includes reversing of CS Hügelheim to allow gas coming from south Europe (which has been commissioned in 2018), as well as the construction of a deodorisation page 2020), including modifications to all necessary installations to allow gas coming from Fra Wallbach. Fluxys TENP Open Grid Europe will both take part in the commercial operation	plant near the German-Swiss border cance to be transported through the	(to be commissioned in

PRJ Code - PRJ Name

Point		Operator		Year	From Gas System	To Gas System	Capacity
Wallbach		Fluxys TEN GmbH	NP GmbH & Open Grid Europe	2020	СН	DEn	240.00 GWh/d
Sponsors		General Information NDP and PCI Information					
Fluxys TENP GmbH		Promoter	Fluxys TENP GmbH & Open Grid Europe GmbH	Part o	of NDP Ye	rs (Netzentwicklung	gsplan Gas 2018- 2028)
Open Grid Europe GmbH	35.75 %	Operator	Fluxys TENP GmbH & Open Grid		Number		305-02
		Operator	Europe GmbH	NDP	Release Date		20/03/2019
		Host Country	Germany	NDP	Website		NDP URL

Status

Website

In Progress Currently PCI

<u>Project's URL</u> Priority Corridor(s)

No

Schedule	Start Date	End Date
Pre-Feasibility		01/2015
Feasibility	10/2012	01/2015
FEED	03/2017	11/2017
Permitting	12/2016	10/2018
Supply Contracts		04/2018
FID		01/2015
Construction	06/2017	10/2020
Commissioning	2020	2020
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

#### **Expected Gas Sourcing**

Algeria, Caspian Region, Libya, Russia, LNG ()

Benefits			
Main Driver	Others		
Main Driver Explanation			
Benefit Description	Contribution to the covering of the H-Gas Demand for Germany and to the switch from L- to H-gas.		

	СВСА	
Decision	Yes, we have submitted an investment request and have received a decision	Applied
Submissin Date		Grants f
Decision Date		Grants f
Website		Grants f
Countries Affected		Grants f
Countries Net Cost Bearer		Intentio
Additional Comments		Other Fi
		Comme

Financial Assistance			
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision		
Grants for studies	Yes		
Grants for studies amount	Mln EUR 0.4		
Grants for works	Yes		
Grants for works amount	Mln EUR 8.7		
Intention to apply for CEF			
Other Financial Assistance	No		
Comments			
General Comments			

Current TYNDP : TYNDP 2020 - Annex A Page 395 of 773

# **TENP Security of Supply**

TRA-N-402	Project	Pipeline including CS	Non-FID
Update Date	07/09/2020		Advanced
	In the Germand Network Development Plan (NEP 2018) several scenarios have been a German state of Baden-Württemberg and the demand for southbound transports to		security needs in the
Description  Two pipeline sections will be built between Mittelbrunn and Schwanheim(Region Rheinland-Pfalz) and between Hügelheim and Tannen Baden-Württemberg).			
	It will ensure the security of supply needs for the Region Baden-Württemberg, identified Additionally, these investments will secure a capacity of 13.3 GWh/h at the Cross-Boro		
PRJ Code - PRJ Name	-		

Sponsors		General Information	ND	P and PCI Information
	Promoter	Fluxys TENP GmbH & Open Grid Europe GmbH	Part of NDP	Yes (Netzentwicklungsplan Gas 2018- 2028)
OGE 35.	75 % Operator	Fluxys TENP GmbH & Open Grid Europe GmbH	NDP Number NDP Release Date	552-01 / 554-01 / 555-01 20/03/2019
	Host Country	Germany		NDP URL
	Status	Planned	Currently PCI	No
	Website		Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2024	2024
Grant Obtention		
Date		

~	,			
Third-Party Access Regime				
Considered TPA Regime	Regulated			
Considered Tariff Regime	Regulated			
Applied for Exemption	No			
Exemption Granted	No			
Exemption in entry direction	0.00%			
Exemption in exit direction	0.00%			

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Connections TENP I - TENP II		600			2021
Pipeline Hügelheim-Tannenkirch		900	16		2024
Pipeline Mittelbrunn-Schwanheim		1,000	38		2024
	Total		54		

Benefits					
Main Driver	Regulation SoS				
Main Driver Explana	ation				
Benefit Description					

CBCA			
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not		
Submissin Date	not		
Decision Date			
Website			
Countries Affected			
Countries Net Cost Bearer			
Additional Comments			

Financial Assistance			
Applied for CEF	(3) No, we have not applied for CEF		
Grants for studies	No		
Grants for studies amount	Mln EUR 0.0		
Grants for works	No		
Grants for works amount	Mln EUR 0.0		
Intention to apply for CEF	No decision yet taken		
Other Financial Assistance	No		
Comments			
General Comments			

Current TYNDP : TYNDP 2020 - Annex A Page 398 of 773

# Upgrade Sülstorf station

TRA-F-1267	Project	Pipeline including CS	FID
Update Date	18/11/2019		Advanced
Description	The station Sülstorf has to be upgraded by a preheating facility and an additional meas pipeline NEL into the pipeline FGL 219.	turing section in order to allow for ac	dditional flow from the
PRJ Code - PRJ Name	-		

Sponsors				General Information	NDP and PCI Information	
NEL Gastransport Gn		51%	Promoter	NGT GmbH / GUD GmbH & Co. KG / Fluxys D GmbH	Part of NDP	Yes (Netzentwicklungsplan Gas 2018- 2028)
Gasunie Deutschland	GmbH & Co. KG	25%	Operator	NEL Gastransport GmbH	NDP Number	507-01k
Fluxys Deutschland G	SmbH	23%	Host Country	Germany	NDP Release Date	20/03/2019
			Status	Planned	NDP Website	NDP URL
			Website	<u>Project's URL</u>	Currently PCI	No
					Priority Corridor(s)	
Schedule	Start Date	End Date			Third-P	Party Access Regime
Pre-Feasibility					Considered TPA Regime	Regulated
Feasibility					Considered Tariff Regime	e Regulated
FEED					Applied for Exemption	No
Permitting					Exemption Granted	No
Supply Contracts						
FID		03/2019			Exemption in entry direc	tion 0.00%
Construction	06/2019	10/2019			Exemption in exit direction	on 0.00%
Commissioning	2019	2019				
Grant Obtention Date						

Current TYNDP : TYNDP 2020 - Annex A Page 399 of 773

Benefits Benefits		
Main Driver	Market Demand	
Main Driver Explanation	The project will satisfy market demand that was expressed through binding capacity bookings in the context of "more capacity". The market demand is proven by the successful auctioning of the new capacities in the yearly auctions of 2017 that also proves the economic viability of the project.	
Benefit Description	The "more capacity" projects - especially in combination with the other projects within PRJ group "More capacity - DE/CZ Capacity4Gas Project" - will enhance market integration, security of supply, sustainability, and competition within Europe.	

1/	7.		
CBCA			
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it		
Submissin Date			
Decision Date			
Website			
Countries Affected			
Countries Net Cost Bearer			
Additional Comments			

Financial Assistance			
Applied for CEF	(3) No, we have not applied for CEF		
Grants for studies	No		
Grants for studies amount	Mln EUR 0.0		
Grants for works	No		
Grants for works amount	Mln EUR 0.0		
Intention to apply for CEF	No, we do not plan to apply		
Other Financial Assistance	No		
Comments			
General Comments			

# Vlieghuis (NL)/ Emlichheim (DE) Capacity for Hydrogen according to the NDP

ETR-N-905	Project	Energy Transition Related Project	Non-FID
Update Date	22/06/2020		Advanced
Description	According to the german NDP 2020-2030 this Increment project for Hydroge	en shows the capacity at the IP Vlieghuis (NL) -Em	mlichheim (DE).
DPI Code - DPI Name			

Sponsors	G	General Information
	Promoter	Thyssengas GmbH
	Operator	Thyssengas GmbH
	Host Country	Germany
	Status	Planned
	Website	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2025	2025
Grant Obtention Date		

	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commiss ning Ye
commissioning H2-IP	planned entry-capacity is 500 MWh/h = 12 GWh/d		2025

## Wilhelmshaven LNG-Terminal Anbindungsleitung

TRA-A-408	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Advanced
Description	Project to connect the planned LNG Terminal Wilhelmshaven to the German transmission	system for gas.	
PRJ Code - PRJ Name			

Sponsors		Gene	General Information		NDP and PCI Information		
			Promoter Operator Host Country Status Website	Open Grid Europe GmbH Open Grid Europe GmbH Germany Planned	Part of NDP  NDP Number  NDP Release Date  NDP Website  Currently PCI	No ((1) the NDP was prepared at an earlier date and the project will be proposed for inclusion in the next NDP)  No	
					Priority Corridor(s)	110	
Schedule	Start Date	End Date			Thi	rd-Party Access Regime	
Pre-Feasibility					Considered TPA Reg	jime Regulated	
Feasibility	10/2018	03/2019			Considered Tariff Re	egime Regulated	
FEED	02/2019	11/2019			Applied for Exemption	on <i>No</i>	
Permitting	12/2019	12/2020			Exemption Granted	No	
Supply Contracts							
FID		12/2020			Exemption in entry of	direction 0.00%	
Construction	06/2021	10/2022			Exemption in exit dir	rection 0.00%	
Commissioning Grant Obtention Date	2022	2022					

Current TYNDP: TYNDP 2020 - Annex A Page 403 of 773

### **Expected Gas Sourcing**

LNG ()

Website

Countries Affected

Countries Net Cost Bearer **Additional Comments** 

Benefits

Main Driver Market Demand

Main Driver Explanation

Benefit Description

	CDCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or
	not
Submissin Date	
Decision Date	

Financial Assistance			
Applied for CEF	(3) No, we have not applied for CEF		
Grants for studies	No		
Grants for studies amount	Mln EUR 0.0		
Grants for works	No		
Grants for works amount	Mln EUR 0.0		
Intention to apply for CEF			
Other Financial Assistance	No		
Comments			
General Comments			

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# ZEELINK

TRA-F-329	Project P	ipeline including CS	FID
Update Date	18/11/2019		Advanced
Description	Pipeline and two compressor stations project to support the changeover from low-calorific gas	to high-calorific gas in Germany	
PRJ Code - PRJ Name			

Sponsors			General Information	N	DP and PCI Information
CS Legden Open Grid Europe GmbH, Germany	75%	Promoter	Open Grid Europe GmbH and Thyssengas GmbH	Part of NDP	Yes (Netzentwicklungsplan 2018 (German NDP 2018))
	•	Operator	Open Grid Europe GmbH	NDP Number	203-02, 204-02a-d, 205-02a-b, 416-02,
Thyssengas GmbH, Germany	25%	Host Country	Germany	NDP Release Date	20/03/2019
CS Würselen		Status	Planned	NDP Website	NDP URL
Open Grid Europe GmbH, Germany	75%	Website	<u>Project's URL</u>	Currently PCI	No
Thyssengas GmbH, Germany	25%			Priority Corridor(s)	
ZEELINK 1					
Open Grid Europe GmbH, Germany	75%				
Thyssengas GmbH, Germany	25%				
ZEELINK 2					
Open Grid Europe GmbH, Germany	75%				
Thyssengas GmbH, Germany	25%				

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED	09/2015	09/2020
Permitting	09/2017	09/2020
Supply Contracts		08/2016
FID		01/2018
Construction	04/2019	03/2023
Commissioning	2023	2023
Grant Obtention Date		

	<u> </u>
Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
CS Legden				26	2023
CS Würselen				39	2021
ZEELINK 1		1,000	112		2021
ZEELINK 2		1,000	115		2021
	Total		227	65	

## **Expected Gas Sourcing**

Norway, LNG (BE,FR,NL,UK)

Current TYNDP : TYNDP 2020 - Annex A Page 406 of 773

Benefits				
Main Driver	Market Demand			
Main Driver Explanation	Main Driver Explanation Changeover of regions currently supplied by low-calorific gas to high-calorific gas due to declining availability of low-calorific gas			
Benefit Description	Availability of low-calorific gas is declining in Germany. The regions currently supplied by low-calorific gas will need to switch supply from low-calorific gas to high-calorific gas. The project is needed to transport high-calorific gas to the regions currently supplied by low-calorific gas.			

	CBCA	
Decision	No, we have not submitted an investment request yet,	Applied for CEF
2000001	and we do not plan to submit it	Grants for studies
Submissin Date		Grants for studies amount
Decision Date		Grants for works
Website		Grants for works amount
Countries Affected		Intention to apply for CEF
Countries Net Cost Bearer		Other Financial Assistance
Additional Comments		Comments
		General Comments

	Financial Assistance
Applied for CEF	(3) No, we have not applied for CEF
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	No, we do not plan to apply
Other Financial Assistance	No
Comments	
General Comments	

# Zevenaar (NL)/ Elten (DE) Capacity of Hydrogen according to the NDP

ETR-N-911	Project	Energy Transition Related Project	Non-FID
Update Date	22/06/2020		Advanced
Description	According to the german NDP 2020-2030 this Increment project for Hydroge	en shows the capacity at the IP Zevenaar (NL)-Elte	en (DE).
PRJ Code - PRJ Name			

Sponsors			General Information
Open Grid Europe GmbH	50%	Promoter	Thyssengas GmbH and Open Grid Europe GmbH
Thyssengas GmbH	50% Operator		Thyssengas GmbH
		Host Country	Germany
		Status	Planned
		Website	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2029	2029
Grant Obtention		
Date		

irrent TYNDP : TYNDP 2020 - Annex A	Technical Information (ETR)	Pag	ge 408 of 773
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
commissioning H2-IP	planned entry-capacity is about 40 GWh/d		Tillig Teal

Current TYNDP : TYNDP 2020 - Annex A Page 409 of 773

### Biomethane reverse flow Denmark

ETR-A-64	Project	Energy Transition Related Project	Non-FID	
Update Date	15/08/2019		Advanced	
Description	The objective of this reverse flow project from DSO grid to TSO grid, is to ensure the integration of excess biomethane in the distribution grid into the transmission grid. The project is a virtual aggregation of three physical projects establishing reverse flows from DSO grid to TSO grid.  In Total 746 MWh/h biomethane production capacity is connected to the DSO grid at low pres-sure level (4 bar). When supply exceeds demand, the DSO uses intermediate pressure compres-sors to lift the gas to a higher-pressure distribution grid (from 4 bar to 20/40 bar). When supply of			
Description	step 1: Biomethane -> low pressure distribution grid at 4 bar, supplying local de step 2: When local demand in the 4 bar distribution grid is saturated. DSO reco step 3: When local demand in the 20-40 bar distribution grid is satura	emand	)/40 bar to 80 bar).	
PRJ Code - PRJ Name	-			

Point	Operator	Year	From Gas System	To Gas System	Capacity
	Energinet	2021	DScDK	DK	1.00 GWh/d
ETR virtual aggregation (DK)	Comment: As the reverse flo average	ow varies significantly over entry to the TSO grid. The	•	,	

Sponsors	General Info	rmation
	Promoter	Energinet
	Operator	Energinet
	Host Country	Denmark
	Status	Planned
	Website	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	08/2018	09/2019
FEED	02/2019	09/2019
Permitting	06/2019	04/2021
Supply Contracts		01/2020
FID		09/2019
Construction	04/2021	04/2021
Commissioning	2021	2021
Grant Obtention Date		

	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
Reverse flow Denmark	Reverseflow units: 3 Total biomethane production ab plants: 746 MWh/h Biomethane reverse flow (DSO-TSO) Compressor capacity: 29 Metering (quality and quantity) and de-odorisation of gas	94 MWh/h	2021

Current TYNDP : TYNDP 2020 - Annex A Page 411 of 773

### **Green Gas Lolland-Falster**

ETR-N-922	Project	Energy Transition Related Project	Non-FID
Update Date	13/07/2020		Advanced
Description	The purpose of the project is to establish a transmission and distribution grid. Two of the biggest energy consumers in Denmark are located on these islands. The project is a two-faced project. On one hand it will enable gas to industries possible, on the other hand the project will enable integration of biogas produ with the potential to rise to 100% within some years. Going to 100% will requifrom excess power production.  The project consists of about 115 km 40 bar pipeline, including connecting me injection of biogas there will be installed compressor and metering stations.	s. s where there is no gas infrastructure and where e uction. Initially the biogas production will be 50% ire methanation of excess CO2 from biogas produ	electrification is not 6 of the consumption uction with hydrogen
PRJ Code - PRJ Name	-		

Sponsors	General I	nformation
	Promoter	Energinet
	Operator	Energinet
	Host Country	Denmark
	Status	Planned
	Website	<u>Project's URL</u>

Schedule	Start Date	End Date
Pre-Feasibility		09/2019
Feasibility	09/2019	10/2020
FEED	01/2020	01/2021
Permitting	01/2020	01/2022
Supply Contracts		01/2021
FID		09/2020
Construction	06/2022	09/2023
Commissioning	2023	2023
Grant Obtention		
Date		

Current TYNDP : TYNDP 2020 - Annex A Page 413 of 773

# Green Hydrogen Hub Denmark

ETR-N-828	Project	Energy Transition Related Project	Non-FID
Update Date	14/08/2020		Advanced
Description	Production of hydrogen via electrolysis & storage of hydrogen in salt caverns. Consuitable for storage of hydrogen are created in salt deposits by Nouryon during infrastructure: high-voltage electricity transmission grid, gas transmission networks are Region. Electrolysis capacity - Year 2025 - 300 MW - Year 2030 - 1,000 MW 400 GWh. The project benefits exceed project costs. Large-scale electrolysis optimises the maximises the benefits of these technologies and ensures robustness of the hydrogen have already been received from entities engages.	its salt producing activities. Located close to ork, underground gas storage and wind resour V - Hydrogen storage capacity - Year 2025 - 2 value of RES-E and co-location with large-sca drogen supply chain. Sector coupling potentia	existing energy rces in the Northern 00 GWh - Year 2030 - le hydrogen storage
PRJ Code - PRJ Name	-		

Sponsors			General Information
Corre Energy Limited	100%	Promoter	Corre Energy Limited
		Operator	Corre Energy Storage Ltd
		Host Country	Denmark
		Status	Planned
		Website	

Schedule	Start Date	End Date
Pre-Feasibility		11/2020
Feasibility	12/2020	01/2021
FEED	02/2021	09/2021
Permitting	05/2021	05/2023
Supply Contracts		05/2023
FID		06/2023
Construction	09/2023	08/2025
Commissioning	2025	2025
Grant Obtention		
Date		

	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
Planning	Power-to-hydrogen electrolysis system with a capacity of MW - Salt cavern storage of up to 130 million Nm3 (400 hydrogen producing 2.712 GWh/day of Green Hydrogen hydrogen-fuelled CAES facility with generation capacity which has been accepted by ENTSO-E as eligible for incluTYNDP 2020 (TYNDP Project No. 1044).	O GWh) of - GHH CAES, a of 320 M	2025

Current TYNDP : TYNDP 2020 - Annex A Page 415 of 773

## Norwegian tie-in to Danish upstream system

TRA-A-394	Project	Pipeline including CS	Non-FID
Update Date	26/09/2019		Advanced
Description	A new offshore pipeline between the Norwegian gas system (Europipe II) in the Norcombination with the Baltic Pipe - that Norwegian gas (approx. 10 bcm/year) can be the wider Central and Eastern European region. This will provide a number of countr could also flow through the Danish German interconnection point Ellund-Egtved to construction of a new offshore pipeline between the Norwegian gas system in the N Denmark is planned on the beach near Blåbjerg), construction of a new pipeline from receiving plant at Nybro.  - Former project name: "Gassled -Norwegian upstream system to Denmark"	e transported directly through Denmark to ries with improved access to additional sup the wider European gas market. The proje Jorth Sea (the offshore pipeline landfall on	Sweden, Poland and pply sources. The gas ect consists of a the west coast of
PRJ Code - PRJ Name	-		

Point	Operator	Year	From Gas System	To Gas System	Capacity
Europipe (NO) / Baltic Pipe (DK)	Energinet	2022	NO	IB-NPcDKn	306.80 GWh/d
		Comment: Connection to the Norwegian offshore			
N. J	Energinet	2022	IB-NPcDKn	DK	306.80 GWh/d
Nybro			Comment: Del	ete peak incremen	t

Sponsors	General Infor	rmation	NDI	and PCI Information
	Promoter	Energinet.dk	Part of NDP	No ((2) no NDP exists in the country)
	Operator	Energinet	NDP Number	
	Host Country	Denmark	NDP Release Date	
	Status	Planned	NDP Website	
	Website	<u>Project's URL</u>	Currently PCI	No
			Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	09/2015	12/2016
FEED	05/2018	02/2022
Permitting	01/2018	07/2019
Supply Contracts		10/2017
FID		12/2018
Construction	01/2020	10/2022
Commissioning	2022	2022
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Negotiated
Considered Tariff Regime	Not Applicable
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Norwegian tie-in to Danish upstream system		800	105	0	2022
	Total		105	0	

<b>Expected Gas Sourcing</b>	<b>Expected</b>	Gas Sourcing
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### Norway

	Benefits	
Main Driver	Market Demand	
Main Driver Explanatio	n	
Benefit Description		

Current TYNDP: TYNDP 2020 - Annex A Page 417 of 773

	CBCA	Finan	cial Assistance
Decision	Yes, we have submitted an investment request and have received a decision	Applied for CEF Grants for studies	(3) No, we have not applied for CEF
Submissin Date	27/10/2017		No Min FUR 0.0
Decision Date	27/02/2018	Grants for studies amount  Grants for works	Mln EUR 0.0 No
Website	<u>CBCA URL</u>	Grants for works amount	Mln EUR 0.0
Countries Affected	Denmark, Poland, Sweden	Intention to apply for CEF	
Countries Net Cost Bearer		Other Financial Assistance	No
	The Danish NRA (DERA) approved the CBCA on the	Comments	
	27 February 2018. The Polish NRA (URE) approved the CBCA on the 12 March 2018.	General Comments	
Additional Comments	The Danish decision can be found here: http://energitilsynet.dk/gas/afgoerelser/tilsynsafgoerels er/2018/godkendelse-af-omkostningsfordelingen- mellem-polen-og-danmark-for-baltic-pipe-projektet/		
	The Polish decision can be found here: https://bip.ure.gov.pl/bip/taryfy-i-inne-decyzje/inne- decyzje-informacj/3634,Inne-decyzje-informacje-		

search=3253

sprawozdania-opublikowane-w-2018-r.html?

Current TYNDP : TYNDP 2020 - Annex A Page 418 of 773

### **Enhancement of Estonia-Latvia interconnection**

TRA-F-915	Project Project	Pipeline including CS	FID
Update Date	22/11/2019		Advanced
Description	The project composes of implementation of reverse flow in Karksi metering station reverse flow gas measuring station would be erected to the location of the existing measuring of gas quantities through Estonia with the main advantages of reverse pipeline. Karksi reverse flow enables the full use of Inculkalns UGS for all the mark transportation of gas through Estonia and the Balticconnector offshore pipeline to enable the full use of the planned offshore pipeline without a compressor station the physical implementations needed for market integration between the Baltics at	ng measuring station in Karksi. Karksi reverse flow used after the commissioning of the B set participants. Puiatu compressor station of the Finnish gas market. The current system in south of Estonia. Puiatu compressor stat	e flow enables the salticconnector offshore enables the n design does not
PRJ Code - PRJ Name	2		

Capacity Increments Variant For Modellin	g				
Point	Operator	Year	From Gas System	To Gas System	Capacity
Mayles:	Elering AS		EE	LV	105.00 GWh/d
Karksi	Elering AS	2019	LV	EE	42.00 GWh/d
Sponsors	General Informa	tion	NDP and	d PCI Information	
Karksi metering station Promoter Elering AS Yes (EESTI G/		es (EESTI GAASIÜL	EKANDEVÕRGU		

Sponsors			General Information		NDP and PCI Information	
Karksi metering station		Promoter	Elering AS	Part of NDP	Yes (EESTI GAASIÜLEKANDEVÕRGU	
Elering AS	100%	Operator	Elering AS		ARENGUKAVA 2019-2028)	
Puiatu Compressor Station		Host Country		NDP Number	paragraph 3.2	
Elering AS	100%	Status	In Progress	NDP Release Date	03/03/2019	
Elering A3	100%	Website	Project's URL	NDP Website	<u>NDP URL</u>	
				Currently PCI	No	
				Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		01/2015
Feasibility	01/2015	01/2016
FEED	05/2015	05/2016
Permitting	09/2015	06/2019
Supply Contracts		02/2018
FID		10/2016
Construction	06/2018	12/2019
Commissioning	2019	2019
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations		
Pipeline Section	Pipeline Comment	Diameter Length Compressor Power Comissioning (mm) (km) (MW) Year
Karksi GMS, Puiatu CS		10 2019
	Total	10

<b>Expected Gas Sourcing</b>
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Russia, LNG (WO)

Benefits					
Main Driver	Regulation-Interroperability				
Main Driver Explanatio	Main project driver is the operational link with the Balticconnector project.				
Benefit Description					

	CBCA		Financial Assistance
Decision	Yes, we have submitted an investment request and have received a decision	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Submissin Date	07/04/2016	Grants for studies	No
Decision Date	22/04/2016	Grants for studies amount	Mln EUR 0.0
Website	<u>CBCA URL</u>	Grants for works	Yes
Countries Affected	Finland, Latvia	Grants for works amount	Mln EUR 18.6
Countries Net Cost Bearer	Estonia	Intention to apply for CEF	
Additional Comments		Other Financial Assistance	No
		Comments	
		General Comments	

Current TYNDP : TYNDP 2020 - Annex A Page 421 of 773

### Paldiski LNG Terminal

LNG-A-79
Update Date
15/08/2019
Project
LNG Terminal
Non-FID
Non-Advanced

Description LNG import and regasification terminal for regional use on the Pakri peninsula on the Easern coast of the Baltic Sea

PRJ Code - PRJ Name

Capacity Increments Variant For Modelling						
Point	Operator	Year	From Gas System	To Gas System	Capacity	
	Balti Gaas plc	2025	LNG_Tk_EE	EE	140.00 GWh/d	
Paldiski LNG	Comment: The regasificatio	Comment: The regasification capacity will be dependent on market demand and				
			Balt	icConnector usage	•	

Sponsors			General Information	ND	P and PCI Information
Balti Gaas LLC	100%	Promoter	Balti Gaas plc	Part of NDP	Yes (Estonian transmission system
		Operator	Balti Gaas plc		development plan for 2018-2027)
		Host Country	Estonia	NDP Number	-
		Status	Planned	NDP Release Date	03/03/2018
		Website	Project's URL	NDP Website	NDP URL
			•	Currently PCI	No
				Priority Corridor(s)	BEMIP

Schedule	Start Date	End Date
Pre-Feasibility		11/2008
Feasibility	01/2012	01/2016
FEED	04/2013	04/2014
Permitting	01/2008	06/2017
Supply Contracts		01/2024
FID		01/2022
Construction	11/2022	12/2025
Commissioning	2025	2025
Grant Obtention		
Date		

Third-Party Access Regime						
Considered TPA Regime	Regulated					
Considered Tariff Regime	Regulated					
Applied for Exemption	No					
Exemption Granted	No					
Exemption in entry direction	0.00%					
Exemption in exit direction	0.00%					

Technical Information (LNG)								
Regasification Facility	Reloading Ability Project Phase	Expected Increment Ship S (bcm/y) (m3	canacity	Storage capacity (m3 LNG)	Comments	Commissioning L Year	oad Factor (%)	
Paldiski LNG terminal	Yes Paldiski LNG Terminal	2.0 160,0	00 135.00	160,000	Estimates	2025	25	

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

#### **Delays since last TYNDP**

Delay Since Last TYNDP

**Delay Explanation** 

The project is technically ready for construction, but no FID can be taken before the competing projects and governmental aid issues are solved (political decision regarding regional LNG terminal and potential financial aid to it).

Current TYNDP : TYNDP 2020 - Annex A Page 423 of 773

#### **Expected Gas Sourcing**

LNG (LNG)

#### Comments about the Third-Party Access Regime

The regulatory scheme applicable to this project is unclear. Since the project intends to reinstate the PCI lable, and thus would have significant cross-border impact, the regulatory scheme must be acceptable to all concerned regulators. Additionally, the regulation for LNG terminals in the project country (Estonia) does not yet exist.

Benefits Benefits						
Main Driver	Others					
Main Driver Explanation	The region as a whole is an energy island with Russia as the only counterpart and supply source for gas. An LNG import and re-gasification terminal would provide alternative sources as well as storage capability. Currently, there is a temporary solution in Klaipeda, but a permanent and more efficient solution is needed, especially after BalticConnector, to supply the whole region.					
Benefit Description	Additionally the terminal is capable of servicing the potential Baltic bunkering demand as well as provide alternative fuel to road and rail transport in the affected countries. It can also be the Baltic region Hub for smaller LNG terminals (Pori, Hamina, Tornio).					
	Barriers					
Barrier Type	Description					
Regulatory	Regulatory framework for LNG facilities in Estonia is insufficient to clarify this point.					
Permit Granting	Long process					
Political	The assesment methods of competing PCI projects is not well established.					
Regulatory	Lack of proper transposition of EU regulation					
	Intergovernmental Agreements					

	Intergovernmental Agreements						
Agreement	Agreement Description	Is Signed	Agreement Signature Date				
Memorandum of Understanding	MoU between Estonia and Finland and LNG project promoters	Yes	28/02/2014				
Agreement between PMs of Estonia and Finland	Agreement in regards to the gas infrastructure in the countries.	Yes	17/11/2014				

	CBCA		Financial Assistance
Decision	Yes, we have submitted an investment request and have received a decision	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Submissin Date	10/08/2016	Grants for studies	Yes
Decision Date	28/10/2016	Grants for studies amount	Mln EUR 137.0
Website	<u>CBCA URL</u>	Grants for works	Yes
Countries Affected	Estonia, Finland	Grants for works amount	Mln EUR 137.0
Countries Net Cost Bearer		Intention to apply for CEF	
Additional Comments	No net cost bearers were identified	Other Financial Assistance	No
		Comments	
		General Comments	The CEF funding application was declined due to unclear situation with the temporary solution in Klaipeda and lack of clarity regarding the permanent solution.

Current TYNDP : TYNDP 2020 - Annex A Page 425 of 773

## Tallinn LNG

LNG-A-962	Project	LNG Terminal	Non-FID
Update Date	15/08/2019		Advanced
Description	Conventional LNG import terminal (bunkering, break-bulk, on-grid and off-grid land to supply and serving commercial customers. The project includes 5x800 m3 pressurized 11 m), 2x100m3/h truck loading rack and connection to the low pressure natural gas of covering about 60% of Estonian gas demand. And one to two flat bottom storage tank m3, with second connection to the berth (LOA 365m depth -17m) capable of handling (MOP 54 bar) national high pressure grid located about 13 km from the terminal site. I 160 000 m3 with 4 bcma connection to the national high pressure grid. (grid connection to the national high pressure grid.)	bullets, connection to the existing bert listribution network located about 1 kn ks with the total LNG storage capacity of any size LNG carrier on the market, co Rail shunting tracks are 200m. Current	th (LOA 198 m; depth - n from terminal site, of 50 000 m3 to 320 000 onnection to DN711
PRJ Code - PRJ Name			

Capacity increments variant For Mod	aeiiing							
Point		Operator			From Gas System	To Gas System	Capacity	
Tallinn LNG		Liwatho	on E.O.S.	2022	LNG_Tk_EE	EE	121.00 GWh/d	
Sponsors		General Information			NDP and PCI Information			
Liwathon E.O.S.		Promoter	Liwathon E.O.S. AS / Port of Tallinn AS		f NDP		i Ülekandevõrgu kava 2018-2027.)	
Port of Tallinn	25%	Operator	Liwathon E.O.S.	. NDP N	lumber	Par	ragraph 3 point 7	
		Host Country	Estonia	NDP R	elease Date		03/03/2018	
		Status	Plannea	NDP V	Vebsite		NDP URL	
		Website	<u>Project's URL</u>	Curren	ntly PCI		No	
				Priority	y Corridor(s)		BEMIP	

Schedule	Start Date	End Date
Pre-Feasibility		09/2012
Feasibility	02/2012	09/2012
FEED	01/2016	01/2020
Permitting	01/2012	03/2017
Supply Contracts		08/2021
FID		02/2020
Construction	04/2020	12/2022
Commissioning	2022	2022
Grant Obtention Date	06/02/2020	06/02/2020

Third-Party Access Regime					
Considered TPA Regime	Regulated				
Considered Tariff Regime	Regulated				
Applied for Exemption	No				
Exemption Granted	Not Yet				
Exemption in entry direction	0.00%				
Exemption in exit direction	0.00%				

Technical Information (LNG)								
Regasification Facility	Reloading Ability Project Phase	Expected Increment Ship Size (bcm/y) (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 LNG)	Comments	Commissioning Year	Load Factor (%)	
Tallinn LNG	Yes Tallinn LNG	4.0 160,000	11.00	160,000	No comments	2022	50	

F	1.0:11	المما	Criteria	
FU		le(a	Criteria	

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

				Delays sinc	e last TYNDF	•
	171					

Delay Since Last TYNDP

One to two years

Delay Explanation

The project is delayed because of the uncertainty and delay in other former LNG Terminal projects in the region, as this affects the project scope, feasibility, FEED and FID.

Current TYNDP : TYNDP 2020 - Annex A Page 427 of 773

## **Expected Gas Sourcing**

LNG ()

	Benefits
Main Driver	Market Demand
Main Driver Explanation	- Market integration and diversification, SoS, market development, clean energy contributing to the fulfilment of Directive 2014/94/EC of the European Union - Synergies between energy supply and a alternative fuel in transport
Benefit Description	Reduces isolation and bottlenecks, interoperability, appropriate connections, diversification of sources, diversification of routes, sustainability.
	Barriers
Barrier Type	Description
Permit Granting	All permits for the construction phase have been granted
Political	None!
Others	The market interference which has been created by FSRU 'Independence' LNG vessel moored in Klaipeda harbor, Lithuania. With almost entire cost of the vessel being socialized over the Lithuanian gas consumer with any additional service provided by the vessel being largely underpriced; the vessel is negatively affecting other Baltic terminal developments. As other projects do not enjoy such heavy state funding and will therefore have to develop market-based commercially sound solutions in the region. A concrete example is FSRU 'Independence' re-gasification price, which is priced about 10-20 times lower than any other large LNG facility. We expect the European Competition authority to review the waiver provided in this respect, as the cost-base of this particular vessel largely exceeds 'normal' cost level of an onshore facility. Over 10y period, total lease cost of the vessel is in excess of Eur 600 million, that is equal to about two similar land-based terminals construction cost.
Regulatory	Low rate of return
Financing	Availability of funds and associated conditions
Market	Lack of market maturity

	CBCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance			
Applied for CEF	(3) No, we have not applied for CEF		
Grants for studies	No		
Grants for studies amount	Mln EUR 0.0		
Grants for works	No		
Grants for works amount	Mln EUR 0.0		
Intention to apply for CEF	Yes, for studies and works		
Other Financial Assistance	No		
Comments			
General Comments	We prepared a CBA for the project related to the CEF requirements in 2018.		

## Circular economy: waste to biomethane

ETR-N-921	Project	Energy Transition Related Project	Non-FID
Update Date	14/06/2020		Advanced
Description	Reganosa promotes for TYNDP2020 an energy transition project for biome environmental neutral project in order to integrate the farming, agricultura sector.  The project will consider different residues generated in the region for the contribute the compliance of the existing EU targets on the recycling and	al, industrial and domestic residues coupling circularir conversion in biomethane energy and, in addition	ar economy with the gas
PRJ Code - PRJ Name			

Sponsors			General Information
Reganosa	100%	Promoter	Reganosa
		Operator	Reganosa
		Host Country	Spain
		Status	Planned
		Website	Project's URL

Schedule	Start Date	End Date
Pre-Feasibility		10/2020
Feasibility	10/2020	06/2021
FEED	06/2021	11/2021
Permitting	11/2021	12/2021
Supply Contracts		01/2021
FID		01/2022
Construction	02/2022	10/2022
Commissioning	2022	2022
Grant Obtention Date		

	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commission ning Year
Circular economy: waste to biomethane	The Project will be design for treating 1.7 MTPA of dry slurry, 4000 t/year of treated waste water, 44000 t/year of organic industrial waste and 364000 t/year of solid urban waste; to produce around 100000 t/year of fertilisers, 118 Mm3/year of biomethane, 55 Mm3/year of CO2 and 21000 t/year of recycled materials.	The technical parameters will be analysed during the feasibility study. These values may suffer any modification according to the outcomes of the mentioned study.	2022

Current TYNDP : TYNDP 2020 - Annex A Page 431 of 773

# CORE LNGas hive and LNGHIVE2 Infrastructure and logistic solutions

ETR-F-541	Project	Energy Transition Related Project	FID
Update Date	18/11/2019		Advanced
Description	CORE LNGas hive project is part of institutional strategy to deploy LNG supply to market, is a step in the career of reduced emissions. Enagás is performing the forplants in the Iberian Peninsula, these adaptations are made to be able to supply These modifications are part of the project CORE LNGas hive and LNGHIVE2 Information and the modification and the modification are part of the project CORE LNGas hive and LNGHIVE2 Information and the strategy and provided the project contact and the strategy and provided the project contact and the modification are part of the project core and the project contact and the project core are provided to the project core and the project core are part of the project core and the project core are provided to the project core and the project core are provided to the project core and the project core are provided to the project core and the project core are provided to the project core and the project core are provided to the project core and the project core are provided to the project core and the project core are provided to the project core and the project core are provided to the project core and the project core are provided to the project core and the project core are provided to the project core and the project core are provided to the project core are provided to the project core and the project core are provided to the project core are project core are pr	ollowing activities: Coordination; adaptation of LNG small scales services and supply LNG as trastructure and logistic solutions (hivelogs), we sting penetration of LNG as propulsion and aumination, especially in port domain, as using l	of jetties in existing smarine fuel to ships. which aims to make the uxiliary fuel for vessels.
PRJ Code - PRJ Name	-		

Sponsors	Gen	General Information	
	Promoter	Enagas Transporte S.A.U.	
	Operator	Enagas Transporte S.A.U.	
	Host Country	Spain	
	Status	In Progress	
	Website	<u>Project's URL</u>	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	01/2014	03/2014
FEED	01/2015	10/2018
Permitting	06/2017	12/2018
Supply Contracts		04/2020
FID		01/2014
Construction	10/2017	03/2020
Commissioning	2020	2020
<b>Grant Obtention</b>		
Date		

Current TYNDP : TYNDP 2020 - Annex A Page 433 of 773

### **Gran Canaria LNG Terminal**

LNG-F-163	Project LNG Tel	rminai	FID	
Update Date	10/12/2019		Advanced	
Description	A new regasification terminal in Gran Canaria (Arinaga).  The start-up of the Gran Canaria LNG terminal is assumed to take place within the TYNDP period. For practic period is reported as the start-up date. This does not, however, constitute an estimate of the start-up date. Be would already be justified by 2022.	The second second		

PRJ Code - PRJ Name

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Cran Canaria INC	Enagas Transporte S.A.U.	2029	LNG_Tk_ESc	ESc	41.90 GWh/d
Gran Canaria LNG	Gascan	2029	LNG_Tk_ESc	ESc	41.90 GWh/d
Sponsors	General Information		NDP and PCI Information		
	1000	_			

Sponsors			General Information	NDP and PCI Information		
Gascan	100%	Promoter	Gascan	Part of NDP	Yes (Planta de regasificación de Gran	
		Operator	Enagas Transporte S.A.U.		Canaria)	
		Host Country	Spain	NDP Number	No code in the NDP	
		Status	Planned	NDP Release Date	01/05/2008	
		Website		NDP Website	<u>NDP URL</u>	
				Currently PCI	No	
				Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		01/2008
Feasibility	01/2008	01/2008
FEED		
Permitting		
Supply Contracts		
FID		05/2008
Construction		
Commissioning	2029	2029
Grant Obtention		
Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Technical Information (LNG)						
Regasification Facility	Reloading Ability Project Phase	Expected Increment Ship Size (bcm/y) (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 LNG)	Comments	Commissioning Load Factor Year (%)
Gran Canaria	Yes Gran Canaria	1.3 140,000	3,600,000.00	150,000	the commissioning year does not constitute an stimate of the start-up date	2029 100

#### Delays since last TYNDP

Delay Since Last TYNDP

Delay Explanation

The start-up of the Gran Canaria LNG terminal is assumed to take place within the TYNDP period. For practical purposes, the last year of the ten-year period is reported as the start-up date. This does not, however, constitute an estimate of the start-up date. Based on demand estimates, the terminal would already be justified by 2022.

## **Expected Gas Sourcing**

LNG ()

		Benefits	
Main Driver	Others		
Main Driver Explanation	on		
Benefit Description			

CBCA		Finar	ncial Assistance
	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF
Decision	and we have not yet decided whether we will submit or	Grants for studies	No
Submissin Date	not	Grants for studies amount	Mln EUR 0.0
		Grants for works	No
Decision Date		Grants for works amount	Mln EUR 0.0
Website		Intention to apply for CEF	
Countries Affected		Other Financial Assistance	No
Countries Net Cost Bearer		Comments	
Additional Comments		General Comments	

Current TYNDP : TYNDP 2020 - Annex A Page 436 of 773

## **Green Crane - Spain**

ETR-N-537	Project	Energy Transition Related Project	Non-FID
Update Date	22/09/2020		Advanced
Description	Green Crane is a joint initiative by Enagás and SNAM to deploy renewable hydrogen va as well as export routes to NW and Central Europe. In Spain, it comprises the regional hatter foresees exporting green hydrogen to The Netherlands by using LOHC's. The hyd wind farms and will be used directly in industry and mobility projects. All hubs foresees gas grid (up to 2 or 5%).	hubs of Baleares, Aragon, Asturias and drogen will be produced from new dec	l Castilla y León. The dicated solar PV and

Capacity Increments Variant For Modelling
Point
Operator
Year From Gas System To Gas System Capacity

2024

**NPcES** 

Enagas Transporte S.A.U.

Sponsors		General Information
	Promoter	EnaGás Renovable S.L.U
	Operator	EnaGás Renovable S.L.U
	Host Country	Spain
	Status	Planned
	Website	<u>Project's URL</u>

PRJ Code - PRJ Name

Hydrogen (ES)

ES

0.62 GWh/d

Schedule	Start Date	End Date
Pre-Feasibility		06/2019
Feasibility	06/2020	04/2021
FEED	04/2021	10/2022
Permitting	10/2021	04/2022
Supply Contracts		
FID		04/2022
Construction	04/2022	04/2024
Commissioning	2024	2024
Grant Obtention		
Date		

Technical Information (ETR)					
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year		
Green Crane	The project foresees up to 5 injection points. The aggregated RES capacity is 900 MW.		2024		

Current TYNDP : TYNDP 2020 - Annex A Page 438 of 773

# Guitiriz - Lugo - Zamora pipeline

TRA-A-950	Project	Pipeline including CS	Non-FID
Update Date	17/12/2019		Advanced
Description	Construction of the Interconnector between Guitiriz, Lugo and Zamora, with a length The Guitiriz-Lugo-Zamora pipeline will guarantee the security of supply in the Northgas system presents, maximizing the contribution of all its inputs (i.e. send-out extensouth balance.  Additionally, this pipeline is necessary to ensure the integration of the Musel LNG tecapacities.  In this sense, it will avoid the restrictions that will be imposed by the asturian plant a essential to ensure the bidirectionality of the third interconnection with Portugal. This carry out the first section of the pipeline to guarantee the security of supply in the process.	west area and eliminate the current cong sion of Mugardos LNG terminal) and im rminal, the extension Mugardos LNG ter t the entrance from the Mugardos LNG s pipeline is divided in two sections, bec	proving the North- minal and VIP Iberico Terminal. Likewise, it is
PRJ Code - PRJ Name	-		

Sponsors			General Information		NDP and PCI Information		
Reganosa	100%	Promoter	Reganosa	Part of NDP	Yes (PLANIFICACION ELECTRICIDAD Y		
		Operator	Reganosa		GAS 2008-2016)		
		Host Country	Spain	NDP Number	N/A.		
		Status	Planned	NDP Release Date	01/05/2008		
		Website	Project's URL	NDP Website	NDP URL		
				Currently PCI	No		
				Priority Corridor(s)			

Schedule	Start Date	End Date
Pre-Feasibility		12/2017
Feasibility	07/2017	12/2017
FEED	12/2017	01/2019
Permitting	10/2020	10/2021
Supply Contracts		
FID		10/2021
Construction	10/2021	01/2024
Commissioning	2024	2024
Grant Obtention Date		

Third-Party Access Regime					
Considered TPA Regime	Regulated				
Considered Tariff Regime	Regulated				
Applied for Exemption	No				
Exemption Granted	No				
Exemption in entry direction	0.00%				
Exemption in exit direction	0.00%				

Pipelines and Compressor Stations						
Pipeline Section		Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Guitiriz-Lugo		The starting point will be the position of Guitiriz (I-013), owned by Reganosa, and the end point will be a new position in Lugo.	750	50	0	2022
Lugo-Zamora		The starting point will be the new posotion in Lugo and , owned by Reganosa, and the end point the compression station of Coreses (Zamora) owned by Enagás, S.A.	750	268	0	2024
	Total			318	0	

**Expected Gas Sourcing** 

Algeria, LNG (WO)

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#### Benefits

Main Driver Regulation SoS

The northwest of the Iberian Peninsula is suffering congestion, the situation will get worse following the start up of new entries in the area. The pipeline Guitiriz-Lugo-Zamora will remove the existing congestion and enhance the capacities of the future entries. At the same time, this pipeline will improve the security of supply in the Northwest. Therefore, Guitiriz-Lugo-Zamora pipeline will guarantee the security of supply in the Northwest area and eliminate the current congestions that the Spanish gas system presents, turning Spain into a real single balance area, maximizing the contribution of all its inputs and improving the North-South balance. Also, it is essential to ensure the integration of the Musel LNG terminal, the extension of the Mugardos LNG terminal and the bidirectionality of the third interconnection with Portugal.

Benefit Description

Main Driver Explanation

This project is an "enabler" for the security of supply of the Northwest area in Spain. SoS= The project will guarantee the security of supply in the Northwest area and eliminate the current congestions that the Spanish gas system presents, turning Spain into a real single balance area. Sustainability= The project will allow a secure supply to the CCGT located in the Northwest of Iberian Peninsula. Market Integration and Competition= The project is essential to ensure the integration of the Musel LNG terminal, the extension of the Mugardos LNG terminal and VIP Iberico capacities.

#### **Barriers**

Barrier Type Description

Regulatory Lack of proper transposition of EU regulation

	CBCA	Financial Assistance			
Decision	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF		
Decision	and we do not plan to submit it	Grants for studies	No		
Submissin Date		Grants for studies amount	Mln EUR 0.0		
Decision Date		Grants for works	No		
Website		Grants for works amount	Mln EUR 0.0		
Countries Affected		Intention to apply for CEF	No decision yet taken		
Countries Net Cost Bearer		Other Financial Assistance	No		
Additional Comments		Comments			
		General Comments			

# L2DG (LNG to Decarbonised Gas)

ETR-N-483	Project	Energy Transition Related Project	Non-FID
Update Date	17/12/2019		Advanced
Description	Reganosa promotes for TYNDP2020 an energy transition project based on a minjection which has the objective of achieving the decarbonisation of the LNG efficiency targets.		_
PRJ Code - PRJ Name	- /		

Sponsors			General Information
Reganosa	100%	Promoter	Reganosa
1	.7/.	Operator	Reganosa
		Host Country	Spain
		Status	Planned
		Website	<u>Project's URL</u>

Schedule	Start Date	End Date
Pre-Feasibility		07/2020
Feasibility	08/2019	07/2020
FEED	08/2020	06/2021
Permitting	06/2021	06/2023
Supply Contracts		
FID		06/2023
Construction	06/2023	12/2024
Commissioning	2024	2024
Grant Obtention Date		

rrent TYNDP : TYNDP 2020 - Annex A		Page	e 442 of 773
	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissi ning Yea
L2DG (LNG to Decarbonised gas)	The methane autothermal reforming plant will produce H2 in rate around 4 t/h. This capacity represents the 5% of the technical send-ou capacity of Mugardos LNG terminal.  The entry of the authothermal reforming plant will be the natural gas regasificated in the terminal and the H2 obtained will be injected in the natural gas grid owned by Reganosa.  This new plant will be located in the existing installation of Mugardos LNG terminal.	analysed during the feasibility study.	2024
	LNG terminal.		

Current TYNDP : TYNDP 2020 - Annex A Page 443 of 773

## Mugardos LNG Terminal: 2nd Jetty

LNG-A-296
Update Date
Description
Construction of a second jetty for berthing of LNG ship with capacity from approximately 1,000m3 LNG up to 266,000m3 LNG.

PRJ Code - PRJ Name
-

Sponsors				General Information	ND	P and PCI Information
Reganosa	f = f	100%	Promoter	Reganosa	Part of NDP	No ((6) others - please comment below)
			Operator	Reganosa	NDP Number	
			Host Country	Spain	NDP Release Date	
			Status	Planned	NDP Website	
			Website	<u>Project's URL</u>	Currently PCI	No
					Priority Corridor(s)	NSIW
Schedule	Start Date	End Date			Thir	rd-Party Access Regime
Pre-Feasibility		12/2015			Considered TPA Regi	ime Regulated
Feasibility	02/2015	12/2015			Considered Tariff Reg	gime Regulated
FEED	04/2016	06/2017			Applied for Exemption	on No
Permitting	04/2021	03/2022			Exemption Granted	Not Relevant
Supply Contracts						
FID		03/2022			Exemption in entry d	irection 0.00%
Construction	06/2022	07/2024			Exemption in exit dire	ection 0.00%
Commissioning	2024	2024				
Grant Obtention Date						

		Technical Information (L	NG)				
Regasification Facility	Reloading Ability Project Phase	Expected Increment Ship Size (bcm/y) (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 LNG)	Comments	Commissioning Year	Load Factor (%)
Mugardos LNG Terminal	Yes 2nd jetty	0.0 266,000	0.00	0	This new jetty of the Terminal will be able to operate with a range of vessels from 1,000 m3 to 266,000m3	l 2024	100

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable

gas

Specific Criteria Fulfilled Comments

Expected		
EVNACTAC	(-ac \n	urcina
LAPECICA	Gas So	ur cirrig

LNG (WO)	
	Benefits
Main Driver	Market Demand
Main Driver Explanation	on
Benefit Description	The second jetty of the Terminal will enable the Port of Ferrol to maximize flexibility and to complete the infrastructures offered that could respond to the new operational requirements derived from the implementation of LNG as fuel in maritime transport for both ships navigating the Atlantic corridor and satellite Terminals in nearby ports and coasts. Apart from that, it will guarantee the availability of the Terminal to carry out the necessary operations of loading and unloading vessels. Also, Mugardos terminal is ideally located to take advantage of the US FOB volumes.
	Barriers
Barrier Type	Description
Market	Lack of market maturity

	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF	No decision yet taken			
Other Financial Assistance	No			
Comments				
General Comments				

Current TYNDP : TYNDP 2020 - Annex A Page 446 of 773

## Mugardos LNG Terminal: Send-out Increase

LNG-A-295	Project	LNG Terminal	Non-FID
Update Date	17/12/2019		Non-Advanced
Description	The project aims to expand the LNG terminal capacity from 9,9 mcm/d to 19,8 mcm/d through the expansion of the send-out capacity will enable to balance the North-South capacities in gas transport, promoting the approach of emission points to consumption points and compression stations. Likewise, it will reinforce the security of supply by building the infra of integration comparable with the rest of Spain.	of the Spanish gas system inputs a generating efficiencies through of t	and to reduce the costs the lower use of
PRJ Code - PRJ Name	•		

Operator

Capacity Increments Variant For Modelling

Point

						,		1 /
Mugardos		Reganosa	ì		2024	LNG_Tk_ESa	a ES	115.00 GWh/d
		Reganosa	a (LSO)		2024	LNG_Tk_ESa	a ES	115.00 GWh/d
Sponsors			General Information			NDF	and PCI Inform	nation
Reganosa	100%	Promoter		Reganosa	Part of N	NDP	Yes (PLANIFICA	CION ELECTRICIDAD Y
		Operator		Reganosa	T dit Oi i	VD1		GAS 2008-2016)
		Host Country		Spain	ı			me: Ampliación Planta
		Status		Planned	NDP Nu	mber	de Reganosa. A	mpliación de Emisión a 825,600 Nm3/h
		Website		<u>Project's URL</u>	NDP Rel	ease Date		01/05/2008
					NDP We	ebsite		NDP URL
					Currentl	y PCI		No
					Priority (	Corridor(s)		

From Gas System To Gas System

Year

Capacity

Schedule	Start Date	End Date
Pre-Feasibility		02/2018
Feasibility	04/2017	02/2018
FEED	11/2018	02/2020
Permitting	06/2020	05/2021
Supply Contracts		
FID		05/2021
Construction	09/2021	03/2024
Commissioning	2024	2024
Grant Obtention		
Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

		Technical Information (L	NG)				
Regasification Facility	Reloading Ability Project Phase	Expected Increment Ship Size (bcm/y) (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 LNG)	Comments	Commissioning Year	Load Factor (%)
Mugardos LNG Terminal	Yes Send-out	3.6 0	9.90	0	This expansion will mean an increase in send-out capacity until to	2024	100
					825,600 Nm3/h, meaning, twice the current capacity.		

**Expected Gas Sourcing** 

LNG (WO)

Benefits				
Main Driver	Market Demand			
Main Driver Explanation	The expansion of the send-out capacity will enable to balance the North-South capacities of the Spanish gas system inputs and to reduce the costs in gas transport, promoting the approach of emission points to consumption points and generating efficiencies through of the lower use of compression stations. Likewise, it will reinforce the security of supply by building the infrastructures that allow the Northwest area to be in a situation of integration comparable with the rest of Spain.			
Benefit Description	SoS= The project it will reinforce the security of supply allowing the Northwest area to be in a situation of integration comparable with the rest of Spain. Sustainability= The project will enable to balance the North-South capacities of the Spanish gas system inputs and to reduce the costs in gas transport and generating efficiencies through of the lower use of compression stations.			

	Barriers

Barrier Type Description

Regulatory Capacity quotas

Market Lack of market maturity

CBCA		Financial Assistance		
Decision	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF	
Decision	and we do not plan to submit it	Grants for studies	No	
Submissin Date		Grants for studies amount	Mln EUR 0.0	
Decision Date		Grants for works	No	
Website		Grants for works amount	Mln EUR 0.0	
Countries Affected		Intention to apply for CEF	No decision yet taken	
Countries Net Cost Bearer		Other Financial Assistance	No	
Additional Comments		Comments		
		General Comments		

## Mugardos LNG Terminal: Storage Extension

LNG-N-297	Project	LNG Terminal	Non-FID
Update Date	17/12/2019		Advanced
Description	Construction of an additional storage tank with capacity of one hundred ninety t	housand cubic meters of LNG.	
PRJ Code - PRJ Name	- /		

Sponsors				General Information	NDP and PCI Information	
Reganosa		100%	Promoter	Reganosa	Part of NDP	No ((6) others - please comment below)
/2	7		Operator	Reganosa	NDP Number	
			Host Country	Spain	NDP Release Date	
			Status	Planned	NDP Website	
			Website	Project's URL	Currently PCI	No
					Priority Corridor(s)	
Schedule	Start Date	End Date			Third-	-Party Access Regime
Pre-Feasibility		12/2015			Considered TPA Regim	e Regulated
Feasibility	02/2015	12/2015			Considered Tariff Regir	me Regulated
FEED	08/2016	11/2017			Applied for Exemption	No
Permitting	02/2023	02/2024			Exemption Granted	Not Relevant
Supply Contracts						
FID		02/2024			Exemption in entry dire	ection 0.00%
Construction	05/2024	01/2028			Exemption in exit direc	tion 0.00%
Commissioning	2026	2026				
Grant Obtention Date						

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		Technical Info	rmation (LN	IG)				
Regasification Facility	Reloading Ability Project Phase	Expected Increment (bcm/y)	Ship Size (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 LNG)	Comments	Commissioning Year	Load Factor (%)
Mugardos LNG Terminal	Yes Storage	0.0	0	0.00	190,000	This new Terminal tank will have a storage capacity of 190,000 m3, increasing the total capacity of the terminal to 490,000 m3.	2026	100

	Expected Gas Sourcing
LNG (WO)	
	Benefits
Main Driver	Market Demand
Main Driver Explanation	The third tank of the Terminal will enable the inclusion of the northwest of the peninsula in the market of large gas carriers, such as the Q-flex (216,000 m3) and Q-max (266,000 m3). Likewise, it will convert the Terminal in a real LNG hub. Additionally, synergetic effects could be created between the naval and fishing sector in Galicia (repairs in shipyards, construction of new ships, etc.) and it will allow the participation of Galicia in the new LNG markets, e.g., the of the use of LNG as maritime fuel.
Benefit Description	Mugardos terminal is ideally located to take advantage of the US FOB volumes.
	Barriers
Barrier Type	Description
Regulatory	Capacity quotas
Market	Lack of market maturity

	CBCA	
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it	Applie
Culturalization District	and we do not plan to submit it	Grant
Submissin Date		Grant
Decision Date		Grant
Website		Grants
Countries Affected		Intent
Countries Net Cost Bearer		Other
Additional Comments		
		Comn
		Gener

Financial Assistance					
Applied for CEF	(3) No, we have not applied for CEF				
Grants for studies	No				
Grants for studies amount	Mln EUR 0.0				
Grants for works	No				
Grants for works amount	Mln EUR 0.0				
Intention to apply for CEF	No decision yet taken				
Other Financial Assistance	No				
Comments					
General Comments					

## Musel LNG terminal

LNG-F-178	Project	LNG Terminal	FID
Update Date	18/11/2019		Advanced
Description	A LNG terminal in Musel (North of Spain).  The Construction of the "El Musel" LNG terminal was completed in 2012, but it has authorization by the government according to Royal Decree-Law 13/2012. Enagás	•	
PRJ Code - PRJ Name			

Point	Operator		Year Fron	n Gas System	To Gas System	Capacity
	Enagas Transp	porte S.A.U.	2021 LI	NG_Tk_ESa	ES	0.00 GWh/d
Musel	not been cor accor This LN	The construction of the "El Musel" Lenmissioned yet. The terminal is pending to Royal Decree-Law 13/2012.  IG terminal has four seawater vapooch could be connected to the grid at	ding start-up . Enagás Tran risers with a to	authorization b asporte expects t autho otal send-out co ing the TYNDP	by the government to get the start-up orization by 2021. apacity of 800.000 2020 period (after	
				the co	mmissioning date)	
Sponsors	Gen	eral Information			PCI Information	
Sponsors	Gen Promoter	eral Information  Enagas Transporte S.A.U.	Part of NDP	NDP and		asificación de E
Sponsors			Part of NDP	NDP and	PCI Information Yes (planta de reg	asificación de El Musel
Sponsors	Promoter	Enagas Transporte S.A.U.	NIDD Nives la	NDP and	PCI Information Yes (planta de reg	asificación de E Muse
Sponsors	Promoter Operator	Enagas Transporte S.A.U. Enagas Transporte S.A.U.	NIDD Nives la	NDP and	PCI Information Yes (planta de reg	asificación de E Muse code in the ND
Sponsors	Promoter Operator Host Country	Enagas Transporte S.A.U. Enagas Transporte S.A.U. Spain	NDP Numbe	NDP and o er e Date	PCI Information Yes (planta de reg	asificación de E Muse code in the ND 01/05/200
Sponsors	Promoter Operator Host Country Status	Enagas Transporte S.A.U. Enagas Transporte S.A.U. Spain	NDP Number	NDP and er e Date te	PCI Information Yes (planta de reg	

Schedule	Start Date	End Date
Pre-Feasibility		01/2008
Feasibility	01/2008	01/2008
FEED		
Permitting		
Supply Contracts		
FID		05/2008
Construction		
Commissioning	2021	2021
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%
	0.0070

		Technical Information (LN	1G)				
Regasification Facility	Reloading Ability Project Phase	Expected Increment Ship Size (bcm/y) (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 LNG)	Comments	Commissioning Loa Year	ad Factor (%)
Musel	Yes El Musel	0.0 266,000	0.00	300,000	See additional comments	2021	100

Delays since last TYNDP

Delay Since Last TYNDP

Delay Explanation Construction has been completed and Enagás Transporte expects to get the start-up authorization by 2021

**Expected Gas Sourcing** 

LNG ()

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Main Driver

Decision

Website

Submissin Date

**Decision Date** 

Others

Main Driver Explanation

Benefit Description

No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not Applied for CEF

(3) No, we have not applied for CEF

**Financial Assistance** 

Grants for studies

Mln EUR 0.0

Grants for studies amount

No

No

Grants for works

Mln EUR 0.0

Grants for works amount Intention to apply for CEF

Other Financial Assistance

No

Comments

**General Comments** 

Additional Comments

Countries Net Cost Bearer

Countries Affected

## P2G integrated in Reganosa NG Transmission Grid

ETR-N-427	Project	Energy Transition Related Project	Non-FID
Update Date	17/12/2019		Advanced
Description	Reganosa promotes for TYNDP2020 an energy transition project base on which has the objective of facilitating the integration of renewables with traduction of other air pollutants and improving the sector coupling.		

PRJ Code - PRJ Name

Sponsors			General Information
Reganosa	100%	Promoter	Reganosa
		Operator	Reganosa
		Host Country	Spain
		Status	Planned
		Website	Project's URL

reduction of other air pollutants and improving the sector coupling.

Schedule	Start Date	End Date
Pre-Feasibility		06/2020
Feasibility	10/2019	06/2020
FEED	08/2020	06/2021
Permitting	06/2021	06/2023
Supply Contracts		
FID		06/2023
Construction	06/2023	12/2024
Commissioning	2024	2024
Grant Obtention		

	Technical Information (ETR)		
ection/Phase Name	Main Technical Parameters	Technical Information Comment	Commiss ning Yea
	Renewable energy generation (Photo Voltaic &/or Wind Power) of 100 MW to be installed, producing H2 in a rate around 2 t/h.	The technical parameters will be	
2G integrated in Reganosa NG Transmission Grid	The project will be located in an area where a coal power station was installed. Therefore, both, a NG pipeline and a High Voltage infrastructure is already in place to be immediately used, being a perfect point of injection for the H2 produced and also an optimal point to be powered supply, if this be the case. Existent high pressure (#600) pipeline is 16 inch.	analysed during the feasibility study. These values may suffer any modification according to the outcomes of the mentioned study.	2024

Current TYNDP : TYNDP 2020 - Annex A Page 457 of 773

## Railway project roadmap. Transformation to LNG

ETR-F-632	Project	Energy Transition Related Project	FID
Update Date	18/11/2019		Advanced
Description	Automotive Pilot of passengers consists of the development of the necessary sturp passengers with LNG in the vicinities of Asturias and the tests of the same one for Project raiLNG is developed by the consortium (RENFE, Enagás, Naturgy and Burnto generate the hybrid Diesel/GNL tractor composition. The resulting composition the same service conditions  Project to transform locomotives from manoeuvres to LNG that currently use die LNGhive2: transformation of a heavy haul locomotive in the Huelva-Sevilla corridor Project of R+D+ì to promote disruptive technologies and alternatives to the tradecurrent platform	or its extrapolation to commercial lines, 4 units reau Veritas) consists of the transformation of ton will establish a comparison of performance lesel fuel in port areas, 6 S310 units.	the S1600 locomotive between the two in
PRJ Code - PRJ Name	-		

Sponsors	General Information	
	Promoter	Enagas Transporte S.A.U.
	Operator	Enagas Transporte S.A.U.
	Host Country	Spain
	Status	In Progress
	Website	

Schedule	Start Date	End Date
Pre-Feasibility		06/2016
Feasibility	06/2019	01/2020
FEED	01/2020	01/2020
Permitting	01/2020	01/2020
Supply Contracts		
FID		01/2016
Construction	09/2019	01/2022
Commissioning	2022	2022
Grant Obtention Date		

Current TYNDP : TYNDP 2020 - Annex A Page 459 of 773

# Sun2Hy

ETR-N-504	Project	Energy Transition Related Project	Non-FID
Update Date	23/06/2020		Advanced
Description	Photoelectrochemical hydrogen production and hydrogen injection into the gas grid. This project is considering the production of green hydrogen by PEC technologies. The photoelectrochemical electrolysis and its use in industrial and transport applications. T CAPEX and 6 years (considering the scaling up, the production and the real case applications).	he prefeasibility study, that is under defi	
PRJ Code - PRJ Name	- / <sup>2</sup>		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Hydrogen (ES)	Enagas Transporte S.A.U.	2024	NPcES	ES	0.06 GWh/d

Sponsors	Gene	eral Information
	Promoter	EnaGás Renovable S.L.U
	Operator	EnaGás Renovable S.L.U
	Host Country	Spain
	Status	Planned
	Website	

Schedule	Start Date	End Date
Pre-Feasibility		12/2018
Feasibility	01/2019	12/2020
FEED	01/2021	12/2021
Permitting	09/2021	01/2022
Supply Contracts		
FID		
Construction	01/2022	12/2024
Commissioning	2024	2024
Grant Obtention		
Date		

Current TYNDP : TYNDP 2020 - Annex A Page 461 of 773

### Tenerife LNG Terminal

LNG-F-183	Project LNG Terminal	FID
Update Date	18/11/2019	Advanced

Description

This project consists in a new regasification Terminal in Tenerife (Arico-Granadilla, Spain), in the Canary Islands.

PRJ Code - PRJ Name

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Tanavifa LNC	Enagas Transporte S.A.U.	2022	LNG_Tk_ESc	ESc	41.90 GWh/d
Tenerife LNG	Gascan	2022	LNG_Tk_ESc	ESc	41.90 GWh/d

Sponsors		General Information		NDP and PCI Information		
Gascan	100%	Promoter Operator	Gascan Enagas Transporte S.A.U.	Part of NDP	Yes (Planta de regasificacion de Tenerife)	
		Host Country		NDP Number	No code in the NDP	
		Status	Planned	NDP Release Date	01/05/2008	
		Website		NDP Website	NDP URL	
				Currently PCI	No	
				Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		01/2008
Feasibility	01/2008	01/2008
FEED		
Permitting		
Supply Contracts		
FID		05/2008
Construction		
Commissioning	2022	2022
Grant Obtention Date		

Regulated
Regulated
No
No
0.00%
0.00%

Technical Information (LNG)							
Regasification Facility	Reloading Ability Project Phase	Expected Increment Ship Size (bcm/y) (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 LNG)	Comments	Commissioning L Year	oad Factor (%)
Tenerife LNG Terminal	Yes Tenerife LNG	1.3 140,000	3,600,000.00	150,000	No addittional comments	2022	100

	Delays since last TYNDP
Delay Since Last TYNDP	
Delay Explanation	The design of this LNG terminal is currently under review, and therefore the specifications of the final project could differ from the ones reported
	Expected Gas Sourcing

LNG ()

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**General Comments** 

Main Driver

Decision

Website

Submissin Date
Decision Date

Countries Affected

Countries Net Cost Bearer Additional Comments

Others

Main Driver Explanation

Benefit Description

No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not

	Financial Assistance
Applied for CEF	(3) No, we have not applied for CEF
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	
Other Financial Assistance	No
Comments	

Current TYNDP : TYNDP 2020 - Annex A Page 464 of 773

# Adaptation L- gas - H-gas

TRA-A-429	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Non-Advanced
Description	The L-gas area covers around 10% of French gas consumption. It depends on the Net annual basis. Additional flexibility is ensured by Gournay UGS and peak H-to-L conversion to the decline of L-gas production the conversion of the whole French L-gas area. The project covers both the required infrastructure to ensure access to H-gas supply a coordinated with Belgian and Dutch operators.	sion facility at Loon-Plage. I will have to be achieved by the end of	f 2029.
PRJ Code - PRJ Name			

Point		Operato	or	Year From	Gas System	To Gas System	Capacity
Blaregnies L (BE) / Taisnières B (FR)		GRTgaz		2025	BEI	FRnL	-115.00 GWh/d
Sponsors			General Information		NDP and	PCI Information	
Storage		Promoter	GRTgaz and Storengy	Part of NDP	Yes	(Plan décennal de	e développement
Storengy	5%	Operator	GRTgaz			du réseau de GR	Tgaz 2018-2027)
Transmission		Host Country	France	NDP Number	Plo	an de conversion d	u gaz B en gaz H
	95%	Status	Planned	NDP Release	Date		04/02/2019
GRTgaz	95%	Website	Project's URL	NDP Website			NDP URL
				Currently PCI			Yes (5.21 (2020))
				Priority Corric	dor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		09/2016
Feasibility	06/2014	09/2016
FEED	09/2015	09/2020
Permitting	11/2016	12/2026
Supply Contracts		
FID		06/2016
Construction	04/2017	12/2026
Commissioning	2025	2025
Grant Obtention Date		

Third-Party Access Regi	me
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Arleux interconnection station	Adaptation				0
Bethune area	New pipeline	300	8		0
Brouckerque area	New pipeline	200	2		0
Connection to H-gas grid	Gravelines, Diéval, Isbergues, Orchies, Beaurevoir, Caulaincourt and Nesle				0
Interconnection with Gournay UGS	Adaptation				0
Taisnieres interconnection station	Adaptation				0
	Total		10		

Current TYNDP: TYNDP 2020 - Annex A Page 466 of 773

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

The project will ensure that gas consumers of the former L-gas area will benefit from the same competitive and secured supply as H-gas consumers. security of supply: without this project, the energy demand cannot be covered as soon as 2021. Thr security of supply will be brought up to the level already reached in North Westerne Europe competition and market integaration: diversity on the L-gas area will reach the same level as the North West Region

#### **Expected Gas Sourcing**

Algeria, Caspian Region, Libya, Norway, Russia, LNG ()

	Benefits
Main Driver	Others
Main Driver Explanation	Decline of L-gas production in the Netherlands with supply contracts ending on 2029 for France and Belgium notwithstanding earlier termination date.
Benefit Description	Currently the L-gas area across France, Belgium and Germany is similar to a gas island connected to a single source. Through the conversion of the area to H-gas, the project is part of set of new regional infrastructures enabling market participants and consumers to take benefit from competitive and secured supply as the rest of North-West Europe.

	CBCA	Financial Assistance				
Decision	Yes, we have submitted an investment request and have received a decision	Applied	d for CEF	(1) Yes, we have applied for CEF and we have received a decision		
Submissin Date		Grants	for studies	Yes		
Decision Date	04/10/2018	Grants	for studies amount	Mln EUR 0.0		
Website	<u>CBCA URL</u>	Grants	for works	Yes		
Countries Affected	Belgium, France	Grants	for works amount	Mln EUR 0.0		
Countries Net Cost Bearer	Belgium;#France	Intenti	on to apply for CEF	No decision yet taken		
Additional Comments		Other I	Financial Assistance	No		
		Comm	ents			
		Genera	al Comments			

# Biomethane: connection of production units and reverse flow projects

ETR-F-728	Project	Energy Transition Related Project	FID
Update Date	04/08/2020		Advanced
Description	The scattered production of renewable gas will take an increasing part in the gas mix. On this production units to the transmission network. Backhaul facilities will also be needed to the transmission grid when the biomethane injected locally exceeds local demand. To of biomethane injected into the gas system and reach national target for renewable gas connection projects per year (around 30 completed by 2030) for an estimated production (around 4 completed by 2030) for an estimated reverse flow of 0,4 TWh/year.	d to allow biomethane injected in the hese network adaptations will enable s (10% of gas consumption in 2030). T	distribution to flow back to maximize the volume eréga expects 3
PRJ Code - PRJ Name	_		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	TERÉGA	2030	NPcFRt	FR	3.00 GWh/d
Production France PEG TIGF	Comment: Collection of p transmission grid where reve There is also a need to adjust	erse flow from the distrib injection figures risin	ution grids is needed. A g over the period cove ected here from "Prod	All this will lead to ered by the TYNDP.	

Sponsors		General Info	ormation
Backhaul facilities		Promoter	Teréga
Teréga	100%	Operator	TERÉGA
Biomethane units connection to grid		Host Country	France
Teréga	100%	Status	Planned
	.0070	Website	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2030	2030
Grant Obtention		
Date		

Technical Information (ETR)									
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year						
Backhaul facilities	Facilities adjustments (compressor power, metering) at the connection point between the distribution and the transmission grids		2030						
Biomethane units connection to grid	Connection of biomethane production units		2030						

					Delay	s since	last T	YND	Р

Delay Since Last TYNDP

Delay Explanation N/A

Current TYNDP : TYNDP 2020 - Annex A Page 469 of 773

# Fos Tonkin LNG Terminal Evolution

ETR-N-226	Project	Energy Transition Related Project	Non-FID
Update Date	15/08/2019		Advanced
Description	The project aims to adapt the Fos Tonkin LNG terminal into a small scale LNG clients in France, the neighbouring countries and beyond. It shall, in particula circumstances.  Thus, the project will doubly contribute to the energy transition:  1) it will contribute to the development of the use of LNG as an alternative further contributed in the small scale LNG terminal where LNG it will prevent any CO2 emission on the small scale LNG terminal where LNG is a small scale LNG is a small scale LNG terminal where LNG is a small scale	ur, allow the terminal to being able to operate with	nout any flaring in all assed products, and
PRJ Code - PRJ Name	-		

Sponsors			General Information	
Elengy	100%	Promoter		Elengy
		Operator		Elengy
		Host Country		France
		Status		Planned
		Website		Project's URL

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		07/2020
Construction	07/2020	07/2022
Commissioning	2022	2022
Grant Obtention Date		

Technical Information (LNG)							
Regasification Facility	Reloading Ability Project Phase	Expected Increment Ship Size (bcm/y) (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 LNG)	Comments	Commissioning Year	Load Factor (%)
	No				see below	2022	0

Current TYNDP : TYNDP 2020 - Annex A Page 471 of 773

# HyGéo

ETR-N-901	Project	Energy Transition Related Project	Non-FID
Update Date	15/07/2020		Advanced
Description	The project Hygeo aims to develop a geological renewable energy storage installation of electrolysis units to transform renewable electricity into hydroge providing a source of supply of electricity (P2P), as well as the possibility of prothe pre-feasibility study regarding technical, economic, environmental, regulat	en (P2H2). The project will offer flexibility to the eoviding H2 for direct consumption or for injectio	electricity grid,

Sponsors		Gene	eral Information
HDF	46%	Promoter	Teréga
Teréga	40%	Operator	TERÉGA
		Host Country	France
BRGM	14%	Status	Planned
		Website	

Schedule	Start Date	End Date
Pre-Feasibility		04/2021
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2024	2024
Grant Obtention		
Date		

PRJ Code - PRJ Name

	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commission ning Year
One phase project	Storage capacity of 1,5 GWh		2024

Current TYNDP : TYNDP 2020 - Annex A
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# Impulse 2025

ETR-F-743	Project	Energy Transition Related Project	FID		
Update Date	12/06/2020		Advanced		
	IMPULSE 2025 project aims at implementing a « smart multi-energies system » to interconnect different energy networks (gas, power, heat) to synergies and improve energy efficiency. It includes studies and the building of a pilot demonstrator. 2 phases:				
Description	Phase 1 (2019-2022): development of a model and optimization tool to identify the optimal configuration of a smart multi-energies sylvanteen technological components will be studied and meaningful or priority design studies will be conducted;				
	Phase 2 (2022-2025): study of the operational feasibility to confirm estimated gathe demonstrator through the implementation of the technological components	· · · · · · · · · · · · · · · · · · ·	ase aims at improving		
PRJ Code - PRJ Name	-				

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	TERÉGA	2025	NPcFRt	FR	0.00 GWh/d
Production France PEG TIGF	Comment: 0 indicated because	e numbers are confiden	,	, ,	
			lowe	er than 0,1 GWh/d)	

Sponsors		General Information	
Teréga + Others (confidential)	100%	Promoter	Teréga
		Operator	TERÉGA
		Host Country	France
		Status	Planned
		Website	Project's URL

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	07/2019	07/2022
FEED		
Permitting		
Supply Contracts		
FID		07/2019
Construction		
Commissioning	2025	2025
Grant Obtention		
Date		

Technical Information (ETR)					
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year		
Impulse - Pilot Phase	building an optimization and modelling tool relying on different technologies (P2G, P2H) and designs		2022		
Impulse - Operational phase	Building and connecting a facility to demonstrate the operational industrial feasibility of such projects	and	2025		

# Delays since last TYNDP

Delay Since Last TYNDP

Delay Explanation N/A

# Jupiter 1000: first industrial demonstrator of Power to Gas in France

ETR-F-546	Project	Energy Transition Related Project	FID
Update Date	02/06/2020		Advanced
Description	The Jupiter 1000 project is the first industrial demonstrator of Power to Gas with carbon capture. Green hydrogen will be produced using two electrolysers installation will be based on an innovative methanation technology and CO2 viperformance levels shown by the demonstrator, GRTgaz and its partners will winstallation of this type. Over the longer term, the idea is to launch the Power each year using the Power to Gas system by 2050.	s involving different technologies, from 100% rewill be captured on a nearby industrial site. In the work on future technical and economic standard	enewable energy. The ne light of the ds of a full-sized
PRJ Code - PRJ Name	-		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Forecast Production France GRTgaz	GRTgaz	2020	NPcFRg	FR	0.01 GWh/d

Sponsors		General	Information
CO2 capture and electrolyzer		Promoter	GRTgaz, Terega
LLT, GPMM, CNR, McPhy	15%	Operator	GRTgaz
expertise		Host Country	France
Terega	15%	Status	In Progress
		Website	<u>Project's URL</u>
global conception and construction			
GRTgaz	59%		
methanation unit			
Atmostat	15%		
tests and technical economicl modelling			
CEA	7%		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	01/2014	01/2016
FEED		
Permitting	01/2016	06/2017
Supply Contracts		
FID		04/2016
Construction	06/2017	06/2020
Commissioning	2020	2020
Grant Obtention Date		

Technical Information (ETR)					
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year		
Jupiter 1000	a power rating of 1 MWe for electrolysis and a methanation process with carbon capture. Green hydrogen will be produced using two electrolysers involving different technologies, from 100% renewable energy.		2020		

Current TYNDP : TYNDP 2020 - Annex A Page 477 of 773

# Lacq Hydrogen

ETR-N-942	Project	Energy Transition Related Project	Non-FID
Update Date	14/09/2020		Advanced
Description	Lacq Hydrogen project aims at developing a 800MWe green H2 gas turbine plant is and its SW Region.  The hydrogen is expected to be produced in Spain, sourced from the electrolysis of natural gas or pure) to France through the existing gas grid and stored in the existing used for green energy production to be injected into the power grid.	of wind and solar power. It will be then tran	sported (blended with
PRJ Code - PRJ Name			

Sponsors			General Information
Gazel Energie	50%	Promoter	Teréga
Teréga	50%	Operator	TERÉGA
3		Host Country	France
Soladvent (coordinator)	0%	Status	Planned
		Website	

Schedule	Start Date	End Date
Pre-Feasibility		06/2020
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2026	2026
Grant Obtention Date		

# **Technical Information (ETR)** Commissio **Technical Information Comment** Section/Phase Name Main Technical Parameters ning Year Installed capacity: 800MWe Hydrogen consumption of 5 GWh/day to be imported from Spain Only phase through the existing gas grid and stored in existing storage with a capacity of 3 GNm3.

Current TYNDP : TYNDP 2020 - Annex A Page 479 of 773

# mosaHYc (Mosel Saar Hydrogen Conversion

ETR-N-899	Project	Energy Transition Related Project	Non-FID
Update Date	15/06/2020		Advanced
Description	GRTgaz in France and CREOS in Germany work together towards a cross-b infrastructures, connecting Saarland (Germany) and Lorraine (France) and a The ambition of the mosaHYc project is to provide a 70 km regional-size h in Saarland, Lorraine and Luxemburg can access on a non-discriminatory b and especially in the mobility sector. Indeed, the project aims at supplying mobility ambitions of Saar federal State in Germany, Grand Est Region in F mobility uses and address major environmental and societal challenges inchydrogen infrastr	rriving at the border of Luxembourg. ydrogen infrastructure where various hydrogen pro asis and interact freely to develop hydrogen applic first future hydrogen filling stations, in line with gr rance and Luxemburg. Thus, the project could cont	oducers and consumers cations in the industry een cross-border tribute decarbonising
PRJ Code - PRJ Name	-		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	GRTgaz	2024	IB-FR1	Y-DEnm	0.90 GWh/d
Observatilles de (FR) / Madalahaira (PF)	Comment: New bidirectionnal H2 IP between France and Germany				
Obergailbach (FR) / Medelsheim (DE)	GRTgaz	2024	Y-DEnm	IB-FR1	0.90 GWh/d
		Comment: New bidirection	nnal H2 IP between Fr	ance and Germany	

Sponsors		General Information		
Section 1		Promoter	GRTgaz, CREOS Deutschland	
GRTgaz	50%	Operator	GRTgaz	
Section 2		Host Country	France	
CEOS Deutschland	50%	Status	Planned	
CLOS Deatscharta	3070	Website		

Schedule	Start Date	End Date
Pre-Feasibility		12/2020
Feasibility	01/2021	12/2021
FEED		
Permitting		
Supply Contracts		
FID		01/2022
Construction	01/2022	12/2024
Commissioning	2024	2024
Grant Obtention Date		

Technical Information (ETR)			
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
Carling - Perl	A 55 km long pipeline from Carling to Perl (Germany). capacity; 10 000m3/h (max 20 000m3/h)		2024
Fenn Völkingen - Carling	- A 15 km long pipeline connecting the power plant site Fenne- Völklingen (Germany) to the industrial platform in Carling (France); capacity: 10 000m3/h (max 20 000m3/h)		2024

Current TYNDP: TYNDP 2020 - Annex A Page 481 of 773

## White Stream

TRA-N-53	Project	Pipeline including CS	Non-FID
Update Date	25/10/2019		Non-Advanced

Description

The White Stream pipeline will transport gas produced in Turkmenistan and the Caspian area destined for Baumgarten and surrounding markets. 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 can be considered). White Stream will be connected to BRUA and possibly with other connectors to bring competitively priced gas from new sources to Baumgarten via lowest cost transportation routes.

PRJ Code - PRJ Name

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Constanta (White Stream)	White Stream	2023	GEw	RO	505.00 GWh/d
		Comment: Commissioning rescheduled from 2022 to 2023		3	
Vala (CE)	White Stream	2023	GE/SCP	GEw	505.00 GWh/d
Vale (GE)		Comment: Commissioning rescheduled from 2022 to 2023		3	

Sponsors			General Information	NDP	and PCI Information
W-Stream Pipeline Company Ltd	80%	Promoter	White Stream Ltd	Part of NDP	No ((2) no NDP exists in the country)
Georgian Oil and Gas Corporation (GOGC)	10%	Operator	White Stream	NDP Number	
	1070	Host Country	Georgia	NDP Release Date	
M Bryza	10%	Status	Planned	NDP Website	
		Website	<u>Project's URL</u>	Currently PCI	No
				Priority Corridor(s)	SGC

Schedule	Start Date	End Date
Pre-Feasibility		12/2011
Feasibility	09/2019	09/2020
FEED	10/2020	09/2021
Permitting	01/2021	12/2021
Supply Contracts		12/2021
FID		01/2022
Construction	06/2022	12/2023
Commissioning	2023	2023
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Negotiated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Supsa to Constanta	Offshore (for first stage / 16 bcma)	813	1,115	375	2023
Vale to Supsa	Onshore	1,039	135		2023
	Total		1,250	375	

# **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

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# **Delays since last TYNDP**

Delay Since Last TYNDP

**Delay Explanation** 

The progress of the Trans Caspian Pipeline system (2 strings) - so the enabler project of the White Stream Pipeline, was not that fast as previously expected because of the uncertainties regarding legal status of the Caspian Sea. Since the signature of the Caspian Sea convention - signed mid of 2018 - the perceived risks by potential investors has decreased, subsequently interest in the Trans Caspian Pipeline system has increased. Nevertheless, it takes some time to fully built up the necessary confidence of investors consequently it will be difficult to catch up regarding initial time schedule to the full extend, thus a rescheduling of the White Stream Pipeline was advisable.

	Expected Gas Sourcing
Caspian Region	
	Benefits
Main Driver	Market Demand
Main Driver Explanation	Diversification of delivery routes (two entry points into EU) resulting in the reduction of perceived risk is important for such sizable supply source as Turkmenistan and potentially Kazakhstan and Uzbekistan. For Germany and Austria White Stream also ensures lower transportation costs in comparison with the route via Turkey being more advantageous for SEE and Italy. WS provides for internal diversification of routes within the Southern Gas Corridor in expectation of increased import needs for mentioned areas in the EU.
Benefit Description	Increased competition because of the highly competitive gas from Turkmenistan, as well improved security of gas supply because of the new source and the new route. Market integration because of enabling more competition even in Georgia (trade with the EU-internal market on swap basis).
	Barriers
Barrier Type	Description
Political	Since the Caspian Sea convention was signed only recently, developments regarding transporting Turkmen gas across the Caspian Sea were not as fast as expected in previous years, thus slowed down the progress of the TCP and consequently White Stream as well. Because of the momentum generated by signature of Caspian Sea convention, progress of both projects has increased but still difficult to catch up to full extend, thus a rescheduling of the White Stream Pipeline was advisable.
Others	Risk perceived by potential investors because of the missing Caspian Sea convention which was only signed mid of 2018. Even after the signature of the Caspian Sea convention, which is perceived as a key milestone, it takes some time to increase confidence of potential investor but the interest is steadily and quickly growing. So, once the Trans Caspian Pipeline 1st string and in particular 2nd string make the required progress the White Stream pipeline will significantly improve progress as well.

	CBCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or
	not
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance		
Applied for CEF	(3) No, we have not applied for CEF	
Grants for studies	No	
Grants for studies amount	Mln EUR 0.0	
Grants for works	No	
Grants for works amount	Mln EUR 0.0	
Intention to apply for CEF	No decision yet taken	
Other Financial Assistance	Yes	
Comments	TEN-E in 2008 and 2009	
General Comments		

# Compressor station at Ambelia

TRA-N-1278	Project	Pipeline including CS	Non-FID
Update Date	11/09/2019		Non-Advanced
Description	The project consists in the installation of a new compressor station at Ambelia (in C system of DESFA to transport gas from north to south but also (in reverse flow) fror commissioning of TAP that will add one additional Entry point (and potentially Exit	m south to north. This increase is needed	
PRI Code - PRI Name			

Capacity Increments Variant Fo	r Modelling				
Point	Operator	Year	From Gas System	To Gas System	Capacity
Nies Manderode	DESFA S.A.	2023	GR	GR/TAP	32.40 GWh/d
Nea Mesimvria	DESFA S.A.	2023	GR/TAP	GR	32.40 GWh/d

Sponsors			General Information	NDP and PCI Information		
DESFA S.A.	100%	Promoter	DESFA S.A.	Part of NDP	Yes (National Development Plan 2017-	
		Operator	DESFA S.A.	Tare of 1421	2026)	
		Host Country	Greece		2.1.2.2	
		Status	Planned	NDP Release Date	21/02/2019	
		Website	Project's URL	NDP Website	NDP URL	
				Currently PCI	No	
				Priority Corridor(s)	SGC	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	12/2018	06/2019
FEED	10/2019	06/2020
Permitting	11/2019	11/2020
Supply Contracts		07/2020
FID		05/2020
Construction	12/2020	03/2023
Commissioning	2023	2023
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor	Stations				
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Ambelia				20	2023
	Total			20	

# **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes

Specific Criteria Fulfilled Comments

# **Expected Gas Sourcing**

Caspian Region, Russia

No

No

## Benefits

Main Driver Market Demand

Main Driver Explanation

Benefit Description

No, we have not submitted an investment request yet, and we do not plan to submit it

Submissin Date

**Decision Date** 

Website

Decision

Countries Affected

Countries Net Cost Bearer

**Additional Comments** 

**Financial Assistance** 

Applied for CEF (3) No, we have not applied for CEF

Grants for studies

Grants for studies amount Mln EUR 0.0

Grants for works Yes

Grants for works amount Mln EUR 32.7

Intention to apply for CEF No decision yet taken Other Financial Assistance

Comments

**General Comments** 

# Compressor station at Nea Messimvria

TRA-N-971	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Non-Advanced

Description

The project consists of the implementation of a 27 MW boosterr 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".

PRJ Code - PRJ Name

Capacity Increments Variant For N	Modelling							
Point		Operat	or		Year From Gas	System	To Gas System	Capacity
Nea Mesimvria		DESFA	S.A.	,	2023 GI	R	GR/TAP	49.20 GWh/d
Sponsors			General Information			NDP and	PCI Information	
DESFA	100%	Promoter		DESFA S.A.	Part of NDP	Yes (	National Developn	ment Plan NNGS
		Operator		DESFA S.A.	Tare of Nor			2017-2026)
		Host Country		Greece	NDP Number			2.2.1.4
		Status		Planned	NDP Release Dat	e		21/02/2019
		Website		Project's URL	NDP Website			NDP URL
					Currently PCI		,	Yes (7.1.3 (2020))
					Priority Corridor(	s)		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	09/2018	06/2019
FEED	10/2019	06/2020
Permitting	02/2020	09/2020
Supply Contracts		09/2020
FID		09/2020
Construction	09/2020	03/2023
Commissioning	2023	2023
Grant Obtention Date		

Third-Party Access Regi	me
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	Not Relevant
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Nea Messimvria to TAP				27	0
	Total			27	
	Fulfilled Criteria				
Specific Criteria Fulfilled	Competition, inter alia through diversification of supply sources, supplying counterparts appropriate connections and diversification of supply sources, supplying counterpart emissions, supporting intermittent renewable generation and enhancing deployment	rts and routes,	Sustainab		_
Specific Criteria Fulfilled Comments	continued from previous field: - Promote competition by offering alternative sour the region	ces of supply c	ompared	to those of historical	suppliers of

# **Expected Gas Sourcing**

Caspian Region, 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.

	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance					
Applied for CEF	(3) No, we have not applied for CEF				
Grants for studies	No				
Grants for studies amount	Mln EUR 0.0				
Grants for works	No				
Grants for works amount	Mln EUR 0.0				
Intention to apply for CEF	No decision yet taken				
Other Financial Assistance	No				
Comments					
General Comments					

# Compressor station at Nea Messimvria (3rd unit)

TRA-F-1276	Project	Pipeline including CS	FID
Update Date	18/11/2019		Non-Advanced
Description	The project consists in the addition of a third turbocompressor unit at the existing import capacity of the transmision system of DESFA to transport gas from north the is needed in view of the commissioning of TAP that will add one additional Entry	o south but also (in reverse flow) from sou	th to north. This increase
PRJ Code - PRJ Name	_		

Capacity Increments Variant For Mod	delling				
Point	Operator	Year	From Gas System	To Gas System	Capacity
Nice Masterials	DESFA S.A.	2022	GR	GR/TAP	32.40 GWh/d
Nea Mesimvria	DESFA S.A.	2022	GR/TAP	GR	32.40 GWh/d

Sponsors	General Information		NDP and PCI Information	
DESFA 100%	Promoter	DESFA S.A.	Part of NDP	Yes (National Development Plan 2017-
	Operator	DESFA S.A.	Tare of IVD	2026)
	Host Country	Greece		2.1.2.8
	Status	Planned	NDP Release Date	21/02/2019
	Website	Project's URL	NDP Website	NDP URL
			Currently PCI	No
			Priority Corridor(s)	SGC

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	10/2019	01/2019
FEED	02/2019	10/2019
Permitting	10/2019	09/2020
Supply Contracts		02/2020
FID		06/2019
Construction	12/2020	09/2022
Commissioning	2022	2022
Grant Obtention		
Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compress	sor Stations				
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Nea Messimvria				8	2022
	Total			8	

# **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes

Specific Criteria Fulfilled Comments

# **Expected Gas Sourcing**

Caspian Region, Russia

Yes

is pending.

## Benefits

Main Driver Market Demand

Main Driver Explanation

**Benefit Description** 

No, we have not submitted an investment request yet, and we do not plan to submit it

Submissin Date

**Decision Date** 

Website

Decision

Countries Affected

Countries Net Cost Bearer

**Additional Comments** 

Applied for CEF

Grants for studies

No

Grants for studies amount

Mln EUR 0.0

Grants for works

No

Grants for works amount

Mln EUR 0.0

No decision yet taken

**Financial Assistance** 

DESFA has requested grants for construction from PA (Partnership Agreement for the Development Framework) 2014-2020. This programme uses resources originating from the European Structural and Investment Funds (ESIF) of the European Union. The requested amount is 7.54 million EUR. The decision from the competent authorities

**General Comments** 

Comments

Other Financial Assistance

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# **Compressor Station Kipi**

TRA-N-128	Project	Pipeline including CS	Non-FID
Update Date	26/11/2019		Non-Advanced
Description	The project consists of a Compressor Station on the GR side of the GR/TK border in order to make possible the transmission of natural gas to the Greek and Europealso contains a regulating station in Komotini which is needed in order to prote operating pressure (66,4 barg) than the part from Kipi to Komotini (75 barg).	opean markets with the use of downstream to	ransmission systems. It
PRJ Code - PRJ Name	- //		

Capacity Increment	ts Variant For Modelling					
	Variant : 92.5 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.	2024	TRi	IB-GRk	44.00 GWh/d
Komotini (DESFA) -	- GR / IGB	DESFA S.A.	2024	IB-GRk	BG/IGB	62.50 GWh/d
Komotini (DESFA) E	Bottleneck	DESFA S.A.	2024	IB-GRk	GR	44.00 GWh/d
Capacity Increment	ts Variant(s) For Information Only					
	Variant : 206.40 GWh/d	case where TAP will be, from IGB will be supplied by the D system and the ones of neigh	ESFA network therefore	the C/S will supply g		
Point		Operator	Year	From Gas System	To Gas System	Capacity
Kipi (TR) / Kipi (GR)	)	DESFA S.A.	2024	TRi	IB-GRk	157.80 GWh/d

Sponsors		General Information		NDP and PCI Information		
DESFA S.A.	100%	Promoter	DESFA S.A.	Part of NDP	Yes (National Development Plan NNGS	
		Operator	DESFA S.A.		2017-2026)	
		Host Country	Greece	NDP Number	2.2.1.2	
		Status	Planned	NDP Release Date	21/02/2019	
		Website	Project's URL	NDP Website	NDP URL	
			•	Currently PCI	Yes (6.8.1 (2020))	
				Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	06/2019	09/2019
FEED	01/2020	06/2020
Permitting	03/2020	01/2021
Supply Contracts		02/2021
FID		01/2021
Construction	06/2021	06/2023
Commissioning	2024	2024
Grant Obtention		
Date		

Pipelines and Compressor Stations - Alternative Variant						
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year	
Kipi		0	0	18	0	
	Total		0	18		

Regulated Regulated

Not Relevant

No

0.00% 0.00%

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## **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes

Specific Criteria Fulfilled Comments

The C/S will increase the import capacity from Turkey in order to supply both the Greek System and the those of neighbouring countries and will allow the entry of new suppliers in the market that may supply gas at higher pressures without hindering the supply from Turkey.

## **Delays since last TYNDP**

Delay Since Last TYNDP

**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** 

#### Barriers

**Barrier Type** 

Description

Market

Lack of market maturity

0

	к	Δ

No, we have not submitted an investment request yet, and we do not plan to submit it

Submissin Date

**Decision Date** 

Website

Decision

Countries Affected

Countries Net Cost Bearer

**Additional Comments** 

**General Comments** 

Financia	al Assistance
Applied for CEF	(3) No, we have not applied for CEF
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	No decision yet taken
Other Financial Assistance	No
Comments	

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# EastMed Pipeline

TRA-A-330	Project	Pipeline including CS	Non-FID
Update Date	22/09/2020		Non-Advanced
Description	The EastMed project is an approximately 1900 km offshore/onshore pipeline project to the European gas system.  The project consists of 5 sections connecting the following areas: Levantine basin – Contract The system will have a capacity of 320-350 GWh/d with the option to upgrade the capacity reserves will be discovered in the offshore of Crete.	Cyprus –Crete- Peloponnese –West Gree	ece-Thesprotia.
PRJ Code - PRJ Name	- /		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Fact Mad / Crata (CD)	IGI Poseidon S.A.	2025	GRc	GR/EMD	190.00 GWh/d
East Med / Crete (GR)	IGI Poseidon S.A.	2025	GR/EMD	GRc	20.00 GWh/d
East Med / Cyprus (CY)	IGI Poseidon S.A.	2025	GR/EMD	CY	30.00 GWh/d
East Med / Cyprus/Israeli Production Field	IGI Poseidon S.A.	2025	NPcCY	GR/EMD	330.00 GWh/d
East Med / Peloponnesus (GR)	IGI Poseidon S.A.	2025	GR/EMD	GR	90.00 GWh/d
East Med / Thesprotia (Poseidon)	IGI Poseidon S.A.	2025	GR/IGI	GR/EMD	350.00 GWh/d

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Sponsors		
EastMed pipeline: from	Crete to Pelopon	nese
IGI Poseidon SA		100%
EastMed pipeline: from	Cyprus to Crete	
IGI Poseidon SA		100%
EastMed pipeline: from	Levantine Basin t	o Cyprus
IGI Poseidon SA	1	100%
EastMed pipeline: from	Peloponnese to \	West Greece
IGI Poseidon SA		100%
EastMed pipeline: from with Poseidon)	West Greece to T	hesprotia (tie-in

100%

Schedule	Start Date	End Date
Pre-Feasibility		01/2014
Feasibility	05/2015	03/2018
FEED	11/2018	12/2021
Permitting	06/2019	12/2021
Supply Contracts		
FID		12/2021
Construction	12/2021	12/2024
Commissioning	2025	2025

25/01/2018

25/01/2018

IGI Poseidon SA

**Grant Obtention** 

Date

	General Information	NDP and PCI Information			
Promoter  Operator	Natural Gas Submarine Interconnector Greece-Italy Poseidon S.A. IGI Poseidon S.A.	Part of NDP NDP Number NDP Release Date	No ((6) others - please comment below)		
Host Country Status Website	Greece Planned <u>Project's URL</u>	NDP Website Currently PCI Priority Corridor(s)	Yes (7.3.1 (2020))		

Third-Party Access Regime	
Considered TPA Regime	Not Applicable
Considered Tariff Regime	Not Applicable
Applied for Exemption	Not Yet
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
EastMed pipeline: section from Crete to Peloponnese	This offshore pipeline section is designed to transport 320 GWh/d of natural gas form 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.	660	421	120	0
EastMed pipeline: section from Cyprus to Crete	This section of the project is related to the offshore pipeline between Cyprus and Crete.	660	732	100	0
EastMed pipeline: section from Levantine Basin to Cyprus	This offshore pipeline section will tansport 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		0
EastMed pipeline: section from West Greece to Thesprotia	This offshore pipeline section is designed to transport 320 GWh/d of natural gas form 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		0
EastMed: section from Peloponnese to West Greece	This offshore pipeline section is designed to transport 320 GWh/d of natural gas form 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	317		0
To	al		1,871	220	

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#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Strengthens SECURITY OF SUPPLY via diversification, providing solutions to disruption scenarios and impacting SSA. Achieves gasification of Cyprus, ending isolation and connects it, with reverse flow to Europe gas network system via GR and IT (Poseidon offshore). Interconnects Crete, promoting interoperability and gasification. Provides 3rd diversified gas source and increased N-1 indicator for Greece. (SLID). Concerns positively remaining flexibility in Greece and contributes, in case of disruption of Ukraine route. Enhances COMPETITION along whole gas chain, including among producers. Provides Greece and Italy with additional entry points, access to new markets, promoting diversification of counterparts in these markets and beyond. The new gas will compete advantageously lowering gas supply price across Eur. Promotes SUSTAINABILITY, allowing CY & Crete to overcome dependence on imported petrol products, triggering cost savings, and attainment of EU emission reductions targets.

Specific Criteria Fulfilled Comments

#### **Delays since last TYNDP**

Delay Since Last TYNDP

**Delay Explanation** 

The project's development activities are on time. Compared to the previous TYNDP application, the date of FID has been corrected from 06 2021, to 12 2021 and the formal start of the permitting phase, according to Article 10 of Regulation 347/2013 adjusted. The overall project schedule remains unaffected.

# **Expected Gas Sourcing**

Cyprus resources and offshore of Crete in case relevant gas reserves will be discovered and potentially Egypt.

# Comments about the Third-Party Access Regime

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

cooperation in relation to EastMed Pipeline Israel and the Ambassador of the Italian Republic to Cyprus

irrent TYNDP : TYNDF	, 2020 - Annex <i>F</i>	1		Page 501 of 773
		Benefits		
Main Driver	Others			
Main Driver Explanation	Basin with the Eu Levantine Basin of deliveries from no trading in the Soc Corridor initiative	ctive of the Eastern Mediterranean Pipeline is to provide a permanent connection of the recently ropean gas markets. The specific objectives to be achieved with implementation of the project a gas fields to mainland Europe, to diversify the sources, routes and counterparts of the European gew sources, which are wholly or partly produced within the EU; • integrate Cyprus with the Europe at the Eastern Europe region; • promote the development of a gas trading hubs in Greece and in Italians, facilitating gas exchanges in South Eastern Europe; • gasify regions of Greece that currently have the Greece.	re to: • exploi gas supply wit bean gas syste aly, in connec	it the proximity of the th 10-16 bcm/year of em, further promoting gas tion with other Southern
Benefit Description	diversify sources Levantine Basin, i development of t needs: • Increase energy market; •	of the European Union on external gas supplies is continuously increasing, with indigenous processo as to strengthen security of the markets' supply, particularly in SEE. On the other hand, unlocking referring to the sole Cyprus - the largest recent discovery of gas reserves in Europe, is the exploration and hydrocarbons in the whole East Mediterranean. Considering all the above, East Security and diversification of gas supplies to Europe, as well as competition in line with the EU Contributes to the development of EU domestic gas resources, thus limiting the dependence on ally located for EU	king the recen s particularly r astMed addres objectives to	nt discoveries in the relevant for the sses the following main complete the internal
		Barriers		
Barrier Type	Description			
Political	A supportive poli	tical, fiscal and regulatory framework is necessary to secure the timely development of the EastN	/ledProject. a	4-Party Agreement Y
		Intergovernmental Agreements		
Agreement		Agreement Description	Is Signed	Agreement Signature Date
Italiy-Greece-Cyprus-Isra	ael Working Group		Yes	01/12/2016
Cyprus-Israel-Greece Tri Declaration	lateral Summit	Agreement to "to strengthen the cooperation between our three countries in order to promote a trilateral partnership in different fields of common interest and to work together towards promoting peace, stability, security and prosperity in the Mediterran"	Yes	28/01/2016
Memorandum of Unders	standing on	MoU signed by Ministers of the Republic of Cyprus, the Hellenic Republic and the State of	Yes	05/12/2017

05/12/2017

urrent TYNDP : TYNDP 2	020 - Annex A		Page 502 of 773
	CBCA		Financial Assistance
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
	not	Grants for studies	Yes
Submissin Date		Grants for studies amount	Mln EUR 34.5
Decision Date		Grants for works	No
Website		Grants for works amount	Mln EUR 0.0
Countries Affected		Intention to apply for CEF	No decision yet taken
Countries Net Cost Bearer		Other Financial Assistance	No
Additional Comments		Comments	The project has been awarded in 2015 with 2 M€ of CEF grants for the development activities related to Pre-FEED phase.  In 2018, a second CEF grant of 34.5M€ has been awarded to the project for the development activities related to
			FEED Phase.
			IGI Poseidon is currently carrying out CEF Action 7.3.1- 0023-CYEL-S-M-17, Implementation schedule: May 2018 to December 2021
		General Comments	
			The previous CEF Action for the EastMed, 7.3.1-0025- ELCY-S-M-15, Implementation schedule: May 2015 to March 2018, has been successfully carried out.

# Metering and Regulating Station at Alexandroupoli

TRA-N-1090	Project	Pipeline including CS	Non-FID			
Update Date	15/08/2019		Non-Advanced			
Description	The project consists of the implementation of one Metering and Regulating Station at Alexandroupoli (Amphitriti) for the potential interconnection of the Greek transmission system with the LNG terminal in Northern Greece.					
PRJ Code - PRJ Name	-					

PRI Code - PRI Name								
Capacity Increments Variant For Modell	ing							
Point		Operat	tor		Year From Ga	s System	To Gas System	Capacity
Alexandroupolis Amphitriti		DESFA S.A.		2022 G	Ra	IB-GRk	268.00 GWh/d	
Sponsors			General Information			NDP and	PCI Information	
DESFA S.A.	100%	Promoter		DESFA S.A.	Part of NDP	No (	(6) others - please	comment below)
		Operator		DESFA S.A.	NDP Number			
		Host Country		Greece	NDP Release Da	ate		

Status	Planned	NDP Website	
Website	<u>Project's URL</u>	Currently PCI	Yes (6.9.1 (2020))
		Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	09/2019	02/2020
FEED	04/2020	12/2020
Permitting	06/2020	06/2021
Supply Contracts		08/2021
FID		07/2021
Construction		03/2023
Commissioning	2022	2022
Grant Obtention		

Date

Current TYNDP: TYNDP 2020 - Annex A Page 504 of 773

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes

**General Comments** 

Specific Criteria Fulfilled Comments The project will help in adding one additional supply source. Thus enhancing market integration, security of supply and growth of competition.

# **Expected Gas Sourcing**

LNG ()

Benefits

Main Driver Market Demand

Main Driver Explanation

Benefit Description

Barriers

**Barrier Type** 

Description

Market

Website

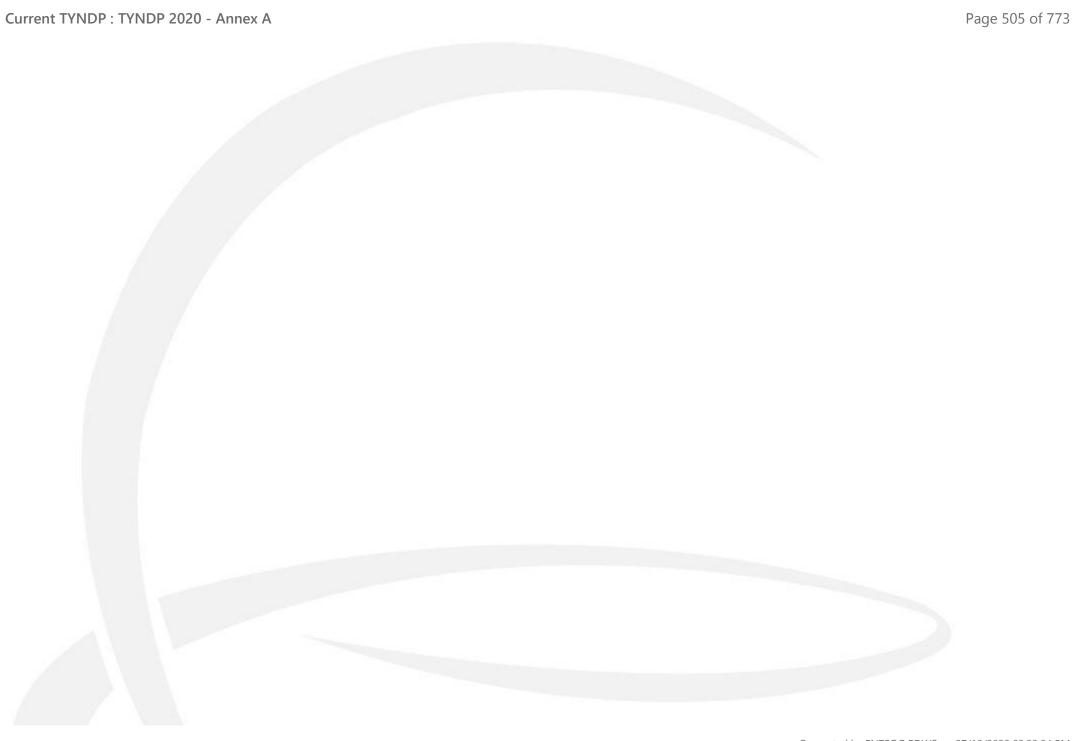
Countries Affected

Countries Net Cost Bearer Additional Comments

Lack of market maturity

	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it
Submissin Date	
Decision Date	

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF	No decision yet taken			
Other Financial Assistance	No			
Comments				



# Metering and Regulating station at Megalopoli

TRA-N-1091	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Non-Advanced
Description	The project consists of the implementation of one Metering & Regulating station at N interconnection of the Greek gas transmission system with the East-Med pipeline.	Megalopoli, in the Peloponnese, for the	potential
PRJ Code - PRJ Name	-		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
East Med / Peloponnesus (GR)	DESFA S.A.	2025	GR/EMD	GR	90.00 GWh/d

Sponsors			General Information	NDP and PCI Information	
DESFA S.A.	100%	Promoter	DESFA S.A.	Part of NDP	No ((6) others - please comment below)
	7	Operator	DESFA S.A.	NDP Number	
		Host Country	Greece	NDP Release Date	
		Status	Planned	NDP Website	
		Website	<u>Project's URL</u>	Currently PCI	Yes (7.1.3 (2020))
				Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	04/2022	10/2022
FEED	12/2022	10/2023
Permitting	02/2022	02/2023
Supply Contracts		09/2023
FID		02/2023
Construction	09/2023	12/2025
Commissioning	2025	2025
Grant Obtention		

Date

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Current TYNDP : TYNDP 2020 - Annex A Page 507 of 773

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes

Specific Criteria Fulfilled Comments The project will allow one additional source of gas (Levantine basin) to supply the Greek transmission system

#### **Delays since last TYNDP**

Delay Since Last TYNDP

Delay Explanation Lack of market demand

#### **Expected Gas Sourcing**

#### Cyprus

	Benefits Programme Benefits		
Main Driver	Market Demand		
Main Driver Explanation	on		
Benefit Description	The project will add one more source of supply to the Greek market thus increasing SoS and Market integration.		
Barriers			
Barrier Type	Description		
Market	Lack of market support		

	CBCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or
	not
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance			
Applied for CEF	(3) No, we have not applied for CEF		
Grants for studies	No		
Grants for studies amount	Mln EUR 0.0		
Grants for works	No		
Grants for works amount	Mln EUR 0.0		
Intention to apply for CEF	No decision yet taken		
Other Financial Assistance	No		
Comments			
General Comments			

# Metering and Regulating station at Nea Messimvria

TRA-F-941	Project P	ripeline including CS	FID
Update Date	18/11/2019		Advanced
Description	The project consists of the implementation of one Metering & Regulating station at Nea Messir	mvria for the interconnection of	of the Greek

Description transmission system with TAP.

PRJ Code - PRJ Name

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Nea Mesimvria	DESFA S.A.	2020	GR/TAP	GR	49.20 GWh/d
Sponsors General Information			NDP and	PCI Information	
	Durantan	CEA CA	V /	(NI=+:=   D =	+ DI NINICC

Sponsors	General Information		ND	P and PCI Information
	Promoter	DESFA S.A.	Part of NDP	Yes (National Development Plan NNGS
	Operator	DESFA S.A.		2017-2026)
	Host Country		NDP Number	2.2.1.4
	Status	Planned	NDP Release Date	21/02/2019
	Website	Project's URL	NDP Website	<u>NDP URL</u>
			Currently PCI	Yes (7.1.3 (2020))
			Priority Corridor(s)	

#### Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	01/2016	04/2016
FEED	05/2016	03/2018
Permitting	02/2018	02/2019
Supply Contracts		09/2019
FID		09/2017
Construction	09/2019	10/2020
Commissioning	2020	2020
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	Not Relevant
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations		
Pipeline Section	Pipeline Comment	Diameter Length Compressor Power Comissioning (mm) (km) (MW) Year
Nea-Messivria to TAP		1 0
	Total	1

### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes

Specific Criteria Fulfilled Comments The project will add one more route and source of gas supply (from TAP) to the Greek transmission system.

### **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.

	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit i
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

	Financial Assistance
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Grants for studies	Yes
Grants for studies amount	Mln EUR 0.5
Grants for works	Yes
Grants for works amount	Mln EUR 7.1
Intention to apply for CEF	No decision yet taken
Other Financial Assistance	Yes
Comments	DESFA has requested grants for construction from PA (Partnership Agreement for the Development Framework) 2014-2020. This programme uses resources originating from the European Structural and Investment Funds (ESIF) of the European Union. The requested amount is 5.45 million EUR.
General Comments	

PRJ Code - PRJ Name

# Metering and Regulating Station at UGS South Kavala

TRA-N-1092	Project Pipeline including C	S Non-FID
Update Date	15/08/2019	Non-Advanced
DASCRIPTION	The project consists of the implementation of one Metering and Regulating Station at Kavala for the potential intercon transmission system with the UGS in South Kavala.	nection of the Greek

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	DESFA S.A.	2023	STcGR	IB-GRk	44.00 GWh/d
LICC Courth Kours In (CD)			Comment: fr	om storage to grid	1
UGS South Kavala (GR)	DESFA S.A.	2023	IB-GRk	STcGR	55.00 GWh/d
			Comment: Fi	om grid to storage	2

Sponsors		General Information		NDP and PCI Information	
		Promoter	DESFA S.A.	Part of NDP	No ((6) others - please comment below)
		Operator	DESFA S.A.	NDP Number	
1		Host Country	Greece	NDP Release Date	
DESFA S.A.	100%	Status	Planned	NDP Website	
		Website	<u>Project's URL</u>	Currently PCI	Yes (6.20.3 (2020))
				Priority Corridor(s)	

Current	TYNDP :	TYNDP	2020 -	Annex A

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	04/2020	10/2020
FEED	11/2020	05/2021
Permitting	12/2020	12/2021
Supply Contracts		03/2022
FID		01/2022
Construction	03/2022	09/2023
Commissioning	2023	2023
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

	Fulfilled Criteria
Specific Criteria Fulfilled	Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas
Specific Criteria Fulfilled Comments	The project is a needed part of the Greek transmission system to allow its connection to the UGS of South Kavala promoted by others (Hellenic Republic Assets Development Fund - HRADF)

## Delays since last TYNDP

Delay Since Last TYNDP

Delay Explanation The project schedule depends on the implementation of the UGS of South Kavala, promoted by others (HRADF).

## Expected Gas Sourcing

All sources of gas comprised in the Greek supply mix including the ones to be brought by TAP.

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Main Driver **Regulation SoS** 

Main Driver Explanation The UGS projets will enhance SoS

The enhancement of SoS will become more important as the penetration of natural gas in the residential sector of the still immature Greek gas market and Benefit Description

its neighbours (like FYRoM) will increase.

#### **Barriers**

**General Comments** 

Description **Barrier Type** 

The implementation of the project depends on the implementation of the UGS South Kavala. Others

Lack of market maturity Market

Decision	No, we have not submitted an investment request yet, and we do not plan to submit it
Submissin Date	

CBCA

**Decision Date** Website

Countries Affected

Countries Net Cost Bearer

**Additional Comments** 

Financial Assistance					
Applied for CEF	(3) No, we have not applied for CEF				
Grants for studies	No				
Grants for studies amount	Mln EUR 0.0				
Grants for works	No				
Grants for works amount	Mln EUR 0.0				
Intention to apply for CEF	No decision yet taken				
Other Financial Assistance	No				
Comments					

Date

# Nea-Messimvria to Evzoni/Gevgelija pipeline (IGNM)

TRA-A-967	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Non-Advanced
Description	The project consists of a pipeline from Nea-Messimvria to the GR/MK border allow Transmission System	ring the supply of North Macedonia by the	e Greek Gas
PRJ Code - PRJ Name	-		

Capacity Increments Variant For Modelling						
Point	Operator	Year	From Gas System	To Gas System	Capacity	
Stojakovo village (MK) / Pontoiraklia (GR)	DESFA S.A.	2022	GR	MK	76.50 GWh/d	

Sponsors		General Information NDP and PCI Information		OP and PCI Information	
DESFA S.A.	100%	Promoter	DESFA S.A.	Part of NDP	Yes (NDP 2017-2026)
y and a second		Operator	DESFA S.A.	NDP Number	2.1.2.1
		Host Country	Greece	NDP Release Date	
		Status	Planned	NDP Website	<u>NDP URL</u>
		Website	<u>Project's URL</u>	Currently PCI	No
				Priority Corridor(s)	NSIF

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	03/2017	01/2019
FEED	03/2019	11/2019
Permitting	12/2018	03/2020
Supply Contracts		10/2020
FID		06/2020
Construction	12/2020	09/2022
Commissioning	2022	2022
Grant Obtention		

Current TYNDP : TYNDP 2020 - Annex A Page 516 of 773

Pipelines and Compressor Stations		
Pipeline Section	Pipeline Comment	Diameter Length Compressor Power Comissionin (mm) (km) (MW) Year
Nea-Messimvria to Pontoiraklia/Stojakovo		700 50 0
	Total	50

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

Dolar	ic cinco	last TYNDP
Dela	ys silice	Iast I HIDE

Delay Since Last TYNDP

Delay Explanation

The condition imposed by the Regulator for the approval of the inclusion of the project iin the NDP (i.e. the execution of a successful Market Test) had as a consequence a delay for the drafting of the relevant Guidelines and Notice and for the alignement betwenn the two gas transmission companies.

### **Expected Gas Sourcing**

Caspian Region, LNG (DZ,WO)

Benefits					
Main Driver	Market Demand				
	North Macedonia has a forecast gas demand showing an important increase due to their need to replace polluting energy sources in the District heating installations and in some of their power plants as well as in the residential space heating sector.				
Benefit Description					

Current TYNDP: TYNDP 202	0 - Annex A		Page 517 of 773
	CBCA		Financial Assistance
Decision Submissin Date Decision Date Website	No, we have not submitted an investment request yet, and we do not plan to submit it	Applied for CEF Grants for studies Grants for studies amount Grants for works Grants for works amount	(3) No, we have not applied for CEF No Mln EUR 0.0 No Mln EUR 0.0
Countries Affected Countries Net Cost Bearer Additional Comments		Intention to apply for CEF Other Financial Assistance Comments General Comments	No decision yet taken Yes  DESFA has requested grants for construction from PA (Partnership Agreement for the Development Framework) 2014-2020. This programme uses resources originating from the European Structural and Investment Funds (ESIF) of the European Union. The requested amount is 16.91 million EUR. The decision from the competent authorities is pending.

Current TYNDP : TYNDP 2020 - Annex A Page 518 of 773

# Poseidon Pipeline

TRA-A-10	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Advanced
Description	The Poseidon Pipeline project represents a valid "multi-source" option to comp supply.  The current configuration of the project includes 2 sections entirely within the Turkey to Thesprotia and ii) 210 offshore crossing the Ionian Sea up to the Itali In its first phase, Poseidon pipeline would transport 10-12 Bcm/y of the available southern Balkans. In its second development phase, the project capacity will be Eastern Mediterranean region through EastMed pipeline, to which Poseidon pi	EU territory: i) 770km onshore crossing Greece ian landfall in Otranto. ble gas volumes at Turkish/Greek border, toward e increased up to 20 Bcm/y allowing the flow of	from the border with
PRJ Code - PRJ Name	-		

Point	Operator	Year	From Gas System	To Gas System	Capacity
E AM LATE OF A COLUMN	IGI Poseidon S.A.	2025	GR/EMD	GR/IGI	320.00 GWh/d
East Med / Thesprotia (Poseidon)			Со	mment: 2nd phase	2
	IGI Poseidon S.A.	2022	TRi	IB-GRk	480.00 GWh/d
Kipi (TR) / Kipi (GR)	IGI Poseidon S.A.	2025	TRi	IB-GRk	150.00 GWh/d
			Comment: 2nd phase		
	IGI Poseidon S.A.	2022	IB-GRk	BG/IGB	90.00 GWh/d
Komotini (DESFA) - GR / IGB	IGI Poseidon S.A.	2025	IB-GRk	BG/IGB	65.00 GWh/d
			Comment: 2nd phase		2
	IGI Poseidon S.A.	2022	IB-ITs	GR/IGI	160.00 GWh/d
Otropto IT /ICI Possidor	IGI Poseidon S.A.	2022	GR/IGI	IB-ITs	380.00 GWh/d
Otranto - IT / IGI Poseidon	IGI Poseidon S.A.	2025	GR/IGI	IB-ITs	250.00 GWh/d
			Со	mment: 2nd phase	2

Sponsors		General Information		NDP and PCI Information	
IGI POSEIDON S.A.	100%	Promoter	Natural Gas Submarine Interconnector Greece-Italy Poseidon S.A	Part of NDP	Yes (Piano decennale di sviluppo delle reti di trasporto di gas naturale 2017- 2026 (pag. 55, 56, 98))
		Operator	IGI Poseidon S.A.	NDP Number	n.a.
		Host Country	Greece	NDP Release Date	30/11/2017
		Status	Planned	NDP Website	<u>NDP URL</u>
		Website	<u>Project's URL</u>	Currently PCI	Yes (7.3.3 (2020))
				Priority Corridor(s)	

Schedule	Start Date	End Date	Third-Par
Pre-Feasibility			Considered TPA Regime
Feasibility	03/2004	10/2006	Considered Tariff Regime
EED	08/2017	01/2019	Applied for Exemption
Permitting	08/2017	06/2019	Exemption Granted
Supply Contracts			
FID		06/2019	Exemption in entry direction
Construction	03/2020	09/2022	Exemption in exit direction
Commissioning	2022	2025	
Grant Obtention			

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Poseidon offshore section		813	210	75	2022
Poseidon onshore section		1,220	770	75	2022
	Total		980	150	

Not Applicable
Not Applicable

Yes Not Yet

> 0.00% 0.00%

Current TYNDP: TYNDP 2020 - Annex A Page 520 of 773

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

Strengthens SoS. Broadens SGC with route diversification and additional/multiple diversified sources including from E. Mediterranean to IT, GR and EUR markets, contributing to mitigating demand/supply unbalance risks. Contributes to N-1 indicator for GR (SLID) enables access to storage facilities in IT. Added SoS via reverse flow for GR and (via IGB) SE Europe, allowing gas sourced from the IT and ensuring remaining flexibility in case of Ukraine route disruption. Boosts market integration with physical connection of GR-IT and via the IGB and EastMed deepens integration of SE Europe to European gas system. Poseidon enhances competition. Fosters creation of an Italian and Greek gas hub, increasing market liquidity and number of players, with benefit for European price signals thanks to forward and reverse flow and continental markets by exerting competitive pressure on gas importers to other European countries. Strengthens sustainability by accelerate switching gas from coal.

#### **Expected Gas Sourcing**

Caspian Region, Cyprus and offshore Crete resources, coming through the EastMed pipeline.

#### Comments about the Third-Party Access Regime

The promoter has obtained for the initial configuration of Poseidon Project (offshore section), a TPA exemption for 89% of the forward flow capacity from Greece to Italy.

	Benefits
Main Driver	Others
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.

	Intergovernmental Agreements	5		
Agreement	Agreement Description		Is Signed	Agreement Signature Date
Memorandum of Understanding between Greece and Turkey			Yes	01/05/2010
Protocol of Cooperation between Italy and Azerbaijan			Yes	01/12/2007
Italy-Greece-Turkey Intergovernmental Agreement			Yes	01/07/2007
Italy-Greece Intergovernmental Agreement			Yes	01/11/2005
Joint statement of the Italian Minister of Economic Development and the Turkish Minister of Energy and Natural Resources			Yes	01/11/2009

	CBCA		Financial Assistance
	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF
Decision	and we have not yet decided whether we will submit or	Grants for studies	No
Cubmissin Data	not	Grants for studies amount	Mln EUR 0.0
Submissin Date		Grants for works	No
Decision Date		Grants for works amount	Mln EUR 0.0
Website		Intention to apply for CEF	No decision yet taken
Countries Affected		Other Financial Assistance	Yes
Countries Net Cost Bearer Additional Comments		Comments	The Poseidon project has been awarded in 2010 with c.a. 5.5 M€ of EU grants through EEPR program (EEPR-2009-INTg-Poseidon), mainly for the technical development activities as Front-End-Engineering-Design and Design Appraisal and Certification for the project offshore section.
		General Comments	

Current TYNDP : TYNDP 2020 - Annex A Page 522 of 773

# South Kavala Underground Gas Storage facility

UGS-N-385	Project	Storage Facility	Non-FID
Update Date	06/01/2020		Non-Advanced
Description	The project involves the conversion of the offshore depleted gas field of South Kavala in	ito an Underground Gas Storage Fac	ility.
PRJ Code - PRJ Name			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	Hellenic Republic Asset Management Fund		STcGR	IB-GRk	44.00 GWh/d
LICS South Konala (CD)			Comment: fi	rom storage to grid	1
UGS South Kavala (GR)	Hellenic Republic Asset Management Fund	2023	IB-GRk	STcGR	55.00 GWh/d
			Comment: fi	rom grid to storage	2

Sponsors		General Information NDP and PCI In		DP and PCI Information
Hellenic Republic Asset Develpment Fund (HRADF)	00% Promoter	Hellenic Republic Asset Development Fund	Part of NDP	No ((3) the operators are not required to prepare and publish a NDP)
	Operator	Hellenic Republic Asset Management Fund		
	Host Country		NDP Release Date	
	Status	Planned	Currently PCI	Yes (6.20.3 (2020))
	Website	<u>Project's URL</u>	Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		11/2019
Feasibility	11/2019	06/2020
FEED	06/2020	10/2020
Permitting	02/2021	09/2021
Supply Contracts		
FID		10/2021
Construction	11/2021	09/2023
Commissioning	2023	2023
Grant Obtention Date		

Regulated
Regulated
No
No
0.00%
0.00%

			Technical Informa					
Storage Facility	Storage Facility Type	Multiple-cycle Facility	Project Phase	Working Volume (mcm)	Withdrawal Capacity (mcm/d)		Comments	Commisioning Year

Current TYNDP: TYNDP 2020 - Annex A Page 524 of 773 Exact working gas volume (360 - 720 mcm per annum) depends on the number of cycles as well as the number of operating wells. The aforementioned estimates, as well as number of cycles, are based on various preliminary South Kavala Depleted Field 2023 Yes Single-phase Project 720 4.0 5.0 100 studies conducted in the past. However, as the transaction process progresses and upon completion of the FEED study more accurate project technical specifications will arise which can differ from the current

known estimates.

Current TYNDP : TYNDP 2020 - Annex A Page 525 of 773

	Fulfilled Criteria
Specific Criteria Fulfill	Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes
Specific Criteria Fulfill	- The storage facility may support the increased peneration of gas in the residential and commercial sectors as this makes the yearly demand distribution less even due to the space heating seasonal demand
	Delays since last TYNDP
Delay Since Last TYN	DP .
Delay Explanation	Current market conditions are considered favourable for the project's advancement and the project promoter strongly believes that the indicated timeline will be met.
	Expected Gas Sourcing
Caspian Region, Russ	ia, LNG ()
	Comments about the Third-Party Access Regime
The definition of the	regulatory regime, including tariffs regime, is pending by the NRA.
	Benefits
Main Driver	Regulation SoS
Main Driver Explanati	I. The UGS is expected to enhance Greece's security of supply during peak demand seasons (i.e. winter, summer) and system balancing gas during intradation peak hours II. The UGS will serve as an additional source primarily for the Greek but also for the neighbouring interconnected European gas markets. III. The UGS is expected to compliment other natural gas projects, promote Greece as regional gas hub and increase the natural gas system's efficiency
Benefit Description	
	Barriers
Barrier Type	Description
Regulatory	The regulatory framework will be finalised after the selection of a consessionaire, however, the project promoter has already initiated discussions with the NRA in order to form a solid view and understanding for the regulatory framework that will be applicable for the project

NRA in order to form a solid view and understanding for the regulatory framework that will be applicable for the project

launch the tender process, is close to be finalised and published

critical for the project's advancement

**Political** 

Financing

N/A - The Greek state supports the advancement of the project, being evident from the fact that the Joint Ministerial Decision, which is a prerequistite to

Final financing structure will be decided by the selected concessionaire, however, project's inclusion in the PCI list and support from the EU is deemed

CBCA
No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not
not

	Financial Assistance					
Applied for CEF	(2) Yes, we have applied for CEF, but we have not received a decision yet					
Grants for studies	Yes					
Grants for studies amount	Mln EUR 1.7					
Grants for works	No					
Grants for works amount	Mln EUR 0.0					
Intention to apply for CEF						
Other Financial Assistance	No					
Comments						
General Comments						

Current TYNDP : TYNDP 2020 - Annex A Page 527 of 773

# **TAP Expansion**

TRA-N-810	Project	Pipeline including CS	Non-FID
Update Date	29/10/2019		Advanced
Description	TAP's initial capacity is 10 bcm/a and it can expand up to 20 bcm/a, subject to binding Capacity up to a maximum of 20 bcm/a that can be created by adding additional com TAP launched the Market Test Non-Binding phase on 1 July 2019 and on 21 October 2 aggregated non-binding demand indications received at TAP's Interconnection Points launched the Coordinated Design phase to analyse suitable technical scenarios for accounts.	pression to the initial 10 bcm/a capacit 2019 published the Demand Assessmer in Greece, Italy and Albania. On 22 Oc	nt Report, indicating ctober 2019 TAP has
PRJ Code - PRJ Name			

Capacity Increments Variant For Modelling						
Point	Operator	Year	From Gas System	To Gas System	Capacity	
	Trans-Adriatic Pipeline AG	2025	TR/TNP	GR/TAP	233.00 GWh/d	
Kipi (TR) / Kipi (TAP)	Comment: The total capacity entry Kipoi is identical with the total capacity exit Melendugno when adding the initial TAP project and the TAP Expansion together. GCV used for capacity calculations: 9.71 kWh/Sm3.					
Komatini TAD / ICD	Trans-Adriatic Pipeline AG	2025	GR/TAP	BG/IGB	0.00 GWh/d	
Komotini - TAP / IGB	Comment: GCV used for capacity calculations: 9.71 kWh/Sm3.					
	Trans-Adriatic Pipeline AG	2025	AL/TAP	IB-ITs	292.00 GWh/d	
Melendugno - IT / TAP	Comment: The total capacity entry Kipoi is identical with the total capacity exit Melendugno when adding the initial TAP project and the TAP Expansion together. GCV used for capacity calculations: 9.71 kWh/Sm3.					
	Trans-Adriatic Pipeline AG	2025	GR/TAP	GR	0.00 GWh/d	
Nea Mesimvria	Comment: The energy quantities have not been updated, given that the ones submitted for TAP initial capacity - for Nea Mesimvria exit cover also the non-binding demand indications received by TAP in the 2019 Market Test. GCV used for capacity calculations: 9.71 kWh/Sm3.					

Sponsors			Ger	neral Information	NDP and F	CI Information
ВР		20%	Promoter	Trans Adriatic Pipeline AG	Part of NDP No ((6	) others - please comment below)
SNAM		20%	Operator	Trans-Adriatic Pipeline AG	NDP Number	
SOCAR		20%	Host Country	Greece	NDP Release Date	
SUCAR		20%	Status	In Progress	NDP Website	
FLUXYS		19%	Website	<u>Project's URL</u>	Currently PCI	No
ENAGAS		16%			Priority Corridor(s)	SGC
AXPO		5%				
Schedule	Start Date	End Date			Third-Party	Access Regime
Pre-Feasibility		03/2013			Considered TPA Regime	Regulated
Feasibility	01/2009	03/2013			Considered Tariff Regime	Negotiated
FEED					Applied for Exemption	No
Permitting					Exemption Granted	No
Supply Contracts						
FID					Exemption in entry direction	0.00%
Construction					Exemption in exit direction	0.00%
Commissioning	2025	2025				
Grant Obtention Date						

Current TYNDP: TYNDP 2020 - Annex A Page 529 of 773

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
TAP Expansion	TAP Expansion is built on TAP Initial Capacity by investment for additional compression at two existing compressor stations and by introducing two additions compressor stations.	•		275	2025
	Total			275	

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

#### **Expected Gas Sourcing**

Caspian Region

#### Comments about the Third-Party Access Regime

The initial capacity is exempted from TPA. TAP Expansion capacity is subject to TPA and is offered to the market via market tests, with the exception of short term obligations. TAP has received a Tariff Exemption for all capacity. The Tariff Exemption covers also the TAP Expansion capacity. Please see submission of data for TAP initial capacity.

	Benefits					
Main Driver	Market Demand					
Main Driver Explanation						
Benefit Description	Benefits of TAP Expansion are an enhancement of the benefits of TAP - Initial Capacity project.					

	CBCA	
Decision	No, we have not submitted an investment request yet,	Applied
	and we do not plan to submit it	Grants f
Submissin Date		Grants f
Decision Date		Grants f
Website		Grants f
Countries Affected		Intentio
Countries Net Cost Bearer		Other Fi
Additional Comments		Comme
		General

Financial Assistance						
Applied for CEF	(3) No, we have not applied for CEF					
Grants for studies	No					
Grants for studies amount	Mln EUR 0.0					
Grants for works	No					
Grants for works amount	Mln EUR 0.0					
Intention to apply for CEF	No decision yet taken					
Other Financial Assistance	No					
Comments						
General Comments						

Current TYNDP : TYNDP 2020 - Annex A Page 531 of 773

# **Trans Adriatic Pipeline**

TRA-F-51	Project Project	Pipeline including CS	FID
Update Date	18/11/2019		Advanced
Description	Trans Adriatic Pipeline (TAP) will transport natural gas from Kipoi in Greece ne Italy's southern Puglia region in the province of Lecce. TAP will interconnect w secure access to the Shah Deniz natural gas field in Azerbaijan, and ties into Ita province of Lecce. TAP's initial capacity is 10 bcm/a and it can expand its capacity will be offered to the market via market tests, from no later than start	ith TANAP, which is linked further to the East valy's gas transportation grid operated by Snancity up to 20 bcm/a, subject to binding market	with systems in Turkey, to n Rete Gas in the t demand. The expansion
PRJ Code - PRJ Name	- 1/2		

Point	Operator	Year	From Gas System	To Gas System	Capacity
	Trans-Adriatic Pipeline AG	2020	GR/TAP	TR/TNP	331.00 GWh/d
Kipi (TR) / Kipi (TAP)	Comment: GCV used for capacity calc		equal to booked forv nt inserted given the c	ard entry capacity	
Kipi (TK) / Kipi (TAP)	Please note that validation of Kipoi as	an exit point is su	ıbject to further alignr	nent with adjacent TSOs.	
	Trans-Adriatic Pipeline AG	2020	TR/TNP	GR/TAP	350.00 GWh/d
	Comment: GCV used for capacity calculations: 11.071 kWh/Sm3.				
Vometini TAD / ICD	Trans-Adriatic Pipeline AG	2020	GR/TAP	BG/IGB	142.00 GWh/d
Komotini - TAP / IGB	Comment: GCV used for capacity calculations: 11.071 kWh/Sm3.				
Molanduana IT / TAD	Trans-Adriatic Pipeline AG	2020	AL/TAP	IB-ITs	291.00 GWh/d
Melendugno - IT / TAP	Comment: GCV used for capacity calculations: 11.071 kWh/Sm3.				
	Trans-Adriatic Pipeline AG	2020	GR	GR/TAP	142.00 GWh/d
Nea Mesimvria	Comment: GCV used for capacity calculations: 11.071 kWh/Sm3. This entry point is subject to the development of required facilities by the adjacent TSO.				
	Trans-Adriatic Pipeline AG	2020	GR/TAP	GR	142.00 GWh/d

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

#### Nea Mesimvria

'ncremental 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		NDP and PCI Information		
BP	20%	Promoter	Trans Adriatic Pipeline AG	Part of NDP	No ((6) others - please comment below)		
Snam	20%	Operator	Trans-Adriatic Pipeline AG	NDP Number			
		Host Country	Greece	NDP Release Date			
SOCAR	20%	Status	In Progress	NDP Website			
Fluxys	19%	Website	<u>Project's URL</u>	Currently PCI	Yes (7.1.3 (2020))		
Enagas	16%			Priority Corridor(s)			
Axpo	5%						

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED	01/2008	03/2013
Permitting	09/2011	11/2018
Supply Contracts		04/2015
FID		12/2013
Construction	05/2016	10/2020
Commissioning	2020	2020
Grant Obtention Date	02/08/2017	02/08/2017

Third-Party Access Regime						
Considered TPA Regime	Negotiated					
Considered Tariff Regime	Negotiated					
Applied for Exemption	Yes					
Exemption Granted	Yes					
Exemption in entry direction	100.00%					
Exemption in exit direction	100.00%					

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Main onshore section	90MW=45MW Kipoi+45MW Fier	1,200	773	90	0
Offshore section		900	105		0
	Total		878	90	

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments Please find enclosed document entitled TYNDP 2020\_TAP\_Justification PCI.

#### **Delays since last TYNDP**

Delay Since Last TYNDP

Delay Explanation N/A

#### **Expected Gas Sourcing**

Caspian Region

## Comments about the Third-Party Access Regime

The initial capacity is exempted from TPA. Expansion capacity is subject to TPA and will be offered to the market via market tests, from no later than start of operations and subsequently every two years. In this regard, please note enclosed the exemption related materials.

Benefits Programme Control of the Co						
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 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				
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				

	CBCA
Decision	No, we have not submitted an investment request yet and we do not plan to submit
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance						
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision					
Grants for studies	Yes					
Grants for studies amount	Mln EUR 14.0					
Grants for works	No					
Grants for works amount	Mln EUR 0.0					
Intention to apply for CEF	No decision yet taken					
Other Financial Assistance	No					
Comments						
	Regarding CEF, TAP project requested EUR 14 018 347 in					
General Comments	2016, amount which was granted. In 2017, TAP requested EUR 3 314 317, amount which was not granted. EIB					

funding does not qualify as a 'funding programme'.

**Sponsors** 

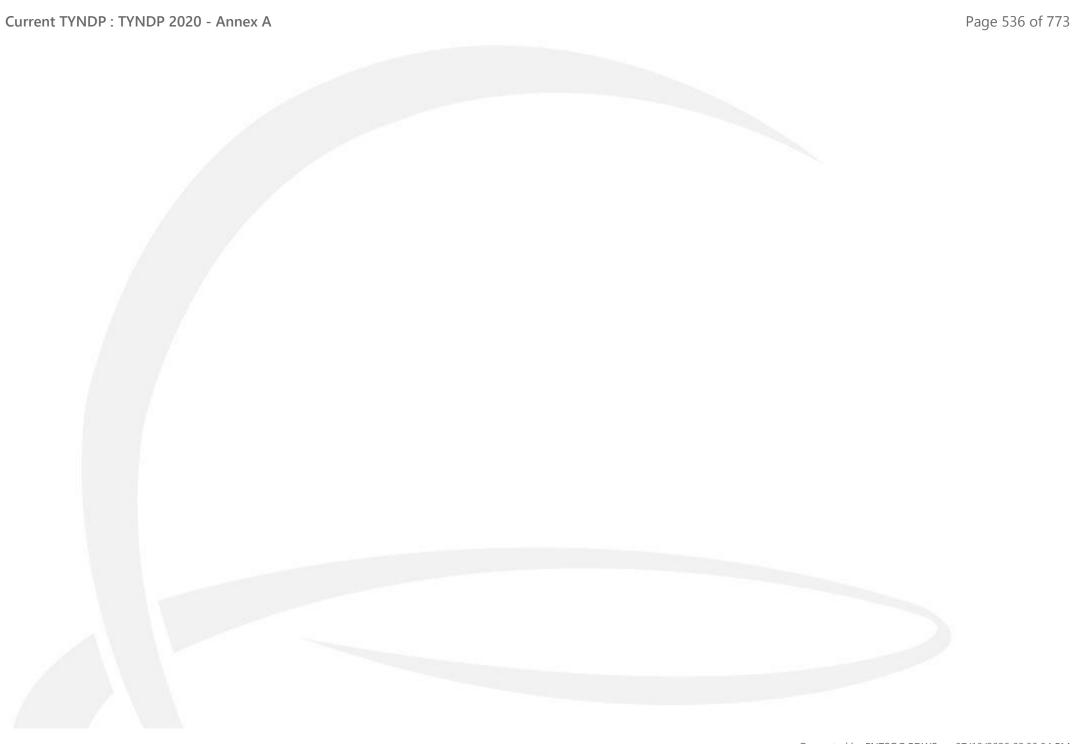
Date

# CNG filling station system development (CroBlueCorr project)

ETR-N-898	Project	Project Energy Transition Related Project				
Update Date	10/06/2020		Advanced			
Description	Plinacro is planning to initiate activities to encourage the construction of compro of petrol stations on motorways and other main traffic routes in Croatia. Initially, transmission system.					
PRJ Code - PRJ Name						

**General Information** 

			Promoter	Plinacro L
			Operator	Plinacro L
			Host Country	Croat
			Status	Planne
			Website	
Schedule	Start Date	End Date		
Pre-Feasibility	Tall	03/2021		
Feasibility	04/2021	10/2021		
FEED	11/2021	04/2022		
Permitting	05/2022	12/2022		
Supply Contracts		10/2022		
FID		06/2022		
Construction	01/2023	12/2025		
Commissioning	2026	2026		
Grant Obtention				



## Compressor station 1 at the Croatian gas transmission system

TRA-F-334 Project Pipeline including CS FID
Update Date 18/11/2019 Advanced

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. 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.

PRJ Code - PRJ Name

Capacity Increments Variant For	Modelling						
Point		Operat	or	Year	From Gas System	To Gas System	Capacity
Dravaszerdahely		Plinacro	Ltd	2019	HR	HU	13.60 GWh/d
Sponsors		General Information			NDP and	PCI Information	
Plinacro	100%	Promoter	Plinacro Li	d Part	of NDP		Yes (2018-2027)
		Operator	Plinacro Li	d NDP	Number		5.1
		Host Country	Croat	a NDP	Release Date		15/12/2017
		Status	Planne	d NDP	Website		NDP URL
		Website	<u>Project's UF</u>	<u>L</u> Curre	ently PCI		Yes (6.5.5 (2020))
				Priori	ity Corridor(s)		

Current	T	٦Y٢	IDP	•	TY	N	DP	202	20	) –	Annex A
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Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	11/2014	03/2015
FEED	09/2016	05/2017
Permitting	06/2015	05/2018
Supply Contracts		01/2018
FID		12/2017
Construction	01/2018	12/2019
Commissioning	2019	2019
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Not Applicable
Considered Tariff Regime	Not Applicable
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
CS 1				4	2019
	Total			4	
	Fulfilled Criteria				
Specific Criteria Fulfilled	Competition, inter alia through diversification of supply sources, supplying coulifting the isolation of at least one Member State and reducing energy infrastruof Supply, inter alia through appropriate connections and diversification of supinter alia through reducing emissions, supporting intermittent renewable general	ucture bottlenecks, ir pply sources, supplyi	nteropera	bility and system flex erparts and routes, S	xibility, Security ustainability,
Specific Criteria Fulfilled Comments	Construction of such facilities is necessary due to the opening of the gas mark provide sufficient transmission capacities and natural gas delivery pressure con the neighbouring countries wich will have an influence on the Security of supple Croatian gas transmission system. Compressor stations are integral part of the manner to increase the flexibility of managing the existing transmission capacities according to user needs, that is, the requirements of the application of new legal regulation.	nditions and for deve oly. Compressor station transmission system ities of the system, a	elopment ons will si n, integrated nd to pro	of the gas market in ignificantly increase eted in the system, privide rational increase	Croatia and efficiency of the marily in a e of

Current TYNDP : TYNDP 2020 - Annex A Page 539 of 773

## **Expected Gas Sourcing**

LNG ()

Benefits			
Main Driver	Regulation SoS		
Main Driver Explanatio	Project will enable the reverse flow in all interconnection points.		
Benefit Description	Construction of such facilities is neccessary 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.		

CBCA		
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not	
Submissin Date		
Decision Date		
Website		
Countries Affected		
Countries Net Cost Bearer	Croatia;#Hungary	
Additional Comments		

Financial Assistance			
Applied for CEF	(3) No, we have not applied for CEF		
Grants for studies	No		
Grants for studies amount	Mln EUR 0.0		
Grants for works	No		
Grants for works amount	Mln EUR 0.0		
Intention to apply for CEF			
Other Financial Assistance	No		
Comments			
General Comments			

## Compressor stations 2 and 3 at the Croatian gas tranmission system

TRA-N-1057	Project	Pipeline including CS	Non-FID
Update Date	21/09/2020		Advanced
	Construction of such facilities is necessary due to the opening of the gas market, as well	as providing sufficient transmission	capacities and natural

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. 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.

PRJ Code - PRJ Name

Sponsors		General Information	NDP and PCI Information	
Plinacro 100	9% Promoter	Plinacro Ltd	Part of NDP	Yes (2018-2027)
	Operator	Plinacro Ltd	NDP Number	5.3 and 5.4
	Host Country	Croatia	NDP Release Date	15/12/2017
	Status	Planned	NDP Website	NDP URL
	Website	<u>Project's URL</u>	Currently PCI	Yes (6.26.1.3 (2020))
			Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	06/2025	12/2025
FEED	01/2026	06/2026
Permitting	06/2025	06/2026
Supply Contracts		06/2026
FID		01/2027
Construction	01/2027	12/2029
Commissioning	2029	2029
Grant Obtention Date	25/04/2016	25/04/2016

Third-Party Access Regime	
Considered TPA Regime	Not Applicable
Considered Tariff Regime	Not Applicable
Applied for Exemption	Not Relevant
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Compressor station 2	Project is at early stage of development. Compressor power will be determined in the feasibility phase.	0	0	10	2029
Compressor station 3	Project is at early stage of development. Compressor power will be determined in the feasibility phase.	0	0	10	2029
	Total		0	20	

Current TYNDP : TYNDP 2020 - Annex A Page 542 of 773

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Construction of such facilities is necessary due to the opening of the gas market, wich will have an influence on the market integration. It will provide sufficient transmission capacities and natural gas delivery pressure conditions and for development of the gas market in Croatia and the neighbouring countries wich will have an influence on the Security of supply. 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.

Specific Criteria Fulfilled Comments

#### **Delays since last TYNDP**

Delay Since Last TYNDP

Delay Explanation

#### **Expected Gas Sourcing**

Caspian Region, Russia, LNG (HR)

	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 neccessary 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.				

	СВСА					
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not					
Submissin Date	Hot					
Decision Date						
Website						
Countries Affected						
Countries Net Cost Bearer						
Additional Comments						

Financial Assistance					
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision				
Grants for studies	Yes				
Grants for studies amount	Mln EUR 4.4				
Grants for works	No				
Grants for works amount	Mln EUR 0.0				
Intention to apply for CEF					
Other Financial Assistance	No				
Comments					
General Comments					

Current TYNDP: TYNDP 2020 - Annex A Page 544 of 773

## Gas storage facility Grubisno Polje

	UGS-N-347	Project	Storage Facility	Non-FID				
	Update Date	13/11/2019		Non-Advanced				
		In undepleted gas field Grubisno Polje, which is reasonably good candidate for gas storage (geological, petrofizic data) additional tests/data should						
Description be perform/collect in order to make decision to build a new storage facility. Project consists of two phases. In first phase aditional data should be performed by the control of the control								
	Description	collect as this is small gas field with original gas in place. Additional HD measurements should be done. In second place now gas storage shall be						

PRJ Code - PRJ Name

Capacity Increments Variant For Modelling

collect as this is small gas field with original gas in place. Additional HD measurements should be done. In second phase new gas storage shall be constructed. According to time schedule it should be finished in 2025/26.

Point		Operato	r	Year From	Gas System	To Gas System	Capacity
UGS Croatia		Podzemr	Podzemno skladiste plina d.o.o.		STcHR	HR	16.00 GWh/d
		Podzemno skladiste plina d.o.o.		2025	HR	STcHR	23.00 GWh/d
Sponsors			General Information		NDP and	PCI Information	
Podzemno skladiste plina d.o.o.	100% Promoter <i>Podzemno skladiste plina Ltd</i>			٨	lo ((1) the NDP wa	s prepared at an	
		Operator	Podzemno skladiste plina d.o.o.	Part of NDP		earlier date and th	
		Host Country	Croatia			posed for inclusion	in the next NDP)
		Status	In Progress	NDP Number			
		Website	<u>Project's URL</u>	NDP Release			
			-	NDP Website			
				Currently PCI			No
				Priority Corrid	dor(s)		NSIE

Schedule	Start Date	End Date
Pre-Feasibility		12/2018
Feasibility	01/2019	06/2019
FEED	07/2019	12/2019
Permitting	01/2020	07/2020
Supply Contracts		12/2020
FID		12/2020
Construction	01/2021	07/2021
Commissioning	2025	2025
Grant Obtention Date	31/03/2017	31/03/2017

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Technical Information (UGS)									
Storage Facility	Storage Facility Type	Multiple-cycle Facility	Project Phase	Working Volume (mcm)	Withdrawal Capacity (mcm/d)			Comments	Commisioning Year
Grubisno Polje	Depleted Field	Yes	Phase1	60	2.4	1.7	90	No comment.	2025

Fulfil	led	Criteria	
		Circuita	

Specific Criteria Fulfilled

Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks,

interoperability and system flexibility

Specific Criteria Fulfilled Comments

### **Delays since last TYNDP**

Delay Since Last TYNDP

Delay Explanation

### Comments about the Third-Party Access Regime

Act on gas market defines regulated TPA to storage

Benefits				
Main Driver	Others			
Main Driver Explanation	Consumption profiles become demanding due to consumption decreasing and peak consumption increasing. Existing storage facility Okoli has adequate working volume but withdrawal curve is unfavorable ( strong decline after 50% of occupancy)			

Benefit Description

Barriers		
Barrier Type	Description	
Regulatory	Maximum allowed revenue (revenue cap)	
Permit Granting	ongoing for phase one	
Political	Project is submitted to national authority for issuing strategic status	
Financing	Availability of funds and associated conditions	
Market	Lack of market maturity	
Financing	Amortization rates	

CBCA		Financial Assistance		
	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF	
Decision	and we have not yet decided whether we will submit or	Grants for studies	No	
Submissin Date	not	Grants for studies amount	Mln EUR 0.0	
Decision Date		Grants for works	No	
Website		Grants for works amount	Mln EUR 0.0	
Countries Affected		Intention to apply for CEF		
Countries Net Cost Bearer		Other Financial Assistance	No	
Additional Comments		Comments		
Additional Comments		General Comments		

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

TRA-A-70	Project Project	Pipeline including CS	Non-FID
Update Date	18/02/2020		Advanced
Description	Covering Croatia and Serbia, connecting the Croatian gas transmission systems. Bačko Novo Selo (Serbia). First phase would be Negoslavci-Sotin-Bačko Novo entry point and transmission route for the needs of Serbia; it will be saccess to Croatian UGS and enable supply of gas from Austria, Slovenia and enable supply of gas from Austria, Slovenia and enable supply of gas from Austria, Slovenia and enable supply of gas from Austria.	ovo Selo plus the pipeline Osijek-Vukovar. It will b SoS and diversification of supply route for Serbia. It	e new interconnection,
PRJ Code - PR	J Name		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	Plinacro Ltd	2023	HR	RS	42.11 GWh/d
Clabodrica Catio (LID) / Pails Nava Cala (PC)	Plinacro Ltd	2023	RS	HR	54.34 GWh/d
Slobodnica - Sotin (HR) / Bačko Novo Selo (RS)	Plinacro Ltd	2027	HR	RS	197.89 GWh/d
	Plinacro Ltd	2027	RS	HR	185.66 GWh/d

Sponsors			General Information	NDP a	nd PCI Information
Croatian section		Promoter	Plinacro Ltd	Part of NDP	Yes (2018-2027)
Plinacro	100%	Operator	Plinacro Ltd	NDP Number	1.30, 1.31, 1.22
Serbian section		Host Country	Croatia	NDP Release Date	15/12/2017
Srbijagas	100%	Status	Planned	NDP Website	NDP URL
o i o i jugus	10070	Website	<u>Project's URL</u>	Currently PCI	No
				Priority Corridor(s)	NSIE

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	01/2021	01/2021
FEED	01/2021	01/2025
Permitting	01/2010	01/2025
Supply Contracts		01/2022
FID		01/2022
Construction	01/2022	01/2027
Commissioning	2023	2027
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Negoslavci-Sotin		800	10		2023
Osijek-Vukovar		500	11		2022
Slobodnica-Negoslavci		800	87		2027
Sotin- Bačko Novo Selo		800	5		2023
	Total		113		

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

#### **Expected Gas Sourcing**

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

Current TYNDP : TYNDP 2020 - Annex A Page 549 of 773

	Benefits
Main Driver	Market Demand
Main Driver Explanatio	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

CBCA				
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not			
Submissin Date				
Decision Date				
Website				
Countries Affected				
Countries Net Cost Bearer				
Additional Comments				

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF				
Other Financial Assistance	No			
Comments				
General Comments				

Current TYNDP : TYNDP 2020 - Annex A Page 550 of 773

# Interconnection Croatia/Slovenia (Umag-Koper)

TRA-N-336	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Non-Advanced
Description	This pipeline is a regional link to Croatian and Slovenian system. Relevant gas pipel the light of the fact that these parts of Croatian and Slovenian markets are alocated also important for the competitiveness and market competition.	•	
PRJ Code - PRJ Name			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
C Y 11 (C) (D) 11 (1D)	Plinacro Ltd	2029	HR	SI	16.20 GWh/d
Sečovlje (SI) / Plovanija (HR)	Plinacro Ltd	2029	SI	HR	16.20 GWh/d
Sponsors	General Information		NDP and	I PCI Information	

Sponsors		General Information	NDP and PC	I Information
Plinacro	100% Promot	er <i>Plinacro Ltd</i>	Part of NDP	Yes (2018-2027)
	Operate	or <i>Plinacro Ltd</i>	NDP Number	1.37
	Host Co	ountry <i>Croatia</i>	NDP Release Date	15/12/2017
	Status	Planned	NDP Website	NDP URL
	Website	<u>Project's URL</u>	Currently PCI	No
			Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	01/2027	01/2027
FEED	01/2028	01/2028
Permitting	01/2026	01/2028
Supply Contracts		01/2028
FID		01/2028
Construction	01/2028	01/2029
Commissioning	2029	2029
Grant Obtention		
Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations		
Pipeline Section	Pipeline Comment	Diameter Length Compressor Power Comissioning (mm) (km) (MW) Year
Umag - Plovanija (HR)- Koper (SI)	Croatian part is 8 km	300 8 2029
	Total	8

Expected	Cac	Sourcing	~
LXDECLEU	Gas	<b>3</b> 0ul CII K	4

## Russia, LNG (HR)

	Benefits	
Main Driver	Market Demand	
Main Driver Explanation	on	
Benefit Description		

CBCA		
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or	
	no	
Submissin Date		
Decision Date		
Website		
Countries Affected		
Countries Net Cost Bearer		
Additional Comments		

Financial Assistance		
Applied for CEF	(3) No, we have not applied for CEF	
Grants for studies	No	
Grants for studies amount	Mln EUR 0.0	
Grants for works	No	
Grants for works amount	Mln EUR 0.0	
Intention to apply for CEF	No decision yet taken	
Other Financial Assistance	No	
Comments		
General Comments		

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# Ionian Adriatic Pipeline

TRA-A-68	Project	Pipeline including CS	Non-FID
Update Date	12/08/2020		Advanced
Description	The pipeline will cross the territory along the Adriatic coast from Fieri in Albania via Croatian gas transmission system (main direction Bosiljevo – Split). The Ionian-Adria entire region. The IAP project is based on the idea of connecting the existing Croati the TAP gas pipeline system (Trans Adriatic Pipeline). An exit to Bosnia and Herzego the project to TYNDP on behalf of Plinacro, Montenegro Bonus and Albgaz.	atic Pipeline will have an influence on the an gas transmission system, via Montene	gasification for the gro and Albania, with
PRJ Code - PRJ Name			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Ionic-Adriatic Pipeline - IAP / AB	Plinacro Ltd	2025	HR/IAP	AL	33.30 GWh/d
Ionic-Adriatic Pipeline - IAP / ME	Plinacro Ltd	2025	HR/IAP	ME	16.60 GWh/d
	Plinacro Ltd	2023	HR/IAP	HR	83.20 GWh/d
Jamie Advistie Dinaline JAD / Culit JJD		Comment: IT is Exit Croatia			
Ionic-Adriatic Pipeline - IAP / Split - HR	Plinacro Ltd	2025	HR	HR/IAP	116.60 GWh/d
			Comment:	It is exit to Croatic	1
	Plinacro Ltd	2025	IB-HRi/IAP	HR/IAP	166.50 GWh/d
Ionic-Adriatic Pipeline - IAP Entry		C	omment: The entry po	ont from TAP (Fieri,	)
	Plinacro Ltd	2025	AL/TAP	IB-HRi/IAP	166.50 GWh/d

Sponsors		General Information		NDP and PCI Information	
Albania		Promoter	Plinacro Ltd	Part of NDP	Yes (2018-2027)
Albgaz	100%	Operator	Plinacro Ltd	NDP Number	1.12, 1.25-1.27, 5.5
Croatia		Host Country	Croatia	NDP Release Date	15/12/2017
Plinacro	100%	Status	Planned	NDP Website	NDP URL
		Website	<u>Project's URL</u>	Currently PCI	No
Montenegro				Priority Corridor(s)	NSIE, SGC
Montenegro Bonus	100%			, - (-)	, , , , , ,

Schedule	Start Date	End Date
Pre-Feasibility		01/2008
Feasibility	05/2012	02/2014
FEED	01/2017	01/2023
Permitting	07/2009	01/2023
Supply Contracts		01/2022
FID		01/2022
Construction	01/2022	01/2025
Commissioning	2023	2025
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
IAP - Croatian part	2.5 billion m3 yearly	800	250	1	2023
IAP- Albanian part	1 billion m3 yearly	800	180		2025
IAP- Montenego part	0.5 billion m3 yearly	800	110		2025
	Total		540	1	

Current TYNDP: TYNDP 2020 - Annex A Page 555 of 773

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

De	lays since l	last TYNDP

Delay Since Last TYNDP

2 years delay

**Delay Explanation** 

Benefit Description

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

**Benefits** 

TPA regime is not defined yet

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

Security of Supply, Rewerse 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
Memorandum of Understanding	Signed between Plinacro and TAP	Yes	05/02/2011
Ministerial declaration	signed by the Ministries of enegry of Albania, Montenegro and Croatia, from dezember 2008, Bosnia and Herzegovina signed as well	Yes	27/09/2007
Agreement to extend the Memorandum of Understanding	Signed between Plinacro and TAP	Yes	25/02/2014
Letter of Itent	Signed by Plinacro, Montenegro Bonus and Albgaz	Yes	15/02/2018
Memorandum of Understanding and Cooperation	signed by the Ministry of Energy and Industry of Republic of Albania, Ministry Foreign Trade and Economic Relations of Bosnia and Herzegovina, Ministry of Economy of the Republic of Croatia and Ministry of Economy of Montenegro	Yes	26/08/2016

	CBCA	Financial Assistance			
	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF		
Decision	and we have not yet decided whether we will submit or	Grants for studies	No		
Submissin Data	not	Grants for studies amount	Mln EUR 0.0		
Submissin Date		Grants for works	No		
Decision Date		Grants for works amount	Mln EUR 0.0		
Website Countries Affected		Intention to apply for CEF			
		Other Financial Assistance	Yes		
Countries Net Cost Bearer Additional Comments			WBIF - EU preaccession Fund: -Comprehensive Feasibility Study – 3,5 mil EUR		
		Comments	-Gas Master Plan MNE – 0,5 mil EUR -Gas Master Plan ALB – 1,2 mil EUR Main Decian (Proliminary Perian for MNE and ALB) 2,5		
			-Main Design (Preliminary Design for MNE and ALB) - 2, 5 mil EUR		

**General Comments** 

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## Városföld CS

TRA-A-123	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Advanced
Description	An additional compressor unit (5.7 MW) at the existing compressor station at Várdalong the HU section of the Corridor.	osföld necessary to ensure adequate pressu	ire for the transportation
PRJ Code - PRJ Name	-		

Sponsors				General Information	NDP and PO	CI Information
FGSZ Ltd.		100%	Promoter	FGSZ Ltd.	Part of NDP	Yes (Hungarian TYNDP 2018)
У.	- /		Operator	FGSZ Ltd.	NDP Number	12.10.
			Host Country	Hungary	NDP Release Date	31/01/2019
			Status	Planned	NDP Website	<u>NDP URL</u>
			Website	<u>Project's URL</u>	Currently PCI	Yes (6.24.4.3 (2020))
					Priority Corridor(s)	
Schedule	Start Date	End Date			Third-Party A	Access Regime
Pre-Feasibility		06/2014			Considered TPA Regime	Regulated
Feasibility	09/2016	07/2017			Considered Tariff Regime	Regulated
FEED	12/2019	01/2020			Applied for Exemption	No
Permitting	02/2020	08/2020			Exemption Granted	No
Supply Contracts		05/2020				
FID		10/2019			Exemption in entry direction	0.00%
Construction	09/2020	12/2022			Exemption in exit direction	0.00%
Commissioning	2022	2022				
Grant Obtention Date	14/10/2016	14/10/2016				

Benefit Description

along with helping with further market integration.

Pipeline Section	Pipeline Comment		Diameter (mm)	Length (km)	Compressor Power (MW)	Year
Városföld CS					6	0
	Total				6	
	Fulfilled Cr	iteria				
Specific Criteria Fulfilled	Competition, inter alia through diversification of supply so appropriate connections and diversification of supply so emissions, supporting intermittent renewable generation	urces, supplying counterparts	and routes,	Sustainab		_
Specific Criteria Fulfilled Cor	The compressor help to increase capacity of Vecsés 4 (M (HU>SK).	GT>FGSZ), Vecsés 4 (FGSZ>N	IGT, Balassa	gyarmat (	SK>HU) and Balassa	gyarmat
	Delays since la	st TYNDP				
Delay Since Last TYNDP	0					
Delay Explanation						
	Expected Gas	Sourcina				
Caspian Region, Black Sea	Expected dus	Jourenig				
дин, <u>-</u>						
	Benefit	S				
Main Driver Ma	irket Demand					
Main Driver Explanation						
οТ	he Hungarian projects taken as a whole main aim, is to enhance t	he flexibility of the Hungarian	transmissic	n system	by connecting to ne	ighbouring

systems, ensuring reserves flow availability, and guaranteeing flow deliverability which will enhance the transmission systems security of supply position

CBCA		Financial Assistance		
Decision	Yes, we have submitted an investment request and have received a decision	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision	
Submissin Date		Grants for studies	Yes	
Decision Date	16/10/2015	Grants for studies amount	Mln EUR 2.3	
Website		Grants for works	No	
Countries Affected	Hungary, Romania	Grants for works amount	Mln EUR 0.0	
Countries Net Cost Bearer		Intention to apply for CEF	No decision yet taken	
Additional Comments		Other Financial Assistance	No	
		Comments		
		General Comments		

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#### **Ervia Cork CCUS**

ETR-N-22	Project	Energy Transition Related Project	Non-FID
Update Date	15/08/2019		Advanced
	This project will involve the development of the necessary infrastructure to tra	insport captured CO2 from a CCUS cluster of hea	avy industry (oil

Description

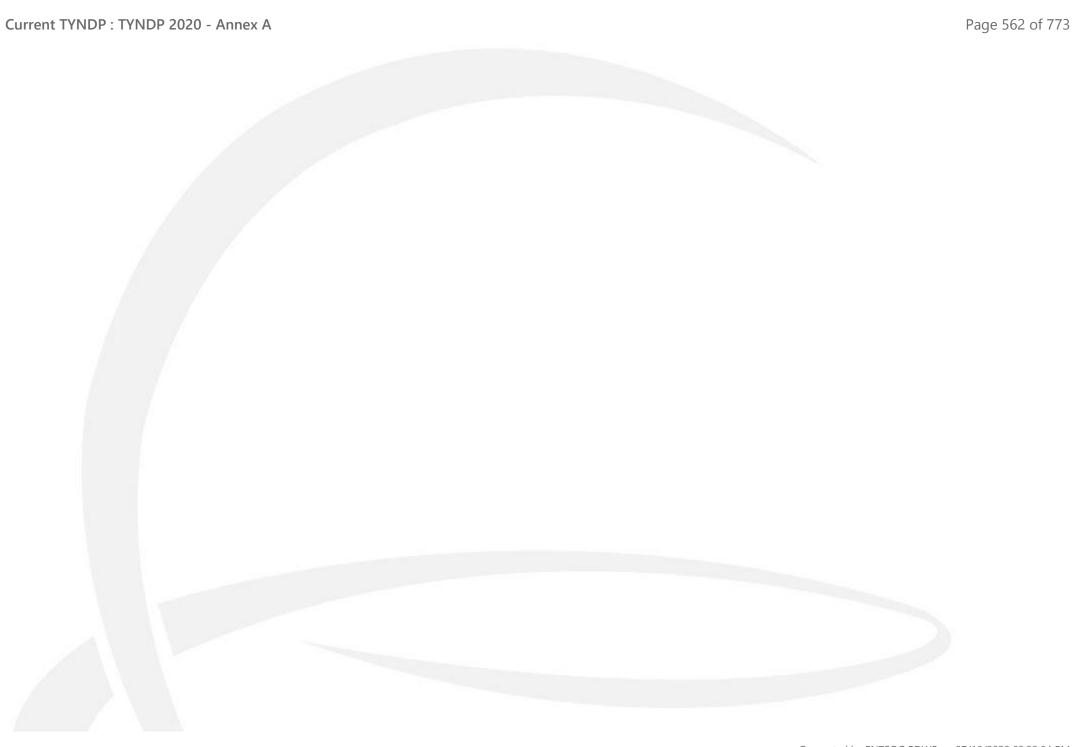
This project will involve the development of the necessary infrastructure to transport captured CO2 from a CCUS cluster of heavy industry (oil refinery) and two gas fired CCGTs to enable the CO2 to be transported either to local geological store or if unavailable to another store managed by another CCUS project developer. The import infrastructure and geological store will also be made available as a backup storage facility to other CCUS developments to reduce the risk of cross chain default or as a market maker. Cork has unique attributes which combine to provide an opportunity for the first full chain CCUS project within the European Union. The soon to be depleted Kinsale Energy offshore gas field is due to be decommissioned in 2020/2021. This low pressure field on first look by the SEAI and GSI in 2008 looks to be a suitable reservoir for CO2 storage. Further analysis will take place over the coming years to ensure that it is a suitable, secure storage site.

PRJ Code - PRJ Name

Sponsors			General Information
Ervia Cork CCUS	100%	Promoter	Ervia (parent company of Gas Networks Ireland)
		Operator	Ervia
		Host Country	Ireland
		Status	Planned
		Website	<u>Project's URL</u>

Schedule	Start Date	End Date
Pre-Feasibility		07/2019
Feasibility	07/2019	07/2020
FEED	07/2020	11/2022
Permitting	02/2022	05/2023
Supply Contracts		05/2023
FID		04/2024
Construction	04/2024	12/2028
Commissioning	2028	2028
Grant Obtention		
Date		

	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
Ervia Cork CCUS	This project will involve dedicated CO2 pipelines which will transport CO2 from 3 sources initially, from the combustion of gas, for the purpose of permanent geological storage of CO2 pursuant to Directive 2009/31/EC. This will include the repurposing of existing onshore /offshore gas pipelines and the construction of new dedicated CO2 pipelines. In order to provide backup storage for other CCUS projects, will involve the facilities for liquefaction, gasification and buffer storage of CO2 at port facilities in order to prepare CO2 for transportation by ship when either importing or exporting CO2. To ensure the safe and secure operation of the CO2 infrastructure a comprehensive utility system in line with existing gas safety frameworks will be installed and operated during the lifetime of this project. This will encompass the pipeline transportation, compression, liquefaction and gasification processes. This project will store first 60MT of CO2 at a rate of 2.5 MT/yr.	e	2028



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# **GNI Renewable Gas Central Grid Injection Project**

ETR-N-20	Project	Energy Transition Related Project	Non-FID
Update Date	28/10/2019		Advanced
Description	Gas Networks Ireland (GNI) has a strategic plan to achieve 20% renewable gas of with the GRAZE Gas project which has been shortlisted for funding under the Iri comprising of one Central Grid Injection (CGI) facility (for injection of agri-based stations and a vehicle fund.	sh Government's Climate Action Fund. This is a	pilot project
Description	The Renewable Gas Central Grid Injection Project will involve the construction of centralised locations for renewable gas producers from local AD plants (within a enable the rollout of renewable gas on a national basis and contribute significant the national gas network.	a 50 km radius) to inject into GNI's transmission	system. This will help
PRJ Code - PRJ Name	-		

Point	Operator	Year	From Gas System	To Gas System	Capacity
	Gas Networks Ireland	2023	NPcIE	IE	0.50 GWh/d
		Comment: Total project capacity of 0.5 GWh/d			
	Gas Networks Ireland	2024	NPcIE	IE	1.30 GWh/d
		Comn	nent: Total project cap	acity of 1.8 GWh/d	
	Gas Networks Ireland	2025	NPcIE	IE	2.00 GWh/d
		Comment: Total project capacity of 3.8 GWh/d			
Renewable Gas Ireland (IE)	Gas Networks Ireland	2026	NPcIE	IE	2.10 GWh/d
		Comment: Total project capacity of 5.9 GWh/d			
	Gas Networks Ireland	2027	NPcIE	IE	1.30 GWh/d
		Comn	nent: Total project cap	acity of 7.2 GWh/d	
	Gas Networks Ireland	2028	NPcIE	IE	0.50 GWh/d
		Comment: Total project capacity of 7.7 GWh/d			

Sponsors	
Gas Networks Ireland	100%

General Information		
Promoter	Gas Networks Ireland	
Operator	Gas Networks Ireland	
Host Country	Ireland	
Status	Planned	
Website	<u>Project's URL</u>	

Schedule	Start Date	End Date
Pre-Feasibility		09/2019
Feasibility	10/2019	06/2020
FEED	05/2021	06/2024
Permitting	05/2021	06/2024
Supply Contracts		
FID		07/2022
Construction	08/2022	10/2025
Commissioning	2023	2028
Grant Obtention Date		

Technical Information (ETR)			
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
GNI Renewable Gas Central Grid Injection Project	The first CGI facility will be commissioned in 2023, with an initial capacity of 0.5 GWh/d. A total of 5 CGI physical entry points will come on stream with an eventual entry capacity of 7.7 GWh/d by 2028.		2023

# **Shannon LNG Terminal and Connecting Pipeline**

LNG-A-30	Project	LNG Terminal	Non-FID
Update Date	12/09/2019		Advanced
Description	Shannon LNG proposes to construct a liquefied natural gas (LNG) terminal on the sou Shannon LNG also has obtained all of the major permits and consents for the LNG proposed export pipeline to the national gas grid, pipeline rights of way and foreshore leases and The Shannon LNG terminal is designed and permitted to export to the national gas grid, gas. It is currently envisaged the project will have initial deliverability of 16.1 normal magnetic proposed to the project will have initial deliverability of 16.1 normal magnetic proposed to the project will have initial deliverability of 16.1 normal magnetic proposed to the project will have initial deliverability of 16.1 normal magnetic proposed to the project will have initial deliverability of 16.1 normal magnetic proposed to the project will have initial deliverability of 16.1 normal magnetic proposed to the project will have initial deliverability of 16.1 normal magnetic proposed to the project will have initial deliverability of 16.1 normal magnetic proposed to the project will have initial deliverability of 16.1 normal magnetic proposed to the project will have initial deliverability of 16.1 normal magnetic proposed to the project will have initial deliverability of 16.1 normal magnetic proposed to the project will be pr	oject including planning permission for nd licenses. rid up to 26.8 million normal cubic met	the terminal and 26 KM
PRJ Code - PRJ Name			

Capacity Increments Variant For Modelling							
Point	Operator	Year	From Gas System	To Gas System	Capacity		
Shannon LNG	Shannon LNG	2022	LNG_Tk_IE	IE	86.00 GWh/d		
	Comment: Consistent with 2.8 bcm/year under 'Type Specific Informatkon'						
	Shannon LNG	2025	LNG_Tk_IE	IE	64.00 GWh/d		
Shannon Ling	Comment: Cumulatively with first increment = 150 GWh/day = 480 mmscf/day						
	Shannon LNG	2029	LNG_Tk_IE	IE	100.00 GWh/d		
	Comment: Cumulatively with	first and second increme	ents = 250 GWh/day =	= apx 800 mmscf/a	1		

Sponsors		General Information		NDP and PCI Information		
Shannon LNG Ltd	100%	Promoter	Shannon LNG Ltd	Part of NDP	res (Gas Networks Ireland 2018 Network	
		Operator	Shannon LNG	Tart of NDI	Development Plan)	
		Host Country	Ireland	NDP Number	5.4	
		Status	Planned	NDP Release Date	21/12/2018	
		Website	Project's URL	NDP Website	<u>NDP URL</u>	
			<del></del> _	Currently PCI	Yes (5.3 (2020))	
				Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		05/2006
Feasibility	05/2006	09/2007
FEED	01/2020	06/2020
Permitting	09/2007	01/2020
Supply Contracts		10/2020
FID		03/2020
Construction	04/2020	06/2022
Commissioning	2022	2029
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Negotiated
Considered Tariff Regime	Negotiated
Applied for Exemption	Yes
Exemption Granted	Yes
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

	Technical Information (LNG)								
Regasification Facility	Reloading Ability	Project Phase	Expected Increment (bcm/y)	Ship Size (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 LNG)	Comments	Commissioning Lo Year	oad Factor (%)
Shannon LNG Terminal and connecting pipeline	No	Initial	2.8	265,000	7.70	200,000	Initial	2022	100
Shannon LNG Terminal and connecting pipeline	No	Phase 2	2.1	0	5.76	0	Phase 2	2025	100
Shannon LNG Terminal and connecting pipeline	No	Phase 3	3.3	0	9.00	0	Phase 2	2029	100

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Shannon Pipeline	The pipeline is part of the core project and will connect the LNG terminal to the National Gas Grid.				0
	Total				

Page 567 of 773 Current TYNDP: TYNDP 2020 - Annex A

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Ireland, up to 2015, imported over 90% of gas from GB – and relied on GB infrastructure to meet the N-1 standard on a regional basis. Currently this dependence is about 40% because of Corrib gas coming on stream. According to Gaslink Network Development Plan 2018, by 2026/27 Corrib gas supplies will have declined to less than 30% of initial peak production levels. The anticipated reduction in Corrib and Inch Specific Criteria Fulfilled Comments gas supplies will re-establish the Moffat Entry Point as the dominant supply point from 2018/19. The Shannon LNG project, at full capacity, would allow Ireland to pass the N-1 test enhancing security of supply. The LNG terminal will also allow for serving the Northern Ireland gas market. An LNG terminal in Ireland will also mean that, in the long term, Ireland will have two major supply import routes (i) pipeline imports from GB and (ii) LNG imports through the Shannon LNG terminal providing additional sustainability and competition in the market.

#### **Delays since last TYNDP**

**Delay Since Last TYNDP** 

**Delay Explanation** 

Previously we indicated a construction complete date of 1/4/2022. We are currently revising this with engineers and our current estimate is

30/6/2022

#### **Expected Gas Sourcing**

LNG (LNG,QA,US), The world LNG market

	c
	fits

Main Driver

**Regulation SoS** 

Ireland, up to 2015, imported over 90% of gas from the UK - and relied on UK infrastructure to meet the N-1 standard on a regional basis. Currently this dependence is about 40% because of Corrib gas. According to Gaslink Network Development Plan 2018, by 2026/27 Corrib gas supplies will have declined to less than 30% of initial peak production levels. The anticipated reduction in Corrib and Inch gas supplies will re-establish the Moffat Entry Point as the Main Driver Explanation dominant supply point from 2018/19. The Shannon LNG project, at full capacity, would allow Ireland to pass the N-1 test - enhancing security of supply.

The initial phase of the Shannon LNG project (16.1 mcm/d) will be capable of supplying approximately 60% of forecast Irish peak demand (26.6 mcm/d) for 2020/2021. The proposed LNG terminal will increase market integration and system flexibility by providing a new gas supply route to Ireland enhancing Ireland's - and Europe's, long-term diversity of entry points with new source.

Benefit Description

The Shannon LNG project will enhance competition in the gas market in Ireland by providing a new supply source. The project supports reduction in emissions particularly in the power generation sector. The project can provide security and diversity of supply for Northern Ireland. Although, politically, Northern Ireland is part of the UK, there is a single Ireland/NI electricity market. A new source of gas in Ireland has potential to enhance West to East gas movement.

Current TYNDP: TYNDP 2020 - Annex A Page 568 of 773

	Barriers					
Barrier Type	Description					
Others	Project was granted extension of planning permission by the Planning Authority (An Bord Pleanala) - but was then subject to Judicial Review taken by an environmental group.					
Regulatory	Low rate of return					
Regulatory	Lack of proper transposition of EU regulation					
Financing	Availability of funds and associated conditions					

	CBCA
Decision	No, we have not submitted an investment request yet, but we do plan to submit it
Submissin Date	01/04/2020
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	Shannon LNG did receive a CBCA decision in connection with the early build of the Shannon Pipeline. The CBCA involved agreement by the CRU in Ireland, Utility Regulator in Northern Ireland and Ofgem in the UK.

Financial Assistance			
Applied for CEF	(3) No, we have not applied for CEF		
Grants for studies	No		
Grants for studies amount	Mln EUR 0.0		
Grants for works	No		
Grants for works amount	Mln EUR 0.0		
Intention to apply for CEF	No decision yet taken		
Other Financial Assistance	No		
Comments			
General Comments			

Current TYNDP : TYNDP 2020 - Annex A Page 569 of 773

# Additional Southern developments

TRA-N-9	Project	Pipeline including CS	Non-FID
Update Date	17/09/2020		Non-Advanced
Description	The project consists in new on-shore and off-shore pipelines and in development of com the increase of transport capacity at new or existing Entry Points in south Italy.	pressor stations along the center-so	outh of Italy to permit
PRJ Code - PRJ Name			

Capacity Increments Variant For Modelling Point	Operator	Year	From Gas System	To Gas System	Capacity	
rollit				TO das System		
	Snam Rete Gas S.p.A.	2034	IB-ITs	IT	264.00 GWh/d	
Italy Mezzogiorno Import Fork	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).					
	Snam Rete Gas S.p.A.	2034	IB-ITi	IB-ITs	264.00 GWh/d	
Italy Southern Import Fork	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).					

Sponsors		General Information		NDP and PCI Information		
Snam Rete Gas s.p.a.	100%	Promoter	Snam Rete Gas S.p.A.	Part of NDP	Yes (Snam Rete Gas TYNDP 2017-2026)	
		Operator	Snam Rete Gas S.p.A.	NDP Number	RN_07	
		Host Country	Italy	NDP Release Date	30/11/2018	
		Status	Planned	NDP Website	NDP URL	
		Website	Project's URL	Currently PCI	No	
				Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2034	2034
Grant Obtention Date		

	<u></u>
Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

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

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

	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance			
Applied for CEF	(3) No, we have not applied for CEF		
Grants for studies	No		
Grants for studies amount	Mln EUR 0.0		
Grants for works	No		
Grants for works amount	Mln EUR 0.0		
Intention to apply for CEF	No decision yet taken		
Other Financial Assistance	No		
Comments			
General Comments			

## Biomethane productions interconnection

TRA-N-1265	Project	Pipeline including CS	Non-FID
Update Date	17/09/2020		Non-Advanced
Description	The project consists of the interconnections of the new biomethane productions to exist 2022.	sting Snam Rete Gas network that will	be commissioned until
PRJ Code - PRJ Name	-		

Capacity Increments Variant For Modelling

Point	Operator			Year From Gas Sy	ystem To Gas System	Capacity
Forecast Production Italia		Snam Rete Gas S.p.A.		2022 NPcIT	IT	39.60 GWh/d
Sponsors		General Information		NDP and PCI Information		
Snam Rete Gas S.p.A.	100%	Promoter	Snam Rete Gas S.p.A.		Yes (en-year develop	ment plan of the
7		Operator	Snam Rete Gas S.p.A.	Part of NDP	natural gas transmissi	
		Host Country	Italy			2027)
		Status	Planned			NA
		Website		NDP Release Date		30/11/2018
		VVCDSICC		NDP Website		NDP URL
				Currently PCI		No
				Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2022	2022
Grant Obtention		
Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
All the project	The present information represent the aggregate of all the interconnections that compose the project	100	21		2022
	Total		21		

Benefits		
Main Driver	Market Demand	
Main Driver Explanati	on	
Benefit Description		

	CBCA	
Decision	No, we have not submitted an investment request yet,	Applied for CEF
Decision	and we do not plan to submit it	Grants for studies
Submissin Date		Grants for studies
Decision Date		Grants for works
Website		Grants for works
Countries Affected		Intention to appl
Countries Net Cost Bearer		Other Financial A
Additional Comments		Comments
		General Commer

Financial Assistance		
Applied for CEF	(3) No, we have not applied for CEF	
Grants for studies	No	
Grants for studies amount	Mln EUR 0.0	
Grants for works	No	
Grants for works amount	Mln EUR 0.0	
Intention to apply for CEF	No decision yet taken	
Other Financial Assistance	No	
Comments		
General Comments		

## CNG and L-CNG stations

ETR-F-516	Project	Energy Transition Related Project	FID
Update Date	15/09/2020		Advanced
Description	The project consist in the development of about 150 CNG and L-CNG stations a sector	along Italy in order to facilitate the energy tran	sition in the transport
PRJ Code - PRJ Name	-		

Sponsors		General Information	
Snam4Mobility S.p.A.	100%	Promoter	Snam4mobility
		Operator	Snam4Mobility S.p.A.
		Host Country	Italy
		Status	In Progress
		Website	<u>Project's URL</u>

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		11/2018
Construction		
Commissioning	2022	2022
Grant Obtention Date		

Page 576 of 773  Technical Information (ETR)				
Section/Phase Name	Main Technical Parameters	Technical	Information Comment Commiss ning Yea	
All the project	The 150 CNG and L-CNG stations will GWh/y	ll be able to deliver up to 910	2022	

PRJ Code - PRJ Name

# Development for new import from the South (Adriatica Line)

TRA-N-7	Project	Pipeline including CS	Non-FID
Update Date	17/09/2020		Non-Advanced
Description	The project consists in new on-shore pipeline and compressor station along the center at new or existing Entry Points in south Italy.	er-south of Italy that will allow the incre	ease of transport capacity

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.	2026	IB-ITs	IT	264.00 GWh/d		

Sponsors		General Information		NDP and PCI Information	
Snam Rete Gas s.p.a.	100%	Promoter	Snam Rete Gas S.p.A.		Yes (Ten-year development plan of the
		Operator	Snam Rete Gas S.p.A.	Part of NDP	natural gas transmission network 2018-
		Host Country	Italy		2027)
		Status	Planned	NDP Number	RN_04
		Website	<u>Project's URL</u>	NDP Release Date	30/11/2018
		Website	<u> 110ject 3 ONE</u>	NDP Website	NDP URL
				Currently PCI	Yes (7.3.4 (2020))
				Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED	01/2009	05/2011
Permitting	01/2009	09/2023
Supply Contracts		09/2023
FID		01/2021
Construction	09/2023	01/2026
Commissioning	2026	2026
Grant Obtention Date		

ne					
Regulated					
Regulated					
No					
No					
0.00%					
0.00%					

Pipelines and Compre	ssor Stations				
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Adriatica Line		1,200	430	33	2026
	Total		430	33	

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments please find enclosed

Others

Benefits	

Benefit Description

Main Driver Explanation

Main Driver

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.

CBCA				
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it			
Submissin Date				
Decision Date				
Website				
Countries Affected				
Countries Net Cost Bearer				
Additional Comments				
Decision Date Website Countries Affected Countries Net Cost Bearer	and we do not plan to submit			

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF	No decision yet taken			
Other Financial Assistance	Yes			
Comments				
General Comments				

Current TYNDP: TYNDP 2020 - Annex A Page 580 of 773

# **Export to Malta**

Pipeline including CS TRA-N-1063 Project Non-FID **Advanced** Update Date 17/09/2020 The project consists of the creation of an infrastructure that allows an export capacity from Italy to Malta of about 5 Mcm/day Description

PRJ Code - PRJ Name

Capacity Increments Variant For Modellin	g						
Point		Operato	or	Year From Gas	System To Gas System	Capacity	
Italy Mezzogiorno Import Fork		Snam R	ete Gas S.p.A.	2024 IT	IB-ITs	56.00 GWh/d	
Sponsors			General Information		NDP and PCI Information		
Snam Rete Gas S.p.A. 100		Promoter	Snam Rete Gas S.p.A.	No ((1) the NE		P was prepared at an	
		Operator	Snam Rete Gas S.p.A.	Part of NDP	earlier date and to		
		Host Country	Italy	, ALDDAL I	proposed for inclusion	in the next NDP)	
		Status	Planned				
		Website		NDP Release Date			
				NDP Website			
				Currently PCI		No	
				Priority Corridor(s	)	SGC	

Current	<b>TYNDP:</b>	<b>TYNDP</b>	2020 -	Annex A
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Schedule	Start Date	End Date
Pre-Feasibility		12/2015
Feasibility	04/2017	12/2017
FEED	09/2020	12/2022
Permitting	09/2020	12/2022
Supply Contracts		01/2022
FID		09/2020
Construction	01/2023	01/2024
Commissioning	2024	2024
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	Yes
Exemption Granted	Yes
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
all the project	The project is related to the realization of few meters of pipeline and of a regulation plant				2024

Total

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

Mln EUR 0.0

No

#### Benefits

Main Driver Market Demand

Main Driver Explanation

Benefit Description

_	ь.	$\overline{}$	А
	к		Д

No, we have not submitted an investment request yet, and we do not plan to submit it

Submissin Date

**Decision Date** 

Website

Decision

Countries Affected

Countries Net Cost Bearer

**Additional Comments** 

**Financial Assistance** 

Applied for CEF (3) No, we have not applied for CEF

Grants for studies No

Grants for works No

Grants for works amount Mln EUR 0.0

Intention to apply for CEF No decision yet taken Other Financial Assistance

Comments

**General Comments** 

Grants for studies amount

Current TYNDP : TYNDP 2020 - Annex A Page 583 of 773

# **GALSI Pipeline Project**

TRA-A-12	Project	Pipeline including CS	Non-FID
Update Date	11/10/2019		Advanced
Description	Gas pipeline project aiming to create a new link between Algeria and Italy via transporting 8 billions mc of gas. From El Kala (Koudiet Draouche) in Algeria at 2.800 m of depth getting to Porto Botte in Sardinia (which will be the entry portowork). From Porto Botte an onshore section will cross Sardinia towards Olffinally bring the long awaited gas to Sardinian users and thus remove the isolof the pipeline will cross the Tyrrhenian Sea at around 800 m of depth to get existing Rete Nazionale Gasdotti of Snam Rete Gas.	an offshore section will cross the Mediterranear pint in the Italian RNG - Rete Nazionale Gasdot bia in the north of the island (with 39 offtake po ation of Sardinia from RNG). From Olbia then a	n Sea going down to ti or Gas National oint along the route to nother offshore section
PRJ Code - PRJ Name			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	Galsi S.p.A.	2022	DZ	DZi/GAL	258.00 GWh/d
Koudiet Eddraouch (Galsi) (DZ)		Comn	nent: Entry of GALSI In Increment is equ	ternational Section vivalent to 8 bcm/y	
	Galsi S.p.A.	2022	ITs	ITn/GAL	258.00 GWh/d
Olbia (Galsi)	Comment: Increment is equivalent to 8 bcm/y				/
	Galsi S.p.A.	2022	ITn/GAL	ITs	32.00 GWh/d
			Comment: Equ	uivalent to 1 bcm/y	/
D: 1: (C.1.)	Galsi S.p.A.	2022	ITn/GAL	IB-ITs	226.00 GWh/d
Piombino (Galsi)			Comment: Equ	uivalent to 7 bcm/y	/
	Galsi S.p.A.	2022	DZi/GAL	ITs	258.00 GWh/d
Porto Botte (Galsi)		Com	ment: Exit of GALSI In Increment is equ	ternational Section vivalent to 8 bcm/y	

Sponsors			General Information	NDF	and PCI Information
Sonatrach	47%	Promoter	Galsi S.p.A.	Part of NDP	Yes (SNAM NDP 2018-2027)
Edison SpA	23%	Operator	Galsi S.p.A.	NDP Number	n.a.
		Host Country	Italy	NDP Release Date	31/12/2018
Enel Produzione SpA	17%	Status	Planned	NDP Website	<u>NDP URL</u>
Hera SpA	11%	Website	<u>Project's URL</u>	Currently PCI	No
				Priority Corridor(s)	NSIW

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	01/2006	12/2006
FEED	01/2007	12/2010
Permitting	07/2008	11/2018
Supply Contracts		11/2020
FID		11/2020
Construction	12/2020	12/2022
Commissioning	2022	2022
Grant Obtention Date	13/08/2010	13/08/2010

Third-Party Access Regi	me
Considered TPA Regime	Not Applicable
Considered Tariff Regime	Not Applicable
Applied for Exemption	Not Relevant
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Current TYNDP: TYNDP 2020 - Annex A Page 585 of 773

Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
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	0
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		0
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 newtwork.	812	288	52	0
То	tal		861	151	

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

		D	elays since las	t TYNDI

Delay Since Last TYNDP

12 months

Delay Explanation

### **Expected Gas Sourcing**

Algeria

### 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 periofd of 25 years.

urrent TYNDP : TYNDF	2020 - Annex A	Page 586 of 7/3					
	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 roll Italian gas consumption (located in northern Italy) and further on the northern European markets. In the longer projects interconnecting different gas sources in Africa (e.g. new Algerian shale gas or TSGP project for Nigerian highly strategic diversification of gas supply routes to European markets and their supply flexibility The Galsi platian gas hub for gas supply to Europe which, through the increase of gas liquidity, will enable the export of me European markets through the development of reverse flow capacities Reduction of GHG emissions; the Galsi development guidelines, i.e. the promotion of the substitution of high pollutant fo	term, with the development of new a gas), the Galsi pipeline could provide a project will contribute to the creation of an ajor gas volumes from Italy to other					
	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 wate 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 permits obtained in 2 Authorization Decree by the Ministry of the Economic Development needs only final approval of Tuscany.						
Market	The persistent uncertainties in the market scenarios make more complex the finalisation by the Shareholders of i.e. the definition of suitable terms and conditions for the gas supply and gas transportation agreements, which investment decision.						
Financing	EEPR funds for 120 millions euros were granted by the European Commission with decision on 13th August 201 decision on 26th September 2014. Future availability of new European Commission funds would be a key issue						
	Intergovernmental Agreements						
Agreement	Agreement Description	Is Signed Agreement Signature Date					
Italy – Algeria Inter-Gove Agreement for Galsi pro		ion Yes 14/11/2007					

	CBCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or
	no
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance			
Applied for CEF	(3) No, we have not applied for CEF		
Grants for studies	No		
Grants for studies amount	Mln EUR 0.0		
Grants for works	No		
Grants for works amount	Mln EUR 0.0		
Intention to apply for CEF	No decision yet taken		
Other Financial Assistance	No		
Comments			
General Comments			

# Gorizia plant upgrade

TRA-N-1227	Project	Pipeline including CS	Non-FID
Update Date	28/09/2020		Non-Advanced
Description	The project consists of the upgrading of Gorizia plant in order to increment the firm bidi Gwh/day).	irectional capacity of the point up to	o 6 MScm/day (64.74
PRJ Code - PRJ Name	-		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Covinia (IT) (Šavanatav (SI)	Snam Rete Gas S.p.A.	2026	IT	SI	17.30 GWh/d
Gorizia (IT) /Šempeter (SI)	Snam Rete Gas S.p.A.	2026	SI	IT	44.30 GWh/d

Sponsors		Ge	neral Information	NDP and PCI Information	
Snam Rete Gas S.p.A.	100%	Promoter	Snam Rete Gas S.p.A.		Yes (Ten-year development plan of the
7		Operator	Snam Rete Gas S.p.A.	Part of NDP	natural gas transmission network 2018-
		Host Country	Italy	NDDN	2027)
		Status	Planned	NDP Number	RN_16
		Website	<u>Project's URL</u>	NDP Release Date	30/11/2018
			<u></u>	NDP Website	NDP URL
				Currently PCI	Yes (6.23 (2020))
				Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		01/2021
Feasibility	01/2021	01/2021
FEED	01/2022	01/2022
Permitting	01/2023	01/2023
Supply Contracts		01/2024
FID		01/2021
Construction	01/2024	01/2024
Commissioning	2026	2026
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

	Benefits
Main Driver	Market Demand
Main Driver Explanation	
Benefit Description	The project Increases the flexibility and diversification of routes and gas sources and increment the SOS of region and Italian system (N-1).

	CBCA	
Decision	No, we have not submitted an investment request yet,	Applied for CEF
Decision	and we do not plan to submit it	Grants for studies
Submissin Date		Grants for studies amount
Decision Date		Grants for works
Website		Grants for works amount
Countries Affected		Intention to apply for CEF
Countries Net Cost Bearer		Other Financial Assistance
Additional Comments		Comments
		General Comments

	Financial Assistance
Applied for CEF	(3) No, we have not applied for CEF
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	No decision yet taken
Other Financial Assistance	No
Comments	
General Comments	

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## **Green Crane - Italy**

ETR-N-958	Project	Project	Non-FID
Update Date	21/09/2020		Advanced
Description	Green Crane is a joint initiative by SNAM and Enagás to deploy renewable hydrogen valuas well as export routes to North and Central Europe. In Italy, it comprises the regional hincludes the decarbonization of steel production processes in Lombardia Region, blending	ubs of Puglia, Sardinia and Sicily. The ng of hydrogen for industrial uses an	e Green Crane Italy also ad an HRS network
	development. All hubs foresee a certain amount of hydrogen to be blended in the natura	al gas grid (up to 10 % or more). The	hydrogen will be used

directly in industry and mobility projects. The asset readiness will be a central aspect of the whole project.

PRJ Code - PRJ Name

Capacity Increments Variant	For Modelling				
Point	Operator	Year	From Gas System	To Gas System	Capacity
	SNAM S.p.A.	2025	IT	IT	1.00 GWh/d
PSV	Comment: Increment refers only to hydroger	n injected in		additional volumes could be available)	

Sponsors			General Information
Snam	100%	Promoter	Snam
		Operator	SNAM S.p.A.
		Host Country	Italy
		Status	Planned
		Website	

Schedule	Start Date	End Date
Pre-Feasibility		03/2020
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2025	2025
Grant Obtention		
Date		

	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
All the project	The aggregated RES capacity is estimaed at 1500MW.		2025

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# Import developments from North-East

TRA-N-8	Project	Pipeline including CS	Non-FID
Update Date	17/09/2020		Non-Advanced
Description	The project consists in new on-shore pipeline and in a new compressor station in the at new or existing Entry Points in that area.	e north east of Italy to permit the increas	se of transport capacity
PRJ Code - PRJ Name	-		

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	340.00 GWh/d
New IP North-East Italy	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).				

Sponsors		Gen	eral Information	NDP and PCI Information	
Snam Rete Gas s.p.a.	100%	Promoter	Snam Rete Gas S.p.A.		Yes (Ten-year development plan of the
		Operator	Snam Rete Gas S.p.A.	Part of NDP	natural gas transmission network 2018-
		Host Country	Italy		2027)
		Status	Planned	NDP Number	RN_06
		Website	Project's URL	NDP Release Date	30/11/2018
		vvebsite	<u>rroject's OKL</u>	NDP Website	NDP URL
				Currently PCI	No
				Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2034	2034
Grant Obtention Date		

	*
Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

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

	Benefits	
Main Driver	Market Demand	
Main Driver Explanation	n	
Benefit Description	Security of Supply, Market integration, Diversification of sources, Diversification of route Market Integration (Increase of competition), Flexibility of the system.	es, N-1 National (Italy), Back-up for renewables, Power-to-gas,

	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial A	Assistance
Applied for CEF	(3) No, we have not applied for CEF
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	No decision yet taken
Other Financial Assistance	No
Comments	
General Comments	

# Interconnection with production in Gela

TRA-F-1241

Update Date

Description

Project

Project

17/09/2020

Advanced

Advanced

PRJ Code - PRJ Name

-

Point		Operator		Year	From Gas System	To Gas System	Capacity
IT - Indigenous Production		Snam Ret	e Gas S.p.A.	2020	NPcIT	IT	45.00 GWh/d
Sponsors			General Information		NDP an	d PCI Information	
Snam Rete Gas S.p.A.	100%	Promoter	Snam Rete Gas S.p.A.			(Ten-year develop	•
		Operator	Snam Rete Gas S.p.A.	Part o	of NDP nate	ural gas transmissio	
		Host Country	Italy	,			2027)
		Status	In Progress	5	Number		RN_17
		Website		NDP F	Release Date		30/11/2018
				NDP \	Website		<u>NDP URL</u>
				Curre	ntly PCI		No
				Priorit	ty Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	01/2017	05/2017
FEED	09/2017	09/2018
Permitting		
Supply Contracts		
FID		09/2017
Construction	09/2019	04/2020
Commissioning	2020	2020
Grant Obtention		
Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
all the project	The project consists of the realization of 500 meter pipeline	500	1	0	2020
	Total		1	0	

		Benefits
Main Driver	Others	
Main Driver Explanat	on	
Benefit Description		

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Finan	cial Assistance
Applied for CEF	(3) No, we have not applied for CEF No
Grants for studies amount Grants for works Grants for works amount Intention to apply for CEF	Mln EUR 0.0 No Mln EUR 0.0 No, we do not plan to apply
Other Financial Assistance Comments General Comments	No
	Applied for CEF Grants for studies Grants for studies amount Grants for works Grants for works amount Intention to apply for CEF Other Financial Assistance Comments

### Interconnection with Slovenia

TRA-N-354 Project Pipeline including CS Non-FID

Update Date 17/09/2020 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.

PRJ Code - PRJ Name

Capacity Increments Variant For Modelling							
Point		Operator		Year Fro	m Gas System	To Gas System	Capacity
San Dorligo della Valle (IT) /Osp (SI)		Snam Rete 0	Gas S.p.A.	2023	IT	SI	3.60 GWh/d
Sponsors	General Information				NDP and	PCI Information	
Snam Rete Gas s.p.a.	100%	Promoter	Snam Rete Gas S.p.A.			(Ten-year developr	
7		Operator	Snam Rete Gas S.p.A.	Part of ND	P natu	ral gas transmissio	
		Host Country	Italy	, NDD N			2027)
		Status	Planned				RN_03
		Website	Project's URL	NDP Relea	se Date		30/11/2018
		***************************************	<u>, , oject 3 0112</u>	NDP Webs	ite		<u>NDP URL</u>
				Currently F	PCI		No
				Priority Co	rridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED	01/2020	01/2020
Permitting	01/2021	01/2022
Supply Contracts		01/2022
FID		01/2020
Construction	01/2022	01/2022
Commissioning	2023	2023
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stat	tions				
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
all the project		250	6	0	2023
	Total		6	0	

		Benefits
Main Driver	Market Demand	
Main Driver Explana	ation	
Benefit Description		

	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF	No decision yet taken			
Other Financial Assistance	No			
Comments				
General Comments				

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## **Italy-Sardinia Virtual Pipeline**

LNG-N-304	Project	LNG Terminal	Non-FID
Update Date	17/09/2020		Advanced

Description

The project consist in the creation of a virtual connection between Sardinia and Italy through two LNG small size carrier (vessel capacity = 8000 liquid cm) and the upgrade of the Panigaglia LNG Regasification plant with reloading facilities. The project gives to Sardinia customers the possibility to be supplyed of natural gas, a new sorurce in the energy market of the island, at the same price conditions of the other Italian regions.

PRJ Code - PRJ Name

Capacity Increments Variant For Modellir	ng							
Point		Operat	or	Year From Gas	System	To Gas System	Capacity	
Sardinia LNG		Snam Rete Gas S.p.A. 20		2021 LNG_T	k_ITs	ITs	50.00 GWh/d	
Sponsors	Sponsors General Information			NDP and	PCI Information			
Snam Rete Gas S.p.A. 100%		Promoter	Snam S.p.A		No	No ((1) the NDP was prepare		
		Operator	Snam Rete Gas S.p.A	Part of NDP		earlier date and the project will be		
		Host Country	Italy	, AIDD Norrals and	prope	proposed for inclusion in the next		
		Status	Planned					
	Website			NDP Release Date	е			
				NDP Website				
				Currently PCI			No	
				Priority Corridor(s	s)			

Schedule	Start Date	End Date
Pre-Feasibility		12/2019
Feasibility	01/2019	12/2019
FEED	01/2020	01/2020
Permitting	01/2020	12/2020
Supply Contracts		12/2020
FID		01/2020
Construction	01/2021	12/2021
Commissioning	2021	2021
Grant Obtention Date		

Third-Party Access Regime			
Considered TPA Regime	Regulated		
Considered Tariff Regime	Regulated		
Applied for Exemption	No		
Exemption Granted	No		
Exemption in entry direction	0.00%		
Exemption in exit direction	0.00%		

Technical Information (LNG)						
Regasification Facility	Reloading Ability Project Phase	Expected Increment Ship Size (bcm/y) (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 LNG)	Comments	Commissioning Load Factor Year (%)
Panigaglia LNG plant	Yes Virtual pipe	0.0 0	0.00	0	0	2021 100

Pipelines and Compressor Stations		
Pipeline Section	Pipeline Comment Diameter Length Compressor Power Cor (mm) (km) (MW)	missioning Year
All the project	The project is about the construction of 2 LNG small size carrier (8000 liquid cm) and reloading facility of the Panigaglia LNG Regasification plant. These infrastructures will be used to create a virtual interconnection to supply the market of Sardinia	0
	Total	

## **Expected Gas Sourcing**

### Benefits

Main Driver Market Demand

Main Driver Explanation

Benefit Description

Website

Countries Affected

Countries Net Cost Bearer Additional Comments

	CDCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit i
Submissin Date	
Decision Date	

Financial Assistance			
Applied for CEF	(3) No, we have not applied for CEF		
Grants for studies	No		
Grants for studies amount	Mln EUR 0.0		
Grants for works	No		
Grants for works amount	Mln EUR 0.0		
Intention to apply for CEF			
Other Financial Assistance	No		
Comments			
General Comments			

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## Larino - Chieti

TRA-F-409	Project	Pipeline including CS	FID
Update Date	18/11/2019		Advanced
Description	Construction of 113 km 24" LARINO-CHIETI linking the provinces of Campobasso an Sangro.  The proget forsee realisation of a Gas Tranportation system on Adriatic coast that with ensure the security of service on the current backbone (which will undergo a progrover the coming decades; avoid congestion in this section and meet capacity increases in relation to changes	II: essive reduction in operating pressures d	
PRJ Code - PRJ Name			

Capacity Increments Variant For Modelling

Point	Operator		Year From Gas Systen	n To Gas System	Capacity
Larino (IT)	Società Gasdotti Italia	Società Gasdotti Italia 20		IT	53.00 GWh/d
Sponsors	General Inform	General Information			
	Promoter	SGI S.p.A:	Part of NDP	Yes	(LARINO-CHIETI)
	Operator	Società Gasdotti Italia	NDP Number		5712
	Host Country	Italy	NDP Release Date		30/09/2018
	Status	In Progress	NDP Website		NDP URL
	Website	Project's URL	Currently PCI		No
			Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		06/2012
Feasibility	03/2013	11/2013
FEED	01/2014	11/2014
Permitting	12/2014	06/2018
Supply Contracts		03/2019
FID		06/2017
Construction	04/2019	06/2022
Commissioning	2022	2022
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Larino - Chieti		600	113		2021
	Total		113		

## **Expected Gas Sourcing**

The project in an internal connection of existing network

	Benefits Programme Benefits
Main Driver	Regulation SoS
	The proget forsee: - ensure the security of service on the current backbone (which will undergo a progressive reduction in operating pressures due to obsolescence) over the coming decades; - avoid congestion in this section and meet capacity increases in relation to changes in demand;
Benefit Description	

	СВСА
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or
	not
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance			
Applied for CEF	(3) No, we have not applied for CEF		
Grants for studies	No		
Grants for studies amount	Mln EUR 0.0		
Grants for works	No		
Grants for works amount	Mln EUR 0.0		
Intention to apply for CEF	No, we do not plan to apply		
Other Financial Assistance	No		
Comments			
General Comments			

# Matagiola - Massafra pipeline

TRA-N-1195	Project	Pipeline including CS	Non-FID
Update Date	17/09/2020		Non-Advanced
	The new Matagiola - Massafra pipeline, will allow the increment of the maximum canac	ity of the Puglia entry points up to 7	4 MScm/d without

Description

The new Matagiola - Massafra pipeline will allow the increment of the maximum capacity of the Puglia entry points up to 74 MScm/d without increasing the overall capacity of the system from the South.

PRJ Code - PRJ Name

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Melendugno - IT / TAP	Snam Rete Gas S.p.A.	2026	AL/TAP	IB-ITs	310.00 GWh/d
Otranto - IT / IGI Poseidon	Snam Rete Gas S.p.A.	2026	GR/IGI	IB-ITs	310.00 GWh/d

Sponsors		Gei	neral Information	NE	OP and PCI Information
Snam Rete Gas S.p.A.	100%	Promoter	Snam Rete Gas S.p.A.		Yes (Ten-year development plan of the
		Operator	Snam Rete Gas S.p.A.	Part of NDP	natural gas transmission network 2018-
		Host Country	Italy		2027)
		Status	Planned	NDP Number	RN_05
		Website	<u>Project's URL</u>	NDP Release Date	30/11/2017
		***************************************	<u></u>	NDP Website	NDP URL
				Currently PCI	Yes (7.3.4 (2020))
				Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		12/2019
Feasibility	01/2020	12/2020
FEED	01/2021	01/2022
Permitting	01/2022	06/2024
Supply Contracts		06/2024
FID		01/2021
Construction	06/2024	01/2026
Commissioning	2026	2026
Grant Obtention Date		

Third-Party Access Regime			
Considered TPA Regime	Regulated		
Considered Tariff Regime	Regulated		
Applied for Exemption	No		
Exemption Granted	No		
Exemption in entry direction	0.00%		
Exemption in exit direction	0.00%		

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Matagiola - Massafra		1,400	80		2026
	Total		80		

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments Please find enclosed

		Benefits	
Main Driver	Market Demand		
Main Driver Explanatio	n		
Benefit Description	Security of supply, competitiveness, F	exibility of the system.	

Current TYNDP : TYNDP 2020 - Annex A Page 610 of 773

	CBCA	Financi	ial Assistance
Decision	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF
	and we do not plan to submit it	Grants for studies	No
Submissin Date		Grants for studies amount	Mln EUR 0.0
Decision Date		Grants for works	No
Website		Grants for works amount	Mln EUR 0.0
Countries Affected		Intention to apply for CEF	No decision yet taker
Countries Net Cost Bearer		Other Financial Assistance	No
Additional Comments		Comments	
		General Comments	

# Microliquefaction plants

ETR-N-528	Project	Energy Transition Related Project	Non-FID
Update Date	16/09/2020		Advanced
Description	The project consists in developing the sustainable mobility by realizing 2 microlic naval sector. The project will realize also the possibility to enable Bio-LNG use in	·	neavy transport also in

PRJ Code - PRJ Name -

Sponsors			General Information
Snam4mobility	100%	Promoter	Snam4mobility
		Operator	Snam4Mobility S.p.A.
		Host Country	Italy
		Status	In Progress
		Website	

Schedule	Start Date	End Date
Pre-Feasibility		12/2019
Feasibility	01/2019	12/2019
FEED	01/2020	12/2021
Permitting	01/2020	12/2021
Supply Contracts		06/2020
FID		01/2020
Construction	01/2020	01/2022
Commissioning	2022	2022
Grant Obtention Date		

Current TYNDP: TYNDP 2020 - Annex A		Page 612 of 773	
	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
All the project	The project consiste in the construction of 2 microliquefaction plants. The project liquefaction capacity is still confidential as a part of the company strategy.		2022

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#### **PEGASUS**

ETR-N-305	Project	Energy Transition Related Project	Non-FID
Update Date	15/08/2019		Advanced
	Pegasus Project aims to demonstrate the operation on an industrial scale PtG sys	tem, one of the technologies that can contrib	ute most to the

Description

Pegasus Project aims to demonstrate the operation on an industrial scale PtG system, one of the technologies that can contribute most to the increase of energy produced 100% from non-programmable renewable sources, for a progressive decarbonisation of the energy system. The aim of the project is to produce 100% renewable methane gas (CH4) on an industrial scale, through an integrated system of conversion of H2O to H2 through RES powered electrolysis and CO<sub>2</sub> supply from biomethane upgrading processes, with subsequent methanation and feeding into SGI transport network with access to all services of the gas system, i.e. export, storage, distribution and liquefaction.

PRJ Code - PRJ Name

eral Information			Sponsors
S.G.I. SpA	Promoter	100%	S.G.I. S.p.A.
Società Gasdotti Italia	Operator		
Italy	Host Country		
Planned	Status		
<u>Project's URL</u>	Website		

Schedule	Start Date	End Date
Pre-Feasibility		05/2019
Feasibility	06/2019	07/2019
FEED	08/2019	09/2020
Permitting	10/2020	12/2021
Supply Contracts		02/2022
FID		02/2022
Construction	03/2022	12/2023
Commissioning	2024	2024
Grant Obtention Date	01/03/2024	01/03/2024

Technical Information (ETR)					
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year		
PEGASUS	The project includes: - The project foresees - High voltage interconnection with the electricity grid for renewable energy supply to water electrolysis process - Interconnection with existing biogas plant for CO2 withdrawal, available from biomethane upgrading unit - CO2 storage at 40 bar - Electrolyzer for hydrogen production, nominal power 23 MW - Hydrogen storage at 200 bar - Methanation reactor, nominal power 4,5 MW (according to methane HHV)  Capacity increment (production of renewable methane): 0,12 GWh/day	Capacity increment (production of renewable methane) 0,12 GWh/day	2024		

# Delays since last TYNDP

Delay Since Last TYNDP

Delay Explanation

# Power to gas plant in the south of Italy

ETR-N-591	Project	Energy Transition Related Project	Non-FID
Update Date	21/09/2020		Advanced
Description	The project is aimed to the injection of hydrogen from a power to gas plant lo renewable sources.	cated in the south of Italy.The electric feed is ex	pected to come from
PRJ Code - PRJ Name			

Sponsors			General Information
SNAM	100%	Promoter	Snam
/		Operator	SNAM S.p.A.
		Host Country	Italy
		Status	Planned
		Website	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2025	2025
Grant Obtention Date		

### Technical Information (ETR)

Section/Phase Name

All the project

Main Technical Parameters

**Technical Information Comment** 

Commissio ning Year

The projects enable the integration of an hydrogen capacity up to 10 MW.

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## SAN MARCO - RECANATI

TRA-F-424	Project	Pipeline including CS	FID
Update Date	18/11/2019		Advanced
Description	Construction of 35 km 24" in the provinces of Fermo, Macerata and Ancona and will Recanati.  The proget forsee realisation of a Gas Tranportation system on Adriatic coast that will - ensure the security of service on the current backbone (which will undergo a progre over the coming decades; - avoid congestion in this section and meet capacity increases in relation to changes in	: ssive reduction in operating pressures o	
PRJ Code - PRJ Name			

Capacity Increments Variant For	Modelling						
Point		Operate	or	Year	From Gas System	To Gas System	Capacity
Recanati (IT)		Società	Gasdotti Italia	2022	IT	ITg	53.00 GWh/d
Sponsors		General Information NDP and PO		and PCI Information			
SGI SpA	100%	Promoter	SGI S.p.A.	Part o	f NDP	Yes (SAN MAR	CO - RECANATI
		Operator	Società Gasdotti Italia	NDP I	Number		568
		Host Country	Italy	NDP F	Release Date		30/11/2018
		Status	In Progress	NDP \	Website		NDP UR
		Website	<u>Project's URL</u>	Curre	ntly PCI		No
				Priorit	y Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		06/2014
Feasibility	07/2014	12/2014
FEED	04/2015	05/2015
Permitting	06/2016	04/2018
Supply Contracts		01/2019
FID		01/2015
Construction	03/2019	09/2021
Commissioning	2022	2022
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
San Marco-Recanati		600	35		2021
	Total		35		

### **Expected Gas Sourcing**

The project is an internal connection of existing network

	Benefits Programme Benefits
Main Driver	Regulation SoS
	The proget forsee: - ensure the security of service on the current backbone (which will undergo a progressive reduction in operating pressures due to obsolescence) over the coming decades; - avoid congestion in this section and meet capacity increases in relation to changes in demand;
Benefit Description	

	СВСА	Financial <i>I</i>	Assistance
	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF
Decision	and we have not yet decided whether we will submit or	Grants for studies	No
Culturalization Date	not	Grants for studies amount	Mln EUR 0.0
Submissin Date		Grants for works	No
Decision Date		Grants for works amount	Mln EUR 0.0
Website		Intention to apply for CEF	No, we do not plan to apply
Countries Affected		Other Financial Assistance	No
Countries Net Cost Bearer		Comments	
Additional Comments	The project is an internal connection of existing network	General Comments	

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## Sardinia Methanization

TRA-N-1194	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Non-Advanced
Description	The project includes the activities aimed at the realization of natural gas transport facilities interconnected with the supply points of new LNG plants in the region of Sardinia that is not even methanized.		

PRJ Code - PRJ Name

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	ENURA S.p.A.	2020	LNG_Tk_ITs	ITs	17.00 GWh/d
Sardinia LNG	ENURA S.p.A.	2022	LNG_Tk_ITs	ITs	22.00 GWh/d
	ENURA S.p.A.	2025	LNG_Tk_ITs	ITs	11.00 GWh/d

Sponsors	General Inform	mation	NI	OP and PCI Information
	Promoter	ENURA S.p.A.		Yes (Ten-year development plan of the
	Operator	ENURA S.p.A.	Part of NDP	natural gas transmission network 2018-
	Host Country	Italy		2027)
	Status	In Progress	NDP Number	RN_09
	Website	<u>Project's URL</u>	NDP Release Date	30/11/2018
	WEDSILE	<u>ITOJECES ONE</u>	NDP Website	NDP URL
			Currently PCI	No
			Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		12/2016
Feasibility	01/2016	12/2016
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2020	2025
Grant Obtention		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
phase 1		1,300	92		2020
phase 2		800	104		2021
phase 3		1,050	104		2022
phase 4		1,000	85		2022
phase 5		400	34		2025
phase 6		350	23		2025
phase 7		550	131		2025
	Total		573		

Current TYNDP : TYNDP 2020 - Annex A Page 622 of 773

	Benefits		
Main Driver	Market Demand		
Main Driver Explanation	Project has been developed with reference to the "Environmental Energy Plan of Sardinia Region 2015-2030" (PEARS), that hypothesizes that the supply to cover Sardinia Demand is guaranteed by LNG facilities.		
Benefit Description	Competition: The Sardinian methanization project, introducing gas as the most competitive element in the energy mix of the region, will increase the competitiveness of the Sardinian market. Sustainability: The Sardinian methanization project could cause the substitution of source that cause an high production of CO2 with Natural Gas, leading to a reduction in the production of the pollutant.		

	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financ	cial Assistance
Applied for CEF	(3) No, we have not applied for CEF
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	No decision yet taken
Other Financial Assistance	No
Comments	
General Comments	

# Sector coupling: hybrid compressor station

ETR-F-599	Project	Energy Transition Related Project	FID
Update Date	16/09/2020		Advanced
Description	The project consists of the installation of two new electro compressors in substitution of gas compressor power (particularly, the elder turbo compresectors activating flexibility resources at the benefit of the overall energy states.	essors). The project makes possible the coupling of $\epsilon$	•
PRJ Code - PRJ Name	- /		

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	In Progress
		Website	

Schedule	Start Date	End Date
Pre-Feasibility		12/2017
Feasibility	01/2017	12/2017
FEED	01/2018	12/2021
Permitting	01/2019	12/2021
Supply Contracts		06/2024
FID		07/2018
Construction	06/2024	12/2024
Commissioning	2024	2024
Grant Obtention Date		

urrent TYNDP : TYNDP 2020 - Annex A		Pag	ge 624 of 773
	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commission ning Year
All the project	The project consists of the installation of two new electro compressors in Malborghetto compressor station for a total of 24 MW in partial substitution of gas compressor power		2024

## Stazione di Spinta "San Marco"

TRA-N-439	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Advanced

Description Construction 3 MW compression station SAN MARCO

The project forsees the realisation of a revers flow capacity on Gas Tranportation system of Adriatic coast

PRJ Code - PRJ Name

Point			Operator		Year	From Gas System	To Gas System	Capacity
Larino (IT)			Società Gasdotti Italia		2022	IT	lTg	53.00 GWh/d
Sponsors			General Info	rmation		NDP and	PCI Information	
SGI SpA	1	100%	Promoter	S.G.I. S.p.A.	. Part o	of NDP	Yes (Stazione si Sp	ointa San Marco)
	Y		Operator	Società Gasdotti Italia	NDP	Number		5515
			Host Country	Italy	NDP	Release Date		30/11/2018
			Status	In Progress	NDP	Website		NDP URL
			Website	<u>Project's URL</u>	Curre	ently PCI		No
					Priori	ity Corridor(s)		
Schedule	Start Date	End Date				Third-Par	ty Access Regime	
Pre-Feasibility		07/2015			Consi	dered TPA Regime		Regulated
Feasibility	06/2018	10/2019			Consi	dered Tariff Regime		Regulated
FEED	11/2019	06/2020			Appli	ed for Exemption		No
Permitting	11/2019	03/2021			Exem	ption Granted		No
Supply Contracts		05/2021						
FID		01/2021			Exem	ption in entry directio	on	0.00%
Construction	06/2021	12/2022			Exem	ption in exit direction		0.00%
Commissioning	2022	2022						
Grant Obtention Date								

Current TYNDP : TYNDP 2020 - Annex A Page 626 of 773

Pipelines and Compressor Stations		
Pipeline Section	Pipeline Comment	Diameter Length Compressor Power Comissioning (mm) (km) (MW) Year
Compression Station		3 2022
	Total	3

### **Expected Gas Sourcing**

The project is an internal connection of existing network

Main Driver Regulation SoS  Main Driver Explanation  The project will be increase the security enabling the revers-flow un the pipelines sistem allowing the delvery to Recanati interconnection points.			
Main Driver Explanation		Regulation SoS	Main Driver
coming from south	es sistem allowing the delvery to Recanati interconnection point of ga	The project will be increase the security enabling the coming from south	Main Driver Explanation

Benefit Description

	CBCA	Finar	ncial Assistance
	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF
Decision	and we have not yet decided whether we will submit or	Grants for studies	No
Submissin Date	not	Grants for studies amount	Mln EUR 0.0
		Grants for works	No
Decision Date		Grants for works amount	Mln EUR 0.0
Website		Intention to apply for CEF	No, we do not plan to apply
Countries Affected		Other Financial Assistance	No
Countries Net Cost Bear		Comments	
Additional Comments	The project is an internal connection of existing network	General Comments	

## System Enhancements - Stogit - on-shore gas fields

UGS-F-260	Project	Storage Facility	FID
Update Date	17/09/2020		Advanced
Description	The project envisages the development of the following depleted on-shore gas fields Alfonsine	s: Fiume Treste - Minerbio - Ripalta - Sab	bbioncello - Sergnano -
PRJ Code - PRJ Name	-		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	STOGIT	2028	STcIT	IT	104.30 GWh/d
UGS - IT - Snam Rete Gas/STOGIT	Comment: Interconnection capacity available is eq	qual to the capacity offered	-		
UGS - II - Snam Rete Gas/STOGII	STOGIT	2028	IT	STcIT	20.90 GWh/d

Sponsors		General Information		NDP and PCI Information	
Stogit	100%	Promoter	STOGIT		Yes (Ten-year development plan of the
		Operator	STOGIT	Part of NDP	natural gas transmission network 2018-
		Host Country	Italy		2027)
		Status	Planned	NDP Number	not applicable
		Website		NDP Release Date	
		Website		NDP Website	NDP URL
				Currently PCI	No
				Priority Corridor(s)	

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Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2028	2028
Grant Obtention Date		

	9			
Third-Party Access Regime				
Considered TPA Regime	Regulated			
Considered Tariff Regime	Regulated			
Applied for Exemption	No			
Exemption Granted	No			
Exemption in entry direction	0.00%			
Exemption in exit direction	0.00%			

			Technical Information (	(UGS)					
Storage Facility	Storage Facility Type	Multiple-cycle Facility	Project Phase	Working Volume (mcm)	Withdrawal Capacity (mcm/d)		(%)	Comments	Commisioning Year
Fiume Treste - Minerbio - Ripalta - Sabbioncello - Sergnano - Alfonsine	Depleted Field	No	System Enhancements - Stogit - on-shore gas fields	588	2.0	9.5	90	NA	2028

		Benefits	
Main Driver	Others		
Main Driver Explanation	on		
Benefit Description			

	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial	Assistance
Applied for CEF	(3) No, we have not applied for CEF
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	
Other Financial Assistance	No
Comments	
General Comments	

Current TYNDP : TYNDP 2020 - Annex A Page 630 of 773

## TAP interconnection

TRA-F-1193	Project Pipel	line including CS	FID
Update Date	17/09/2020		Advanced
Description	The project is functional to connect the new TAP import infrastructure, scheduled to arrive in Melen- Brindisi.	dugno, with the existing nation	nal network near
PRJ Code - PRJ Name	-		

. ,	,	,	, , , , ,			
. ,	,	,	, , , , ,			
Comment: GCV used for capacity calculations: 11.071 kWh/Sm3. Physical entry capacity for emergency operations in line with FJO (158). Commercial Reverse Capacity equal to booked forward exit capacity (272)						
ete Gas S.p.A.	2020	AL/TAP	IB-ITs	509.00 GWh/d		
	•	'	te Gas S.p.A. 2020 AL/TAP			

Sponsors			General Information	NDP and PCI Information		
Snam Rete Gas s.p.a.	100%	Promoter	Snam Rete Gas S.p.A.		Yes (Ten-year development plan of the	
		Operator	STOGIT	Part of NDP	natural gas transmission network 2018-	
		Host Country	Italy	NIDD Ni wala ay	2027)	
		Status	In Progress	NDP Number	RN_02	
		Website	<u>Project's URL</u>	NDP Release Date	30/11/2017	
				NDP Website	<u>NDP URL</u>	
				Currently PCI	Yes (7.1.3 (2020))	
				Priority Corridor(s)		

<b>Current TYND</b>	P:	TYNDP	2020 -	Annex	A
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Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED	04/2015	05/2018
Permitting	11/2015	05/2018
Supply Contracts		02/2019
FID		05/2018
Construction	02/2019	10/2020
Commissioning	2020	2020
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor S	Stations				
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Tap Interconnection		1,400	55		2020
	Total		55		

# Fulfilled Criteria

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments please find enclosed

Current TYNDP : TYNDP 2020 - Annex A Page 632 of 773

Benefits Benefits			
Main Driver	Market Demand		
	Snam rete gas received a First Request for access to the National Gas Pipeline Network in accordance with Resolution ARG/Gas 2/10 of the Italian Autorità di Regolazione per Energia Reti e Ambiente and with paragraph 8 of Chapter 5 of the Snam Rete Gas Network Code (Open season).		
Ranatit I laccrintion	Security of supply, diversification of sources, diversification of routes, back-up for renewables, power-to-gas, market Integration (Increase of competition) and flexibility of the system.		

СВСА		
Decision	No, we have not submitted an investment request yet, and we do not plan to submit i	
Submissin Date		
Decision Date		
Website		
Countries Affected		
Countries Net Cost Bearer		
Additional Comments		

	Financial Assistance
Applied for CEF	(3) No, we have not applied for CEF
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	No decision yet taken
Other Financial Assistance	No
Comments	
General Comments	

PRJ Code - PRJ Name

# Transport of hydrogen into natural gas network for industrial customers

ETR-N-595	Project	Energy Transition Related Project	Non-FID
Update Date	21/09/2020		Advanced
Description	Leveraging on the experience acquired thanks to Contursi pilot project (injection till 10% the project aims at decarbonizing group of industrial customers transporting hydrogen into the industrial processes and end-use applications. The projects includes also the fact natural gas and hydrogen. Where necessary, the industrial plant technological adaptation	in various locations with a gradual int cilities needed to inject into a grid por	egration of hydrogen

Capacity Increments Variant For Mod	elling				
Point	Operator	Year	From Gas System	To Gas System	Capacity
PSV	SNAM S.p.A.	2025	IT	IT	0.19 GWh/d

Sponsors			General Information
SNAM	100%	Promoter	Snam
		Operator	SNAM S.p.A.
		Host Country	Italy
		Status	In Progress
		Website	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2025	2025
Grant Obtention Date		

	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
Section 1	The projects enable the integration of an hydrogen capacity up to 3 MW.		

## Hydrogen injection into the gas network in Lithuania

ETR-N-900	Project	Energy Transition Related Project	Non-FID
Update Date	14/06/2020		Advanced
Description	The aim of the project is to analyze the physical impact of increased concentransporting gas to consumers in Lithuania and neighboring (EU and non-E performed to Lithuania's natural gas transmission and distribution infrastructures pressure pipeline under real conditions will be implemented. Hydrogen bler results of the Feasibility study, the capacity level will be defined.	U) countries. The test and evaluation of hydrogen/ cture. The demonstration project of the injection o	natural gas mix will be f hydrogen into a high-
PRJ Code - PRJ Name			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Forecast Production Lithuania	AB Amber Grid	2024	NPcLT	LT	0.01 GWh/d

Sponsors			General Information
AB Amber Grid	100%	Promoter	AB Amber Grid
		Operator	AB Amber Grid
		Host Country	Lithuania
		Status	Planned
		Website	

Schedule	Start Date	End Date
Pre-Feasibility		03/2021
Feasibility	04/2021	06/2022
FEED	06/2022	12/2022
Permitting	12/2022	07/2023
Supply Contracts		07/2023
FID		07/2023
Construction	07/2023	11/2024
Commissioning	2024	2024
Grant Obtention		
Date		

	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
Hydrogen injection	The capacity level will be defined in the Feasibility study.  MW electrolysis.	. It is planned 1	2024

# LNG Terminal in Klaipeda

LNG-F-824	Project	LNG Terminal	FID
Update Date	18/11/2019		Non-Advanced
Description	As this pilot action of 10 year lease turned to be a success story, Klaipedos nafta in line will Terminal operations post 2024. This long-term solution will ensure a consolidation of the and ensure the sustainability of future regional gas market. The benefits include security of LNG break bulk infrastructure and effective natural gas price cap. Purchase of the FSRU will operations and consequentially lower the effective natural gas price cap for all consumers small and mid-scale LNG infrastructure and faster switch-over to LNG from more polluting	substantial regional benefits alread of supply, availability of alternative ill also facilitate substantially lower in the region, as well as facilitate t	dy brought to the region natural gas supplies, costs of Terminal
PRJ Code - PRJ Name			

Capacity Increments Variant For Modelling

Point		Operato	r	Year	From Gas System	To Gas System	Capacity
Klaipeda (LNG)		AB Klaip	ėdos Nafta	2024	LNG_Tk_LT	LT	122.40 GWh/d
Sponsors			General Information		NDP and	I PCI Information	
AB Klaipėdos Nafta	100%	Promoter	AB Klaipėdos Nafto	7	Y	Yes (National Energ	gy Independence
		Operator	AB Klaipėdos Nafto	os Nafta Part of NDP	NDP 5	strategy, appproved 2018-06-26 by	
		Host Country	Lithuania	7		·	rder No. XI-2133)
		Status	Planned	d NDP Nu	ımher <i>Inde</i> i	Action Plan of pendence strategy,	National Energy
		Website	<u>Project's UR</u>		,	erment on 2018-12	
				NDP Re	elease Date		26/06/2018
				NDP W	ebsite		NDP URL
				Current	ly PCI		No
				Priority	Corridor(s)		BEMIP

Schedule	Start Date	End Date
Pre-Feasibility		11/2017
Feasibility	11/2017	04/2018
FEED	07/2011	03/2012
Permitting	11/2011	10/2012
Supply Contracts		12/2018
FID		12/2018
Construction		
Commissioning	2024	2024
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Technical Information (LNG)					
Regasification Facility	Reloading Ability Project Phase	Expected Increment Ship Size (bcm/y) (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 Comments LNG)	Commissioning Load Factor Year (%)
FSRU Independence	Yes Purchase	3.7 160,000	10.20	170,000 -	2024 40

#### Fulfilled Criteria

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

#### **Expected Gas Sourcing**

LNG (LNG,NO,US,WO), Nigeria, Trinidad and Tobago

#### Comments about the Third-Party Access Regime

Tariff regulation created by Lithuania NRA and Parliament, which was also approved by EC -State aid SA.36740 (2013/NN) – Lithuania. All services of Klaipeda LNG terminal is regulated.

	Benefits
Main Driver	Regulation SoS
Main Driver Explanation	Ensure certainty on the SoS in the region Without a project there is uncertainty on: - compliance with N-1 standard - competition of gas supply in the market - successful evolution of the regional gas market
Benefit Description	Ensure certainty of independence from the single external natural gas supplier Ensure certainty of diversification of natural gas supply sources Ensure certainty to the regional gas market players and create real gas market ensuring natural gas supply in the Baltics The project is also driven by a market demand to have flexibility in choosing different sources of supply, to be connected with global market

Barriers			
Barrier Type	Description		
Market	Lack of market support		
Market	Lack of market maturity		
Financing	Amortization rates		
Regulatory	Low or zero-priced short-term capacity		

CBCA		Fir	nancial Assistance
	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF
Decision	and we have not yet decided whether we will submit or	Grants for studies	No
Submissin Date	not	Grants for studies amount	Mln EUR 0.0
Decision Date		Grants for works	No
		Grants for works amount	Mln EUR 0.0
Website Countries Affected		Intention to apply for CEF	Yes, for work only
Countries Net Cost Bearer		Other Financial Assistance	No
Additional Comments		Comments	
Additional Comments		General Comments	

### Biomethane production with infrastructure building/enhancement in Latvia

ETR-N-125	Project	Energy Transition Related Project	Non-FID
Update Date	29/05/2020		Advanced
	The total installed electrical capacity of biogas in Latvia is 60.446 MW which in 2018 a	produced 247.02 GMb. However there is	no hiomathan

The total installed electrical capacity of biogas in Latvia is 60.446 MW, which in 2018 produced 347.93 GWh. However, there is no biomethan production in Latvia. Only these biogas plants, which are close to the transmission grid is feasible to upgrade for biomethan production in order to inject biomethan into the transmission grid. 13 existing biogas production facilities for upgrade to biomethan production are chosen in Latvia: 8 in Zemgale region (Druvas unguri, Daile Agro, Bio Ziedi, Zemgaļi, Lielmežotne, Agro Iecava, Egg Energy) and 5 in Vidzeme region (Baltijas Darzeņi, Zaļās zemes enerģija, Vecsiljāṇi, Pilslejas, International Investments). The project will start with the feasibility study resulting in selection of the pilot facility. The operation of the pilot facility will be assessed and based on experience other facilities will be upgraded and connected to the grid. The transmission grid might need to be upgraded for accommodation of the biomethan.

PRJ Code - PRJ Name

Description

Capacity Increments Variant For Modelling

Point Operator Year From Gas System To Gas System Capacity

Forecast Production Latvia Conexus Baltic Grid 2026 NPcLV LV 0.73 GWh/d

General Information		nsors	Sponsors	
JSC "Conexus Baltic Grid	Promoter			
Conexus Baltic Grid	Operator			
Latvio	Host Country			
Planned	Status			
<u>Project's URI</u>	Website			

Schedule	Start Date	End Date
Pre-Feasibility		12/2020
Feasibility	01/2021	12/2021
FEED		
Permitting		
Supply Contracts		
FID		
Construction	01/2024	12/2026
Commissioning	2026	2026
Grant Obtention		
Date		

Current TYNDP : TYNDP 2020 - Annex A Page 642 of 773

## **Enhancement of Incukalns UGS**

UGS-F-374	Project	Storage Facility	FID
Update Date	22/09/2020		Advanced
Description	With working gas capacity of 24 TWh Inčukalns Underground Gas Storage (hereinafter Baltic Sea region. IUGS is natural, aquifer type storage with compressor injection but no transmission system ensures withdrawal from storage. Currently at the end of withdrawallowing ensuring late winter supply. The aim of the project is to enhance the operation storage to maintain its functionality after pressure upgrade in Baltic transmission systems the ability to reduce the dependence of withdrawal capacity on the volume of gas reseated. Additional to the technological issues, improvement of physical, cybersecurity and SCA	atural withdrawal. Pressure difference wal season, pressure at entry from storens of the storage to allow the Inčukalrem. The key benefit from the implementaries in the IUGS.	between storage and rage drops to 30 bar, as Underground gas
PRJ Code - PRJ Name			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	Conexus Baltic Grid	2019	STcLV	LV	84.00 GWh/d
Incukalns (LV)	Conexus Baltic Grid	2025	LV	STcLV	8.50 GWh/d
		(	Comment: Incement o	f iniection capacity	/

Sponsors		Gen	eral Information	NDP and PCI Information			
JSC "Conexus Baltic Grid"	100%	Promoter	JSC "Conexus Baltic Grid"		No ((4) there is no obligation at national		
		Operator	Conexus Baltic Grid	Part of NDP	level for such a project to be part of the		
		Host Country	Latvia	NDDN	NDP)		
		Status	In Progress	NDP Number			
		Website	Project's URL	NDP Release Date			
				NDP Website			
				Currently PCI	Yes (8.2.4 (2020))		
				Priority Corridor(s)			

Schedule	Start Date	End Date
Pre-Feasibility		02/2012
Feasibility	02/2017	11/2017
FEED	09/2019	07/2022
Permitting	05/2014	12/2020
Supply Contracts		09/2022
FID		03/2019
Construction	03/2019	12/2025
Commissioning	2019	2025
Grant Obtention Date	19/05/2017	19/05/2017

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Technical Information (UGS)									
Storage Facility	Storage Facility Type	Multiple-cycle Facility	Project Phase	Working Volume (mcm)	Withdrawal Capacity (mcm/d)			Comments	Commisioning Year
Incukalns Underground Gas Storage	Aquifer	No	Inčukalns UGS	0	20.0	40.0	60		2024

	Fulfilled Criteria
Specific Criteria Fulfilled	Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas
Specific Criteria Fulfilled Comments	Since Incukalns UGS is the only storage of the region, increase of gas withdrawal volumes especially in the end of withdrawal deason significantly increases security of supply during cold spell. It is important for creation of the common market zone in the Baltic Countries and Finland, and the project is of a key importance for market integration. Besides, by storing gas from different sources (pipeline and LNG) it contributes to the competition. Since technical activities provide for significant decrease of emissions it also contributes to the sustainability.

#### **Delays since last TYNDP**

Delay Since Last TYNDP

Two years

**Delay Explanation** 

Change in market conditions.

#### **Expected Gas Sourcing**

Russia, LNG ()

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Main Driver

Market Demand

According to the 2017 feasibility study, the storage in the future will be more used for short term gas products and security of supply purposes. Short therm products will be used for LNG parking and power market peak demand. Regarding security of supply- the storage shall be divided as the strategic Main Driver Explanation storage and storage with the filling requiremnts. After competion of GIPL and Balticconector it is expected that market area for the storage will also include Poland and Finland. Other drivers: - request of the market for availability of gas at short notice - increase of transmission system working pressure

Benefit Description

will allowing to transfer gas flow from GIPL; Klaipeda LNG to Estonia and through Baltic Connector to Finland

Ending energy isolation - Transit route through Latvia facilitates gas flow in region that is currently isolated from rest of EU. In addition, the storage provide option to diminish single supplier impact on gas supply by providing gas source where gas from LNG or other EU suppliers can be stored and at the time of supply transferred to countries currently fully dependent on one source of supply. Implementation of internal energy market - Reliable operations of IGUS is essential to whole East-Baltic region especially in relation to the creation of the joint gas market for Baltic Countries whereas availability of flexible volumes of gas can significantly increase liquidity of gas flows, thus contributing to the integration of energy markets. - One of the key users of storage is electricity producer, providing practical possibility for industry coupling. - Promoting wholesale market development, facilitating

price improvement and increasing liquidity.

**Barriers** 

**Barrier Type** 

Description

Market

Lack of market maturity

Market

Lack of market support

	CBCA		Financial Assistance
sion	Yes, we have submitted an investment request and have received a decision	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
nissin Date	25/09/2018	Grants for studies	Yes
sion Date	04/10/2018	Grants for studies amount	Mln EUR 0.2
site	<u>CBCA URL</u>	Grants for works	Yes
tries Affected	Estonia, Latvia, Lithuania	Grants for works amount	Mln EUR 44.0
tries Net Cost Bearer	earer Latvia	Intention to apply for CEF	No decision yet taken
tional Comments	S	Other Financial Assistance	No
		Comments	
		General Comments	
nissin Date sion Date site atries Affected atries Net Cost Bearer	received a decision 25/09/2018 04/10/2018 CBCA URL Estonia, Latvia, Lithuania earer Latvia	Grants for studies Grants for studies amount Grants for works Grants for works amount Intention to apply for CEF Other Financial Assistance Comments	ML

### Power to Gas Production with infrastructure building/enhacement in Latvia

ETR-N-80	Project Energy Transition Re Project	elated Non-FID
Update Date	29/05/2020	Advanced

There are plans to develop wind farms in two regions of Latvia called Kurzeme and Zemgale with total expected installed capacity of 567 MW, where 207 MW has already received building permit and 360 MW is in pipeline with the final phase of the Environmental Impact Assessment. These windfarms are expected to generate 800 GWh a year. In order to use excess wind power, Power to Gas technology will be used and generated hydrogen as also potentially synthetic hydrocarbon will be injected into existing gas transmission grid with possible utilization of existing or creation of new aquifer gas storage. The first steps of the demonstration project will be feasibility study on the best location and technology as well the impact of hydrogen on aquifer storages. Option of production of the synthetic methane capturing CO2 from industrial site also will be considered.

PRJ Code - PRJ Name

Description

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Forecast Production Latvia	Conexus Baltic Grid	2030	NPcLV	LV	2.00 GWh/d

Sponsors			General Information
JSC "Conexus Baltic Grid"	100%	Promoter	JSC "Conexus Baltic Grid"
		Operator	Conexus Baltic Grid
		Host Country	Latvio
		Status	Planned
		Website	Project's URL

Schedule	Start Date	End Date
Pre-Feasibility		12/2022
Feasibility	01/2023	12/2024
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2030	2030
Grant Obtention		
Date		

## Interconnection North Macedonia-Greece (North Macedonian part)

TRA-A-980	Project Project	Pipeline including CS	Non-FID
Update Date	02/09/2019		Non-Advanced
Description	The project will ensure supply of additional quantities of natural gas from Greece and connection to the existing LNG Terminal Revithoussa and possibly transit of additiona Main gas pipeline section Negotino - Gevgelija (border with Greece) Within this section the following objects and systems are included:  - Line part in length of 68 km with pipe diameter DN 700 (28"),  - Valve stations  - Pig Launching-Receiving Station DN700,  - System for automatic operating with the technological process for natural gas transp - Line for connection with optic fibres;  - Power supply system  - Cathodic protection system  - Security Signaling System and fire signalization.  maximum pressure (projected)pmax = 66.5 bars  - Capacity 326.000 m3/h (76,4 GWh/day)	l quantities of natural gas intended fo	
PRJ Code - PRJ Name	-		

Point	Operator			Year	From Gas System	To Gas System	Capacity	
Stojakovo village (MK) / Pontoiraklia (GR)		MER JSC Skopje		2022	GR	MK	76.50 GWh/d	
Sponsors		General Information			NDP and PCI Information			
MER JSC Skopje	100%	Promoter	MER JSC Skopje	Part o	of NDP Yes	es (Work Program of the Government		
		Operator	MER JSC Skopje		TINDI		of R.Macedonia)	
		Host Country	North Macedonia	NDP I	Number	En	ergy sector, no. 2	
		Status	Planned	NDP I	Release Date		27/11/2018	
		Website		NDP \	Website		NDP URL	
				Curre	ntly PCI		No	
				Priorit	ty Corridor(s)			

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	03/2017	01/2019
FEED	03/2019	12/2019
Permitting	12/2018	03/2020
Supply Contracts		10/2020
FID		06/2020
Construction	12/2020	09/2022
Commissioning	2022	2022
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Negotino-Gevgelija		700	68	0	2022
	Total		68	0	

## **Expected Gas Sourcing**

Caspian Region, Russia, LNG ()

	Benefits
Main Driver	Market Demand
Main Driver Explanation	The project will add a second source of supply to North Macedonia and will allow the expected demand to be covered.
Benefit Description	By adding a second source of supply through Greece the project will increase: - Security of Supply - Market Integration, as gas from all sources supplying Greece will be available to North Macedonia - Sustainability, as the higher availability of gas will allow the substitution of lignite in the power generation and the space heating sectors.

	CBCA	
	No, we have not submitted an investment request yet,	Applied fo
Decision	and we have not yet decided whether we will submit or	Grants for
Culturainaina Data	not	Grants for
Submissin Date		Grants for
Decision Date		Grants for
Website		
Countries Affected		Intention t
Countries Net Cost Bearer		Other Fina
		Comment
Additional Comments		General Co

Financial Assistance			
Applied for CEF	(3) No, we have not applied for CEF		
Grants for studies	No		
Grants for studies amount	Mln EUR 0.0		
Grants for works	No		
Grants for works amount	Mln EUR 0.0		
Intention to apply for CEF	No decision yet taken		
Other Financial Assistance	No		
Comments			
General Comments			

Current TYNDP : TYNDP 2020 - Annex A Page 651 of 773

# Melita TransGas Pipeline

TRA-A-31	Project	Pipeline including CS	Non-FID
Update Date	19/09/2019		Advanced
Description	The project addresses PCI 5.19 consisting on a gas pipeline between Malta (Delimara of 22" (DN 560) and a length of 159 km (151 km offshore, 7 km onshore in Sicily and connecting the island to the trans-European Natural Gas Network, allowing gas importute inland market and hence enabling the gasification of the country. It will thus contribute to integration of the gas market, access to lower gas prices and island depends on LNG supply through shipping. The average load factor of 22% is a and does not account for peak load conditions for which the max. technical capacity sector.	1km onshore in Malta). The project will ortation to meet Malta's gas demand for dimproved security of energy supply, gittributed to only first three years from p	end Malta's isolation by power generation and ven that presently the project commissioning
PRJ Code - PRJ Name	-		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Gela (Italy) SRG-MTGP (Malta) Interconnection Point	Melita TransGas Co. Ltd.	Melita TransGas Co. Ltd. 2024		MT	56.00 GWh/d
	Comment: MTGP is designed with bi-directional flow capability.				
	Melita TransGas Co. Ltd.	2024	MT	IB-ITi	56.00 GWh/d
	Сол	mment: MTGP is des	signed with bi-directio	nal flow capability.	

Sponsors	Gene	eral Information	NDP and PCI Information	
	Promoter	Melita TransGas Co. Ltd.	Part of NDP	Yes (Malta National Reform Programme
	Operator	Melita TransGas Co. Ltd.	Tare of ND	April 2019)
	Host Country	Malta	NDP Number	Section 4.3.2
	Status	Planned	NDP Release Date	30/04/2019
	Website	Project's URL	NDP Website	NDP URL
		-	Currently PCI	Yes (5.19 (2020))
			Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		04/2015
Feasibility	04/2013	04/2015
FEED	11/2018	03/2020
Permitting	11/2017	07/2020
Supply Contracts		10/2021
FID		07/2020
Construction	03/2023	05/2024
Commissioning	2024	2024
Grant Obtention Date	25/01/2018	25/01/2018

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Delimara (Malta) to Gela (Sicily) Italy	Length of the pipeline reflects the Basic Design study results and will be confirmed by Q3 2020 following the completion of the PMRS, FEED and permitting activities	e 560	159	0	2024
	Total		159	0	

Current TYNDP: TYNDP 2020 - Annex A Page 653 of 773

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

Market integration: MTGP will eliminate Malta's isolation from the EU Gas Network and will thus contribute to the integration of the Internal Energy Market; it will contribute to the overall flexibility and interoperability of the system as it will offer future possibility of reverse flows capacity. Security of supply: MTGP will provide a more reliable, secure and energy efficient form of transport of natural gas. The PCI is designed with bidirectional flow capability, and hence may provide for the possibility of reverse flow from Malta to Europe in case of emergency gas disruption situations. Sustainability: MTGP will remove emissions from LNG supply chain, while generating environmental landscape benefits from removal of FSU. Competition: The PCI will contribute to the diversification of import sources and import routes and will increase the competitiveness by promoting the integration of the internal energy market and the interoperability of electricity and gas networks.

#### **Delays since last TYNDP**

Delay Since Last TYNDP

Yes

Availability of funds and associated conditions

**Delay Explanation** 

Financing

#### **Expected Gas Sourcing**

Algeria, Caspian Region, Libya, Norway, Russia, LNG ()

	Benefits
Main Driver	Others
Main Driver Explanatio	The main driver is the elimination of Malta's isolation from the European Gas network.
Benefit Description	The gas pipeline interconnection will put an end to Malta's isolation from the European gas network and contribute to the integration of the Internal Energy Market; moreover the project shall: • Replace the importation of LNG for the production of electricity; • Contribute to the system's overall flexibility and interoperability in that it will offer the possibility of capacity for reverse flows in the future. • Complement the Energy Union's strategy towards the diversification of sources, routes and suppliers of natural gas. • Guarantee greater security of energy supply to the island; • Enable easier access to the natural gas resources at a lower cost for Malta; • Support objectives of sustainability as it will contribute towards the reduction of GHG (Greenhouse Gas) emissions by delivering natural gas more efficiently, eliminating the need for liquefaction, shipping and regasification, as is the case with LNG use for electricity generation purposes.
	Barriers
Barrier Type	Description

	EO / IIIIO// / I		1 age 03 1 01 7 7 9
	CBCA		Financial Assistance
Decision	Yes, we have submitted an investment request and have received a decision	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Submissin Date	17/04/2019	Grants for studies	Yes
Decision Date	04/06/2019	Grants for studies amount	Mln EUR 4.8
Website	<u>CBCA URL</u>	Grants for works	Yes
Countries Affected	Italy, Malta	Grants for works amount	Mln EUR 299.4
Countries Net Cost Bearer	Malta	Intention to apply for CEF	No decision yet taken
Additional Comments	The CBCA decision jointly issued by the Maltese and Italian NRAs on the 4th June 2019, states that "Malta should bear 100% of the costs of the MTGP project and as such, no monetary transfer is needed between Italy and Malta".	Other Financial Assistance	Yes  (1) TEN-E Programme 2012 Call: 'Feasibility Study and cost-benefit analysis of a gas pipeline between Malta and Sicily' 2012-G215/12-ENER/12/TEN-ESI2.661346  Decision Nr C(2013) 8516 - Amount: 125,925 Eur
		Comments	(2) CEF Synergy Call of 2016: 'Technical Study and Cost- Benefit Analysis for the Development of LNG as a Marine Fuel in Malta' Grant Agreement No: INEA/CEF/SYN/A2016/1338428; Action No: 2016-MT- SA-0005 - Amount: 600,000 Eur
		General Comments	

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### **Green Hydrogen Hub Drenthe**

ETR-N-833	Project	Energy Transition Related Project	Non-FID
Update Date	14/08/2020		Advanced
	Production of hydrogen via electrolysis and storage of hydrogen in salt caverns. GHH DR is located in the Procaverns suitable for storage of hydrogen in salt deposits are present. The location is close to existing energy i transmission grid, gas transmission network, underground gas storage and wind resources in the Northern Se		gh-voltage electricity

Interest for green hydrogen have already been received from entities engaged in transport, construction, and industry.

2027 - 300 MW - Year 2031 - 1,000 MW Hydrogen storage capacity - Year 2027 - 200 GWh - Year 2031 - 400 GWh. The results of ETR-N-828 show that project benefits exceed project costs. Large-scale electrolysis optimises the value of RES-E & co-location with large-scale hydrogen storage maximises the technology benefits ensuring a robust hydrogen supply chain. ETR-N-828 illustrates sector coupling potential as Expressions of

PRJ Code - PRJ Name

Description

Sponsors			General Information
Corre Energy Limited	100%	Promoter	Corre Energy Limited
		Operator	Corre Energy Storage Ltd
		Host Country	Netherlands
		Status	Planned
		Website	

Schedule	Start Date	End Date
Pre-Feasibility		11/2021
Feasibility	12/2021	01/2022
FEED	02/2022	09/2022
Permitting	05/2022	05/2024
Supply Contracts		05/2024
FID		06/2024
Construction	09/2024	08/2026
Commissioning	2026	2026
Grant Obtention		
Date		

Technical Information (ETR)			
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
Planning	Power-to-hydrogen electrolysis system with a capacity of up to 1,000 MW - Salt cavern storage of up to 130 million Nm3 (400 GWh) of hydrogen producing 2.712 GWh/day of Green Hydrogen		2026

Current TYNDP : TYNDP 2020 - Annex A Page 657 of 773

# Green Hydrogen Hub Leer

ETR-N-874	Project	Energy Transition Related Project	Non-FID
Update Date	14/08/2020		Advanced
Description	Production of hydrogen via electrolysis and storage of hydrogen in salt caver deposits suitable for creation of caverns capable of large-scale storage of hydrogenstructure: high-voltage electricity transmission grid, gas transmission new Seas Region.  Electrolysis capacity: Year 2027 - 300 MW Year 2031 - 1,000 MW Hydrogens of ETR-N-828 show that project benefits exceed project costs. Large-scale electrolysis capacity is a project benefits exceed project costs. Large-scale electrolysis capacity is a project benefits ensuring a robust hydrogen storage maximises the technology benefits ensuring a robust hydrogen of interest for green hydrogen have been received from entities	drogen are present. The location is close to existing twork, multiple gas storage caverns and wind resolution to the storage capacity: Year 2027 - 200 GWh Year 2031 - ectrolysis optimises the value of RES-E & co-location components to the supply chain. ETR-N-828 illustrates sector countries.	g energy urces in the Northern - 400 GWh. The results on with large-scale
PRJ Code - PRJ Name	-		

Sponsors			General Information
Corre Energy Limited	100%	Promoter	Corre Energy Limited
		Operator	Corre Energy Storage Ltd
		Host Country	Netherlands
		Status	Planned
		Website	

Schedule	Start Date	End Date
Pre-Feasibility		11/2021
Feasibility	12/2021	01/2022
FEED	02/2022	09/2022
Permitting	05/2022	05/2024
Supply Contracts		05/2024
FID		06/2024
Construction	09/2024	08/2026
Commissioning	2026	2026
Grant Obtention		
Date		

Technical Information (ETR)			
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
Planning	Power-to-hydrogen electrolysis system with a capacity of up to 1,000 MW - Salt cavern storage of up to 130 million Nm3 (400 GWh) of hydrogen producing 2.712 GWh/day of Green Hydrogen		2026

Current TYNDP: TYNDP 2020 - Annex A Page 659 of 773

### Green Hydrogen Hub Zuidwending

ETR-N-830	Project	Energy Transition Related Project	Non-FID
Update Date	14/08/2020		Advanced
	Production of hydrogen via electrolysis & storage of hydrogen in salt caverns. GHH ZW caverns suitable for storage of hydrogen are created in salt deposits by Nouryon during infrastructures high voltage electricity transmission grid and transmission patrons.	its salt producing activities. Located cl	ose to existing energy
Description	infrastructure: high-voltage electricity transmission grid, gas transmission network, unde Region. Electrolysis capacity - Year 2026-300 MW - Year 2030-1 GW Hydrogen storage of		

as expressions of interest for green hydrogen have been received from entities engaged in transport, construction & industry

results of ETR-N-828 show that project benefits exceed project costs. Large-scale electrolysis optimises the value of RES-E & co-location with large-scale hydrogen storage maximises the technology benefits ensuring a robust hydrogen supply chain.ETR-N-828 illustrates sector coupling potential

PRJ Code - PRJ Name

Sponsors			General Information
Corre Energy Limited	100%	Promoter	Corre Energy Limited
		Operator	Corre Energy Storage Ltd
		Host Country	Netherlands
		Status	Planned
		Website	

Schedule	Start Date	End Date
Pre-Feasibility		11/2021
Feasibility	12/2021	01/2022
FEED	02/2022	09/2022
Permitting	05/2022	05/2024
Supply Contracts		05/2024
FID		06/2024
Construction	09/2024	08/2026
Commissioning	2026	2026
Grant Obtention		
Date		

Technical Information (ETR)						
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year			
Planning	Power-to-hydrogen electrolysis system with a capacity of up to 1,000 MW - Salt cavern storage of up to 130 million Nm3 (400 GWh) of hydrogen capable of producing 2.712 GWh/day of Green Hydrogen-CAES Zuidwending (CAES ZW), a hydrogen-fuelled CAES facility with generation capacity of 320 MW which is a European Project of Common Interest, PCI Number 1.17.		2026			

Current TYNDP : TYNDP 2020 - Annex A Page 661 of 773

# Supercritical water gasification facilities

ETR-A-437	Project	Energy Transition Related Project	Non-FID
Update Date	15/08/2019		Advanced
	Supercritical water gasification (SCWG) is an innovative technology that con sludge into sustainable energy and reusable raw materials.	verts wet biomass (waste) streams such as manu	re, biowaste and sewage
Description  Supercritical water gasification is a thermo-chemical conversion technology that makes use of the water component in the wet waster Compressing water, containing the biomass, under high temperature, creates the so-called supercritical phase.			
	SCWG is a multi-feedstock technology, in which all kinds of (wet)biomass ca without additional costs for compression.	n be processed. In addition, the gas is produced	under high pressure,
PRJ Code - PRJ Name	-		

Sponsors	General Information		
	Promoter	N.V. Nederlandse Gasunie	
	Operator	Gasunie Transport Services B.V.	
	Host Country	Netherlands	
	Status	Planned	
	Website		

Schedule	Start Date	End Date
Pre-Feasibility		12/2018
Feasibility	01/2018	06/2019
FEED	07/2019	12/2020
Permitting	01/2019	12/2020
Supply Contracts		01/2021
FID		07/2020
Construction	01/2021	12/2023
Commissioning	2021	2021
Grant Obtention Date		

Current TYNDP : TYNDP 2020 - Annex A Page 663 of 773

## FSRU Polish Baltic Sea Coast

LNG-N-947	Project	LNG Terminal	Non-FID
Update Date	04/08/2020		Non-Advanced
Description	The FSRU Polish Baltic Sea Coast project is planned as the first floating terminal in Pola The project will offer its regasification capacities to the gas consumers in Poland and of via Gas Interconnection Poland-Lithuania and/or LNG ships) and in Central-Eastern Europel-SK and PL-UA interconnections). The implementation of the project supports the EU ensuring LNG supplies for short and long-haul shipping (for bunkering service). The FSI fuels infrastructure for both road and sea transport. The project covers also the planned Gdańsk, as well as with a new compressor station CS Pomorze.	ther countries in the Baltic Sea region ope (supplies within the North-South J's efforts to reduce the sulphur conte RU terminal also supports the develop	(supplies to be directed Gas Corridor via PL-CZ, ent of marine fuels by pment of alternative
PRJ Code - PRJ Name	-		

Capacity Increments Variant For Modelling							
Point		Operate	or	Year	From Gas System	To Gas System	Capacity
FSRU Polish Baltic Sea Coast	GAZ-SYSTEM S.A. 20		2025	LNG_Tk_PL	PL	138.00 GWh/d	
Sponsors	oonsors General Information			NDP an	d PCI Information		
Gas Transmission Operator GAZ-SYSTEM S.A.	100%	Promoter	GAZ-SYSTEM S.A	A. Part c	11 I/II IP	Yes (National Ten-Year Transmission	
		Operator	GAZ-SYSTEM S.A		Sy	stem Development	Plan 2018-2027)
		Host Country	Polan	d NDP	Number		N/A
		Status	Planne	d NDP	Release Date		
		Website	Project's UR	L NDP	Website		NDP URL
			•		ntly PCI		Yes (5.1.1 (2020))
				Priori	ty Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	03/2017	10/2017
FEED	01/2020	07/2022
Permitting	09/2019	07/2022
Supply Contracts		08/2020
FID		10/2022
Construction	03/2023	12/2025
Commissioning	2025	2025
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Technical Information (LNG)					
Regasification Facility	Reloading Ability Project Phase	Expected Increment Ship Size (bcm/y) (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 Comments LNG)	Commissioning Load Factor Year (%)
FSRU Polish Baltic Sea Coast	Yes FSRU project	4.5 170,000	13.20	170,000 none	2025 0

### Fulfilled Criteria

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

- Diversification of supply, sources, routes and counterparts by enhancing the access to the global LNG market; - Reduction of dependence on a single supply sources in PL and other countries in the BEMIP and CEE regions; - Mitigation of exposure to supply disruptions from the East in the BEMIP and CEE regions; - Reduction of dependence on a single supply source in the CEE region; - Reduction of price differences between the BEMIP and North-West regions; - Reduction of emissions in the BEMIP and CEE regions by promoting natural gas in national economies.

### **Expected Gas Sourcing**

Benefits				
Main Driver	Others			
Main Driver Explanation	n Project driver: SoS, market demand, sustainability			
Benefit Description				

Barriers

Barrier Type Description

Financing Availability of funds and associated conditions

	CBCA	Finar	ncial Assistance
	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF
Decision	and we have not yet decided whether we will submit or	Grants for studies	No
61	not	Grants for studies amount	Mln EUR 0.0
Submissin Date		Grants for works	No
Decision Date		Grants for works amount	Mln EUR 0.0
Website		Intention to apply for CEF	No decision yet taken
Countries Affected		Other Financial Assistance	No
Countries Net Cost Bearer		Comments	
Additional Comments		General Comments	

Current TYNDP : TYNDP 2020 - Annex A Page 666 of 773

# GCP GAZ-SYSTEM/ONTRAS - incremental capacity project

TRA-N-1202	Project	Pipeline including CS	Non-FID				
Update Date	15/08/2019		Non-Advanced				
Description	The incremental capacity project concerns the IP GCP GAZ-SYSTEM/ONTRAS. The demand for incremental capacity has been indicated in the direction from Poland to GASPOOL. To meet the indicated demand for incremental capacity at this IP, GAZ-SYSTEM S.A. and ONTRAS conducted analyses related to the technical development of the Lasów gas station. The maximum level of the capacity development is set on 2,025,676 kWl In order to offer such incremental capacity, the Polish gas transmission system will have to be developed through extension of the Kiełczów gas node and Lasów metering station.						

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
GCP GAZ-SYSTEM/ONTRAS	GAZ-SYSTEM S.A.	2023	PL	DEg	48.60 GWh/d

PRJ Code - PRJ Name

Sponsors		General Information	NE	OP and PCI Information	
Gas Transmission Operator GAZ-SYSTEM S.A.	100%	Promoter	GAZ-SYSTEM S.A.	Part of NDP	No ((6) others - please comment below)
		Operator	GAZ-SYSTEM S.A.	NDP Number	
		Host Country	Poland	NDP Release Date	
		Status	Planned	NDP Website	
		Website	<u>Project's URL</u>	Currently PCI	No
				Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2023	2023
Grant Obtention		
Date		

Regulated
Regulated
No
Not Relevant
0.00%
0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter Length Compressor Pow (mm) (km) (MW)	er Comissioning Year		
Kiełczów node - modernisation			0		
Lasow metering station - modernisation			0		
	Total				

## Delays since last TYNDP

Delay Since Last TYNDP

Delay Explanation The lack of NRAs' coordinated decisions regarding the project.

	Benefits
Main Driver	Market Demand
	The incremental process regarding extension of the GCP GAZ-SYSTEM/ONTRAS capacity started in 2017 due to the interest of market participants in the incremental capacity in the given point.
Benefit Description	

Decision  No, we have not submitted an investment request yet, and we do not plan to submit it  Submissin Date  Decision Date  Website  Countries Affected  Countries Net Cost Bearer  Additional Comments  No, we have not submitted an investment request yet, and we do not plan to submit it  Grants for studies  Grants for works  Grants for works  Grants for works amount  Intention to apply for CEF  Other Financial Assistance  Comments  General Comments	olied for CEF No Mln EUR 0.0 No
Countries Affected Intention to apply for CEF Countries Net Cost Bearer Other Financial Assistance Additional Comments Comments	
General Comments	Mln EUR 0.0

Current TYNDP : TYNDP 2020 - Annex A Page 669 of 773

## North - South Gas Corridor in Eastern Poland

TRA-N-245	Project	Pipeline including CS	Non-FID
Update Date	31/10/2019		Non-Advanced
Description	The investment tasks within the project constitute essential elements of the planned N Eastern Europe. The corridor covers Eastern Poland and is planned to be connected to Poland – Slovakia Interconnection. Implementation of the project will allow for signific Eastern Poland towards PL-SK Interconnection and PL-UA Interconnection. This invest along the North-South axis. It will also enhance the access to the UGS Strachocina that security of supply infrastructure in the CEE region.	two interconnectors, Poland – Ukraine cant volumes of gas to be transported v ment plays a key role in the integration	e Interconnection and via the corridor in with the CEE region
PRJ Code - PRJ Name	•		

Capacity Increments Variant For Modelling							
Point	Operator	Year	From Gas System	To Gas System	Capacity		
	GAZ-SYSTEM S.A.	2029	DScPL	PL	0.00 GWh/d		
Aggregated Distribution (PL)	Comment: The is an internal project which is planned to be connected to PL-SK, PL-UA						
				interconnections			

Sponsors	General Information		NDP and PCI Information		
Gas Transmission Operator GAZ-SYSTEM S.A. 100%		Promoter	GAZ-SYSTEM S.A.	Part of NDP	Yes (National Ten-Year Transmission
		Operator	GAZ-SYSTEM S.A.	Tare of ND1	System Development Plan 2018-2027)
		Host Country	Poland	NDP Number	N/A
		Status	Planned	NDP Release Date	
		Website	Project's URL	NDP Website	NDP URL
				Currently PCI	Yes (6.2.2 (2020))
				Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2029	2029
Grant Obtention		
Date		

	<u> </u>			
Third-Party Access Regime				
Considered TPA Regime	Regulated			
Considered Tariff Regime	Regulated			
Applied for Exemption	No			
Exemption Granted	Not Relevant			
Exemption in entry direction	0.00%			
Exemption in exit direction	0.00%			

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
CS Strachocina	up to 30 MW			30	0
Gustorzyn-Wronów pipeline		1,000	316		0
Hermanowice-Jarosław pipeline		1,000	39		0
Jarosław - Rozwadów pipeline		1,000	60		0
Płońsk-Uniszki Zawadzkie pipeline		1,000	72		0
Rembelszczyzna-Wronów pipeline		1,000	135		0
Rozwadów-Końskowola-Wronów pipeline		1,000	103		0
	Total		725	30	

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#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

The project is an internal enabler for PL-SK and PL-UA interconnections. Its implementation will have an impact on: Market integration: - Creation of a well-integrated and functioning market in the CEE region. SoS: - Mitigation of exposure to supply disruptions in CEE countries; - Reduction of dependence on gas supplies from Russia in the CEE region; - Bringing new route for natural gas to the south-eastern part of Poland which has developed gas transmission system and storage facilities. Competition: - Reduction of price differences between the CEE and North-West regions; - Enhanced access to new sources of supply in the CEE region (LNG, NO supplies). d) Sustainability - Reduction of emissions in the CEE region by promoting natural gas in national economies.

	Delients
Main Driver	Others
Main Driver Explanation	Regulation SoS, market demand, sustainability
Benefit Description	The project will allow to transport significant volumes of gas via PL-SK and PL-UA Interconnections. It will also enhance the access to the UGS Strachocina that have large expansion potential and may serve as essential security of supply infrastructure in the CEE region. Construction of the pipelines within this project, together with completion of the PL-SK Interconnection and PL-UA Interconnection, will have a positive impact on the competition in the CEE region, as the project will provide a possibility to open the market for more gas suppliers. This would in turn mean ending the state of major dependency on one single gas supplier for the countries in the respective regions thanks to the potential access to gas deliveries from new sources.
	Barriers
Barrier Type	Description
Permit Granting	Efficient permitting procedures are necessary for timely implementation of the project.
Others	Due to the project drivers which are mainly related to SoS in Central-Eastern Europe, the project does not meet the criterion of economic viability, so the external co-financing is indispensable. Lack of external financial support may be a serious barrier in implementation.
Financing	Due to the project drivers which are mainly related to SoS in Central-Eastern Europe, the project does not meet the criterion of economic viability, so the external co-financing is indispensable. Lack of external financial support may be a serious barrier in implementation.

	CBCA	
Decision	No, we have not submitted an investment request yet,	Applied for CEF
5 0 0 0 1 0 1 1	and we do not plan to submit it	Grants for studies
Submissin Date		Grants for studies amou
Decision Date		Grants for works
Website		Grants for works amoun
Countries Affected		Intention to apply for CE
Countries Net Cost Bearer		Other Financial Assistance
Additional Comments		Comments
		General Comments

Financial Assistance					
Applied for CEF	(3) No, we have not applied for CEF				
Grants for studies	No				
Grants for studies amount	Mln EUR 0.0				
Grants for works	No				
Grants for works amount	Mln EUR 0.0				
Intention to apply for CEF					
Other Financial Assistance	Yes				
Comments					
General Comments					

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## North - South Gas Corridor in Western Poland

TRA-F-247	Project	Pipeline including CS	FID
Update Date	09/12/2019		Advanced
Description	The investment tasks within the project constitute essential elements of the The corridor covers Western Poland and it is planned to be connected to PL project will allow for exploiting full potential of gas transmission from LNG corridor to other CEE countries. This infrastructure will be used for purpose	CZ Interconnection. Implementation of the inve Terminal in Świnoujście and Baltic Pipe through t	stment tasks within this
PRJ Code - PRJ Name			

Capacity Increments Variant For Modelling							
Point		Operat	or	Year	From Gas System	To Gas System	Capacity
Aggregated Distribution (PL)		GAZ-SY	STEM S.A.	2021	DScPL	PL	0.00 GWh/d
Sponsors			General Information		NDP and	PCI Information	
Gas Transmission Operator GAZ-SYSTEM S.A.	100%	Promoter	GAZ-SYSTEM S.A	. Part o	of NDP	es (National Ten-Ye	ar Transmission
		Operator	GAZ-SYSTEM S.A		Sys	stem Development	Plan 2018-2027)
		Host Country	Poland	NDPI	Number		N/A
		Status	Planned	NDP	Release Date		
		Website	<u>Project's URI</u>	NDP	Website		NDP URL
					ntly PCI		No
				Priori	ty Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED	09/2013	08/2017
Permitting	11/2014	08/2017
Supply Contracts		
FID		11/2017
Construction	11/2017	03/2021
Commissioning	2021	2021
Grant Obtention		
Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
CS Kędzierzyn				30	0
Kędzierzyn Node					0
Tworóg-Kędzierzyn Koźle pipeline		1,000	43		0
Zdzieszowice - Wrocław pipeline		1,000	130		0
Zdzieszowice-Kędzierzyn Koźle		1,000	19		0
	Total		192	30	

	Benefits					
Main Driver	Others					
Main Driver Explanation	Main Driver Explanation The project is driven by SoS, market demand considerations and sustainability					
Benefit Description	Implementation of the investment tasks within this project will allow for ensuring full functionality of PL-CZ Interconnection. This project will have an impact on: enhancing functionality of transmission system in Central and Southern Poland in order to facilitate better operational functioning of the upgraded PL-CZ Interconnection; increasing the security of supply sources, routes and counterparts, as well as on providing an overall flexibility for the CEE region; improving European gas grid interconnections; creating a well-functioning internal market in the CEE region by ensuring high reliability of the cross-border transmission between Poland and the Czech Republic; promoting natural gas as a low emission source of energy in the economy.					

	CBCA		Financial Assistance
Decision	Yes, we have submitted an investment request and have received a decision	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Submissin Date	31/10/2013	Grants for studies	Yes
Decision Date	24/06/2014	Grants for studies amount	Mln EUR 0.0
Website	<u>CBCA URL</u>	Grants for works	No
Countries Affected		Grants for works amount	Mln EUR 0.0
Countries Net Cost Bearer		Intention to apply for CEF	
Additional Comments		Other Financial Assistance	Yes
			Structural Funds (Operational Programme Infrastructure and Environment 2014-2020): - Tworóg - Kędzierzyn-Koźle; - Zdzieszowice- Wrocław.
		Comments	
			Zdzieszowice- Wrocław: TEN-E: " Studies and preinvestment works related to the utilization and further development possibilities of the Interconnector Poland - Czech Republic"
		General Comments	

Current TYNDP : TYNDP 2020 - Annex A Page 676 of 773

## **UGS** Damasławek

UGS-N-914	Project	Storage Facility	Non-FID
Update Date	04/10/2019		Non-Advanced
	The purpose of the project is to construct a UGS facility in salt caverns in Damasławek in cer	ntral Poland along with the pipel	ine connecting the UGS
Description	facility with the gas transmission system. The initial working gas volume will amount for 800	) mcm. UGS Damasławek will pla	y an important role from
Description	the point of view of SoS and competition perspective. It will also be instrumental in terms of	f ensuring proper functioning of	the transmission system

in Poland. The project scope covers the UGS facility in Damasławek and a connecting pipeline to the transmission network.

PRJ Code - PRJ Name

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Democratic (DL)	GAZ-SYSTEM S.A.	2026	STcPL	PL	200.00 GWh/d
Damasławek (PL)	GAZ-SYSTEM S.A.	2026	PL	STcPL	100.00 GWh/d

Sponsors	General Information		NDP and PCI Information			
Gas Transmission Operator GAZ-SYSTEM S.A.	100%	Promoter	GAZ-SYSTEM S.A.	Part of NDP	Yes (National Ten-Year Transmission	
		Operator	GAZ-SYSTEM S.A.	Tall Of NDI	System Development Plan 2020-2029,	
		Host Country	Poland	NDP Number	N/A	
		Status	Planned	NDP Release Date		
		Website	Project's URL	NDP Website	NDP URL	
			-	Currently PCI	No	
				Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2026	2026
Grant Obtention		
Date		

Regulated
Regulated
No
Not Relevant
0.00%
0.00%

Technical Information (UGS)									
Storage Facility	Storage Facility Type	Multiple-cycle Facility	Project Phase	Working Volume (mcm)	Withdrawal Capacity (mcm/d)			Comments	Commisioning Year
UGS Damasławek	Salt Cavern	Yes	UGS Damaslawek	800	8.9	17.7	75		2026

	Be	nefits
Main Driver	Others	
Main Driver Explanat	ion Project drivers: SoS, market demand	
Benefit Description		

	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance						
Applied for CEF	(3) No, we have not applied for CEF					
Grants for studies	No					
Grants for studies amount	Mln EUR 0.0					
Grants for works	No					
Grants for works amount	Mln EUR 0.0					
Intention to apply for CEF						
Other Financial Assistance	No					
Comments						
General Comments						

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# Upgrade of LNG terminal in Świnoujście

LNG-F-272	Project	LNG Terminal	FID
Update Date	22/11/2019		Advanced
Description  PRJ Code - PRJ Name	The project includes the extension of the regasification capacity from 5 bcm/y to elements:  - Additional submerged combustion vaporizers (SCVs);  - Third LNG storage tank of min 160.000 cm LNG;  - Second jetty;  - Rail loading terminal;  The terminal will provide for small scale services covering bunkering, reloading to the expansion would entail increasing plant's regasification capacity and supply through which the Polish LNG terminal could become a prominent reloading debunkering vessels with LNG.	to smaller vessels, trans-shipment and rail load of highly-specialized LNG reloading service fo	ding. or smaller vessels,

Capacity Increments Variant For Modelling

Point		Operat	or	Year	From Gas System	To Gas System	Capacity
Swinoujscie		GAZ-SYSTEM S.A.		2023	LNG_Tk_PL	PL	76.57 GWh/d
		Polskie LNG S.A.		2023	LNG_Tk_PL	PL	76.57 GWh/d
Sponsors			General Information		NDP an	d PCI Information	
Gas Transmission Operator GAZ-SYSTEM S.A.	100%	Promoter	GAZ-SYSTEM S.A	. Part o	of NDP	es (National Ten-Ye	ear Transmission
		Operator	Polskie LNG S.A		Sy	stem Development	Plan 2018-2027)
		Host Country	Poland	d NDP	Number		N/A
		Status	Planned	NDP	Release Date		
		Website	Project's URI	NDP	Website		NDP URL
				<del></del>	ntly PCI		No

**BEMIP** 

Priority Corridor(s)

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	04/2015	12/2017
FEED	12/2017	06/2018
Permitting	08/2017	01/2019
Supply Contracts		
FID		05/2018
Construction	04/2018	05/2023
Commissioning	2023	2023
Grant Obtention		
Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Technical Information (LNG)							
Regasification Facility	Reloading Ability Project Phase	Expected Increment Ship Size (bcm/y) (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 Comments LNG)	Commissioning Load Factor Year (%)		
LNG terminal in Świnoujście	Yes Extension	2.5 90,000	6.86	180,000 N/A	2023 50		

### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

	Benefits	
Main Driver	Others	
Main Driver Explanation	on Implementation of the project is driven by SoS and market demand considerations	
Benefit Description	The extension of the LNG terminal in Świnoujście will have an impact on: increasing security of supply in the Baltic Sea and CEE regions by diversifying supply routes, sources (new physical source of supply for both regions) and counterparts (access to global LNG market); enhancing competition on regional markets; promoting natural gas as a reliable, competitive and environmentally-friendly source of energy e.g. in the transport sector (mariting transport); creating a physical hub in Swinoujscie and/or a virtual hub in Poland; establishing adequate technical conditions necessary to cover the forecasted growth of the gas demand in Poland and possible leverage for market coupling potential in the Baltic Sea region and in Central-Eastern The LNG terminal in Świnoujście contributes to the NSI EAST corridor, as the supplies from Świnoujście may be directed through upgraded transmis system in Poland, PL-CZ PL-SK and PL-UA interconnections towards the CEE region.	me Europe.
	Barriers	
Danis a Traca	Description.	

	Barriers
Barrier Type	Description
Others	Possible lack of risk-taking in the private gas sector which would result in insufficient long term committments to enable the investment decision for the infrastructure operator. It could be mitgated by external susbisdies (EU) to cover positive externalities such as SoS, positive environmental impact (reduction of emissions due to fuel change in maritime transport) and supply diversification in the Baltic area and the CEE region (including Ukraine).
Financing	Availability of funds and associated conditions
Regulatory	Capacity quotas
Regulatory	Low rate of return
Market	Lack of market maturity

	CBCA		Finan
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it	Applied for CEF	(1) Yes,
Submissin Date		Grants for studies	
Decision Date		Grants for studies amount	
Website		Grants for works	
Countries Affected		Grants for works amount	
Countries Net Cost Bearer		Intention to apply for CEF	
Additional Comments		Other Financial Assistance	
		Comments	
		6 16	

	Financial Assistance
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	
Other Financial Assistance	No
Comments	
General Comments	

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# **Carregado Compressor Station**

TRA-A-320	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Advanced
Description	The project consists of a Compressor Station in the main high pressure pipeline and it ai Sines and Leiria, to enable that higher flow rates can be transported from the Sines LNG IP between Portugal and Spain (pipeline Celorico-Spanish Border).		•

PRJ Code - PRJ Name

Capacity Increments Variant For Mod	delling				
Point	Operator	Year	From Gas System	To Gas System	Capacity
Sines	REN - Gasodutos, S.A.	2025	LNG_Tk_PT	PT	92.80 GWh/d
	Comment: Incremental capacity in	Comment: Incremental capacity in pipeline network from Sines LNG regaseification.			

Sponsors			General Information	NDP and PCI Information		
REN Gasodutos, SA	100%	Promoter	REN-Gasodutos, S.A.	Part of NDP	Yes (PDIRGN 2018 - 2027)	
		Operator	REN - Gasodutos, S.A.	NDP Number	-	
		Host Country	Portugal	NDP Release Date	19/12/2018	
		Status	Planned	NDP Website	NDP URL	
		Website	<u>Project's URL</u>	Currently PCI	No	
				Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		01/2010
Feasibility	09/2008	01/2010
FEED	08/2010	11/2010
Permitting	02/2014	07/2016
Supply Contracts		10/2023
FID		05/2023
Construction	01/2024	12/2025
Commissioning	2025	2025
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Setubal - Leiria (Lote 1)	Carregado Compressor Station.			14	2025
	Total			14	

Delays since last 1 mor			
Delay Since Last TYNDP	3 years		
Delay Explanation	The investment in this infrastructure should be decided in future NDP. The schedule of this project is aligned and is a enabler of the PCI project 5.4 - 3rd interconnection between Portugal and Spain (TRA-N-283), which in turn is dependent on STEP's decision.		

### **Expected Gas Sourcing**

LNG (DZ,LY,MX,NO,QA,RU,SA,ES,AE,US,VE,WO,YE)

Benefits
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Market Demand

Main Driver Explanation Se comments below.

**Benefit Description** 

The project aims to increase the capacity of the pipeline section between Sines and Leiria, to enable that higher flow rates can be transported from the Sines LNG Terminal. The project will increase the interoperability and system flexibility and consequently support intermitent renewable generation, mainly from the high share of wind generation capacity installed in Portugal and Spain. With the expansion of the Sines LNG Terminal and the consequent increase in their regasification capacity to RNTGN, this project will contribute for the diversification of supply sources and also supplying counter parts. From the strategic and planning point of view, the Carregado CS is proposed in order to integrate the other infrastructures of the RNTIAT, namely the Sines LNG terminal, the construction of the 3rd interconnection Portugal-Spain and the development of the Carriço underground storage (UGS).

#### **Barriers**

**Barrier Type** 

Main Driver

#### Description

Regulatory

**Additional Comments** 

In simple terms and according to the current Portuguese regulation, the revenue stream will be obtained by the remuneration of the net invested capital of the project plus the amortization recovery and the opex cost recovery (subject to a mix of price cap and revenue cap regimes). These revenues will be ensured through the payment of regulated TPA tariffs by network users Nevertheless, it's important to notice that it is not possible to predict if, when and to what extent any changes to this model may occur.

CBCA		
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it	
Submissin Date		
Decision Date		
Website		
Countries Affected		
Countries Net Cost Bearer		

Financial Assistance		
Applied for CEF	(3) No, we have not applied for CEF	
Grants for studies	No	
Grants for studies amount	Mln EUR 0.0	
Grants for works	No	
Grants for works amount	Mln EUR 0.0	
Intention to apply for CEF	No, we do not plan to apply	
Other Financial Assistance	No	
Comments		
General Comments		

# Bilciuresti daily withdrawal capacity increase

UGS-F-311	Project	Storage Facility	FID
Update Date	18/11/2019		Advanced
Description	Upgrade of the surface facilities: compressor station, new dehydration unit, upgrade the compressor station and the well field. The project also includes drilling of four new The project aims to increase the withdrawal rate from 14 million cm/day to 18 million	ew wells.	ecting pipeline between
PRJ Code - PRJ Name			

Point	Operat	or	Year	From Gas System	To Gas System	Capacity
VIP Romgaz UGS (RO)	INMAG	SNGN ROMGAZ SA - FILIALA DE INMAGAZINARE GAZE NATURALE DEPOGAZ PLOIESTI SRL		STcRO	RO	42.00 GWh/d
Sponsors		General Information		NDP an	d PCI Information	
SNGN ROMGAZ SA - FILIALA DE INMAGAZINARE GAZE NATURALE DEPOGAZ PLOIESTI SRL	00% Promoter	SNGN ROMGAZ SA - FILIALA DE INMAGAZINARE GAZE NATURALE DEPOGAZ PLOIESTI SRL	NDP	of NDP Number Release Date	No ((2) no NDP exis	ts in the country
	Operator	SNGN ROMGAZ SA - FILIALA DE INMAGAZINARE GAZE NATURALE DEPOGAZ PLOIESTI SRL	NDP Curre	Website ently PCI ity Corridor(s)		N NSI
	Host Country	Romania				
	Status	In Progress				
	Website					

Schedule	Start Date	End Date
Pre-Feasibility		12/2015
Feasibility	03/2016	03/2017
FEED	12/2017	07/2020
Permitting	05/2018	12/2020
Supply Contracts		06/2023
FID		06/2017
Construction	05/2018	09/2025
Commissioning	2025	2025
Grant Obtention Date		

Third-Party Access Regime						
Considered TPA Regime	Regulated					
Considered Tariff Regime	Regulated					
Applied for Exemption	No					
Exemption Granted	No					
Exemption in entry direction	0.00%					
Exemption in exit direction	0.00%					

			Technical Information	(UGS)					
Storage Facility	Storage Facility Type	Multiple-cycle Facility	Project Phase	Working Volume (mcm)	Withdrawal Capacity (mcm/d)	Capacity	1 %	Comments	Commisioning Year
Bilciuresti	Depleted Field	No	Bilciuresti daily withdrawal capacity increase	0	5.0	0.0	80		2025

### **Fulfilled Criteria**

Specific Criteria Fulfilled

Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

#### **Expected Gas Sourcing**

Romania

	Benefits	
Main Driver	Others	
Main Driver Explanation	Higher delivery rate of gas per day. The project aims at supplying directly or indirectly at least two Member States market integration, security of supply and sustainability criteria, the project's main contribution is to the European complementarity to future major pipeline projects in Romania developed by SNTGN Transgaz S.A creating on one neighboring Member States (HU and BG) and on the other hand access to the newly discovered gas resources in monetized soon.	n security of supply, given its e hand interconnections with the NTS of
Benefit Description	Its main regional benefits are: (a) SoS will benefit from the increase of withdrawal capacity, (b) increase the flexibil to the sustainability and flexibility of the transmission system especially of high pressure pipelines, (d) reduction c support for Romania's gas export potential.	- ·
	Barriers	
Barrier Type	Description	
Regulatory	Lack of stability of the methodologies regarding tariffs computation - under current regulations the project would which makes the storage business less attractive and don't respond to the increasing demands of the gas market.	
Political	Frequent changes in legislation	
Market	Reduced market demand from the companies acting on the gas market due to availability of gas imports	
Financing	Due to the characteristics of the storage business, financial institutions are not interested to support such project	yet.
Regulatory	Low rate of return	
Market	Lack of market maturity	
Market	Lack of market support	
Financing	Amortization rates	

	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit is
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance						
Applied for CEF	(3) No, we have not applied for CEF					
Grants for studies	No					
Grants for studies amount	Mln EUR 0.0					
Grants for works	No					
Grants for works amount	Mln EUR 0.0					
Intention to apply for CEF	Yes, for work only					
Other Financial Assistance	No					
Comments						
General Comments						

Current TYNDP : TYNDP 2020 - Annex A Page 689 of 773

## Depomures

UGS-A-233	Project	Non-FID	
Update Date	25/08/2020		Advanced
Description	The project consists in the revamping and expansion of an existing gas storage facilit rationale of the project is three fold (i) increase operational independence by building rented from another party (ii) gradually expand the storage capacity (from 300 mcm and (iii) increase flexibility of the storage by increasing injection and withdrawing cap mcm/day after implementation of the second stage.  The implementation of the first stage has already been completed with a partial investigation of the development project is expected in 2019. The project contributes to in possible gas export in the region.	g its own compression unit as currently to 400 mcm in a first stage and to 600 reacity from the existing average 1.7 mcm stment commissioned in Q1 2018, while	compression services are mcm in a second stage) n/ day to approx. 5.0 the FID for the entire
PRJ Code - PRJ Name	-		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	Depomures	2021	STcRO	RO	18.92 GWh/d
LICS Tarres Marras	Depomures	2021	RO	STcRO	18.92 GWh/d
UGS Targu Mures	Depomures	2024	STcRO	RO	15.78 GWh/d
	Depomures	2024	RO	STcRO	15.78 GWh/d
	Боронитез	202.		31010	

Sponsors			General Information	NDP and PCI Information			
GDF International	59%	Promoter	Engie Romania SA	Part of NDP	Yes (National Gas Transmission System		
SNGN Romgaz SA	40%	Operator	Depomures		Developpment Plan 2018-2027)		
SNOW Rolligaz SA	4070	Host Country	Romania	NDP Number	8.5		
FORAJ SONDE SA	0%	Status	In Progress	NIDD D I D I	14/12/2018		
MIF SA	0%	Website	<u>Project's URL</u>	NDP Website	NDP URL		
				Currently PCI	Yes (6.20.4 (2020))		
				Priority Corridor(s)			

Current	T	YNDP	:	<b>TYNDP</b>	2020	-	Annex A
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Schedule	Start Date	End Date
Pre-Feasibility		06/2004
Feasibility	06/2008	06/2009
FEED	06/2011	06/2012
Permitting	06/2012	09/2017
Supply Contracts		08/2016
FID		12/2019
Construction	01/2020	03/2024
Commissioning	2021	2024
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Technical Information (UGS)										
Storage Facility	S	torage Facility Type	Multiple-cycle Facility	Project Phase	Working Volume (mcm)	Withdrawal Capacity (mcm/d)	Injection Capacity (mcm/d)	(70)	Comments	Commisioning Year
Targu Mures	D	Depleted Field	No	Phase 1	100	1.8	1.8	100		2021
Targu Mures	D	Depleted Field	No	Phase 2	200	1.5	1.5	100		2024

	Fulfilled Criteria
Specific Criteria Fulfilled	Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas
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 group increases the remaining flexibility for Romania The project group partially mitigates risk of demand curtailment in case of Ukrainian disruption in Romania The project group allows for partially mitigates risk of demand curtailment in Romania in case of disruption of the single largest infrastructures in Romania (VIP Mediesu Aurit - Isaccea (RO-UA)).

Current TYNDP : TYNDP 2020 - Annex A Page 691 of 773

Delays since last TYNDP				
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 was 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). The permit was eventually obtained in September 2017. In addition, the lack of visibility and certainty on tariff methodology represents an important drawback when it comes for taking the FID and obtaining the necessary financing sources.			

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 both in Romania and the neighboring countries, particularly during the periods with high / peak demands.
Benefit Description	By increasing storage deliverability, transmission capacity in Southern Romania is relieved thus creating the premises for potential exports towards Bulgaria and Southern Europe in general and increasing resilience in general in various supply disruption scenarios thus contributing to a more integrated European gas market. On the other hand, insufficient storage capacity may create uncertainty in terms of energy pricing and hence the region might face more volatile winter gas prices and, at least on the short and medium term, may become too dependent on energy imports. The implementation of the 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. Also, increased flexible storage services coupled with higher regional market integration and liberalization are key in the light of the future expected developments.
	Barriers
Barrier Type	Description
Regulatory	Since the storage in Romania is regulated, the tariff methodology and concerned regulation must be clear and incentivising allowing to recover all investments costs engaged; hence the authorities should take an engagement to keep such a regulation stable on the medium to long term.
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 eventually delayed the implementation of the entire project.
Financing	Availability of funds and associated conditions
Regulatory	Low rate of return
Regulatory	Low or zero-priced short-term capacity

CBCA			
No, we have not submitted an investment request yet, Decision and we have not yet decided whether we will submit or			
	not		
Submissin Date			
Decision Date			
Website			
Countries Affected			
Countries Net Cost Bearer			
Additional Comments			

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF	No decision yet taken			
Other Financial Assistance	No			
Comments				
General Comments				

# Development on the Romanian territory of the NTS (BG-RO-HU-AT)-Phase I

TRA-F-358	Project	Pipeline including CS	FID
Update Date	22/09/2020		Advanced
Description	The project consists in the building of a gas transmission pipeline connecting the Pod and the construction of three gas compressor stations along the pipeline route (Jupa • Podişor – Recaş 32" x 63 bar gas transmission pipeline approximately 479 km long; • three gas compressor stations (Podişor CS, Bibeşti CS and Jupa CS), each station bei ensure bi-directional gas flow.  After the implementatiopn of the project the following transmission capacities will be • towards Hungary: 1.75 bcm/year; • towards Bulgaria: 1.5 bcm/year.	CS, Bibeşti CS and Podişor CS) as following equipped with two compressors, w	ws:
PRJ Code - PRJ Name	-		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Csanadpalota	SNTGN Transgaz S.A.	2020	RO	HU	47.75 GWh/d
David (DC) / Circuit (DO)	SNTGN Transgaz S.A.	2019	RO	BGn	20.80 GWh/d
Ruse (BG) / Giurgiu (RO)	SNTGN Transgaz S.A.	2020	RO	BGn	20.75 GWh/d

Sponsors		General Information		NDP and PCI Information		
SNTGN Transgaz S.A.	100%	Promoter	SNTGN Transgaz S.A.	Part of NDP	Yes (Development Plan for the National	
		Operator	SNTGN Transgaz S.A.		GTS 2018-2027)	
		Host Country	Romania	NDP Number	7.1.1	
		Status	In Progress	NDP Release Date	14/12/2018	
		Website	<u>Project's URL</u>	NDP Website	NDP URL	
				Currently PCI	Yes (6.24.1.2 (2020))	
				Priority Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		12/2013
Feasibility	01/2014	12/2014
FEED	07/2015	02/2017
Permitting	01/2014	02/2018
Supply Contracts		08/2017
FID		11/2016
Construction	12/2017	12/2020
Commissioning	2019	2020
Grant Obtention Date	09/09/2016	09/09/2016

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Sta	ations				
Pipeline Section	Pipeline Comment	Diamete (mm)	r Length (km)	Compressor Power (MW)	Comissioning Year
Phase I: Podisor-Recas		800	479	28	2020
	Total		479	28	
	Fulfilled Criteria				
Specific Criteria Fulfilled	Security of Supply, inter alia through appropriate connections and diver	rsification of supply source	es, supplyii	ng counterparts and	routes
Specific Criteria Fulfilled Comr	ments Phase I – Security of supply				
	Delays since last TYNDP				
Delay Since Last TYNDP	Stage 1- 9 months delay in commissioning Stage 2 – 21 months in com	missioning			
Delay Explanation	Due to delays occurred in the tendering procedures, the promotion of parchaeological sites along the pipeline route and the unfavourable weat will be completed in 2019, the entire project will be completed by 2020.	ther conditions, it is currer	•		•

**Expected Gas Sourcing** 

		Benefits
Main Driver	Regulation SoS	
Main Driver Explanation	ı	
Benefit Description		

	CDCA		E. 114.14	
	CBCA	Financial Assistance		
Decision	Yes, we have submitted an investment request and have received a decision	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision	
Submissin Date	12/10/2015	Grants for studies	Yes	
Decision Date	06/10/2015	Grants for studies amount	Mln EUR 1.5	
Website	<u>CBCA URL</u>	Grants for works	Yes	
Countries Affected	Hungary, Romania	Grants for works amount	Mln EUR 179.3	
Countries Net Cost Bearer	Hungary;#Romania	Intention to apply for CEF		
Additional Comments		Other Financial Assistance	No	
		Comments		
		General Comments		

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## Development on the Romanian territory of the Southern Transmission Corridor

TRA-A-362	Project	Pipeline including CS	Non-FID
Update Date	28/10/2019		Advanced
Description	Pipeline with a total length of approximately 308.3 km, it is a telescopic pipeline made up of two sections and it is designed to transmit gas at pressure of 63 bar. The two sections of the pipeline are:  • Section I, Black Sea shore – Amzacea, 32.4 km long, will have a diameter of Ø 48" (Dn1200);  • Section II, Amzacea – Podișor, 275.9 km long, will have a diameter of Ø 40" (Dn1000);		o transmit gas at a
PRJ Code - PRJ Name	- 1/2		

Sponsors			General Information NDP and PCI Information		
A		Promoter	SNTGN Transgaz SA	Part of NDP	Yes (The National Gas Transmission
SNTGN Transgaz SA	100%	Operator	SNTGN Transgaz S.A.		System Development Plan 2018-2027)
Default		Host Country	Romania	NDP Number	7.2
	250/	Status	Planned	NDDD I D I	14/12/2018
GOGC (GE)	25%	Website	Project's URL	NDP Website	<u>NDP URL</u>
MVM (HU)	25%			Currently PCI	Yes (6.24.4.5 (2020))
ROMGAZ (RO)	25%			Priority Corridor(s)	
SOCAR (AZ)	25%				

Schedule	Start Date	End Date
Pre-Feasibility		06/2014
Feasibility	07/2014	01/2016
FEED	06/2016	02/2018
Permitting	01/2015	05/2018
Supply Contracts		
FID		12/2019
Construction	12/2019	12/2021
Commissioning	2021	2021
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diametei (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Black Sea shore - Podișor	The pipeline is telescopic, the diamond 1,000 mm	eter is reduced to 1,200	308		2021
	Total		308		

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Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments Security of supply, Market Integration, Sustainability, Competition

#### **Delays since last TYNDP**

Delay Since Last TYNDP

Delay Explanation Because of the postponement of the final investment decision of the titleholders of the Black Sea blocks

### **Expected Gas Sourcing**

### Black Sea

	Benefits
Main Driver	Market Demand
Main Driver Explanatio	on
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.

/.		
CBCA		
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not	
Submissin Date		
Decision Date		
Website		
Countries Affected		
Countries Net Cost Bearer		
Additional Comments		

Financ	ial Assistance
Applied for CEF	(3) No, we have not applied for CEF
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	
Other Financial Assistance	No
Comments	
General Comments	

Current TYNDP : TYNDP 2020 - Annex A Page 699 of 773

## Falticeni UGS

UGS-N-399	Project Project	Storage Facility	Non-FID
Update Date	28/08/2019		Advanced
5	The project aims to transform one or several depleted gas fields in gas storage facilities	es of approximately 200 mil mc total c	apacity an injection rate

Description

The project aims to transform one or several depleted gas fields in gas storage facilities of approximately 200 mil mc total capacity an injection of 1.4 mmc/day and withdrawal capacity of approximately 2 mil mc/day

PRJ Code - PRJ Name

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
VIP Romgaz UGS (RO)	SNGN ROMGAZ SA - FILIALA DE INMAGAZINARE GAZE NATURALE DEPOGAZ PLOIESTI SRL	2029	STcRO	RO	18.00 GWh/d
	SNGN ROMGAZ SA - FILIALA DE INMAGAZINARE GAZE NATURALE DEPOGAZ PLOIESTI SRL	2029	RO	STcRO	14.00 GWh/d

Sponsors		General Information	rmation NDP and PCI Information		
SNGN ROMGAZ SA - FILIALA DE INMAGAZINARE GAZE NATURALE DEPOGAZ PLOIESTI SRL  100'	% Promoter	SNGN ROMGAZ SA - FILIALA DE INMAGAZINARE GAZE NATURALE DEPOGAZ PLOIESTI SRL	Part of NDP NDP Number NDP Release Date	No ((2) no NDP exists in the country)	
	Operator	SNGN ROMGAZ SA - FILIALA DE INMAGAZINARE GAZE NATURALE DEPOGAZ PLOIESTI SRL	NDP Website Currently PCI Priority Corridor(s)	No	
	Host Country	Romania			
	Status	Planned			
	Website	<u>Project's URL</u>			

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	03/2020	03/2021
FEED	02/2024	02/2025
Permitting	03/2025	03/2026
Supply Contracts		10/2027
FID		11/2023
Construction	09/2026	03/2029
Commissioning	2029	2029
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

			Technical Informatio	n (UGS)					
Storage Facility	Storage Facility Type	Multiple-cycle Facility	Project Phase	Working Volume (mcm)	Withdrawal Capacity (mcm/d)	Injection Capacity (mcm/d)	(%)	Comments	Commisioning Year
Falticeni UGS	Depleted Field	No	Falticeni new UGS	200	2.0	1.4	90	This is a one phase project. Expected Load Factor to be updated by the Feasibility Study	2027

**Expected Gas Sourcing** 

Romania

	Benefits
Main Driver	Others
Main Driver Explanation	The project aims at supplying with gas, directly or indirectly, the northern part of the country. it meets the market integration, security of supply and sustainability criteria
Benefit Description	Its main regional benefits are: (a) SoS in the region, (b) increase the flexibility of the storage system,
	Barriers
Barrier Type	Description
Regulatory	Lack of stability of the methodologies regarding tariffs computation - under current regulations the project would increase the storage tariffs at a level which makes the storage business less attractive and don't respond to the increasing demands of the gas market
Political	Frequent changes in legislation
Market	Reduced market demand from the companies acting on the gas market due to availability of gas imports
Financing	Due to the characteristics of the storage business, financial institutions are not interested to support such project yet
Regulatory	Low rate of return
Financing	Amortization rates
Financing	Availability of funds and associated conditions
Market	Lack of market maturity
Market	Lack of market support

	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit i
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost B	earer
Additional Comment	rs ·

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF	Yes, for work only			
Other Financial Assistance	No			
Comments				
General Comments				
Intention to apply for CEF Other Financial Assistance Comments	Yes, for work or			

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

TRA-N-959	Project	Pipeline including CS	Non-FID
Update Date	22/11/2019		Non-Advanced
Description	Development of gas transmission capacity on the Oneşti – Coroi – Haţeg – Nădlac co 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 buildin development of 4 or 5 new compressor stations having a total installed power of approximation.	ng of new pipelines installed in parallel	
PRJ Code - PRJ Name	-		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Csanadpalota 2	SNTGN Transgaz S.A.	2023	HU	RO	128.73 GWh/d
	SNTGN Transgaz S.A.	2023	RO	HU	128.73 GWh/d

Sponsors		G	General Information	NDP and PCI Information		
SNTGN Transgaz SA	100%	Promoter	SNTGN Transgaz SA	Part of NDP	Yes (The National Gas Transmission	
		Operator	SNTGN Transgaz S.A.		System Development Plan 2018-2027)	
		Host Country	Romania	NDP Number	7.5	
		Status	Planned	NDP Release Date	14/12/2018	
		Website		NDP Website	NDP URL	
				Currently PCI	No	
				Priority Corridor(s)	NSIE	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED		
Permitting		
Supply Contracts		
FID		
Construction		
Commissioning	2023	2023
Grant Obtention		
Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Onesti - Nadlac	existing pipelines + rehabilitation + new pipelines	813	843	82	2023
	Total		843	82	

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

### **Expected Gas Sourcing**

Caspian Region, LNG (), Black Sea or other on-shore blocks

No

No

Mln EUR 0.0

#### Benefits

Main Driver Market Demand

Main Driver Explanation

Benefit Description

No, we have not submitted an investment request yet, but we do plan to submit it

Submissin Date

**Decision Date** 

Website

Decision

Countries Affected

Countries Net Cost Bearer

**Additional Comments** 

Financial Assistance

Applied for CEF (3) No, we have not applied for CEF

Grants for studies

Grants for works No

Grants for works amount Mln EUR 0.0

Intention to apply for CEF No decision yet taken

Comments

**General Comments** 

Grants for studies amount

Other Financial Assistance

## Ghercesti underground gas storage in Romania

UGS-N-398	Project	Storage Facility	Non-FID
Update Date	28/08/2019		Advanced
Description	Ghercesti Underground Storage in Romania consists in the increase of working capacity of 450 Mcm/cycle, and enhanced withdrawal capacity of up to 5 million cm/day. The requir module, - one dehydration unit; - 80 km of connecting pipeline; The geological suitabilit the project is to: (a) fulfilling of N-1 rule at regional level, (b) increase the flexibility of the flexibility of the transmission system, (d) reduce dependency on Russian gas etc.	red investment consists of: - constructy is backed up by existing reservoir	ction of two compressor studies. The rationale of

PRJ Code - PRJ Name

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	SNGN ROMGAZ SA - FILIALA DE INMAGAZINARE GAZE NATURALE DEPOGAZ PLOIESTI SRL	2026	STcRO	RO	28.00 GWh/d
VIP Romgaz UGS (RO)	SNGN ROMGAZ SA - FILIALA DE INMAGAZINARE GAZE NATURALE DEPOGAZ PLOIESTI SRL	2026	RO	STcRO	18.00 GWh/d

Sponsors	General Information		NDP and PCI Information			
SNGN ROMGAZ SA - FILIALA DE INMAGAZINARE GAZE NATURALE DEPOGAZ PLOIESTI SR	Promoter	SNGN ROMGAZ SA - FILIALA DE INMAGAZINARE GAZE NATURALE DEPOGAZ PLOIESTI SRL	Part of NDP NDP Number NDP Release Date	No ((2) no NDP exists in the country)		
	Operator	SNGN ROMGAZ SA - FILIALA DE INMAGAZINARE GAZE NATURALE DEPOGAZ PLOIESTI SRL	NDP Website Currently PCI Priority Corridor(s)	No NSIE		
	Host Country Status	Romania Planned				
	Website	<u>Project's URL</u>				

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	02/2020	02/2021
FEED	06/2021	06/2022
Permitting	07/2022	12/2023
Supply Contracts		03/2023
FID		03/2021
Construction	01/2024	12/2026
Commissioning	2026	2026
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

			Technical Information (	(UGS)					
Storage Facility	Storage Facility Type	Multiple-cycle Facility	Project Phase	Working Volume (mcm)	Withdrawal Capacity (mcm/d)	Injection Capacity (mcm/d)	Load Factor (%)	Comments	Commisioning Year
Ghercesti	Depleted Field	No	Ghercesti underground gas storage in Romania	450	3.0	0.0	70	This is a one phase project. Expected Load Factor to be updated by the Feasibility Study	2027

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

Current TYNDP : TYNDP 2020 - Annex A Page 707 of 773

### **Expected Gas Sourcing**

#### Romania

	Benefits				
Main Driver	Others				
Main Driver Explanation	The project aims at supplying directly or indirectly at least two Member States and although it meets the competition, market integration, security of supply and sustainability criteria, the project's main contribution is to the European security of supply, given its complementarity to future major pipeline projects in Romania developed by TSO creating on one hand interconnections with the NTS of neighboring Member States (HU and BG) and on the other hand access to the newly discovered gas resources in the Black Sea, which are expected to be monetized soon.				
Benefit Description	Its main regional benefits are: (a)SoS will benefit from the increase of withdrawal capacity, (b) increase the flexibility of the storage system, (c) creating additional capacities for energy transition from coal to gas, (d) support for Romania's gas export potential.				
	Barriers				
Barrier Type	Description				
Regulatory	Lack of stability of the methodologies regarding tariffs computation - under current regulations the project would increase the storage tariffs at a level which makes the storage business less attractive and don't respond to the increasing demands of the gas market				
Political	Frequent changes in legislation				
Market	Reduced market demand from the companies acting on the gas market due to availability of gas imports				
Financing	Due to the characteristics of the storage business, financial institutions are not interested to support such project yet.				
Regulatory	Low rate of return				
Financing	Amortization rates				
Market	Lack of market maturity				
Market	Lack of market support				

CBCA				
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it			
Submissin Date				
Decision Date				
Website				
Countries Affected				
Countries Net Cost Bearer				
Additional Comments				

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF	Yes, for work only			
Other Financial Assistance	No			
Comments				
General Comments				

Current TYNDP : TYNDP 2020 - Annex A Page 709 of 773

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

TRA-F-139	P	roject	Pipeline including CS	FID
Update Date		22/11/2019		Advanced
	The project consists in the following:  • Phase I:  • NTS Interconnection with the internation  - Repair works to the Dn 800 mm Cosmest		n the area of the Isaccea metering station;	
Description	<ul> <li>Phase II:</li> <li>Upgrading and extension of the gas com</li> <li>Upgrading the Gas compressor station C</li> <li>Modifications inside the TN Silistea and T</li> <li>Works in the TN Sendreni.</li> </ul>	nești;		
PRJ Code - PRJ Name	-			

Sponsors	General Information		NDP and PCI Information	
Transgaz 100%	Promoter	SNTGN Transgaz SA	Part of NDP	Yes (The National Gas Transmission
	Operator	SNTGN Transgaz S.A.		System Development Plan 2018-2027)
	Host Country	Romania	NDP Number	7.3
	Status	In Progress	NDP Release Date	14/12/2018
	Website	Project's URL	NDP Website	NDP URL
		·	Currently PCI	No
			Priority Corridor(s)	NSIE

Schedule	Start Date	End Date
Pre-Feasibility		06/2014
Feasibility	06/2017	12/2017
FEED	01/2018	12/2020
Permitting	12/2017	12/2019
Supply Contracts		
FID		04/2018
Construction	05/2018	12/2020
Commissioning	2020	2020
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
	Phase I: The length of the route from Onesti to Isaccea is approx 200 km, but repair/upgrading works are envisaged only for 66.0 km.	813	66		0
Onesti - Cosmesti	Phase II: Gas Compressor Station Siliştea: the existing gas compressor station is equipped with three compressor units: one with a power of 3.2 MW which will be decommissioned and two with a power of 2.9 MW / compressor group which will be maintained.			9	0
	Total		66	9	
	Fulfilled Criteria				

Specific Criteria Fulfilled

Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

Current TYNDP: TYNDP 2020 - Annex A Page 711 of 773

#### **Delays since last TYNDP**

Delay Since Last TYNDP 12 months

**Delay Explanation** Obtaining the necessary permits, authorizations and agreements, extension of the duration of the tender procedure

#### **Expected Gas Sourcing**

#### Black Sea

	Benefits
Main Driver	Regulation-Interroperability
Main Driver Explanation	

Benefit Description

#### **Barriers**

**Barrier Type** Description

**Permit Granting** The permitting process is long and complicated

Availability of funds and associated conditions Financing

D	$\boldsymbol{c}$	Λ
D	u.	н

No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or Decision not

Submissin Date

**Decision Date** 

Website

Countries Affected

Countries Net Cost Bearer

**Additional Comments** 

Applied for CEF	

Grants for studies

Grants for studies amount

Grants for works

Grants for works amount

Intention to apply for CEF

Other Financial Assistance

Comments

**General Comments** 

# **Financial Assistance** (3) No, we have not applied for CEF Mln EUR 0.0 No Mln EUR 0.0 No decision yet taken No

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

TRA-F-964	Project	Pipeline including CS	FID
Update Date	22/11/2019		Advanced
Description	The project consists in the construction of a new 25 km pipeline from the Black Sea short of DN 500 and a design pressure of 55 bar.	e up to the international transit pipe	line T1 with a diameter
PRJ Code - PRJ Name	-		

Sponsors				General Information	NDP and PCI Information	
SNTGN Transgaz SA	/	100%	Promoter	SNTGN Transgaz SA	Part of NDP	Yes (The National Gas Transmission
	7		Operator	SNTGN Transgaz S.A.		System Development Plan 2018-2027)
			Host Country	Romania	NDP Number	7.6
			Status	Planned	NDP Release Date	14/12/2018
			Website		NDP Website	<u>NDP URL</u>
					Currently PCI	No
					Priority Corridor(s)	NSIE
Schedule	Start Date	End Date			Third-Party Access Regime	
Pre-Feasibility		09/2016			Considered TPA Regir	me Regulated
Feasibility	10/2016	05/2017			Considered Tariff Reg	ime Regulated
FEED	08/2017	01/2018			Applied for Exemption	n No
Permitting	03/2017	12/2017			Exemption Granted	No
Supply Contracts		10/2018				
FID		02/2019			Exemption in entry di	rection 0.00%
Construction	03/2019	12/2020			Exemption in exit dire	ection 0.00%
Commissioning	2021	2021				
Grant Obtention Date						

<b>Pipelines and Compressor Statio</b>	ns				
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Vadu-Gradina		508	25		2021
	Total		25		

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

#### **Expected Gas Sourcing**

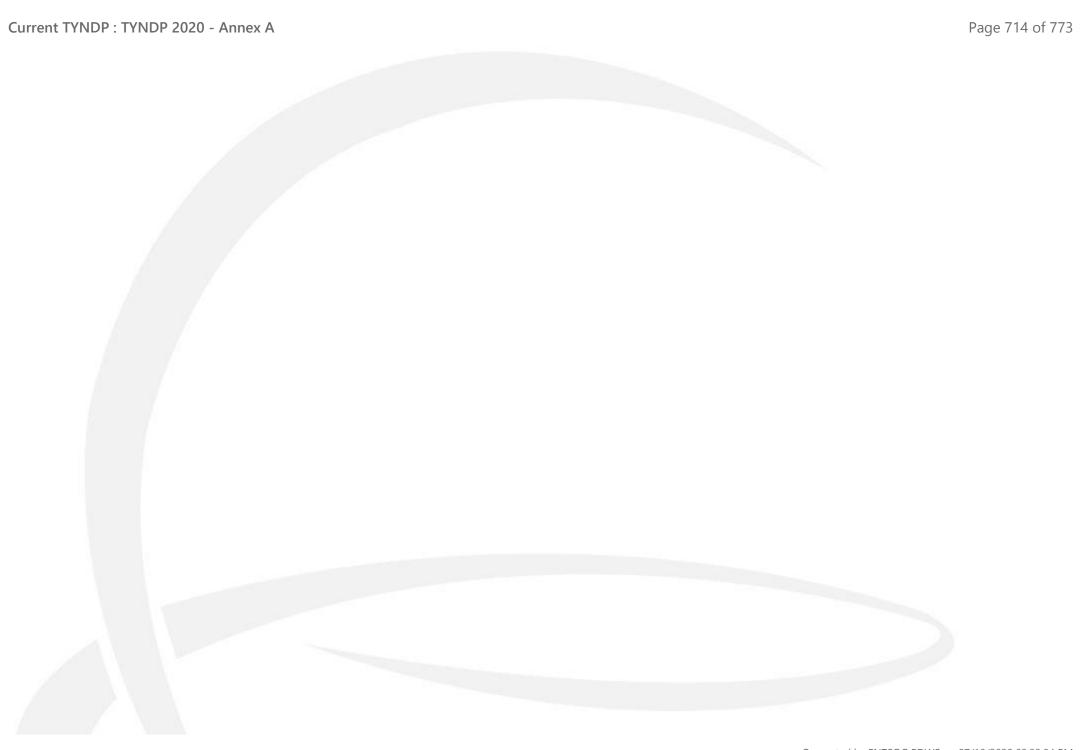
#### Black Sea

Benefit Description

		Benefits	
Main Driver	Market Demand		
Main Driver Explanation	n		

CBCA				
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it			
Submissin Date				
Decision Date				
Website				
Countries Affected				
Countries Net Cost Bearer				
Additional Comments				

Fina	ancial Assistance
Applied for CEF	(3) No, we have not applied for CEF
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	No, we do not plan to apply
Other Financial Assistance	No
Comments	
General Comments	



Current TYNDP: TYNDP 2020 - Annex A Page 715 of 773

### NTS developments in North-East Romania

TRA-F-357	Project	Pipeline including CS	FID
Update Date	18/11/2019		Advanced
	The Project "NTS development in the North East area of Romaniei in order to improv	e gas supply in the area as well as to e	nsure transmission

Description

The Project "NTS development in the North East area of Romaniei in order to improve gas supply in the area as well as to ensure transmission capacities to the Republic of Moldova" consists in the construction of a new gas transmission pipeline to connect the Technological Node Onești with the Technological Node Leţcani in the Onești – Gherăești – Leţcani direction.

The project implies the construction of new objectives and the construction of two pipeline sections with a total length of 165,150 km from the Technological Node Onești and up to the Technological Node Lețcani and of two gas compressor stations.

PRJ Code - PRJ Name

Capacity Increments Variant For Modellir	ng						
Point	Operator Ye		Year	From Gas System	To Gas System	Capacity	
Ungheni		SNTGN Transgaz S.A. 2		2021	RO	MD	42.11 GWh/d
Sponsors			General Information		NDP and	PCI Information	
SNTGN Transgaz S.A.	100%	Promoter	SNTGN Transgaz SA	Part of	· [/]] ]D	Yes (The National Gas Transmission	
		Operator	SNTGN Transgaz S.A.		Syste	em Development P	Plan 2018 - 2027)
		Host Country	Romania	NDPN	lumber		7.4
		Status	Plannea	NDP R	elease Date		14/12/2018
		Website	Project's URL	NDP W	Vebsite		NDP URL
				Curren	tly PCI		No
				Priority	/ Corridor(s)		

Schedule	Start Date	End Date
Pre-Feasibility		02/2014
Feasibility	02/2014	01/2018
FEED	01/2016	01/2018
Permitting	01/2016	01/2018
Supply Contracts		
FID		12/2018
Construction		
Commissioning	2021	2021
Grant Obtention		
Date		

Regulated
Regulated
No
Not Relevant
0.00%
0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Onesti - Gheraesti - Letcani		711	165	18	2021
	Total		165	18	

## Delays since last TYNDP

Delay Since Last TYNDP

Delay Explanation Obtaining the necessary endorsements, agreements and permits, extension of the procurement procedure durations.

### **Expected Gas Sourcing**

European gas market, Black Sea

Intergovernmental Agreements				
Agreement	Agreement Description		Agreement Signature Date	
Memorandum of Understanding	Memorandum of understanding between the Ministry of Economy, Commerce and Business Environment in Romania and the Ministry of Economy from the Republic of Moldova related to preparing the conditions for the construction of the high pressure gas transmissi	Yes	21/05/2015	

	CBCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not
Submissin Date	Hot
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF	No, we do not plan to apply			
Other Financial Assistance	No			
Comments				
General Comments				

Current TYNDP : TYNDP 2020 - Annex A Page 718 of 773

## NTS developments in North-Vest Romania

TRA-N-598	Project	Pipeline including CS	Non-FID		
Update Date	15/08/2019		Advanced		
Description	The project entails the achievement of the objectives related to the National Gas Transmission System, in the North-Western part of Romania, with the aim to create new gas transmission capacities or to increase the existing ones. The project consists in:  the construction of a gas transmission pipeline and of the related equipment in the direction Horia – Medieşu Aurit;  the construction of a gas transmission pipeline and of the related equipment in the direction Sărmăşel – Medieşu Aurit;  the construction of a gas transmission pipeline and of the related equipment in the direction Huedin – Aleşd;  the construction of a gas compressor station at Medieşu Aurit;				
PRJ Code - PRJ Name					

**Capacity Increments Variant For Modelling** 

Operator			From Gas System	To Gas System	Capacity
SNTGN	SNTGN Transgaz S.A.		RO	UAe	77.18 GWh/d
	General Information		NDP and	d PCI Information	
9% Promoter	SNTGN Transgaz SA	4	^	No ((1) the NDP wa	s prepared at an
Operator	SNTGN Transgaz S.A	. Part o	Part of NDP	earlier date and the project will be	
Host Country	Romania			posea for inclusion	in the next NDP)
Status	Planned	d			
Website		NDP I	Release Date		
		NDP \	Website		
		Curre	ntly PCI		No
		Priorit	ty Corridor(s)		
	SNTGN  SNTGN  Promoter  Operator  Host Country	SNTGN Transgaz S.A.  General Information  Promoter  Operator  Host Country  Status  SNTGN Transgaz S.A.  Romania  Plannea	SNTGN Transgaz S.A. 2026  General Information  Promoter SNTGN Transgaz SA Operator SNTGN Transgaz S.A. Host Country Romania Status Planned Website NDP S	SNTGN Transgaz S.A.  General Information  Promoter  SNTGN Transgaz SA Operator  Host Country Status  ONDP and  NDP and	SNTGN Transgaz S.A.  2026 RO UAe    Comparison

Schedule	Start Date	End Date
Pre-Feasibility		12/2016
Feasibility	07/2019	07/2020
FEED	07/2020	12/2023
Permitting	07/2020	12/2023
Supply Contracts		
FID		12/2020
Construction	01/2021	12/2026
Commissioning	2026	2026
Grant Obtention Date		

Third-Party Access Regime				
Considered TPA Regime	Regulated			
Considered Tariff Regime	Regulated			
Applied for Exemption	No			
Exemption Granted	No			
Exemption in entry direction	0.00%			
Exemption in exit direction	0.00%			

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Abramut-Mediesu Aurit		700	134		2026
Bors-Abramut		700	28		2025
Horia-Bors		700	112		2022
Huedin-Alesd		500	73	10	2025
Sarmasel-Mediesu Aurit		400	171		2026
	Total		518	10	

## **Expected Gas Sourcing**

Caspian Region, Russia, LNG (), Black Sea, EU Hubs

_				•	
ĸ	Δ	n	Δ	tr	ts

Main Driver

**Regulation SoS** 

Increase in the gas transmission capacity in the Western part of the country to ensure gas supply to the new developments and to enable reverse flow in Main Driver Explanation the direction Ukraine- Mediesul Aurit

Benefit Description

CBCA				
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not			
Submissin Date				
Decision Date				
Website				
Countries Affected				
Countries Net Cost Bearer				
Additional Comments				

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF				
Other Financial Assistance	No			
Comments				
General Comments				

Current TYNDP : TYNDP 2020 - Annex A Page 721 of 773

# Romania-Serbia Interconnection

TRA-A-1268	Project	Pipeline including CS	Non-FID
Update Date	15/08/2019		Non-Advanced
Description	The project implies the constrcution of a gas transmission pipeline DN 600 x 63 bar 97 the Petrovaselo area, the county of Timiş. In the connection point a pig receivinf/launce pipeline is 85.56 km long, a Gas Metering Station, 18 line valves and two pig launching in the Mokrin direction.	ching station will be installed. On the R	omanian territory the

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
DO (CD ID	SNTGN Transgaz S.A.	2020	RO	RS	46.27 GWh/d
RO/SB IP	SNTGN Transgaz S.A.	2020	RS	RO	46.27 GWh/d

PRJ Code - PRJ Name

Sponsors		General Information		NDP and PCI Information	
SNTGN Transgaz SA	100%	Promoter	SNTGN Tranzgaz SA		Yes (THE NATIONAL GAS
		Operator	SNTGN Transgaz S.A.	Part of NDP	TRANSMISSION SYSTEM DEVELOPMENT
		Host Country	Romania	NDDN	PLAN 2018-2027)
		Status	Planned	NDP Number	/./
		Website		NDP Release Date	14/12/2018
		***************************************		NDP Website	<u>NDP URL</u>
				Currently PCI	No
				Priority Corridor(s)	

### Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		02/2018
Feasibility	02/2018	11/2018
FEED	03/2018	01/2019
Permitting	03/2018	10/2019
Supply Contracts		
FID		
Construction		
Commissioning	2020	2020
Grant Obtention		
Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
PETROVASELO-COMLOŞU MARE	Romanian section of the interconnection pipeline	600	85		2020
	Total		85		

	Benefits	
Main Driver	Regulation SoS	
Main Driver Explanat	ion	
Benefit Description		
	Barriers	
Barrier Type	Description	
Permit Granting	The permitting process is long and complicated	
Financing	Availability of funds and associated conditions	

	CBCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or
	not
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance						
Applied for CEF	(3) No, we have not applied for CEF					
Grants for studies	No					
Grants for studies amount	Mln EUR 0.0					
Grants for works	No					
Grants for works amount	Mln EUR 0.0					
Intention to apply for CEF						
Other Financial Assistance	No					
Comments						
General Comments						

Current TYNDP : TYNDP 2020 - Annex A Page 724 of 773

# Sarmasel undeground gas storage in Romania

UGS-N-371	Project	Storage Facility	Non-FID			
Update Date	28/08/2019		Non-Advanced			
	Sarmasel Underground Storage in Romania consists in the increase of working capacity up 0.65 Bcm/cycle, an enhanced withdrawal capacity of up to 12 million cm/day and an increase of working capacity up to 12 million cm/day and an increase of work					
	The required investment consists of:					
	<ul> <li>construction of one more compressor module,</li> <li>refurbishment of surface infrastructure for all injection-withdrawal wells;</li> </ul>					
Description	- recompletion of all wells and installation of safety devices for each of them;					
	- drilling new additional wells;					
	- increasing the cushion gas.  The geological suitability is backed up by existing reservoir studies.					
	The rationale of the project is to: (a) decongest existing storage capacities in South Roman	ia which may become available fo	or neighboring countries,			
	(b) increase the flexibility of the storage system, contribute to the sustainability and flexibil	ity of the transmission system , (d	) reduce dependency on			
	Russian gas etc.					
PRJ Code - PRJ Name	-					

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
VID D LICC (DO)	SNGN ROMGAZ SA - FILIALA DE INMAGAZINARE GAZE NATURALE 2024 STcRO DEPOGAZ PLOIESTI SRL		RO	45.00 GWh/d	
VIP Romgaz UGS (RO)	SNGN ROMGAZ SA - FILIALA DE INMAGAZINARE GAZE NATURALE DEPOGAZ PLOIESTI SRL	2024	RO	STcRO	34.00 GWh/d

Current TYNDP : TYNDP 2020 - Annex A Page 725 of 773

Sponsors	General Information		NDP and PCI Information		
SNGN ROMGAZ SA - FILIALA DE INMAGAZINARE		SNGN ROMGAZ SA - FILIALA DE	Part of NDP	No ((2) no NDP exists in the country)	
GAZE NATURALE DEPOGAZ PLOIESTI SR	Promoter	INMAGAZINARE GAZE	NDP Number		
		NATURALE DEPOGAZ PLOIESTI SRL	NDP Release Date		
		SNGN ROMGAZ SA - FILIALA DE	NDP Website		
	Operator	INMAGAZINARE GAZE	Currently PCI	Yes (6.20.6 (2020))	
	Орегатог	NATURALE DEPOGAZ PLOIESTI SRL	Priority Corridor(s)		
	Host Country	Romania			
	Status	Planned			
	Website	<u>Project's URL</u>			

Schedule	Start Date	End Date
Pre-Feasibility		06/2016
Feasibility	03/2019	03/2020
FEED	06/2020	04/2021
Permitting	04/2021	10/2021
Supply Contracts		12/2021
FID		06/2020
Construction	01/2022	10/2024
Commissioning	2024	2024
Grant Obtention Date	01/12/2021	01/12/2021

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

			Technical Information (	UGS)					
Storage Facility	Storage Facility Type	Multiple-cycle Facility	Project Phase	Working Volume (mcm)	Withdrawal Capacity (mcm/d)	Injection Capacity (mcm/d)	Load Factor (%)	Comments	Commisioning Year
UGS SARMASEL	Depleted Field	No	Sarmasel underground gas storage in Romania	650	3.2	4.0	70	This is a one phase project. Expected Load Factor to be updated by the Feasibility Study	2024

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

TYNDP views RO as gas source during 2020-2030, but afterwards there is major impact on RO: (1) Disruption Rate doubling from 10% to 20% in case of UA import route disruption, and (2) N-1 which cannot be fulfilled anymore, dropping to 83% for Low Infrastructure and to 85% for Adv. Infra. CBA assessment shows cross-border impact of the Sarmasel storage on SE Europe in terms of security of supply, in case of UA route disruption for all neighbouring countries: BG, HU, RS. CBA results show that irrespective of the geographical location of the storage or the distance to transit lines or the interconnection systems between countries, there is an impact on neighbouring countries through the transmission system in case of UA disruption. There is an impact of the project between 2and 4 % on DR for all scenarios and type of infrastructure. On N-1 the project impact varies between 3-4 % in 2030. It provides stability and flexibility to the entire transmission system, as shown in RO TSO NTS Dev PI.

#### **Delays since last TYNDP**

Delay Since Last TYNDP

FID has changed from Q1 2018 to 01/01/2019

**Delay Explanation** 

### **Expected Gas Sourcing**

Romania

	Benefits	
Main Driver	Others	
Main Driver Explanation	The project aims at supplying directly or indirectly at least two Member States and although it meets the competition, market integration, security of supply and sustainability criteria, the project's main contribution is to the European security of supply, given its complementarity to future major piprojects in Romania developed by SNTGN Transgaz S.A creating on one hand interconnections with the NTS of neighboring Member States (HU are and on the other hand access to the newly discovered gas resources in the Black Sea, which are expected to be monetized soon.	peline
Benefit Description	Its main regional benefits are: (a) decongestion of existing storage capacities in South Romania which may become available for neighboring count increase the flexibility of the storage system, (c) contribution to the sustainability and flexibility of the transmission system especially of high pressurpipelines, (d) reduction of dependency on Russian gas, and (e) support for Romania's gas export potential.	
	Barriers	
Barrier Type	Description	
Regulatory	- lack of stability of the methodologies regarding tariffs computation - under current regulation the project could increase the storage tariffs at a least which make the storage business less attractive. The methodology does not respond to the increasing demands of the gas market for multiple type tariffs	
Political	Frequent changes in legislation	
Market	Reduced market demand from the companies acting on the gas market due to availability of gas imports	
inancing	Due to the characteristics of the storage business, financial institutions are not interested to support such project yet.	
Market	Lack of market maturity	
inancing	Amortization rates	
Regulatory	Low rate of return	
Market	Lack of market support	

	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

	Financial Assistance
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Grants for studies	Yes
Grants for studies amount	Mln EUR 0.6
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	Yes, for work only
Other Financial Assistance	No
Comments	We have applied for CEF grant for studies but it was not approved
General Comments	We have applied for CEF grant for studies but it was not approved,

# Upgrading GMS Isaccea 1 and GMS Negru Voda 1

TRA-F-1277	Project	Pipeline including CS	FID
Update Date	18/11/2019		Advanced
Description	The project "Upgrading GMS Isaccea 1 and GMS Negru Vodă 1" consists in the cons locations of the Metering Stations	truction of two new gas metering station	is on the existing

Capacity Increments \	ariant For Modelling				
Point	Operator	Year	From Gas System	To Gas System	Capacity

2021

RO/TBP

SNTGN Transgaz S.A.

PRJ Code - PRJ Name

Isaccea (RO) - Orlovka (UA) I

Sponsors			General Information	NI	OP and PCI Information	
SNTGN Transgaz SA	100%	Promoter	SNTGN Transgaz SA	Part of NDP	Yes (The National Gas Transmission	
		Operator	SNTGN Transgaz S.A.	Tart of NDI	System development Plan 2018 - 2027)	
		Host Country	Romania	NDP Number	7.8	
		Status	Planned	NDP Release Date	14/12/2018	
		Website		NDP Website	NDP URL	
				Currently PCI	No	
				Priority Corridor(s)		

UAe

28.92 GWh/d

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	01/2018	08/2018
FEED	01/2018	12/2019
Permitting	01/2018	12/2019
Supply Contracts		
FID		12/2018
Construction	12/2018	12/2020
Commissioning	2021	2021
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compres	essor Stations		
Pipeline Section	Pipeline Comment Diameter Length (mm) (km)	Compressor Power (MW)	Comissioning Year
Α	The project refers only to the upgrading of the two Gas Metering Stations		2021
	Total		

# Delays since last TYNDP

Delay Since Last TYNDP

Delay Explanation Obtaining the necessary permits, agreements and approvals, extension of the duration of the tender procedures

### **Expected Gas Sourcing**

Caspian Region, Russia

No

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10)	_	ш		ш	

Main Driver Regulation SoS

Main Driver Explanation

Benefit Description

CRCA	<b>\</b>	
o, we have	not submitted an	investment re

No, we have not submitted an investment request yet, and we do not plan to submit it

Submissin Date

Decision Date Website

Decision

Countries Affected

Countries Net Cost Bearer

**Additional Comments** 

Financial Assistance

Applied for CEF (3) No, we have not applied for CEF

Grants for studies No

Grants for studies amount Mln EUR 0.0

Grants for works No

Grants for works amount Mln EUR 0.0

Intention to apply for CEF

No decision yet taken

Other Financial Assistance

General Comments

Comments

# **Project GO4LNG LNG terminal Gothenburg**

LNG-A-32	Project	LNG Terminal	Non-FID
Update Date	22/11/2019		Advanced
Description	A small-scale LNG terminal, including connection to the transmission grid, placed in the G bunkering and regasification.	othenburg harbour, with flexible se	end out by rail, truck,

Capacity Increments Variant For N	Modelling		

PRJ Code - PRJ Name

**Grant Obtention** 

Date

PointOperatorYearFrom Gas SystemTo Gas SystemCapacityGothenburg LNGSwedegas AB2022LNG\_Tk\_SESE26.00 GWh/d

Sponsors		General Information		NDP and PCI Information	
Swedegas AB	100%	Promoter	Swedegas AB	Part of NDP	No ((2) no NDP exists in the country)
		Operator	Swedegas AB	NDP Number	
		Host Country	Sweden	NDP Release Date	
		Status	Planned	NDP Website	
		Website	<u>Project's URL</u>	Currently PCI	No
				Priority Corridor(s)	BEMIP

Schedule	Start Date	End Date
Pre-Feasibility		01/2012
Feasibility	01/2012	06/2012
FEED	01/2020	05/2020
Permitting	10/2013	05/2014
Supply Contracts		05/2020
FID		06/2020
Construction	06/2020	04/2023
Commissioning	2022	2022

Current TYNDP: TYNDP 2020 - Annex A Page 733 of 773

Technical Information (LNG)							
Regasification Facility	Reloading Ability Project Phase	Expected Increment Ship Size (bcm/y) (m3)	Send-out capacity (mcm/d)	Storage capacity (m3 Comments LNG)	Commissioning Load Factor Year (%)		
Gothenburg LNG terminal	Yes Development	9,999.0 75,000	2.40	25,000 -	2023 100		

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

#### **Delays since last TYNDP**

**Delay Since Last TYNDP** 

**Delay Explanation** Delayed because of market development is slower than expected. Discussions on-going with key potential players.

### **Expected Gas Sourcing**

LNG (EU,LNG,NO)

	Benefits
Main Driver	Market Demand
Main Driver Explanation	n
Benefit Description	
	Barriers

**Barrier Type** Description

Lack of market maturity Market

	CBCA		Financial Assistance
Decision	Yes, we have submitted an investment request and have received a decision	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Submissin Date		Grants for studies	Yes
Decision Date	17/09/2015	Grants for studies amount	Mln EUR 1.8
Website	<u>CBCA URL</u>	Grants for works	No
Countries Affected	Denmark, Sweden	Grants for works amount	Mln EUR 0.0
Countries Net Cost Bearer	Sweden	Intention to apply for CEF	
Additional Comments		Other Financial Assistance	Yes
		Comments	TEN-T subsidy. Though Swedegas only spent 100kEUR of the total subsidy (due to delay in the project and loss of subsidy)
		General Comments	

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# CS Ajdovščina, 1st phase of upgrade

TRA-N-92	Project	Pipeline including CS	Non-FID
Update Date	22/11/2019		Non-Advanced
Description	Adjustment to the operating parameters of the transmission system of the Italian TSO and i	ncreasing the transmission capac	ity.
PRJ Code - PRJ Name			

Sponsors	General Information		NDP and PCI Information		
		Promoter	Plinovodi d.o.o.	Part of NDP	Yes (TYNDP for the period 2019-2028)
Plinovodi	100%	Operator	Plinovodi d.o.o.	NDP Number	C1
Paldiski LNG Terminal		Host Country	Slovenia	NDP Release Date	26/11/2018
Balti Gaas LLC	100%	Status	Planned	NDP Website	NDP URL
	10070	Website	<u>Project's URL</u>	Currently PCI	Yes (6.23 (2020))
				Priority Corridor(s)	

Schedule	Start Date	End Date	Third-Party Access Regim	Third-Party Access Regime		
e-Feasibility			Considered TPA Regime			
asibility	11/2014	02/2015	Considered Tariff Regime			
EED	09/2021	12/2023	Applied for Exemption			
ermitting	10/2022	10/2024	Exemption Granted			
Supply Contracts		10/2025				
FID		09/2020	Exemption in entry direction			
Construction	10/2024	10/2025	Exemption in exit direction			
Commissioning	2025	2025				
Grant Obtention						

Date

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
CS Ajdovščina, 1st phase of upgrade	Power up to 5 MW.			5	0
	Total			5	

### **Fulfilled Criteria**

Specific Criteria Fulfilled

Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

### **Expected Gas Sourcing**

Algeria, Caspian Region, Russia, LNG (HR,IT), UGS in Hungary

	Benefits
Main Driver	Market Demand
Main Driver Explanatio	n
Benefit Description	

Intergovernmental Agreements						
Agreement	Agreement Description	Is Signed	Agreement Signature Date			
Agreement between PMs of Estonia and Finland	Agreement in regards to the gas infrastructure in the countries.	Yes	17/11/2014			
Memorandum of Understanding	MoU between Estonia and Finland and LNG project promoters	Yes	28/02/2014			

CBCA				
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or			
	not			
Submissin Date				
Decision Date				
Website				
Countries Affected				
Countries Net Cost Bearer				
Additional Comments				
Additional Confinents				

Financial Assistance					
Applied for CEF	(3) No, we have not applied for CEF				
Grants for studies	No				
Grants for studies amount	Mln EUR 0.0				
Grants for works	No				
Grants for works amount	Mln EUR 0.0				
Intention to apply for CEF	No decision yet taken				
Other Financial Assistance	No				
Comments					
General Comments					

# CS Kidričevo, 2nd phase of upgrade

TRA-N-94	Project Project	Pipeline including CS	Non-FID		
Update Date	15/08/2019		Advanced		
Description	Upgrade of CS for higher operational pressure in the existing M1/1 and M2/1 pipelines, higher flow and bidirectional operation in the frame obidirectional gas route Austria - Slovenia - Croatia.  The project is a part of the PCI 6.26 Cluster Croatia - Slovenia - Austria at Rogatec.				
PRJ Code - PRJ Name					

Sponsors			General Information		NDP and PCI Information		
Plinovodi		100%	Promoter	Plinovodi d.o.o.	Part of NDP Y	es (TYNDP for the period 2019-2028)	
1/2	7		Operator	Plinovodi d.o.o.	NDP Number	C5	
			Host Country	Slovenia	NDP Release Date	26/11/2018	
			Status	Planned	NDP Website	NDP URL	
			Website	<u>Project's URL</u>	Currently PCI	Yes (6.26.1.2 (2020))	
					Priority Corridor(s)		
Schedule	Start Date	End Date			Third-Pa	arty Access Regime	
Pre-Feasibility		01/2015			Considered TPA Regime	Regulated	
Feasibility	04/2015	05/2015			Considered Tariff Regime	Regulated	
FEED	07/2020	07/2022			Applied for Exemption	No	
Permitting	07/2021	12/2022			Exemption Granted	No	
Supply Contracts		12/2023					
FID		09/2021			Exemption in entry direct	ion 0.00%	
Construction	07/2022	12/2023			Exemption in exit direction	on 0.00%	
Commissioning	2023	2023					
Grant Obtention Date							

Current TYNDP: TYNDP 2020 - Annex A Page 739 of 773

Pipelines and Compressor Stations						
Pipeline Section		Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
CS Kidričevo, 2nd phase of upgrade		Up to three compressor units with total power of up to 30 MW.			30	0
Total					30	
Fulfilled Criteria						

Specific Criteria Fulfilled

Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes

Upgrade of CS for higher operational pressure in the existing M1/1 and M2/1 pipelines, higher flow and bidirectional operation. The project Specific Criteria Fulfilled Comments aims to assure additional necessary compressor power for the PCI 6.26 Cluster Croatia - Slovenia - Austria at Rogatec. The project will contribute to the facilitation of market integration and provide infrastructure allowing the increase of security of supply for the region.

#### **Expected Gas Sourcing**

Caspian Region, Russia, LNG (HR)

	Benefits				
Main Driver	Market Demand				
Main Driver Explanation Also essential contribution to Security of supply.					
Benefit Description					

СВСА				
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or			
	not			
Submissin Date				
Decision Date				
Website				
Countries Affected				
Countries Net Cost Bearer				
Additional Comments				

Financial Assistance				
Applied for CEF	(3) No, we have not applied for CEF			
Grants for studies	No			
Grants for studies amount	Mln EUR 0.0			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF	No decision yet taken			
Other Financial Assistance	No			
Comments				
General Comments				

# M3 pipeline reconstruction from CS Ajdovščina to Šempeter/Gorizia

TRA-N-108	Project	Pipeline including CS	Non-FID
Update Date	26/11/2019		Non-Advanced
Description	Interconnector with the Italian TSO. Adjustment to operating parameters of the transmis	sion system of the Italian TSO.	
PRI Code - PRI Name			

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Gorizia (IT) /Šempeter (SI)	Plinovodi d.o.o.	2025	IT	SI	0.00 GWh/d
		Comment: Total capacity is 49 GWh/d.			
	Plinovodi d.o.o.	2025	SI	IT	0.00 GWh/d
			Comment: Total cap	pacity is 49 GWh/d.	

Sponsors		General Information	NDP and PCI Information	
Plinovodi 10	0% Promoter	Plinovodi d.o.o.	Part of NDP	Yes (TYNDP for the period 2019-2028)
	Operator	Plinovodi d.o.o.	NDP Number	C2
	Host Country	Slovenia	NDP Release Date	26/11/2018
	Status	Planned	NDP Website	<u>NDP URL</u>
	Website	<u>Project's URL</u>	Currently PCI	Yes (6.23 (2020))
			Priority Corridor(s)	

#### Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	11/2014	02/2015
FEED	09/2021	12/2023
Permitting	10/2022	10/2024
Supply Contracts		10/2025
FID		09/2020
Construction	10/2024	10/2025
Commissioning	2025	2025
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
M3 pipeline reconstruction from CS Ajdovščina to Šempeter/Gorizia		500	12		0
	Total		12		

# Fulfilled Criteria

Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes,
Specific Criteria Fulfilled
Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments na

### **Expected Gas Sourcing**

Algeria, Caspian Region, Russia, LNG (HR,IT), UGS in Hungary

Current TYNDP : TYNDP 2020 - Annex A Page 743 of 773

Benefits		
Main Driver	Others	
Main Driver Explanation	Adjustment of IP boundary conditions (pressure).	
Benefit Description		

CBCA		Financial Assistance		
	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF	
Decision	and we have not yet decided whether we will submit or	Grants for studies	No	
Culomaiosin Data	not	Grants for studies amount	Mln EUR 0.0	
Submissin Date		Grants for works	No	
Decision Date		Grants for works amount	Mln EUR 0.0	
Website		Intention to apply for CEF	No decision yet taken	
Countries Affected		Other Financial Assistance	No	
Countries Net Cost Bearer		Comments		
Additional Comments		General Comments		

Current TYNDP: TYNDP 2020 - Annex A Page 744 of 773

# M3/1 Šempeter - Vodice

TRA-N-299	Project	Pipeline including CS	Non-FID
Update Date	26/11/2019		Advanced
	Interconnector with the Italian TSO, cross-border transmission. The project is confined the frame of gas transmission corridor Hungary-Slovenia-Italy, it will enable the		de.

Description

PRJ Code - PRJ Name

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	Plinovodi d.o.o.	2026	IT	SI	49.00 GWh/d
Gorizia (IT) /Šempeter (SI)		Comment: Total capacity is 77.3 GWh/d.			•
	Plinovodi d.o.o.	2026	SI	IT	51.60 GWh/d
			Comment: Total capa	city is 77.3 GWh/d.	•

Sponsors	G	eneral Information	NDP and PCI Information	
Plinovodi 1009	Promoter	Plinovodi d.o.o.	Part of NDP	Yes (TYNDP for the period 2019-2028)
	Operator	Plinovodi d.o.o.	NDP Number	C7, C8, C9 (3 sections)
	Host Country	Slovenia	NDP Release Date	26/11/2018
	Status	Planned	NDP Website	NDP URL
	Website	<u>Project's URL</u>	Currently PCI	No
			Priority Corridor(s)	NSIE

#### Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility	11/2014	02/2015
FEED	03/2021	03/2024
Permitting	03/2022	03/2024
Supply Contracts		01/2026
FID		09/2020
Construction	03/2024	12/2026
Commissioning	2026	2026
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
M3/1a Šempeter - Ajdovščina		800	30		2026
M3/1b Ajdovščina - Kalce		800	24		2026
M3/1c Kalce - Vodice		800	47		2026
	Total		101		

### **Fulfilled Criteria**

Specific Criteria Fulfilled

Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

### **Expected Gas Sourcing**

Algeria, Caspian Region, Russia, LNG (HR,IT), UGS in Hungary

#### Benefits

Main Driver

Decision

Website

Submissin Date

Countries Affected

Countries Net Cost Bearer

**Additional Comments** 

**Decision Date** 

Market Demand

Main Driver Explanation

Benefit Description

No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not **Financial Assistance** 

Applied for CEF (3) No, we have not applied for CEF

Grants for studies No

Mln EUR 0.0 Grants for works No

Mln EUR 0.0 Grants for works amount

Intention to apply for CEF No decision yet taken

Other Financial Assistance No

Comments

**General Comments** 

Grants for studies amount

#### Generated by ENTSOG PDWS on 07/10/2020 03:33:04 PM

Current TYNDP : TYNDP 2020 - Annex A Page 747 of 773

# Capacity increase at IP Lanžhot entry

TRA-F-902	Project	Pipeline including CS	FID
Update Date	18/11/2019		Advanced
Description	The goal of the project Capacity increase at IP Lanžhot (Entry - Eustream) is the use incremental capacity will be secured by construction of a new compressor station Republic. This solution represents prerequisite for market integration in the Cent mitigating impact on environment via utilization of existing transmission corridor is to provide sufficient future transit capacity for delivery of gas for the region of marketsas well as ensuring security of supplies to Ukraine.	n in the territory of western Slovakia near the tral European region and requested flexibility or. Project is also developed in the context of	e border with the Czech y for transmission Eastring project, the aim
PRJ Code - PRJ Name	-/-		

**Capacity Increments Variant For Modelling** 

Point	Operator		Year From Gas S	System To Gas System	Capacity
Lanžhot	eustream, a.s. 2		2019 CZ	SK 884.00 GWh/d	884.00 GWh/d
Sponsors	Ge	neral Information	N	IDP and PCI Information	
eustream, a.s. 100%	Promoter	eustream,a.s. (a joint-stock company)	Part of NDP	Yes (National Develop	ment Plan 2018- 2027)
	Operator	eustream, a.s.	NDP Number		4.1.1.3. Lanžhot
	Host Country	Slovakia	NDP Release Date		30/11/2017
	Status	Planned	NDP Website		NDP URL
	Website	<u>Project's URL</u>	Currently PCI		No
			Priority Corridor(s)		

Current	<b>TYNDP:</b>	<b>TYNDP</b>	2020 -	Annex A
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Schedule	Start Date	End Date
Pre-Feasibility		06/2015
Feasibility	06/2015	10/2015
FEED	09/2015	07/2017
Permitting	08/2017	02/2018
Supply Contracts		01/2017
FID		12/2017
Construction	02/2018	11/2019
Commissioning	2019	2019
Grant Obtention		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations		
Pipeline Section	Pipeline Comment	Diameter Length Compressor Power Comissioning (mm) (km) (MW) Year
Capacity increase at IP Lanžhot entry		46 2019
	Total	46

		Delays since last TYNDP
Delay Since Last TYNDP	no	
Delay Explanation		

# **Expected Gas Sourcing**

Norway, Russia, Spot

Current TYNDP: TYNDP 2020 - Annex A Page 749 of 773

	Benefits
Main Driver	Market Demand
Main Driver Explanation	Capacity was auctioned via the PRISMA platform in the yearly auction in March 2017.
Benefit Description	Effort to utilize existing gas infrastructure at maximum mitigating environmental impacts and stranded assets in order to meet market demand in the Czech Republic, Slovakia, Austria, Italy and other countries in the region supporting efforts of CZ and AT market integration (TRU option project). Project is 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 region, namely Balkan countries, as well as ensuring security of supplies to Ukraine as well as integration of CEE/SEE region to the developed spot markets.

	Barriers
Barrier Type	Description
Regulatory	Capacity quotas
Regulatory	Low rate of return

	CBCA
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
	Current technical capacity at the Czech side is 913,7 GWh/d. Incremental capacity on the Czech side based on Capacity increase at IP Lanžhot entry realization will be 333 GWh/d
	Current technical capacity at the Slovak side is 697

**Additional Comments** 

Grants for studies
Grants for studies amount
Grants for works
Grants for works amount
Intention to apply for CEF
Other Financial Assistance
Comments
General Comments

**Financial Assistance** Applied for CEF (3) No, we have not applied for CEF Grants for studies No Mln EUR 0.0 No Mln EUR 0.0 No, we do not plan to apply

be 884 GWh/d

GWh/d. Incremental capacity on the Slovak side based on Capacity increase at IP Lanžhot entry realization will Current TYNDP : TYNDP 2020 - Annex A Page 750 of 773

# G2F - Gas to Future

ETR-N-315	Project	Project	Non-FID
Update Date	15/08/2019		Advanced
Description	Project Gas to Future (G2F) aims to store renewable energy in form of the hydrogen (H2) storages. The unique structure as well as the location of the UGS with all the interconnect countries. The project is split in 2 phases. In the first phase, the H2 will be stored with nawhole NAFTA capacity to the volume of 2% of hydrogen and during the second phase the capacity will allow to install and use more renewable energy without any negative impacts supply. The project counts to install the electrolysis units to transform electricity to gas (	ction allows to store and distribute H utural gas continuously increasing the he hydrogen content will increase to to the electrical grid as well as will	I2 for neighbouring e amount of H2 stored in 10% of H2 vol. That provide energy safety of

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
	NAFTA a.s.	2025	STcSKm	IB-STcSKmm	1.32 GWh/d
LICC Lab (CIV) (Nafta)	Comment: hydrogen to be withdrawn from the P2G facility & existing storage				
UGS Lab (SK) (Nafta)	NAFTA a.s.	2025	IB-STcSKmm	STcSKm	1.32 GWh/d
	Commo	ent: hydrogen to be injected	from the P2G facility	to existing storage	

Sponsors			General Information
NAFTA a.s.	100%	Promoter	NAFTA a.s. (joint stock company)
		Operator	NAFTA a.s.
		Host Country	Slovakia
		Status	Planned
		Website	

PRJ Code - PRJ Name

infrastructure. The project is consistent with goal to reduce CO2 emissions.

# Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		12/2020
Feasibility	04/2021	04/2022
FEED	01/2023	12/2023
Permitting	05/2020	03/2024
Supply Contracts		04/2024
FID		
Construction	05/2024	06/2025
Commissioning	2025	2025
Grant Obtention Date		

	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
1st phase	For the 1. phase of the project we would like to use our existing gas storages which are in daily use and therefore mostly we would like to use existing infrastructure, so the investment costs should be lower compared to purchase of the new technology. The injected hydrogen to NAFTA reservoirs should be at the rate of 1.32 GWh/day. In order to produce hydrogen and inject it in system at 2% vol. of hydrogen in NAFTAs capacity. It is expected to install P2G technology with power about 84 MW.	none	2025
2nd phase	If successful, the project will continue with Hydrogen production in order to achieve hydrogen volume of 10% in whole NAFTAs storage capacity. The injected hydrogen in this phase should be according to our calculation about 6.6 GWh/day. Once again, project will benefit from existing technology of existing NAFTAs storage facilities. Expected installed P2G technology should be at level of 332 MW.	none	2035



# Measures for the reduction of methane emissions

ETR-N-920	Project	Energy Transition Related Project	Non-FID
Update Date	11/06/2020		Advanced
Description	Reduction of methane emissions is a project aimed at the reduction of methan transmission system, in order to mitigate the impact on climate change.	ne emissions that are created within the Slovak	natural gas

PRJ Code - PRJ Name -

Sponsors			General Information
eustream, a.s.	100%	Promoter	eustream, a.s.
		Operator	eustream, a.s.
		Host Country	Slovakia
		Status	Planned
		Website	

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED	01/2022	06/2022
Permitting	07/2022	03/2023
Supply Contracts		06/2023
FID		12/2022
Construction	07/2023	12/2024
Commissioning	2024	2024
Grant Obtention		
Date		

	Technical Information (ETR)		
Section/Phase Name	Main Technical Parameters	Technical Information Comment	Commissio ning Year
Basic Variant	Reduction of methane emissions (other pollutants)		2024

Current TYNDP : TYNDP 2020 - Annex A Page 755 of 773

# Trans-Caspian

TKA-A-339	Project	Pipeline including CS	Non-FID
Update Date	24/10/2019		Non-Advanced
Description	TCP will branch-off at a connection with the East-West pipeline in Turkmenistan. It will feed economically justified scenarios of TCP's step by step expansion are possible. The first stage transport up to 15 bcm/y towards Turkey (TANAP) starting from 2022. For the second stage 30 bcm/y and feed the White Stream pipeline from Georgia to Constanta, Romania. From Cocurrently doing the Pre-FEED study and evaluating an option of 2 phased development, each	associated with one pipeline stri (2023), the capacity is intended onstanta gas will flow towards Ba	ing is intended to to be increased to up to aumgarten. We are

investment for 300 km 2x32 in. pipelines + one compression station and terminal is € 1.5 billion.

PRJ Code - PRJ Name -

Point	Operator	Year	From Gas System	To Gas System	Capacity
	W-Stream Caspian Pipeline Company OU	2022	TM	AZ/SCP	505.00 GWh/c
	Comment: The data regarding capacity and the system provides only the TCP/SCP as are de facto the exit data of TCP 1st Turkmenistan. The capacity is 505 GWh/a Company Limited respectively OU since to Brexit). If one selects this operator (W-Stream is not possible to file data in box 082 an	'point", only string. The ( !. (N.B. Oper he seat of th m Caspain p nd box 83. T	withe entry data can be entry point of TCP 1st rator will be W-Stream ne company had to be pipeline Company Lim Therefore "White Stream	e indicated - which string is located in Caspian pipeline moved because of ited) in box 081 itm" was selected as	
CP/SCP	W-Stream Caspian Pipeline Company OU	2023	TM	AZ/SCP	505.00 GWh/
	Comment: The data regarding capacity and commissioning year belong to TCP 1st string. Since the system provides only the TCP/SCP as "point", only the entry data can be indicated - which are de facto the exit data of TCP 1st string. The entry point of TCP 1st string is located in Turkmenistan. The capacity is 505 GWh/d. (N.B. Operator will be W-Stream Caspian pipeline Company Limited respectively OU since the seat of the company had to be moved because of Brexit). If one selects this operator (W-Stream Caspain pipeline Company Limited) in box 081 it is not possible to file data in box 082 and box 83. Therefore "White Stream" was selected as Operator since allowing to file in the required data into the foreseen boxes.				

Sponsors	
W-STREAM PIPELINE COMPANY LIMITED	90%
Georgian Oil and Gas Corporation (GOGC)	10%

General Information				
Promoter	W-Stream Caspian Pipeline Company OU			
Operator	W-Stream Caspian Pipeline Company OU			
Host Country	Turkmenistan			
Status	Planned			
Website	<u>Project's URL</u>			

	NDP	and PCI Information
	Part of NDP	No ((2) no NDP exists in the country)
J	NDP Number	
	NDP Release Date	
J	NDP Website	
า	Currently PCI	Yes (7.1.1 (2020))
a L	Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		01/2013
Feasibility	05/2018	04/2020
FEED	04/2020	12/2020
Permitting	08/2019	12/2020
Supply Contracts		06/2021
FID		01/2021
Construction	04/2021	09/2022
Commissioning	2022	2023
Grant Obtention Date	25/01/2018	25/01/2018

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Negotiated
Applied for Exemption	No
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
sub-sea (string 1)	175 MW total for two strings	915	300	175	2022
sub-sea (string 2)	175 MW total for two strings	915	300	175	2023
	Total		600	350	

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#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

30+ bcma of Turkmen gas, supplied via two different routes to different areas in the EU with expected growing import needs will significantly contribute to the enhancement of the level of competition, positively affect prices, improve Security of Supply, stimulate market integration and facilitate deployment of RES. Turkmen gas is readily available through wells with established production, including wells in the shut-in Specific Criteria Fulfilled Comments condition and connected to the 30 bcma throughput East-West pipeline with the Caspian shore. The overall transportation scheme is designed to maximize the use of pipelines already in operation or pipelines being constructed, thus in combination with relatively low production costs, this ensures competitive prices for gas for shippers. The TCP 1st and 2nd string will contribute to material reduction of share of the Russian supplies in affected countries.

#### **Delays since last TYNDP**

**Delay Since Last TYNDP** 

**Delay Explanation** 

The progress of the Trans Caspian Pipeline system was not that fast as previously expected because of lack of clarity regarding legal status of the Caspian Sea. Since the signature of the Caspian Sea convention - signed mid of 2018 - the perceived risks by potential investors has decreased, subsequently interest in the Trans Caspian Pipeline system has increased. Nevertheless, it takes some time to fully built up the necessary confidence of investors consequently it will be difficult to catch up regarding initial time schedule to the full extend, thus a rescheduling of the Trans Caspian Pipeline was advisable.

### **Expected Gas Sourcing**

Caspian Region, Turkmenistan/Central Asia

Benefits					
Main Driver	Market Demand				
Main Driver Explanatio	Gas from Turkmenistan can be the most competitively priced gas on the market in the European Union and the Energy Community. TCP could also further improve the economics of Azeri gas transportation via TANAP and enable the White Stream Pipeline, subsequently further increase market integration, competition and security of gas supply.				
Benefit Description	TCP 1st and TCP 2nd string will indirectly and directly improve competition in the gas markets of the EU and the Energy Community, improve the security of gas supply, market integration and facilitate the deployment of RES at bigger scales in the EU as well as in the Energy Community.				

Current TYNDP : TYNDP 2020 - Annex A Page 758 of 773

Barriers					
Barrier Type	Description				
Permit Granting	The project is at a too early stage at the moment regarding permit granting				
Political	The progress of the Trans Caspian Pipeline system was not that fast as previously expected because of lack of clarity regarding legal status of the Caspian Sea. Since the signature of the Caspian Sea convention - signed mid of 2018 - the perceived risks by potential investors has decreased, subsequently interest in the Trans Caspian Pipeline system has increased. Nevertheless, it takes some time to fully built up the necessary confidence of investors consequently it will be difficult to catch up regarding initial time schedule to the full extend, thus a rescheduling of the Trans Caspian Pipeline was advisable.				

	CBCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	TCP 1st and 2n string are not located in any of the EU-MS nor do they impact any of the EU-MS respectively Contracting Parties to the Energy Community directly.

Financial Assistance				
Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision			
Grants for studies	Yes			
Grants for studies amount	Mln EUR 1.9			
Grants for works	No			
Grants for works amount	Mln EUR 0.0			
Intention to apply for CEF				
Other Financial Assistance	No			
Comments				
General Comments				

Current TYNDP : TYNDP 2020 - Annex A Page 759 of 773

# TANAP X- Expansion of Trans Anatolian Natural Gas Pipeline Projec

TRA-A-782	Project	Pipeline including CS	Non-FID
Update Date	18/10/2019		Advanced
Description	TANAP X intends for the transportation of additional 9 bcma of the natural gas to through Turkey to Europe. The TANAP (Trans-Anatolian Natural Gas Pipeline) Proje by opening up the Southern Gas Corridor. It constitutes a significant part of the gas Expansion) and TAP (Trans Adriatic Pipeline) pipelines and provides a platform to finitially upon gas supplies from Azerbaijan's Shah Deniz gas field. The TANAP pipeline length within the borders of Turkey is about 1850 km on the sincludes an outside pipe diameter of 56 and 48 inches, across land and two 36 includes an outside pipe diameter of 56 and 48 inches, across land and two 36 includes an outside pipe diameter of 56 and 48 inches, across land and two 36 includes an outside pipe diameter of 56 and 48 inches, across land and two 36 includes an outside pipe diameter of 56 and 48 inches, across land and two 36 includes an outside pipe diameter of 56 and 48 inches, across land and two 36 includes and the second part of th	ct will contribute to the European gas supples supply value chain together with SCPX (Soster gas to gas competition in European section up to Greece connection to TAP Pip	oly security and diversity South Caucasus Pipeline- gas market based Deline Project. TANAP
PRJ Code - PRJ Name	-		

Capacity Increments Variant For Modelling					
Point	Operator	Year	From Gas System	To Gas System	Capacity
Kipi (TR) / Kipi (TAP)	TANAP TSO	2025	TR/TNP	GR/TAP	286.00 GWh/d
Türkgözü	TANAP TSO	2025	GE/SCP	TR/TNP	286.00 GWh/d

Sponsors			General Information	N	IDP and PCI Information
"SOUTHERN GAS CORRIDOR" CLOSED JOINT STOCK COMPANY	51%	Promoter	SOCAR (The State Oil Company of the Azerbaijan Republic)	Part of NDP	No ((4) there is no obligation at national level for such a project to be part of the
BORU HATLARI İLE PETROL TAŞIMA A.Ş. (BOTAS)	30%	Operator	TANAP TSO		NDP)
BORO HATEARTIEE I ETROE TAÇIMA A.Ç. (BOTAS)	3070	Host Country	Turkey	NDP Number	
BP PIPELINES (TANAP) LIMITED	12%	Status	In Progress	NDP Release Date	
SOCAR Turkey Energy A.S.	7%	Website	Project's URL	NDP Website	
. 3,			<del></del> _	Currently PCI	No
				Priority Corridor(s)	

#### Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		08/2021
Feasibility	08/2021	12/2021
FEED	01/2022	05/2022
Permitting	05/2022	07/2022
Supply Contracts		09/2022
FID		12/2022
Construction	02/2023	12/2025
Commissioning	2025	2025
Grant Obtention Date	01/03/2016	01/03/2016

Third-Party Access Regime				
Considered TPA Regime	Negotiated			
Considered Tariff Regime	Negotiated			
Applied for Exemption	Not Relevant			
Exemption Granted	Not Relevant			
Exemption in entry direction	0.00%			
Exemption in exit direction	0.00%			

Pipelines and Compressor Stations					
Pipeline Section	Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Eskishehir (Turkey)-Greece Border		1,219	460	70	2025
Georgia/Turkey border- Eskishehir		1,442	1,347	125	2025
	Total		1,807	195	

### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

TANAP brings new alternative supply of natural gas from new supllier. It plays crucial role in diversification and security of supply to the EU, fosters sustainability and competition. It also develops gas network and fosters gasification of Central South and Southen Europe Region.

### **Delays since last TYNDP**

Delay Since Last TYNDP

**Delay Explanation** 

Current TYNDP : TYNDP 2020 - Annex A Page 761 of 773

# **Expected Gas Sourcing**

## Caspian Region

	Benefits
Main Driver	Others
Main Driver Explanation	Diversification of suplly sources and routes New supply source to the European Union Market demand Competition Access to new markets
Benefit Description	Diversification of supply Diversification of routes Benefits sustainability Emission Reduction Benefit infrastructure bottleneck Enabling other PCI and non-PCI projects Significant cross-border effect Possibility of further expansion
	Barriers
Barrier Type	Description
Others	Lack of support from Member States when applying for Support Letter for Grants. Relevant Member States authorities should be more aware of the Projects which bring gas volumes to EU markets.
Financing	Low oil prices in the world, which constitute the income of TANAP's major shareholder SGC.
Financing	Availability of funds and associated conditions
Market	Lack of market maturity
Market	Lack of market support

Intergovernmental Agreements							
Agreement	Agreement Description	Is Signed	Agreement Signature Date				
Intergovernmental Agreement between Turkey and Azerbaijan	Intergovernmental Agreement (IGA) between the Government of the Republic of Turkey and the Government of the Republic of Azerbaijan Concerning the Trans Anatolian Natural Gas Pipeline System	Yes	26/06/2012				

Current TYNDP: TYNDP 202	20 - Annex A		Page 762 of 773
	СВСА		Financial Assistance
Decision	No, we have not submitted an investment request yet, and we do not plan to submit it	Applied for CEF	(1) Yes, we have applied for CEF and we have received a decision
Submissin Date		Grants for studies	Yes
Decision Date		Grants for studies amount	Mln EUR 15.4
Website		Grants for works	No
Countries Affected		Grants for works amount	Mln EUR 0.0
Countries Net Cost Bearer		Intention to apply for CEF	Yes, for studies only
Additional Comments	Our Project does not have CDCA desicion by NRA or	Other Financial Assistance	No
Additional Comments	ACER	Comments	
		General Comments	

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# Trans-Balkan Bi-directional Flow

TRA-F-1169	Project	Pipeline including CS	FID
Update Date	15/06/2020		Advanced
Description	Trans-Balkan system is a key element of energy security of the Balkans and Southern Corridor. The Trans-Balkan route consists of three high diameter pipelines, which can some reconstructions. The Ukrainian GTS and Moldavian GTS can transport up to 20 with Romania. In case of construction of TANAP and Turkish stream, this project would be a sure utilization of the existing infrastructure. The key Romania to CEE Region, inter alia to provide the offshore gas production companies market; - to develop interconnectivity in the Balkan and CEE regions; - to ensure utilization of the salkan and CEE regions.	n transport bi-directionally up to 20 bcm bcm from/to UA-PL, UA-SK and UA-HU ald become a strategic one as it could en overall objectives are: - to facilitate expo with the access to the gas infrastructure	of natural gas after borders to/from the IPs sure security of supply ort of natural gas from
PRJ Code - PRJ Name	<u> </u>		

Capacity Incremer	nts Variant For Modelling					
	Variant : Phase 1	Phase 1 - establishment of physical year, which would not require build			p to 1.5 bcm per	
Point		Operator	Year	From Gas System	To Gas System	Capacity
Crobonylar		LLC Gas TSO of Ukraine	2020	UA	MD	43.10 GWh/d
Grebenyky			Comment: Entry to Ukraine-reverse flow			/
Capacity Incremen	nts Variant(s) For Information Only					
	Variant : Phase 3	Phase 3 -establishment of physical a maximum capacity (approximately 2		a Transit 1-2-3 pipeli	nes up to their	
Point		Operator	Year	From Gas System	To Gas System	Capacity
Crobonylar		LLC Gas TSO of Ukraine	2024	UA	MD	574.10 GWh/d
Grebenyky			Comment: Entry to Ukraine-reverse flow		/	
Capacity Incremen	nts Variant(s) For Information Only					
	Variant : Phase 2	Phase 2 - establishment of physical capacity of 5 bcm per year	and virtual flow v	ria Transit 1 pipeline υ	ıp to its maximum	1
Point		Operator	Year	From Gas System	To Gas System	Capacity
Crobonylar		LLC Gas TSO of Ukraine	2021	UA	MD	143.50 GWh/d
Grebenyky				Comment: Entry to U	kraine-reverse flow	/

Sponsors		Ge	neral Information	NDI	and PCI Information
PJSC "UKRTRANSGAZ"	57%	Promoter	LLC Gas TSO of Ukraine	Part of NDP	No ((2) no NDP exists in the country)
		Operator		NDP Number	
		Host Country	Ukraine	NDP Release Date	
		Status	Planned	NDP Website	
		Website		Currently PCI	No
				Priority Corridor(s)	

Schedule	Start Date	End Date
Pre-Feasibility		08/2019
Feasibility	08/2019	08/2019
FEED	08/2019	08/2019
Permitting	08/2019	09/2019
Supply Contracts		09/2019
FID		09/2019
Construction	10/2019	11/2019
Commissioning	2020	2020
Grant Obtention Date		

Third-Party Access Regir	ne
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	No
Exemption Granted	No
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compress	or Stations					
	Phase 1	Phase 1 - establishment of physical and virtual flow via Transit 1 pipeline up to 1.5 bcm per year, which would not require building additional infrastructure				
Pipeline Section		Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Phase 1		From the Ukrainian side it is necessary to reconstruct the GMS Grebenyky. On the Moldavian side, it is necessary to reconstruct the GMS Kaushany.	800	355	0	2020
	Т	otal		355	0	
Pipelines and Compress	or Stations - Alternative Variant					
	Phase 2	Phase 2 - establishment of physical and virtual flow via Transit 1 pipeline up to its maximum capacity of 5 bcm per year				
Pipeline Section		Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Phase 2		Phase 2 also requires some reconstruction works by Romanian TSO. From Ukrainian side is necessary reconstruction of CS and GMS Orlovka and the CS Berezivka. On the Moldavian side, it is necessary to reconstruct the CS Vulkaneshty.	800	355	20	2021
L.	Т	otal		355	20	
Pipelines and Compress	or Stations - Alternative Variant					
	Phase 3	Phase 3 -establishment of physical and virtual flow via Transit 1-2-3 pipelines up to their maximum capacity (approximately 20 bcm per year)				
Pipeline Section		Pipeline Comment	Diameter (mm)	Length (km)	Compressor Power (MW)	Comissioning Year
Phase 3		Phase 3 -establishment of physical and virtual flow via Transit 1-2-3 pipelines up to their maximum capacity (approximately 20 bcm per year)	1,400	449	305	2024
	_	otal		449	305	

## **Expected Gas Sourcing**

LNG (GR)

Benefits

Main Driver Market Demand

Main Driver Explanation

Benefit Description

	CBCA	Finar	icial Assistance
Decision	No, we have not submitted an investment request yet,	Applied for CEF	(3) No, we have not applied for CEF
5 00.01011	but we do plan to submit it	Grants for studies	No
Submissin Date	01/07/2018	Grants for studies amount	Mln EUR 0.0
Decision Date		Grants for works	No
Website		Grants for works amount	Mln EUR 0.0
Countries Affected		Intention to apply for CEF	No, we do not plan to apply
Countries Net Cost Bearer		Other Financial Assistance	No
Additional Comments		Comments	
		General Comments	

# Islandmagee Gas Storage Facility

UGS-A-294	Project	Storage Facility	Non-FID
Update Date	28/09/2020		Advanced
Description	InfraStrata plc and its affiliated entity Islandmagee Energy Limited plans to create sever metres of gas. This facility will safeguard Northern Ireland's ability to meet the increasin IE and GB.		
PRJ Code - PRJ Name	-		

Capacity Increments Variant For Mo	odelling						
Point		Operato		Year	From Gas System	To Gas System	Capacity
		Islandma	agee Storage Ltd	2022	STcUKn	UKn	90.00 GWh/d
		Islandma	agee Storage Ltd	2022	UKn	STcUKn	132.00 GWh/d
Islandmagee		increm day so th	Comment: The project is a gas storage fac et as stated. The facility is planned to inj ne increment could be as low as 0 per day local demand and it has been difficult to	ect at 12 or peak	2mcm a day and with at the stated 132. T	ndraw at 22mcm a This will depend on	
		Islandma	agee Storage Ltd	2026	STcUKn	UKn	175.00 GWh/d
		Islandma	agee Storage Ltd	2026	UKn	STcUKn	65.00 GWh/d
Sponsors			General Information		NDP and	PCI Information	
InfraStrata plc	100%	Promoter	Islandmagee Storage Limited	Part of	f NIDP	Yes (Northern Irela	nd Gas Capacity
		Operator	Islandmagee Storage Ltd		11401		Statement)
		Host Country	United Kingdom	NDP N	lumber		n.a.
		Status	Planned	NDP R	Release Date		
		Website	Project's URL	NDP V	Vebsite		NDP URL
				Currer	ntly PCI		No
				Priority	y Corridor(s)		NSIW

#### Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		
Feasibility		
FEED	01/2018	12/2018
Permitting		
Supply Contracts		06/2019
FID		09/2019
Construction	10/2019	05/2022
Commissioning	2022	2026
Grant Obtention Date	17/06/2016	17/06/2016

Third-Party Access Regime	
Considered TPA Regime	Not Applicable
Considered Tariff Regime	Not Applicable
Applied for Exemption	Not Relevant
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Technical Information (UGS)									
Storage Facility	Storage Facility Type	Multiple-cycle Facility	Project Phase	Working Volume (mcm)	Withdrawal Capacity (mcm/d)		(%)	Comments	Commisioning Year
Islandmagee Gas Storage Facility	Salt Cavern	Yes	Project Construction	420	22.0	12.0	20	The project is post FEED and currently in FID. Gas offtake agreement is in place with Vitol.	2022

### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Market Integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks, interoperability and system flexibility, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

Current TYNDP : TYNDP 2020 - Annex A Page 769 of 773

### **Delays since last TYNDP**

Delay Since Last TYNDP approx 3 years

Delay Explanation The project has been rescheduled due to the availability of finance and the difficult trading conditions within the UK gas market.

## **Expected Gas Sourcing**

The project will source its gas from the main UK network supply

Benefits				
Main Driver	Others			
Main Driver Explanation	The main project drivers are the security of gas supply for NI/IE and the ability to enable better stability of price for the gas consumers. At present IE have a single connector at Moffat that provides gas and any disruption to this would have major implications.			
Benefit Description	The facility will remove the bottleneck between NI & IE markets caused by pressure differentials between the two networks, by enabling the pressures within NI to be sufficient to enable export of gas from NI to IE. The project will end energy isolation due to greater connectivity with IE/GB markets. NI is currently fully import dependent. The facility will permit exports to be delivered from NI, enhancing free flow of gas to meet localised demand. An alternative source of gas supply to IE. The facility will enhance physical and price security of supply for the NI, IE and GB markets. The project will provide support to renewable electricity generation in both ROI and NI by increasing the availability of flexible gas supplies to support gas generating plant which will be increasingly required to operate in conjunction with intermittent wind generation.			

Barriers Control of the Control of t			
Barrier Type	Description		
Permit Granting	PCI projects cannot currently benefit from accelerated permitting without a local Executive in place.		
Political	The UK government does not place enough importance on the availability of gas storage and as such the economic conditions for such a facility are difficult to manage.		
Regulatory	Low rate of return		
Market	Lack of market support		
Regulatory	Low or zero-priced short-term capacity		
Financing	Availability of funds and associated conditions		

CBCA			
		Financial Assistance	
No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not	Applied for CEF	(1) Yes, we have applied for CEF and we have red decision;#(2) Yes, we have applied for CEF, but v not received a deci	ve have
	Grants for studies		Yes
	Grants for studies amount	Mln	EUR 4.6
	Grants for works		No
	Grants for works amount	Mln	EUR 0.0
	Intention to apply for CEF		
	Other Financial Assistance		No
	Comments		
	General Comments		
	d we have not yet decided whether we will submit or	d we have not yet decided whether we will submit or not  Grants for studies  Grants for works  Grants for works  Grants for works amount  Intention to apply for CEF  Other Financial Assistance  Comments	Applied for CEF  decision;#(2) Yes, we have applied for CEF, but we not received a decision;  frants for studies  Grants for studies amount  Grants for works  Grants for works amount  Intention to apply for CEF  Other Financial Assistance  Comments

# Physical reverse flow from NI to GB and IE via SNIP pipeline

TRA-N-27	Project	Pipeline including CS	Non-FID
Update Date	22/11/2019		Non-Advanced
I Description	Installation of bi-drectional compression on Scotland to Northern Ireland pipeline (SNI metering and flow control and moving gas odourisation point to a new point(s) downs		

PRJ Code - PRJ Name

Capacity Increments Variant For Modellin	g						
Point		Operator		Year From	Gas System	To Gas System	Capacity
Moffat		Premier T	ransmission Ltd	2021	UKn	Y-UKm	131.00 GWh/d
Sponsors			General Information		NDP and	PCI Information	
Premier Transmission Ltd	100%	Promoter	Premier Transmission Limited	Part of NDP	)	Yes (Northern Irela	, ,
7		Operator	Premier Transmission Lta			Stateme	ent - section 3.21)
		Host Country	United Kingdom	NDP Numbe	r		5.1.2
		Status	Plannea	NDP Release	Date		04/12/2018
		Website	Project's URL	NDP Website	е		<u>NDP URL</u>
				Currently PC	I		No
				Priority Corri	dor(s)		NSIW

#### Current TYNDP: TYNDP 2020 - Annex A

Schedule	Start Date	End Date
Pre-Feasibility		10/2019
Feasibility	10/2019	10/2019
FEED	01/2020	01/2020
Permitting	10/2019	09/2020
Supply Contracts		01/2020
FID		12/2020
Construction	01/2021	09/2022
Commissioning	2021	2021
Grant Obtention Date		

Third-Party Access Regime	
Considered TPA Regime	Regulated
Considered Tariff Regime	Regulated
Applied for Exemption	Not Relevant
Exemption Granted	Not Relevant
Exemption in entry direction	0.00%
Exemption in exit direction	0.00%

Pipelines and Compressor Stations				
Pipeline Section	Pipeline Comment		gth Compressor Power m) (MW)	Comissioning Year
SNIP-Scotland to Northern Ireland		600	10	0
	Total		10	

#### **Fulfilled Criteria**

Specific Criteria Fulfilled

Competition, inter alia through diversification of supply sources, supplying counterparts and routes, Security of Supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and routes, Sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas

Specific Criteria Fulfilled Comments

	Delays since last TYNDP
Delay Since Last TYNDP	Approx 2 years
Delay Explanation	This project is linked to the Islandmagee gas storage project and has been subsequently delayed, in line with the gas storage project being delayed – caused by the absence of competitive transmission tariffs for gas storage.

Current TYNDP : TYNDP 2020 - Annex A Page 773 of 773

Benefits			
Main Driver	Market Demand		
Main Driver Explanatio	n Required by Islandmagee Gas Storage Project		
Benefit Description	This project will open up the GB-NI-Republic of Ireland corridor, and the Republic of Ireland-NI-GB corridor, both currently unavailable. All three markets would have the ability for physical bi-directional links for the first time. The project will allow future gas finds in Northern Ireland to be accessed by GB and Rol. The project will allow GB and Rol to access flexible gas storage planned for Northern Ireland – which is essential for Northern Ireland gas storage to be feasible. The planned upgrade will allow security of supply benefits due to the ability to use the planned gas storage facility. It will also provide back-up support for renewable generation.		

	CBCA
Decision	No, we have not submitted an investment request yet, and we have not yet decided whether we will submit or not
Submissin Date	
Decision Date	
Website	
Countries Affected	
Countries Net Cost Bearer	
Additional Comments	

Financial Assistance	
Applied for CEF	(3) No, we have not applied for CEF
Grants for studies	No
Grants for studies amount	Mln EUR 0.0
Grants for works	No
Grants for works amount	Mln EUR 0.0
Intention to apply for CEF	
Other Financial Assistance	No
Comments	
General Comments	