



Connecting Europe Facility Energy

Supported actions - January 2016

Innovation
and Networks
Executive Agency

Innovation & Networks Executive Agency (INEA)
<http://ec.europa.eu/inea>

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Innovation and Networks Executive Agency (INEA)

2016

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GIPL (Gas Interconnector Poland Lithuania) grant agreement signature on 15 October 2015 in Brussels

Foreword



A truly integrated and competitive internal energy market not only needs a common regulatory framework but also significant development of energy transport infrastructure, in particular cross-border interconnections between Member States. With the new framework for trans-European energy infrastructures, the EU is improving investment conditions to make these crucial projects happen. First, the Projects of Common Interest (PCI) are selected for their important contribution to the three pillars of the EU energy policy objectives: completion of the internal market and competition, security of supply and supply diversification as well as sustainability and integration of renewables. The first Union list of PCIs was adopted in autumn 2013.

The Projects of Common Interest benefit from the highest political recognition and from a favourable regulatory framework, including streamlined permit granting procedures, regulatory incentives and, under certain conditions, financial support under the Connecting Europe Facility (CEF).

Besides making available support in the form of financial instruments, the CEF provides grants for financing studies or works where it is necessary to enable, facilitate or accelerate projects of common interests in electricity and gas infrastructure. Grant management was entrusted to the Innovation and Networks Executive Agency (INEA).

In 2015, INEA signed, on behalf of the European Commission, 51 Grant Agreements for a total amount of close to €700 million. The actions supported through these Grant Agreements are presented in this brochure. They reflect in a very concrete manner the progress and added value of the Energy Union, in particular when it comes to ending energy isolation, facilitating cross-border exchanges and integrating renewable energy sources into the network.

The largest grant was awarded to the Gas Interconnector Poland-Lithuania (GIPL), which will end the long-lasting gas isolation of the Baltic region from the rest of the EU. The GIPL Grant Agreement was signed on 15 October 2015 in presence of the Heads of States or Government of Poland, Lithuania, Latvia, Estonia, European Commission President Jean-Claude Juncker and Commissioner Miguel Arias Cañete.

In 2016, the CEF will support new actions related to Projects of Common Interest included in the second Union list of projects of common interest adopted on 18 November 2015 with the support of all 28 Member States.

We are committed to fully deploy the CEF instrument in order to demonstrate the benefits of the Energy Union to everybody, setting visible signs of solidarity between EU countries.

Dominique Ristori (Director-General, DG Energy) and Dirk Beckers (Executive Director, INEA)

Introduction

The Connecting Europe Facility (CEF) is a key EU funding instrument to promote growth, jobs and competitiveness through targeted infrastructure investment at European level. It supports the development of high performing, sustainable and efficiently interconnected trans-European networks in the fields of transport, energy and digital services.

The CEF Regulation ((EU) No 1316/2013) established three priorities for the energy sector:

- increase competitiveness by promoting the further integration of the internal energy market and the interoperability of electricity and gas networks across borders;
- enhance Union security of energy supply and
- contribute to sustainable development and protection of the environment, inter alia by the integration of energy from renewable sources into the transmission network, and by the development of smart energy networks and carbon dioxide networks.

To support these objectives, a **total budget of €5.35 billion** has been made available for energy projects for the 2014-2020 period, of which €4.7 billion is to be allocated through grants managed by the Innovation and Networks Executive Agency (INEA).

The funding allocated to projects shall contribute to supporting energy infrastructure projects of common interest that have significant societal benefits and that ensure greater solidarity among Member States, but which do not receive adequate financing from the market.

The activities for the first two years of implementation of the CEF Energy programme give priority to actions aiming at ending energy isolation, eliminating energy bottlenecks, and completing of the internal energy market.

Three calls for proposals were launched between 2014 and 2015 under the CEF Energy programme (one call in 2014 and two calls in 2015):

- In 2014 and 2015 (first call), 54 proposals were selected for funding for a total amount of €796.6 million. While 2 proposals were cancelled by the beneficiaries, 51 grant agreements were signed for a total amount of €700 million CEF funding and another grant agreement will be signed early 2016.
- The award decision of the second 2015 call for proposals is expected in February 2016 and the grant agreements will be signed by mid-2016.




CEF funding is awarded mainly in the form of grants (through calls for proposals), but also in the form of financial instruments (managed in cooperation with entrusted entities, notably the European Investment Bank). A number of programme support actions are also being carried out, and others are being planned, in particular to improve the capacity of Member States and project promoters to prepare the project pipelines.

This brochure presents the status of the 51 actions supported by the CEF – Energy for which a grant agreement has been signed in 2015.

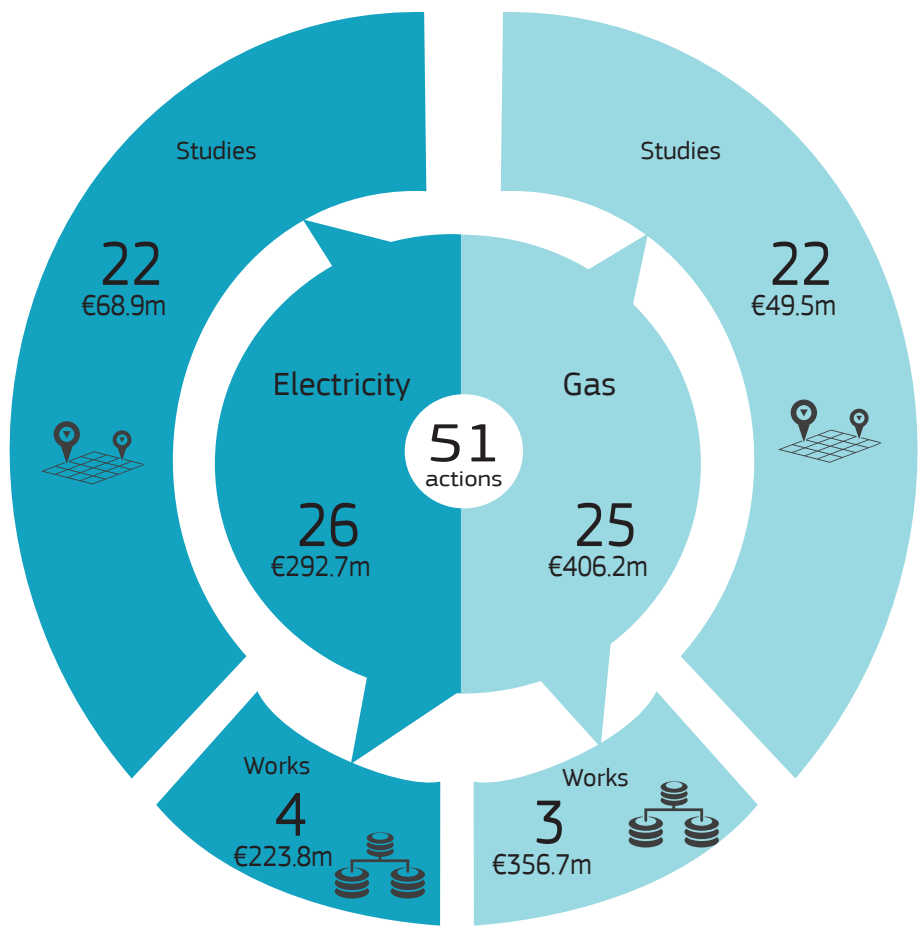
More information: <https://ec.europa.eu/inea/en/connecting-europe-facility/cef-energy>

CEF Energy key figures

Budget 2014-2020 managed by INEA **€4.7 billion**

-  Grant agreements signed in 2014 - 15 **51**
-  For a total amount of **€700 million**
-  Average time-to-grant **221 days**
(7.3 months)

Actions per sector and per type



Electricity actions from the grant agreements signed in 2014-15



EU Member States

Existing power lines (>380kV)

Electricity actions managed by INEA

studies

works

Non EU countries

Cartography: INEA, November 2015
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© EuroGeographics 2001 for the administrative boundaries
© PLATTS for existing power and gas lines

Gas actions from the grant agreements signed in 2014-15



EU Member States

Non EU countries

Existing pipeline network

Gas actions managed by INEA

studies

works

Cartography: INEA, January 2016
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1.

Northern Seas offshore grid

Connecting Europe Facility ENERGY

Member States involved:

France, Ireland

Implementation schedule

Start date: April 2015

End date: August 2016

Budget:

Estimated total cost of the action:
€7,720,664

Maximum EU contribution:
€3,860,332

Percentage of EU support: 50%

Beneficiaries:

Réseau de Transport d'Electricité,
www.rte-france.com

EirGrid Plc, www.eirgrid.com

Additional information:

European Commission
http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)
<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)
www.acer.europa.eu

European Network of Transmission
System Operators for Electricity
(ENTSO-E)
www.entsoe.eu

Celtic Interconnector Feasibility Study

1.6-0024-FRIE-S-M-15

Part of Project of Common Interest 1.6



The Action is a part of the PCI France – Ireland interconnection (currently known as the Celtic Interconnector project) between La Martyre (FR) and Great Island or Knockraha (IE), which aims to build a new 320 kV – 500 kV (depending on the technology, to be fixed at a later stage in detailed design studies) high-voltage direct current (HVDC) subsea connection of approximately 600 km and with a capacity of around 700 MW between Ireland and France (offshore).

The objective of this Action is to produce an Integrated Feasibility Study Report. The activities will take place in both Ireland and France.

The scope of the Action includes 1) marine surveys, 2) preliminary design studies and 3) commercial, legal and governance aspects.

The aim of the marine surveys is to determine sea bed conditions in order to confirm the offshore route and assess the technical conditions for laying the cable and to provide the basis for accurate cost estimation.

The aim of the preliminary design studies is to carry out technical analysis and propose an optimal design for the PCI which will be the basis for cost assessment and procurement at a later stage.

The aim of the commercial, legal and governance studies is to understand regulatory and legal obligations, assess the commercial aspects of the PCI and decide the governance to be put in place, in order to present a comprehensive business case for the PCI.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

France, United Kingdom

Implementation schedule

Start date: July 2014

End date: November 2017

Budget:

Estimated total cost of the action:

€14,470,000

Maximum EU contribution:

€7,235,000

Percentage of EU support: 50%

Beneficiaries:

Transmission Investment LLP

www.transmissioninvestment.com

Réseau de Transport d'Electricité (RTE)

www.rte-france.com

Affiliated entity(ies):

FAB Link Ltd

Transmission Investment Services Ltd

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)

www.acer.europa.eu

European Network of Transmission
System Operators for Electricity
(ENTSO-E)

www.entsoe.eu

Studies for the development of the France- Alderney-Britain (FAB) electricity interconnection project

1.7.1-0003-UKFR-S-M-14

Part of Project of Common Interest 1.7.1



This Action relates to the Project of Common Interest (PCI) 1.7.1. France – United Kingdom interconnection between Cotentin, France and the vicinity of Exeter (UK), currently known as the FAB project. It aims to connect France with the UK via Alderney, using a new, approximately 218 km long HVDC subsea/underground interconnection between Exeter and Manuel, France, with VSC converter station at both locations. The expected rated capacity is 1000-1400 MW.

This funded Action will undertake the necessary studies to prepare for the construction of the PCI. It consists of the technical studies for onshore and offshore cable routing and route surveys, environmental studies for the cable and the converter stations, EIA and public consultations, economics and legal studies for the preparation of documents required by the regulatory authorities, tendering for and negotiating contracts and project financing.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

France, United Kingdom

Implementation schedule

Start date: September 2014

End date: September 2015

Budget:

Estimated total cost of the action:

€3,396,062

Maximum EU contribution:

€1,698,031

Percentage of EU support: 50%

Beneficiary:

ElecLink Limited

www.eleclink.co.uk

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

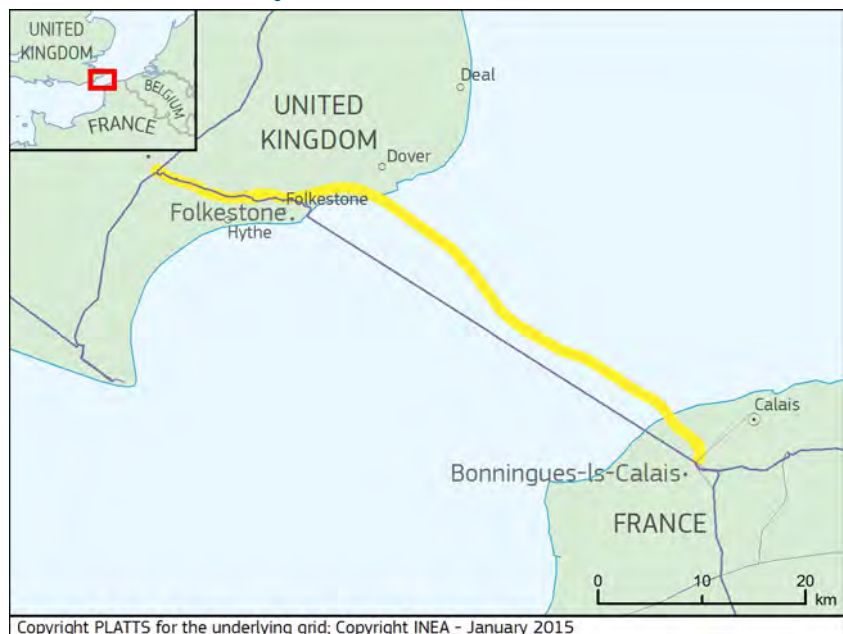
European Network of Transmission System Operators for Electricity (ENTSO-E)

www.entsoe.eu

ElecLink

1.7.3-0060-UK-S-M-14

Part of Project of Common Interest 1.7.3



This Action is a part of the Project of Common Interest (PCI) 1.7.3 France - United Kingdom interconnection between Coquelles, France and Folkestone, UK, currently known as the ElecLink project. It aims to build and operate a 1000 MW merchant interconnector of approximately 70 km passing through the Channel Tunnel to link the 400kV grids in both countries.

This particular Action's objective is to complete a set of studies required to obtain the permits, authorisations, certain regulatory exemptions and financing that will allow the construction work to begin.

It includes compliance with environmental requirements, grid operator requirements and selection of a preferred tenderer for the construction of the interconnector. Furthermore, an Interconnector Access Agreement will be developed and finalised, safety requirements will be agreed and all elements constituting the project financing will be completed.

The Action has ended.

Connecting Europe Facility ENERGY

Member States involved:

France, United Kingdom

Implementation schedule

Start date: April 2015

End date: March 2016

Budget:

Estimated total cost of the action:
€985,338

Maximum EU contribution: €492,669

Percentage of EU support: 50%

Beneficiary:

ElecLink Limited

<http://www.eleclink.co.uk>

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)

www.acer.europa.eu

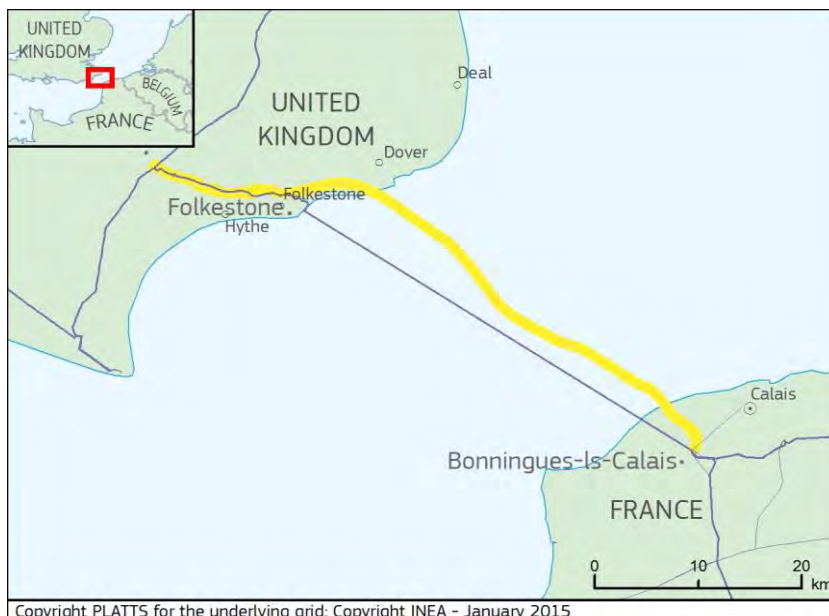
European Network of Transmission
System Operators for Electricity
(ENTSO-E)

www.entsoe.eu

ElecLink

1.7.3-0013-UKFR-S-M-15

Part of Project of Common Interest 1.7.3



The Action is a part of the PCI 1.7.3 France - United Kingdom interconnection between Coquelles (FR) and Folkestone (UK), currently known as the ElecLink project, which aims to build and operate a new approximately 70km 320 kV DC electricity interconnector with a capacity of 1000 MW via the Channel Tunnel (onshore and offshore) to link the 400kV grids in UK and France.

The objective of this Action is to complete the different studies required to ensure the rules for buyers of long-term interconnector capacity ("Interconnector Participation Rules") are (a) approved by the National Regulatory Authorities ("NRAs") and (b) meet the project lenders' requirements.

The scope of this Action is to draft, amend and finalise legal drafts related to Interconnector Participation Rules; agreements for 'forward sale' of long-term interconnector capacity and a market consultation document, to establish the auction platform and to carry out the relevant studies on market consultation and ensuring the provision of the long-term interconnector capacity to the market.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Ireland, United Kingdom

Implementation schedule

Start date: April 2015

End date: December 2016

Budget:

Estimated total cost of the action:

€1,619,090

Maximum EU contribution: €809,545

Percentage of EU support: 50%

Beneficiary:

Element Power Ireland Ltd,

www.elpower.com

Affiliated entity(ies):

Greenwire Transmission Pembroke
Limited, Greenwire Limited

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)

www.acer.europa.eu

European Network of Transmission
System Operators for Electricity
(ENTSO-E)

www.entsoe.eu

Greenwire Interconnector

1.9.1-0018-IEUK-S-M-15

Part of Project of Common Interest 1.9.1



The Action is a part of the PCI 1.9.1 Ireland – United Kingdom interconnection between Co. Offaly (IE), Pembroke and Pentir (UK), which aims to deliver additional transmission capacity between Ireland and United Kingdom. The Action consists of one of the planned interconnections of the PCI, namely, the Greenwire Interconnector (the so-called Greenlink), between Great Island, Wexford County (IE) and Pembroke (UK). Greenlink will approximately be a 320kV HVDC sub-sea cable of a capacity of 500 -700 MW and have a length of approximately 172km.

The objective of this Action is to conduct a series of environmental studies & surveys and address the regulation, grid and financial aspects of Greenlink.

The scope of this Action includes regulatory and financing aspects as well as stakeholder involvement issues in UK and IE. It also comprises the development of the routing for Greenlink, including locations of converter stations onshore and offshore cables, topographical surveys, desktop geotechnical assessments, the preparation of the scoping report and fauna, flora and other surveys for inputs to the EIA, preparing the tenders for contracting the seabed surveys and to confirm the optimal connection points for Greenlink and develop the necessary connection agreements and processes.

Once completed the Action would lead to the start of the Environmental Impact Assessment (EIA) and seabed surveys as well as to the preparation of activities that would lead to financial close of Greenlink.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

United Kingdom
Non-EU country: Norway

Implementation schedule

Start date: August 2014
End date: September 2017

Budget:

Estimated total cost of the action:
€62,600,000

Maximum EU contribution:
€31,300,000

Percentage of EU support: 50%

Beneficiaries:

National Grid Interconnector Holdings
Ltd
www2.nationalgrid.com

Statnett SF
www.statnett.no

Affiliated entity(ies):

National Grid Holdings One plc
National Grid North Sea Link Limited
National Grid International Limited

Additional information:

European Commission
http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)
<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)
www.acer.europa.eu

European Network of Transmission
System Operators for Electricity
(ENTSO-E)
www.entsoe.eu

NSN Technical Design Studies

1.10-0025-UKNO-S-M-14

Part of Project of Common Interest 1.10



This Action is a part of the Project of Common Interest (PCI) 1.10 Norway – United Kingdom interconnection. The interconnector will have a length of approximately 720 km, a capacity of 1.4 GW and a voltage of 525 kV.

It will carry out the necessary cable and converter technical design studies, including prototype component manufacture and type testing. It aims to resolve the necessary consents and licences, the business case and commercial arrangements, as well as the specifications and procurement steps that must be completed in order to minimise risks and take the final investment decisions.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

United Kingdom

Implementation schedule

Start date: May 2015

End date: October 2016

Budget:

Estimated total cost of the action:

€12,930,000

Maximum EU contribution:

€6,465,000

Percentage of EU support: 50%

Beneficiary:

Gaelectric Energy Storage Ltd,
www.gaelectric.ie

Affiliated entity(ies):

Gaelectric CAES NI Limited

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)

www.acer.europa.eu

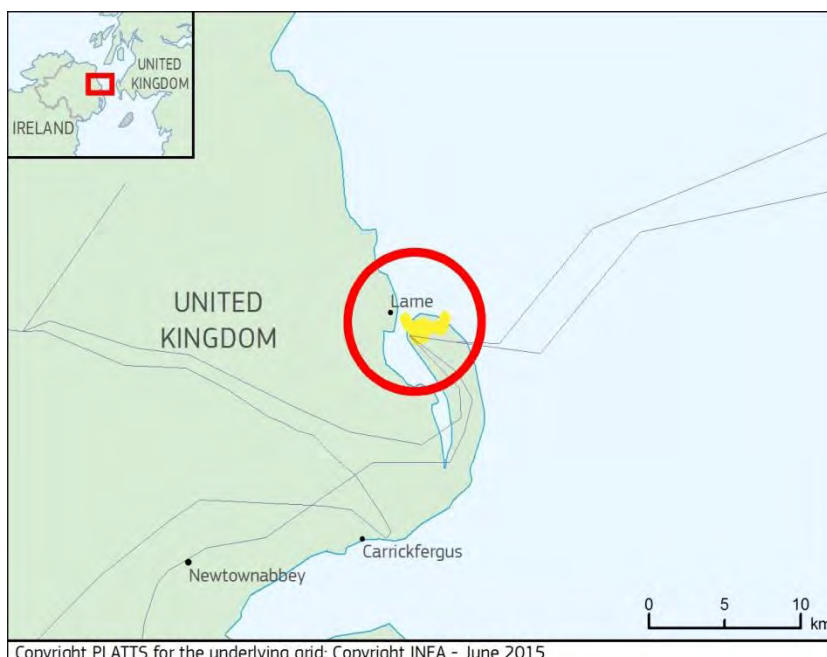
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System Operators for Electricity
(ENTSO-E)

www.entsoe.eu

CAES Larne EIA&FEED

1.12-0020-UK-S-M-15

Part of Project of Common Interest 1.12



The Action is a part of the PCI 1.12 Compressed air energy storage (CAES) in Larne (UK), which aims to build a compressed air energy storage facility using air storage caverns to be created in bedded salt deposits, the facility having an installed generation capacity of approximately 330 MW and an annual storage capacity of approximately 1,426 GWh.

The objective of this Action is to conduct the necessary studies that would prepare the PCI for the application of licences and to provide system services to the all-island Single Electricity Market in Northern Ireland. System Services is a key work stream within the Delivering a Secure, Sustainable, Electricity System Programme (DS3). The overall aim of the DS3 Programme is to put in place the required changes to system policies, tools and performance to allow the electricity system operate safely with a high penetration of wind.

The scope of the Action involves submission of a planning application to the Planning Service in Northern Ireland. As part of the planning application an Environment Impact Analysis (EIA) is required to be submitted and its completion is part of this Action. It also involves the design development and completion of the Front-End Engineering Design (FEED) with detailed cost estimate and detailed schedule construction for the entire CAES facility.

The Action is ongoing.

2.

North-South electricity interconnections in Western Europe

Connecting Europe Facility ENERGY

Member States involved:

France, Spain

Implementation schedule

Start date: September 2014

End date: December 2016

Budget:

Estimated total cost of the action:

€6,500,000

Maximum EU contribution:

€3,250,000

Percentage of EU support: 50%

Beneficiaries:

Réseau de Transport d'Electricité (RTE)
www.rte-france.com

RED Electrica de Espana

www.ree.es

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)

www.acer.europa.eu

European Network of Transmission
System Operators for Electricity
(ENTSO-E)

www.entsoe.eu

Studies for a new Atlantic electrical interconnection between Spain and France

2.7-0023-FRES-S-M-14

Part of Project of Common Interest 2.7



This Action contributes to the Project of Common Interest (PCI) 2.7 for the construction of an interconnector between Spain and France. The length of the cable is approximately 370 km with a total maximum capacity of 2000 MW.

Its main objective is to complete the set of studies needed to determine the precise feasibility and impact of this new interconnector. It is comprised of geological studies, environmental and social acceptance studies of the Action's stakeholders, studies for the technological solutions (HVDC technology, rate of the converters, cable and route design) and installation processes (subsea cable laying and protection).

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Portugal

Implementation schedule

Start date: October 2015

End date: March 2019

Budget:

Estimated total cost of the action:
€500,000

Maximum EU contribution:
€250,000

Percentage of EU support: 50%

Beneficiary:

Rede Eléctrica Nacional, S.A
www.ren.pt

Additional information:

European Commission
http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)
<http://inea.ec.europa.eu>

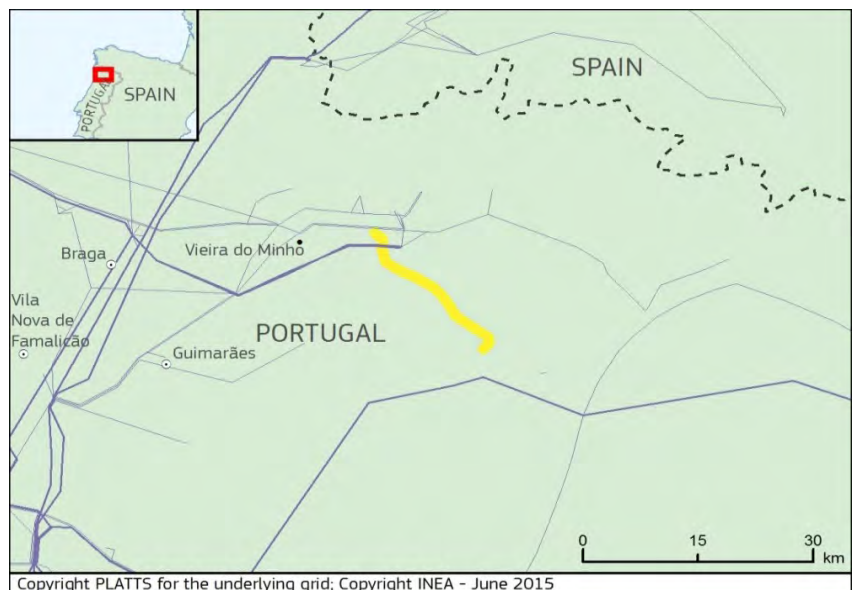
Agency for the Cooperation of Energy
Regulators (ACER)
www.acer.europa.eu

European Network of Transmission
System Operators for Electricity
(ENTSO-E)
www.entsoe.eu

Environmental and engineering studies for the development of the internal Ribeira de Pena – Vieira do Minho 1/2, 400 kV double circuit overhead line (PT)

2.16.3-0003-PT-S-M-15

Part of Project of Common Interest 2.16



The current Action is part of the Project of Common Interest 2.16.1 internal line between Frades B, Ribeira de Pena and Feira which aims to connect the future Ribeira da Pena substation (400/60kV) to the existing Vieira do Minho switch station (400kV).

The Action's aim is to prepare the necessary studies required for the construction of the PCI. The Action consists of two studies:

- Basic Study which will provide the large scale condition factors and determine the alternative line routes. It also includes a stakeholder consultation; and
- Design studies which will include studies covering materials and types of equipment, topographical and preliminary draft studies for the optimal line tracing and the position of the towers. It also includes an Environmental Impact Study (EIS) of the overhead line (OHL) which will be used for the Environmental Impact Assessment (EIA). The Action will end with the issuance of an Environmental Impact Declaration (EID).

The Action is ongoing.

3.

North-South electricity interconnections in Central Eastern and South Eastern Europe

Connecting Europe Facility ENERGY

Member States involved:

Greece

Implementation schedule

Start date: January 2015

End date: July 2017

Budget:

Estimated total cost of the action:
€680,000

Maximum EU contribution:
€340,000

Percentage of EU support: 50%

Beneficiary:

Independent Power Transmission
Operator (IPTO/ADMIE) S.A.
www.admie.gr

Additional information:

European Commission
http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)
<http://inea.ec.europa.eu>

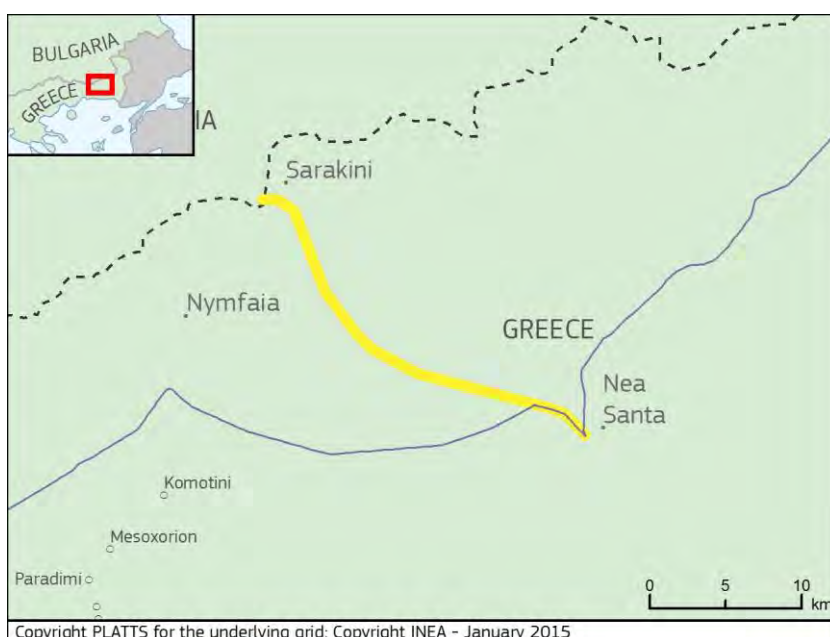
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www.acer.europa.eu

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(ENTSO-E)
www.entsoe.eu

Studies and preparatory actions for the construction of the Greek part of the 2nd interconnector between Bulgaria and Greece (Project No. 3.7.1 Maritsa East 1 (BG)- Nea Santa (EL))

3.7.1-0018-EL-S-M-14

Part of Project of Common Interest 3.7.1



The Action is a part of the Project of Common Interest (PCI) 3.7.1 that concerns the construction of a new AC 400kV single-circuit interconnector of approximately 151 km with transfer capacity of 1500MVA (thermal limit) between the Maritsa East substation in Bulgaria and Nea Santa substation in Greece. The aim is to reinforce the existing 400kV regional grid, further increase cross-border exchanges and accommodate the expected future renewable energy generation in northeast Greece, as well as in the northeast and southern regions of Bulgaria.

This specific Action involves part of the interconnection transmission line Maritsa East 1 (BG) - Nea Santa (EL) within Greece up to the Bulgarian border crossing, with a total length of approximately 29 km. A relevant Action is also undertaken by the Bulgarian TSO (ESO-EAD).

The objectives are to prepare the application file in order to proceed with the environmental permit granting process and define all of the technical details required for construction. In addition, a detailed cost-benefit analysis and business plan for the entire PCI will be prepared that will allow an investment request to be submitted to relevant national regulatory authorities of Bulgaria and Greece.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Bulgaria

Implementation schedule

Start date: November 2014

End date: March 2018

Budget:

Estimated total cost of the action:

€612,000

Maximum EU contribution:

€306,000

Percentage of EU support: 50%

Beneficiary:

Elektroenergien Sistemen Operator EAD

www.tso.bg

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)

www.acer.europa.eu

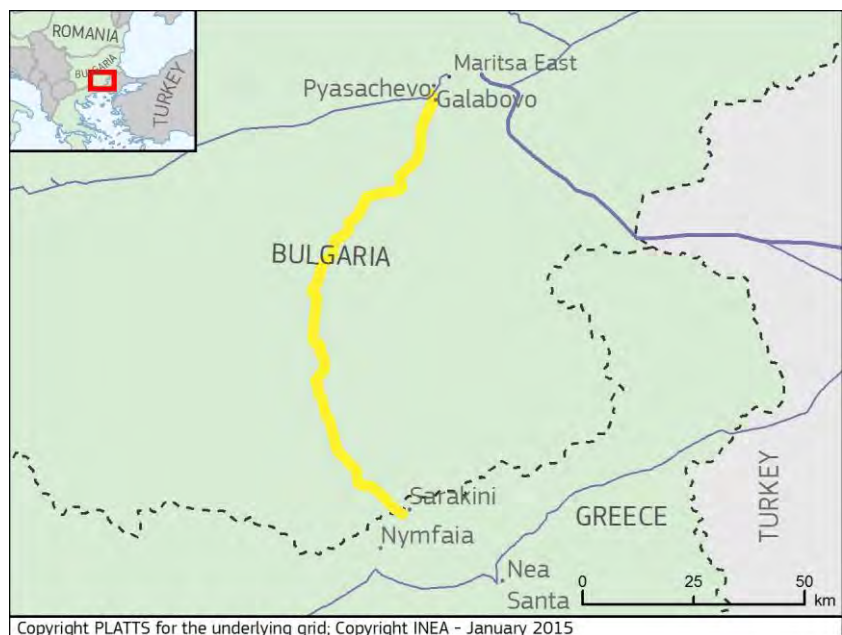
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System Operators for Electricity
(ENTSO-E)

www.entsoe.eu

Studies and pre-investment works for the Bulgarian part of project Interconnection between Maritsa East (BG) and Nea Santa (EL)

3.7.1-0029-BG-S-M-14

Part of Project of Common Interest 3.7.1



The Action belongs to Project of Common Interest (PCI) 3.7.1, which concerns the construction of a new AC 400 kV single-circuit interconnector with a capacity of 1500 MW between the Maritsa East substation in Bulgaria and Nea Santa substation in Greece, with an aim to integrate renewable energy sources into the electricity grid.

This specific Action concerns the part of the Maritsa East-Nea Santa interconnection transmission line in Bulgaria up to the Greek border, a total length of approximately 122 km. A relevant Action is also undertaken by the Greek TSO IPTO/ADMIE.

The aim is to prepare a comprehensive package for study, research and pre-investment activities that are necessary for a final investment decision. It includes the obtaining of all necessary permits for the implementation of the investment project, as well as the design and preparation of the tender procedure for a contractor to carry out the construction.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Bulgaria

Implementation schedule

Start date: January 2015

End date: July 2017

Budget:

Estimated total cost of the action:
€558,000

Maximum EU contribution:
€279,000

Percentage of EU support: 50%

Beneficiary:

Elektroenergien Sistemen Operator EAD
www.tso.bg

Additional information:

European Commission
http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)
<http://inea.ec.europa.eu>

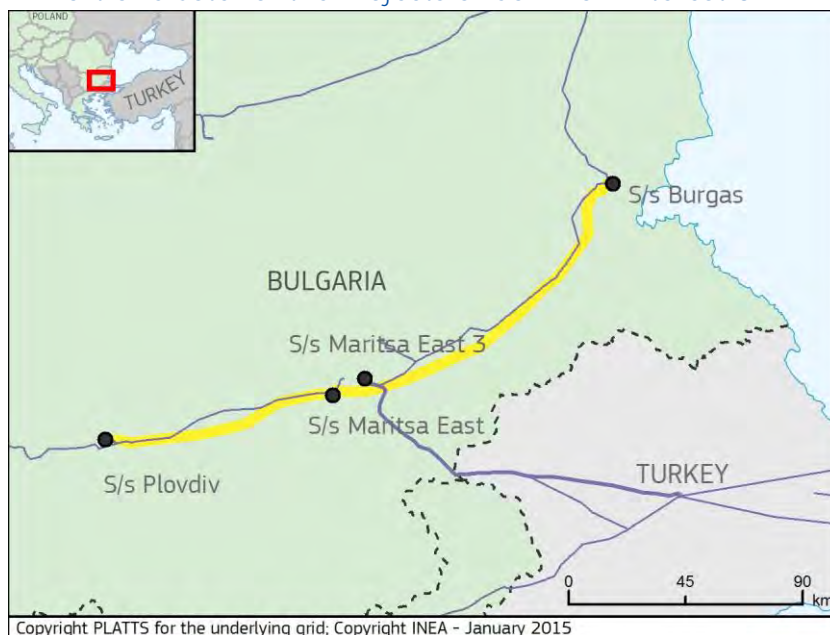
Agency for the Cooperation of Energy
Regulators (ACER)
www.acer.europa.eu

European Network of Transmission
System Operators for Electricity
(ENTSO-E)
www.entsoe.eu

Studies and pre-investment works for projects: Internal lines Maritsa East-Burgas, Maritsa East-Maritsa East 3 and Maritsa East-Plovdiv

3.7.4-0031-BG-S-M-14

Part of Cluster of the Projects of Common Interest 3.7



The Action includes three out of four Projects of Common Interest (PCIs) from cluster 3.7, namely three internal lines in Bulgaria:

- 3.7.2 Maritsa East-Plovdiv (+/- 94 km)
- 3.7.3 Maritsa East-Maritsa East 3 (+/- 13 km)
- 3.7.4 Maritsa East-Burgas (+/- 150 km)

The three 400 kV internal lines will have a capacity of 1500 MW each and total around 257 km. Their construction will contribute to security of supply, system flexibility, the transmission of electrical energy from renewable energy sources and synchronous and secure operation of the power system in southeast Europe.

This specific Action's aim is to prepare the documentation necessary for the final investment decision. It includes the preparation of the final detailed development plans and approval of all necessary permits for the implementation of the investment projects. The preparation of the detailed designs and tender documentation for the selection of contractors to carry out the construction of three lines is also covered.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Bulgaria

Implementation schedule

Start date: January 2016

End date: July 2021

Budget:

Estimated total cost of the action:

€57,993,300

Maximum EU contribution:

€28,996,650

Percentage of EU support: 50%

Beneficiary:

Elektroenergien Sistemen Operator EAD

www.eso.bg

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

European Network of Transmission System Operators for Electricity (ENTSO-E)

www.entsoe.eu

Construction of new 400 kv OHTL between Maritsa East and Burgas

3.7.4-0008-BG-W-M-15

Part of Project of Common Interest 3.7.4



The Action implements the PCI 3.7.4. "Internal line between Maritsa East 1 and Burgas (BG)". The objective of the Action is the construction of an approximately 133 km long 400 kV overhead transmission line between substation "Maritsa East" and substation "Burgas" on the territory of Bulgaria.

The Action is composed of the construction works of the entire line, the supervision of the construction and the Action management, public acceptance, visibility, communication and transparency activities.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Bulgaria

Implementation schedule

Start date: January 2015

End date: April 2018

Budget:

Estimated total cost of the action:
€630,000

Maximum EU contribution:
€315,000

Percentage of EU support: 50%

Beneficiary:

Elektroenergien Sistemen Operator
EAD
www.tso.bg

Additional information:

European Commission
http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)
<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)
www.acer.europa.eu

European Network of Transmission
System Operators for Electricity
(ENTSO-E)
www.entsoe.eu

Studies and pre-investment works for the project Internal line between Dobrudja and Burgas

3.8.1-0030-BG-S-M-14

Part of Project of Common Interest 3.8.1



The Action is a part of the Project of Common Interest (PCI) 3.8.1 which involves the construction of a new, AC 400 kV single-circuit interconnector with a length of approximately 110 km and a capacity of 1500 MW between the Dobrudja and Burgas substations in Bulgaria.

The aim of this specific Action is to prepare a comprehensive package necessary for a final investment decision. This includes the preparation of a final detailed development plan, approval of all the necessary permits for the implementation of the investment project, preparation of a detailed design and the tender documentation for the selection of a contractor to carry out the construction.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Cyprus, Greece
Non-EU country: Israel

Implementation schedule

Start date: January 2015
End date: April 2016

Budget:

Estimated total cost of the action:
€2,650,000

Maximum EU contribution:
€1,325,000

Percentage of EU support: 50%

Beneficiary:

DeiQuantumEnergy Ltd
www.dei-quantumenergy.com

Additional information:

European Commission
http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)
<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)
www.acer.europa.eu

European Network of Transmission
System Operators for Electricity
(ENTSO-E)
www.entsoe.eu

EuroAsia Interconnector - Design, Implementation and Environmental Studies

3.10.1-0028-CY-S-M-14

Part of Cluster of the Projects of Common Interest 3.10



This Action involves the Project of Common Interest (PCI) 3.10. (Israel-Cyprus-Greece) between Hadera, Israel and the Attica region of Greece, currently known as the EuroAsia Interconnector. It consists of an approximately 1518 km long 400 kV interconnector with a capacity of around 2000 MW.

This Action specifically aims at defining the technical and technological solution, and assessing the possible environmental impact. It will also select the preferred route corridor (among those already pre-defined) and provide useful results for the cable engineering. For these purposes a series of preliminary studies and a reconnaissance survey will be carried out.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Czech Republic

Implementation schedule

Start date: August 2014

End date: May 2016

Budget:

Estimated total cost of the action:

€2,026,048

Maximum EU contribution:

€1,013,024

Percentage of EU support: 50%

Beneficiary:

ČEPS, a.s.

www.ceps.cz

Affiliated entity(ies):

ČEPS Invest, a.s.

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

European Network of Transmission System Operators for Electricity (ENTSO-E)

<https://www.entsoe.eu>

Documentation for zoning permit of the line 400 kV Vernerov-Vitkov, substation 400 kV Vitkov and Project study for substation 400 kV Vernerov

3.11.1-0036-CZ-S-M-14

Part of Project of Common Interest 3.11.1



The Action is a part of the 3.11.1 PCI Internal line between Vernerov and Vitkov (CZ), which is a 400 kV AC double circuit overhead line of approximately 75 km and with a capacity of 2x1730 MVA.

The Action consists of the preparation and approval of the documentation for the zoning permit for the construction of the 400 kV AC double circuit overhead transmission line between Vernerov and Vitkov (onshore) and the documentation for the zoning and building permits for the construction of the 400 kV substation Vitkov. The documents to be prepared are obligatory under the Building Act of the Czech Republic (No. 183/2006 Coll.). The zoning and building permit is among the grant permits which need to be ensured and obtained before the construction of the PCI starts.

The Action will be completed with the submission of the application for the zoning and building permit to the competent authorities.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Czech Republic

Implementation schedule

Start date: July 2015

End date: September 2016

Budget:

Estimated total cost of the action:

€572,000

Maximum EU contribution:

€286,000

Percentage of EU support: 50%

Beneficiary:

ČEPS, a.s.

www.ceps.cz

Affiliated entity(ies):

ČEPS Invest, a.s.

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

European Network of Transmission System Operators for Electricity (ENTSO-E)

www.entsoe.eu

Final project documentation for substation Vítkov

3.11.1-0007-CZ-S-M-15

Part of Project of Common Interest 3.11.1



The Action is a part of the 3.11.1 PCI Internal line between Věrnéřov and Vítkov (Czech Republic), which concerns the construction of a 400 kV AC double circuit overhead line of approximately 75 km and with a capacity of 2x1730 MVA. For the purpose of the line the new 400 kV substation Vítkov will be constructed using a special Gas-Insulated Substation (GIS) technology.

The Action aims to complete the preparatory work for the construction of the substation Vítkov and consists of the preparation and approval of the final project documentation, including the tendering documentation, as well as of the tendering procedure of the GIS based technology substation.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Czech Republic

Implementation schedule

Start date: May 2015

End date: June 2016

Budget:

Estimated total cost of the action:
€1,902,000

Maximum EU contribution:
€951,000

Percentage of EU support: 50%

Beneficiary:

ČEPS, a.s.

www.ceps.cz

Affiliated entity(ies):

ČEPS Invest, a.s.

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

European Network of Transmission System Operators for Electricity (ENTSO-E)

www.entsoe.eu

Documentation for zoning permit of the line Vítkov-Přeštice

3.11.2-006-CZ-S-M-15

Part of Project of Common Interest 3.11.2



The Action is part of the PCI 3.11.2 Internal line between Vítkov and Přeštice (CZ) which concerns the building of a new 400 kV AC double circuit OHL of approximately 86 km and with a capacity of 2x1730 MVA between Vítkov and Přeštice (onshore) in the Czech Republic.

The Action consists of the preparation of the documentation for the zoning permit for the construction of the 400 kV AC double circuit overhead transmission line between Vítkov and Přeštice and for the zoning permit for the construction of the substation Přeštice.

The Action will be completed by the submission of the applications for the zoning permits for the electricity connection line from Vítkov to Přeštice and for the substation Přeštice to the competent authorities.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Hungary

Implementation schedule

Start date: August 2014

End date: September 2016

Budget:

Estimated total cost of the action:
€377,918

Maximum EU contribution:
€188,959

Percentage of EU support: 50%

Beneficiary:

MAVIR Magyar Villamosenergia-ipari
Átviteli Rendszerirányító ZRt.
www.mavir.hu

Additional information:

European Commission
http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)
<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)
www.acer.europa.eu

European Network of Transmission
System Operators for Electricity
(ENTSO-E)
www.entsoe.eu

Preparation of Gönyű (HU) – National Border (HU) 400 kV interconnection line

3.16.1-0039-HU-S-M-14

Part of Project of Common Interest 3.16.1



The Action is part of the Project of Common Interest (PCI) 3.16.1 which involves the construction of a new double circuit 400 kV interconnection line of approximately 20 km between the substations of Gönyű (Hungary) and Gabčíkovo (Slovakia). The aim is to increase the cross-border transfer capacity between the two countries' transmission systems, promote security of supply and help to integrate renewable energy sources.

The Action itself refers to the section of the 400 kV and approximately 1 km long double circuit line of optical ground wire between Gönyű and the Slovak border, as well as the upgrade of the Gönyű substation.

It also aims to prepare the preliminary and detailed feasibility studies for the Hungarian section of the overhead line, the planning and designing of the this line and the extension of the Gönyű substation. Other tasks include obtaining and purchasing the necessary permits, ensuring the technical engineering and supervision during the planning phase, as well as the preparation of the MAVIR internal decision regarding the necessity of the submission of an investment request under EU Regulation 347/2013, including a request for a cross-border cost allocation decision.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Slovenia

Implementation schedule

Start date: November 2014

End date: June 2016

Budget:

Estimated total cost of the action:

€400,000

Maximum EU contribution:

€200,000

Percentage of EU support: 50%

Beneficiary:

ELES, Ltd., Electricity Transmission
system operator

www.eles.si

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)

www.acer.europa.eu

European network of Transmission
System Operators for Electricity
(ENTSO-E)

<https://www.entsoe.eu>

Study and validation of the optimal technologies for submarine/terrestrial line HVDC Slovenia-Italy

3.21-0024-SI-S-M-14

Part of Project of Common Interest 3.21



The Action is a study for the implementation of a part of the PCI 3.21 PCI Italy-Slovenia interconnection up to 1000 MW between Salgareda (IT) and Divača - Beričevo region (SI). The Action covers only Slovenian territory, from Divača or Beričevo to the Italo-Slovenian sea-border in the Gulf of Trieste, covering a distance between 48 km and 128 km, depending on the connection point – Divača or Beričevo – which is yet to be determined.

The main objectives of the Action are to establish the optimum technology solution of the planned High Voltage Direct Current (HVDC) connection between the two countries and to prepare the Strategic Environmental Assessment (SEA) which are both necessary for the implementation of the project of common interest.

For this purpose, firstly an analysis of the suitability of different HVDC technologies will be performed and, based on technical considerations the most suitable technological solution will be identified.

Secondly, the Action will focus on the preparation of the Strategic Environmental Assessment (SEA), analysing and identifying the environmental risks, screening potential environmental impacts and studying the sensitivity of the environment.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Bulgaria

Implementation schedule

Start date: August 2014

End date: January 2017

Budget:

Estimated total cost of the action:

€6,426,000

Maximum EU contribution:

€3,213,000

Percentage of EU support: 50%

Beneficiary:

Natsionalna Elektricheska Kompania

www.nek.bg

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

European Network of Transmission System Operators for Electricity (ENTSO-E)

www.entsoe.eu

Hydro-pumped storage in Bulgaria- Yadenitsa

3.23-0063-BG-S-M-14

Part of Project of Common Interest 3.23



The current Action is part of Project of Common Interest (PCI) 3.23, Hydro-pumped storage in Bulgaria which aims to increase the production potential of the Chaira Pump Storage Hydro Power Plant via the construction of the Yadenitsa Dam.

This specific Action will prepare all of the required documentation, procedures and permits for the completion of the PCI. It includes: the Environmental Impact Assessment, detailed design, International Federation of Consulting Engineers (FIDIC) tender documents for the selection of the contractor for the execution of the construction works, the financial analysis and risk assessment, the detailed site development plan and the construction permit.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Greece

Implementation schedule

Start date: August 2014

End date: December 2016

Budget:

Estimated total cost of the action:

€9,830,000

Maximum EU contribution:

€4,915,000

Percentage of EU support: 50%

Beneficiary:

Terna Energy S.A

www.terna-energy.com

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

European Network of Transmission System Operators for Electricity (ENTSO-E)

www.entsoe.eu

Design and EIA of the PCI Hydro-pumped storage in Greece – Amfilochia

3.24-0013-EL-S-M-14

Part of Project of Common Interest 3.24



The current Action is part of Project of Common Interest (PCI) 3.24 Hydro-pumped storage in Greece (Amfilochia) which consists of two independent upper reservoirs (Agios Georgios and Pyrgos) and a common lower reservoir (Kastraki Lake). The equipment for energy production and energy pumping will be installed in two independent powerhouses located near the Kastraki Lake. The existing infrastructure will be upgraded, helping to reduce the environmental impact and **avoid the construction of a new "lower" reservoir.**

This specific Action's aim is to prepare the detailed design studies, including the tender documents for the Agios Georgios and Pyrgos reservoirs. Its deliverables include the detailed design reports, drawings, the decision on the environmental terms approval and the tender documents for the Agios Georgios and Pyrgos reservoirs.

The Action is ongoing.

4.

Baltic Energy Market Interconnection Plan in electricity

Connecting Europe Facility ENERGY

Member States involved:

Estonia, Latvia

Implementation schedule

Start date: January 2015

End date: December 2020

Budget:

Estimated total cost of the action:

€172,771,848

Maximum EU contribution:

€112,301,701

Percentage of EU support: 65%

Beneficiaries:

AS Augstsprieguma Tīkls

www.ast.lv

AS Latvijas elektriskie tīkli

www.latvnergo.lv

Elering AS

www.elering.ee

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)

www.acer.europa.eu

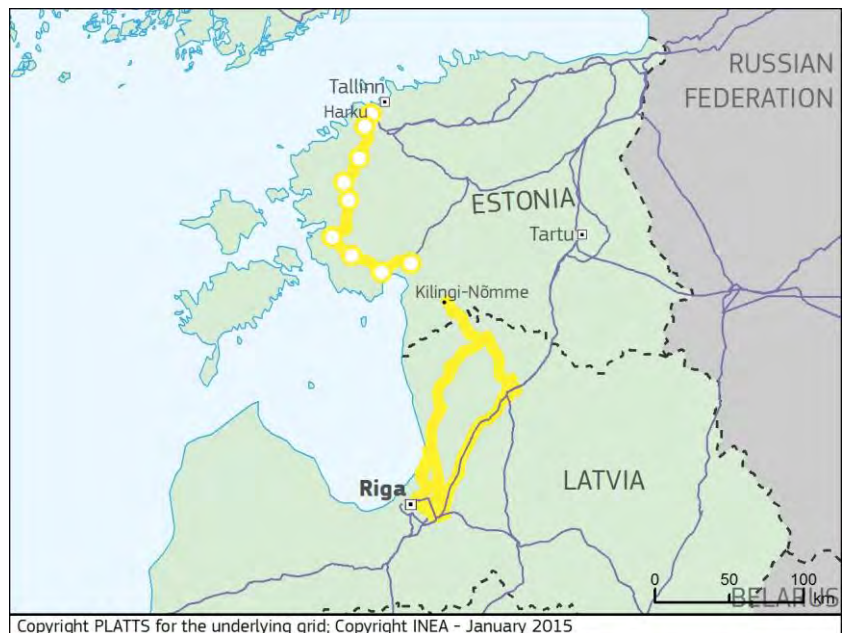
European Network of Transmission
System Operators for Electricity
(ENTSO-E)

www.entsoe.eu

Interconnection between Kilingi-Nõmme (EE) and Riga CHP2 substation (LV)

4.2.1-0027-LVLV-P-M-14

Part of Projects of Common Interest 4.2.1 and 4.2.2



The current Action implements Projects of Common Interest (PCIs) 4.2.1 and 4.2.2 which belong to the cluster 4.2: Cluster Estonia-Latvia between Kilingi-Nõmme and Riga. Known as the 3rd interconnection between Estonia and Latvia, it aims to increase the security of supply and develop the electricity market in the Baltic region.

The goal of the Action is dual. Firstly, on the cross-border section between Estonia and Latvia, it aims to build an interconnection between Kilingi-Nõmme, Estonia and the combined heat and power substations in the Latvian capital of Riga. In Estonia, the Action will build the internal line between Harku and Sindi for the effective and secure operation of PCI 4.2.1. A major part of the new internal connection will be established on existing lines on the western part of the Estonian mainland.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Lithuania

Implementation schedule

Start date: September 2014

End date: April 2015

Budget:

Estimated total cost of the action:
€250,000

Maximum EU contribution:
€125,000

Percentage of EU support: 50%

Beneficiary:

Litgrid AB

www.litgrid.eu

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)

www.acer.europa.eu

European Network of Transmission
System Operators for Electricity
(ENTSO-E)

www.entsoe.eu

Identification of technical requirements and costs for integration of large scale generating unit into the Baltic states' Power System Operating synchronously with the Continental Europe Networks

4.3-0002-LT-S-M-14

Part of Project of Common Interest 4.3



The current Action is part of Project of Common Interest (PCI) 4.3, which aims to address the synchronous operation of the Baltic States' electricity system with the European continental networks.

The Action's specific goal is to complement a 2013 feasibility study by the Baltic States' Transmission System Operators, by providing the final technical requirements for a large scale generating unit to be integrated into the Baltic electricity system. It will evaluate various operating requirements and parameters of the synchronous zone and related costs compared to different scenarios. The study will cover all system reinforcements, stability improvements, technical measures or operational limitations (if no other measures are available), as well as the implementation plan. Its main deliverable will be to set up the package of the final technical requirements necessary for the integration of the large scale generating unit into the transmission network.

The Action has ended.

Connecting Europe Facility ENERGY

Member States involved:

Latvia

Implementation schedule

Start date: July 2014

End date: December 2019

Budget:

Estimated total cost of the action:

€122,420,000

Maximum EU contribution:

€55,089,000

Percentage of EU support: 45%

Beneficiaries:

AS Augstsprieguma Tīkls

www.ast.lv

AS Latvijas elektriskie tīkli

www.latvnergo.lv

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

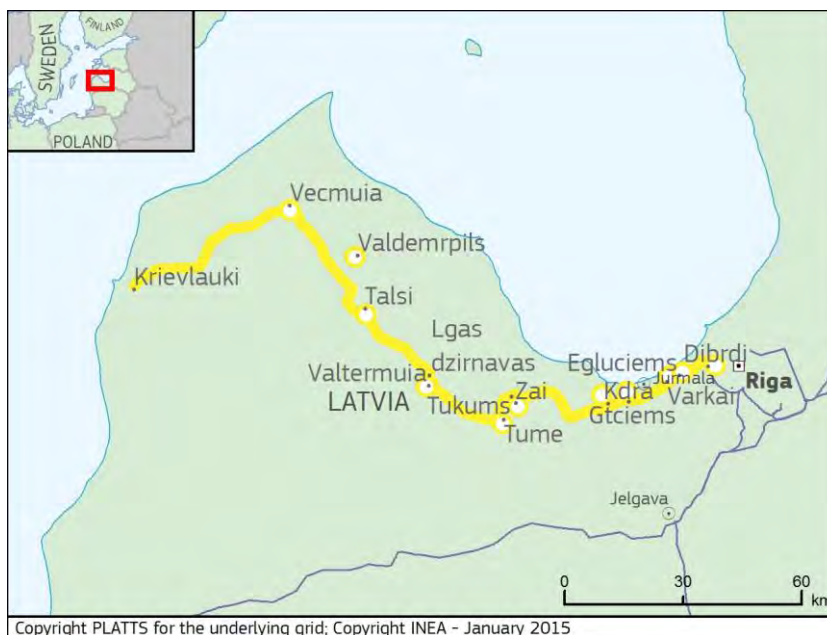
European Network of Transmission System Operators for Electricity (ENTSO-E)

www.entsoe.eu

Internal line between Ventspils, Tume and Imanta (LV)

4.4.1-0004-LVLV-P-M-14

Part of Project of Common Interest 4.4.1



The current Action implements the Project of Common Interest (PCI) 4.4.1 the internal line between Ventspils, Tume and Imanta and belongs to the Cluster 4.4 Latvia – Sweden capacity increase ("NordBalt") project.

The goal of this specific Action is to deliver the following infrastructure:

1. The construction of a double circuit 330kV and 110 kV overhead line from Ventspils-Tume-Imanta measuring approximately 210 km and current rating of 1600A for 330 kV line
2. The extension of the 330kV "Imanta" substation for the transmission line connection to the network, where a new AC switchgear and auxiliary components will be delivered and installed.
3. The construction of the new 330kV and extension of the existing 110kV "Tume" substation, including one 330/110kV autotransformer, reactive power compensation equipment and new 110kV bay for autotransformer connection to the transmission network.
4. 110kV substations will be reconstructed or upgraded in view of the transit current rating increase. This will include the reconstruction of five 110kV substations and the upgrade of another five.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Lithuania

Implementation schedule

Start date: April 2015

End date: February 2016

Budget:

Estimated total cost of the action:
€54,753,000

Maximum EU contribution:
€27,376,500

Percentage of EU support: 50%

Beneficiary:

Litgrid AB

www.litgrid.eu

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

European Network of Transmission System Operators for Electricity (ENTSO-E)

www.entsoe.eu

LitPol Link construction

4.5.1-0005-LT-W-M-15

Part of Project of Common Interest 4.5.1



The current Action implements the first part of Project of Common Interest (PCI) 4.5.1 which is the interconnection between the Lithuanian and the Polish electricity system at the Lithuanian/Polish border called "LitPol Link".

The Action's goal is the construction and commissioning of approximately 51 km double circuit 400 kV AC overhead line between Alytus (Lithuania) to the Polish border. This consists of the construction of OHL foundations, in the Lithuanian territory and the construction and commissioning of a 500 MW High Voltage Direct Current (HVDC) back-to-back converter station with a 400 kV switchyard in Alytus (Lithuania). There will be 8 single-phase converter station transformers, of which 2 will be spare ones. Once completed, it will pave the way for the commencement of the second phase of the LitPol Link.

The Action is ongoing.

5.

North-South gas interconnections in Western Europe

Connecting Europe Facility ENERGY

Member States involved:

United Kingdom

Implementation schedule

Start date: August 2014

End date: January 2016

Budget:

Estimated total cost of the action:

€5,000,000

Maximum EU contribution:

€2,500,000

Percentage of EU support: 50%

Beneficiary:

InfraStrata plc

www.infrastrata.co.uk

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

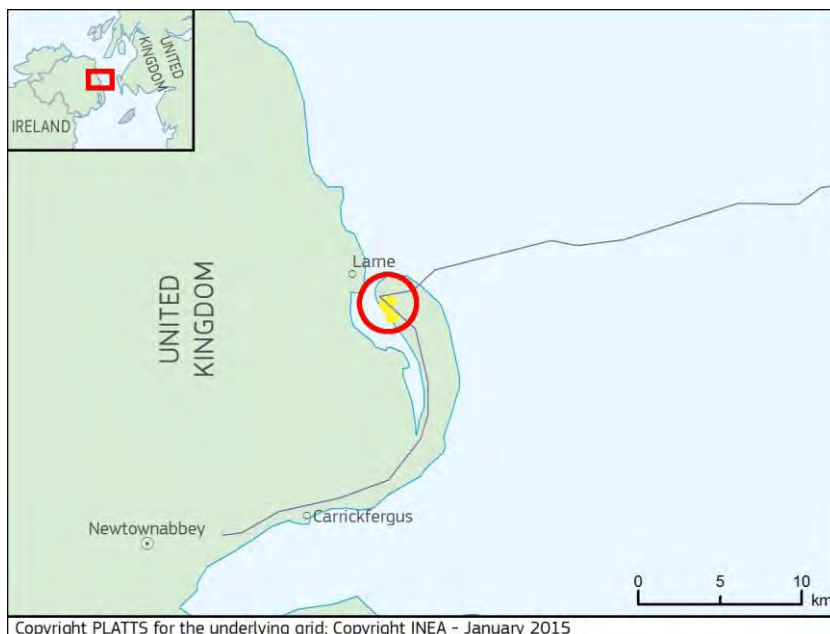
European Network of Transmission System Operators for Gas (ENTSO-G)

www.entsog.eu

Islandmagee Gas Storage Facility

5.1.3-0035-UKUK-S-M-14

Part of Project of Common Interest 5.1.3



This specific Action is part of the Project of Common Interest (PCI) 5.1.3 Development of the Islandmagee Underground Gas Storage (UGS) facility at Larne (Northern Ireland), which aims to improve the security of supply and increase the amount of flexibility available in the gas markets of Great Britain, Northern Ireland and the Republic of Ireland. It also enables greater interconnectivity across these three neighboring markets, while supporting the achievement of national renewable and carbon reduction targets. The PCI concerns the development of a salt cavity gas storage facility located in Larne, UK and will provide a working gas volume of 500 million cubic meters (mcm) and allow for a withdrawal capacity of 22 mcm per day and injection capacity of 12 mcm per day.

This Action will confirm the feasibility of this development of an underground gas storage facility in salt caverns. It will obtain a salt core sample and related data, which will then be tested to provide information on the further development of the design parameters and cost estimate for the project. A borehole will first be drilled to obtain salt samples and related rock mechanical data, and then followed up by the subsequent salt testing, analysis and design testing, which will confirm the economic viability of the project.

The Action has ended.

Connecting Europe Facility ENERGY

Member States involved:

United Kingdom

Implementation schedule

Start date: August 2014

End date: December 2017

Budget:

Estimated total cost of the action:

€92,860,796

Maximum EU contribution:

€33,764,185

Percentage of EU support: 36.4%

Beneficiary:

Gas Networks Ireland (UK)

www.gasnetworks.ie

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)

www.acer.europa.eu

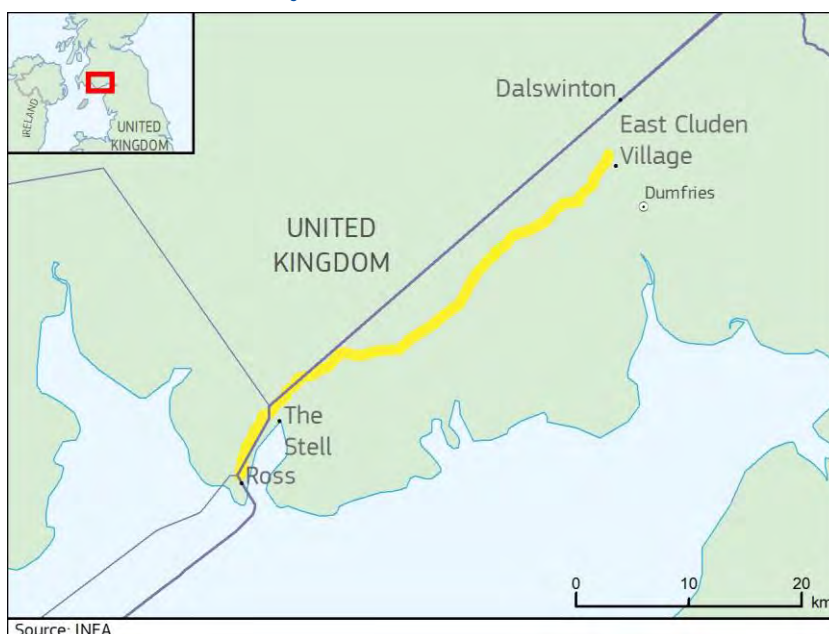
European Network of Transmission
System Operators for Gas (ENTSO-G)

www.entsog.eu

PCI Twinning of Southwest Scotland onshore system between Cluden & Brighouse Bay (UK)

5.2-0042-UK-P-M-14

Part of Project of Common Interest 5.2



The Action will implement PCI 5.2 "Twinning of Southwest Scotland onshore System between Cluden and Brighouse Bay in the United Kingdom (UK)". The scope of the current Action is the construction of the remaining 50 km system of transmission pipeline, with a 914 mm diameter that will operate as a high pressure transmission pipeline and transport an additional quantity of 1.1 bcm/year of natural gas to Ireland. The pipeline will be connected into the existing national gas network.

The Action aims at: i) addressing the current pressure restriction in the onshore system; ii) completing a dual pipeline system between Ireland and the United Kingdom; and iii) removing security of supply concerns, increasing thus the operational pressures by around twenty percent and gas capacity by around ten percent in the network. There are a number of activities associated with the Action's implementation, such as environmental studies, material procurement and construction, leading to the commissioning of the pipeline and the successful completion of the Action. While for the 50 km section of pipeline there are valid planning consents, the foreseen local deviation of 7km at Dumfries will be subject to the consent of the competent environmental authorities.

The completion of the Action will, as a result, reduce compressor fuel gas usage and increase pipeline storage and technical capacity, bringing about environmental benefits through a reduction in greenhouse gas emissions.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Portugal

Implementation schedule

Start date: July 2015

End date: December 2017

Budget:

Estimated total cost of the action:

€1,011,850

Maximum EU contribution: €505,925

Percentage of EU support: 50%

Beneficiary:

REN-Gasodutos, S.A. (REN)

<http://www.ren.pt/>

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

European Network of Transmission System Operators for Gas (ENTSO-G)

<http://www.entsog.eu>

Engineering studies (basic and detailed design) for the development of the PCI - 3rd Interconnection between Portugal and Spain

5.4-0001-PT-S-M-15

Part of Project of Common Interest 5.4



The Action "Engineering studies (basic and detailed design) for the development of the PCI - 3rd Interconnection between Portugal and Spain" is a part of the PCI 5.4 "3rd interconnection point between Portugal and Spain", which aims to connect both gas systems between Celorico da Beira (Portugal) and Zamora (Spain). The Action relates to the first phase of the 3rd Interconnection point between Portugal and Spain and the related auxiliary installations with a total estimated length of 162 km in Portuguese territory.

The scope of this Action includes technical and environmental studies necessary to obtain the project permit and to develop the construction of the Celorico-Vale de Frades pipeline. As a result, the most adequate station sites and pipeline route will be selected and all the design, construction and operation and maintenance processes will be developed in order to minimize the infrastructure impacts on environmental and safety aspects.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Germany

Implementation schedule

Start date: April 2015

End date: December 2016

Budget:

Estimated total cost of the action:

€2,464,000

Maximum EU contribution:

€1,232,000

Percentage of EU support: 50%

Beneficiary:

Fluxys TENP GmbH

<http://www.fluxys.com/>

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

European Network of Transmission System Operators for Gas (ENTSO-G)

<http://www.entsog.eu>

Reverse Flow TENP - Studies

5.10-0010-DE-S-M-15

Part of Project of Common Interest 5.10



The Action "Reverse Flow on TENP – Studies" is part of the Project of Common Interest (PCI) 5.10 "Reverse flow interconnection on TENP pipeline in Germany", which aims to design and engineer the reversal of the TENP pipeline to transport gas from Switzerland to Germany. This Action aims to simulate and assess under what operative conditions the gas flow from North to South could be reversed.

The scope of this Action includes the construction of a test deodorisation facility in Krummhörn and includes the technical and engineering studies aimed at providing input for tender for works for the reversal of Hugelheim compressor station and to start basic design for an industrial scaled deodorisation plant in Schwörstadt region.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Malta

Implementation schedule

Start date: July 2015

End date: June 2017

Budget:

Estimated total cost of the action:
€800,000

Maximum EU contribution:
€400,000

Percentage of EU support: 50%

Beneficiary:

Ministry for Energy and Health
(Government of Malta)
<https://www.gov.mt>

Additional information:

European Commission
http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)
<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)
www.acer.europa.eu

European Network of Transmission
System Operators for Gas (ENTSO-G)
<http://www.entsog.eu>

Route identification study including conceptual design and preparatory activities for the permitting process for a gas pipeline connection between Malta and Sicily

5.19-0011-MTIT-S-M-15

Part of Project of Common Interest 5.19



The Action is a part of the Project of Common Interest 5.19 "Connection of Malta to the European gas network (gas pipeline with Italy at Gela and Floating LNG Storage and Regasification Unit (FSRU))" and relates to a gas pipeline between Gela (Sicily) to Delimara (Malta), of approx. 155 km, DN 543 mm, estimated capacity 2 bcm/y, and the related auxiliary installations. The primary aim is to enable gas flows from Italy to Malta, thus ending **Malta's isolation from the European gas network.**

The scope of this Action entails the identification of the optimal 1.2 km wide pipeline route corridor through a detailed desktop Route Identification Study, including the conceptual design of the pipeline and related infrastructure and preparatory activities for the commencement of the Italian and Maltese permitting processes.

The Action is ongoing.

6.

North-South gas interconnections in Central Eastern and South Eastern Europe

Connecting Europe Facility ENERGY

Member States involved:

Poland, Czech Republic

Implementation schedule

Start date: September 2014

End date: February 2017

Budget:

Estimated total cost of the action:
€3,047,472

Maximum EU contribution:
€1,523,736

Percentage of EU support: 50%

Beneficiaries:

GAZ-SYSTEM, S.A.
www.gaz-system.pl

NET4GAS, s.r.o.
www.net4gas.cz

Additional information:

European Commission
http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)
<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)
www.acer.europa.eu

European Network of Transmission
System Operators for Gas (ENTSO-G)
www.entsog.eu

Preparatory studies for the Poland-Czech Republic interconnection Libhošť (CZ)–Hať (CZ-PL)–Kędzierzyn (PL) (Stork II)

6.1.1-0054-CZPL-S-M-14

Part of Project of Common Interest 6.1.1



The current Action is part of a series of preparatory activities for the implementation of the Project of Common Interest (PCI) 6.1.1 Poland-Czech Republic Interconnection (Stork II) belonging to the PCI cluster 6.1 Czech-Polish interconnection upgrade and related internal reinforcements in Western Poland.

This specific Action covers pre-investment activities for the Poland-Czech Republic interconnector, i.e. Libhošť (CZ)–Hať (CZ-PL)–Kędzierzyn (PL) pipeline, totaling 52 km in the Czech Republic and 55 km in Poland. It also includes its auxiliary installations on the Polish side (gas metering station located near the border, gas node and compressor station in Kędzierzyn). The expected transmission capacity of the interconnector is around 13.7 mcm/day in the direction Poland to Czech Republic and around 19.6 mcm/day in the reverse direction (Stage I).

The completion of the Action will allow starting the construction of the Poland-Czech Republic gas interconnector. To do this, the objective on the Czech side is to prepare the documentation needed for obtaining permits for construction of the Libhošť–Hať pipeline section, the tendering a general contractor and the purchase of material. In Poland, the localisation decisions and environmental consent will be obtained. The Action will carry out the basic and detailed engineering design and get building permission for the pipeline, metering station and auxiliary installations. It will also obtain the localisation decision, perform FEED and the basic engineering design, as well as get the building permission for the Kędzierzyn compressor station.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Poland, Slovakia

Implementation schedule

Start date: August 2014

End date: April 2018

Budget:

Estimated total cost of the action:
€9,203,000

Maximum EU contribution:
€4,601,500

Percentage of EU support: 50%

Beneficiaries:

GAZ-SYSTEM, S.A.
www.gaz-system.pl

Eustream
www.eustream.sk

Additional information:

European Commission
http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)
<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)
www.acer.europa.eu

European Network of Transmission
System Operators for Gas (ENTSO-G)
www.entsog.eu

Preparatory studies and engineering works for the Poland - Slovakia Gas Interconnection

6.2.1-0065-PLSK-S-M-14

Part of Project of Common Interest 6.2.1



This Action is part of preparatory activities for the Project of Common Interest (PCI) 6.2.1 Poland-Slovakia interconnection, which belongs to the cluster 6.2 Poland-Slovakia interconnection and related internal reinforcements in eastern Poland.

This specific Action covers pre-investment activities for the Poland-Slovakia interconnector, measuring approximately 164 km in length with an expected transmission capacity of 12.9 mcm/day in the direction Poland-Slovakia and 15.6 mcm/day (average) in reverse from Slovakia to Poland.

Its aim is to complete the preparation of investment procedures for both sides of the Strachocina-**Velké Kapušany** gas interconnection. In Poland, this concerns obtaining the relevant environmental consents (Environmental Impact Assessment), localisation decisions, and building permits. The Action will also perform a basic engineering design for the Strachocina-**Lupkowska** pipeline section, as well as nodes, the metering and the compressor stations. The Front-End Engineering Design (FEED) for the Strachocina compressor station and the Strachocina-**Lupkowska** pass is also included. In Slovakia, the Action seeks to complete spatial planning design, obtain the localisation permits and environmental consents, complete the basic and detailed engineering and get the building permits for its section of the pipeline, the metering station and the modification of the compressor station in **Velké Kapušany**.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Austria, Czech Republic

Implementation schedule

Start date: October 2014

End date: December 2015

Budget:

Estimated total cost of the action:
€132,296

Maximum EU contribution:
€66,148

Percentage of EU support: 50%

Beneficiaries:

NET4GAS, s.r.o.
www.net4gas.cz

GAS CONNECT AUSTRIA GmbH
www.gasconnect.at

Additional information:

European Commission
http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)
<http://inea.ec.europa.eu>

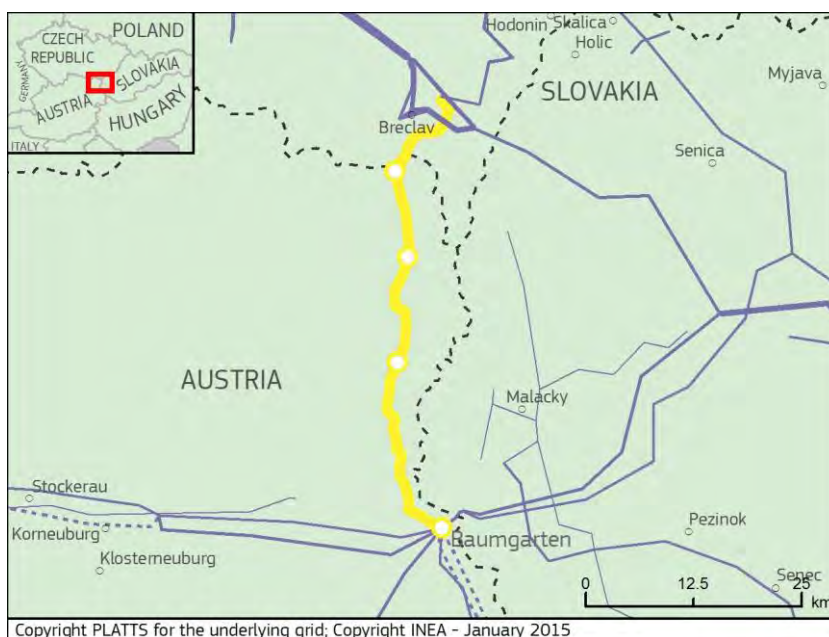
Agency for the Cooperation of Energy
Regulators (ACER)
www.acer.europa.eu

European Network of Transmission
System Operators for Gas (ENTSO-G)
www.entsog.eu

Preparatory studies for the first bidirectional AT-CZ interconnection ("BACI")

6.4-0055-CZAT-S-M-14

Part of Project of Common Interest 6.4



This Action is part of a series of preparatory activities required for the implementation of the Project of Common Interest (PCI) 6.4 Bidirectional Austria-Czech interconnection (BACI) between Baumgarten (AT)-Reinthal (CZ/AT)-**Břeclav (CZ)**, which involves the construction of a new gas pipeline of approximately 61 km of length with a transmission capacity of around 18 mcm/day.

This specific Action, comprised of activities on both the Austrian and Czech sides, aims to complete the preparatory activities necessary for the future joint investment request. In particular, it includes the establishment of a business plan, an assessment of market demand, a financial analysis, the performance of a cost-benefit analysis and the preparation of a proposal for a cross-border cost allocation decision.

The Action **has** ended.

Connecting Europe Facility ENERGY

Member States involved:

Croatia

Implementation schedule

Start date: August 2014

End date: October 2016

Budget:

Estimated total cost of the action:

€9,800,000

Maximum EU contribution:

€4,900,000

Percentage of EU support: 50%

Beneficiary:

LNG Hrvatska d.o.o.

www.lng.hr

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

European Network of Transmission System Operators for Gas (ENTSO-G)

www.entsog.eu

Studies for LNG terminal Krk: legal & financial advisory, FEED, main design, tender documentation for EPC, power supply system documentation

6.5.1-0037-HR-S-M-14

Part of Project of Common Interest 6.5.1



This Action is part of a series of preparatory activities for the implementation of the Project of Common Interest (PCI) 6.5.1 LNG regasification vessel in Krk, which addresses the construction of a first onshore LNG (liquefied natural gas) terminal on Krk island in Croatia. The final terminal will have two 180,000 m³ LNG storage tanks and an approximate maximum send-out capacity of 6 bcm/year. It will also be able to anchor special purpose LNG vessels, as well as handle LNG refilling, storing and reloading. The regasification plant will enable re-gasified natural gas to be supplied to the national gas system. The terminal's reloading facility will be able to re-fill LNG to smaller, special purpose LNG vessels and load LNG trucks.

The Action covers business, legal and financial advising throughout all stages of the PCI's preparation and implementation of the Action. It also includes the development of front-end engineering design (FEED) and the main design of the LNG terminal, preparation of power supply system documentation, studies on power supply source, connection to the grid, basic design and environmental impact assessment (EIA) and main design with the construction permit as final deliverable for the power supply system. As a final activity, it will prepare the engineering, procurement and construction (EPC) contract.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Croatia

Implementation schedule

Start date: July 2015

End date: March 2016

Budget:

Estimated total cost of the action:

€1,100,000

Maximum EU contribution:

€550,000

Percentage of EU support: 50%

Beneficiary:

LNG Hrvatska d.o.o.

www.lng.hr

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

European Network of Transmission System Operators for Gas (ENTSO-G)

www.entsog.eu

Field and laboratory investigations studies and preparation of reports

6.5.1-0026-HR-S-M-15

Part of Project of Common Interest 6.5.1



This Action is part of a series of preparatory activities for the implementation of the Project of Common Interest (PCI) 6.5.1 LNG regasification vessel in Krk, which addresses the construction of a first onshore LNG (liquefied natural gas) terminal on Krk island in Croatia. The final terminal will have two 180,000 m³ LNG storage tanks and an approximate maximum send-out capacity of 6 bcm/year.

The Action consists of a set of studies covering both onshore and offshore areas of the LNG terminal. Both onshore and offshore studies will focus on the geological, geotechnical, geophysical, seismological and archaeological aspects, whereas studies on the coastal part of the LNG terminal will in addition include geodetic and hydrographic surveying.

The objective of the Action is to gather and assess data on the composition and the geological structure of the foundation soil for the LNG terminal. It will ensure the completion of the design stage of the project of common interest 6.5.1 and will allow the beneficiary to obtain the construction permit for the LNG terminal.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Croatia

Implementation schedule

Start date: July 2015

End date: March 2018

Budget:

Estimated total cost of the action:

€4,500,000

Maximum EU contribution:

€2,250,000

Percentage of EU support: 50%

Beneficiary:

Plinacro d.o.o.:

www.plinacro.hr

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

European Network of Transmission System Operators for Gas (ENTSO-G)

www.entsog.eu

Pre-investment phase for the project of the main LNG transit gas pipeline Zlobin- Bosiljevo-Sisak-Kozarac-Slobodnica

6.5.2-0015-HR-S-M-15

Part of Project of Common Interest 6.5.2



This Action is part of preparatory activities for the implementation of the Project of Common Interest (PCI) 6.5.2, which concerns the construction of a new gas pipeline and upgrade of existing line on the Zlobin – Bosiljevo – Sisak – Kozarac – Slobodnica pipeline located in Croatia. The total estimated length of the pipeline is 308 km. The only existing section Kozarac – Slobodnica will be upgraded by constructing a parallel pipeline of DN800, maximum operating pressure (MOP) of 75 bar and transmission capacity 6.5 bcm/year. The other sections will be built with DN1000, MOP 100 bar and a transmission capacity of 10 bcm/year.

The realization of the pipeline is intrinsically linked to the design and the implementation of the Krk LNG terminal (PCI 6.5.1), as the pipeline represents the main evacuation route for the regasified LNG to a number of countries in central-eastern and south-eastern Europe.

The current Action covers the following package of activities needed to complete the pre-investment stage of the pipeline: feasibility study, market test, Cost-Benefit Analysis, business plan, preparation of documents for the Cross-Border Cost Allocation decision and detailed design.

The overall objective of the Action is to analyse the economic, financial and technical aspects for the Zlobin – Bosiljevo – Sisak – Kozarac – Slobodnica pipeline. The key deliverables of the Action, among which are the building permits per section, will allow to start the construction of the PCI 6.5.2.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Greece

Implementation schedule

Start date: August 2014

End date: April 2016

Budget:

Estimated total cost of the action:

€3,510,000

Maximum EU contribution:

€1,755,000

Percentage of EU support: 50%

Beneficiary:

GASTRADE S.A.

<http://www.gastrade.gr>

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)

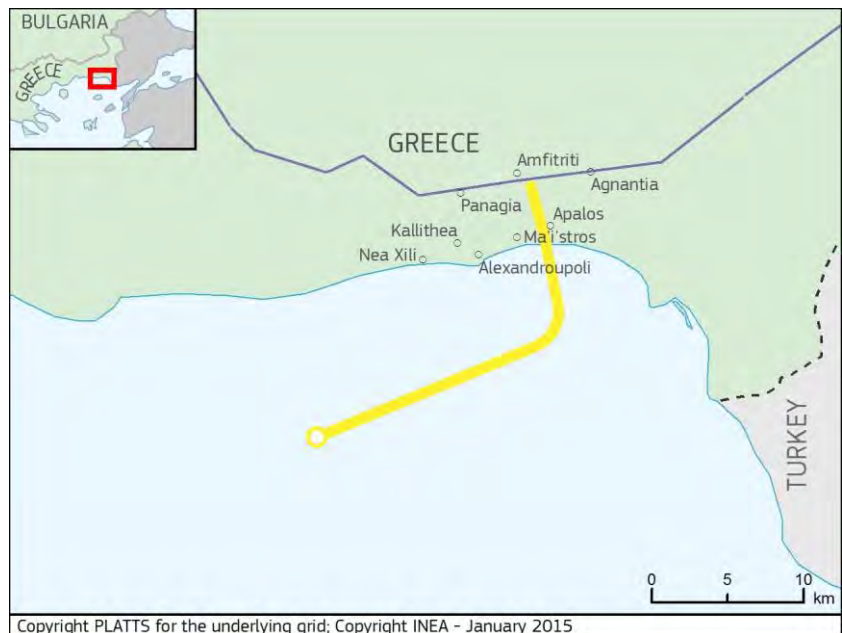
www.acer.europa.eu

European Network of Transmission
System Operators for Gas (ENTSO-G)
www.entsog.eu

Front End Engineering Design (FEED) & preparation of the EPC/ITT dossier

6.9.1-0021-EL-S-M-14

Part of Project of Common Interest 6.9.1



This Action is part of a series of preparatory activities required for the implementation of the Project of Common Interest (PCI) 6.9.1 Independent Natural Gas System LNG Greece, consisting of the construction of a new offshore LNG floating storage and regasification unit and a mooring and pipeline system, connecting the floating unit to the national natural gas transmission system. The storage capacity on the floating unit is expected to be 170.000 m³ and the estimated maximum send-out capacity 16.8 mcm/day. It is located in northeastern Greece, offshore of the town of Alexandroupolis.

This Action's scope includes the preparation of the Front-End Engineering Design (FEED), the Engineering, Procurement and Construction (EPC) and Invitation to Tender dossier (ITT). The FEED will describe all main technological components of the infrastructure (floating unit, turret, mooring, riser, pipeline-end manifold and pipeline). It will provide the specifications, develop the required material lists for all the core equipment and define the main design and key operating principles for the system's development.

It aims to develop system engineering for consolidated technical solutions across the different project components, as well as identify risks and provide effective development cost estimates. As a result, the completed EPC/ITT will be able to engage a construction contractor and purchase long lead items.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Greece

Implementation schedule

Start date: January 2015

End date: July 2015

Budget:

Estimated total cost of the action:
€505.000

Maximum EU contribution:
€252.500

Percentage of EU support: 50%

Beneficiary:

DEPA S.A.

www.depa.gr

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)

www.acer.europa.eu

European Network of Transmission
System Operators for Gas (ENTSO-G)
www.entsog.eu

Aegean LNG – Studies related to permitting procedure

6.9.2-0008-EL-S-M-14

Part of Project of Common Interest 6.9.2



This Action was part of a series of preparatory activities required for the implementation of PCI 6.9.2 "Aegean LNG import terminal", which aimed at constructing a new Aegean offshore LNG Floating Storage and Regasification Unit (FSRU) of an expected send-out capacity of 3-5 bcm/year, approximately 150.000 m³ storage capacity and a system of marine facilities such as a mooring terminal, ship-to-ship and ship-to-shore transfer system and other associated facilities required for the operation of the FSRU.

The scope of the Action included the feasibility study for the capacity variation of the terminal, revision and fine-tuning of the facility's location, safety study, the cold water diffusion study as well as the investigation for potential marine antiquities in the area of the future LNG infrastructure. The goal of the Action was to assess the functionality and different LNG supply chain models of a 25.000 m³ FSRU (same send-out capacity), envisaged for importing LNG in the Kavala region, as well as to facilitate the completion of the Environmental Impact Assessment (EIA) procedure. The Action was to lead to the next stage of the PCI implementation, i.e. Front-End Engineering Design (FEED) and the obtaining of the environmental and installation permits.

The Action has been terminated in view of merging the project with another LNG terminal in Northern Greece (Alexandroupolis LNG - PCI 6.9.1).

Connecting Europe Facility ENERGY

Member States involved:

Bulgaria

Implementation schedule

Start date: July 2015

End date: December 2017

Budget:

Estimated total cost of the action:

€7,800,000

Maximum EU contribution:

€3,900,000

Percentage of EU support: 50%

Beneficiary:

Bulgartransgaz EAD

www.bulgartransgaz.bg/en

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

European Network of Transmission System Operators for Gas (ENTSO-G)

www.entsog.eu

Conduct of 3D seismic surveys as a part of the Chiren UGS expansion project 6.20.2

6.20.2-0021-BG-S-M-15

Part of Project of Common Interest 6.20.2



The Action contributes to the implementation of the project of common interest (PCI) 6.20.2 "Chiren UGS Expansion", the only gas storage on the territory of Bulgaria, with a projected working gas volume of between 720 MCM and 1000 MCM, projected maximum withdrawal capacity 10 MCM/day and projected injection capacity 10 MCM/day. The PCI aims at undertaking measures, such as performance of studies and subsequent works, for the staged gas storage capacity expansion, in order to achieve the targeted technical parameters.

The 3D onshore seismic surveys to be carried out under this Action consist of geophysical and geological studies aiming at the characterisation of the Chiren gas reservoir. This includes the conduct of data acquisition, data processing and interpretation of results and the quality control of the 3D onshore seismic surveys and processing of acquired data.

The current Action is the next required implementation step of the PCI, in order to fully perform the planned geological and geophysical studies.

The results of the complete set of studies will serve as a basis for defining the best option for the expansion of Chiren underground gas storage facility and subsequently the next steps of PCI implementation, such as the design and construction of above and subsurface facilities.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Slovenia

Implementation schedule

Start date: January 2015

End date: December 2017

Budget:

Estimated total cost of the action:
€750,000

Maximum EU contribution:
€375,000

Percentage of EU support: 50%

Beneficiary:

Plinovodi, D.O.O.

www.plinovodi.si

Additional information:

European Commission
http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)
<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)
www.acer.europa.eu

European Network of Transmission
System Operators for Gas (ENTSO-G)
www.entsog.eu

Studies for the gas transmission pipeline R15/1 Pince-Lendava-Kidričevo in the frame of the PCI 6.23 Hungary-Slovenia interconnection

6.23-0019-SI-S-M-2014

Part of Project of Common Interest 6.23



This Action is part of a series of preparatory activities for the implementation of the Project of Common Interest (PCI) 6.23 PCI Hungary-Slovenia interconnection, which aims at the construction of a new bidirectional gas pipeline connecting Hungary and Slovenia. The approximately 113 km pipeline expects a maximum transmission capacity of 3.4 mcm/day.

This specific Action, which applies to the Slovenian section only, aims to complete the necessary steps for the adoption of the Decree on the National Spatial Plan, prepare the required documentation for the detailed design (next stage), and to obtain the necessary paperwork to request the construction permit. In particular, the current Action covers the development of the National Spatial Plan (analyzing and incorporating the pipeline's future layout and basic design) and determining the exact location, functional, general technical and design characteristics of the interconnector. It also includes the preparation of the environmental impact report, describing the effects of the future interconnector and proposing possible ways to avoid and/or mitigate its negative effects.

The Action is ongoing.

7.

Southern Gas Corridor

Connecting Europe Facility ENERGY

Member States involved:

Non-EU country: Turkey

Implementation schedule

Start date: August 2014

End date: December 2019

Budget:

Estimated total cost of the action:

€6,715,800

Maximum EU contribution:

€2,014,740

Percentage of EU support: 30%

Beneficiary:

Tanap Dogal Gaz Iletim Anonim Sirketi

www.tanap.com

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

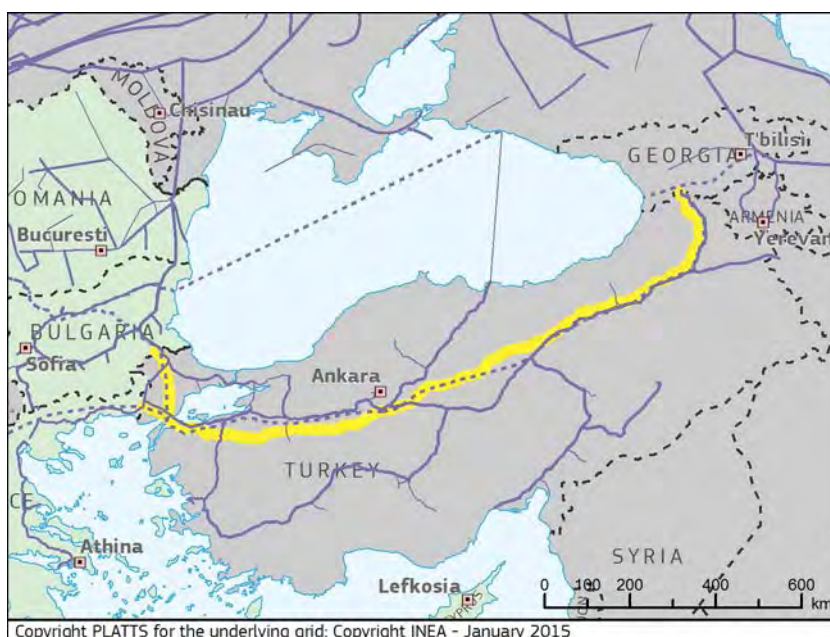
European Network of Transmission System Operators for Gas (ENTSO-G)

www.entsog.eu

Environmental monitoring

7.1.1-0051-TR-S-M-14

Part of Project of Common Interest 7.1.1



The current Action is part of the Project of Common Interest (PCI) 7.1.1, concerning the gas pipeline from the Georgian-Turkish border at Türkgozü/Posof/Ardahan where it connects to SCP and ends at Turkish-Greek border in Ipsala/Edirne, where it feeds into the TAP Pipeline.

This specific Action's scope includes the environmental monitoring of the TANAP Natural Gas Pipeline Project (entire PCI), as committed in the ESIA (Environmental and Social Impact Assessment) Report. The Action concerns third-party environmental monitoring by the beneficiary during all of the construction works, as legally required by the Turkish Ministry of Environment and Urbanization and per international best practice.

Its objective is to ensure that all environmental components in terms of soil, air, water and related habitats (including flora and fauna) will be protected. It also aims to minimise any possible negative human impact during TANAP project activities. The mitigation measures are defined in the ESIA Report.

The beneficiary's reports will be shared with government authorities, TANAP and the company in charge of all construction contractors.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Non-EU country: Turkey

Implementation schedule

Start date: May 2015

End date: July 2017

Budget:

Estimated total cost of the action:

€5,118,000

Maximum EU contribution:

€2,559,000

Percentage of EU support: 50%

Beneficiary:

Tanap Doğalgaz İletim Anonim Şirketi

www.tanap.com

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)

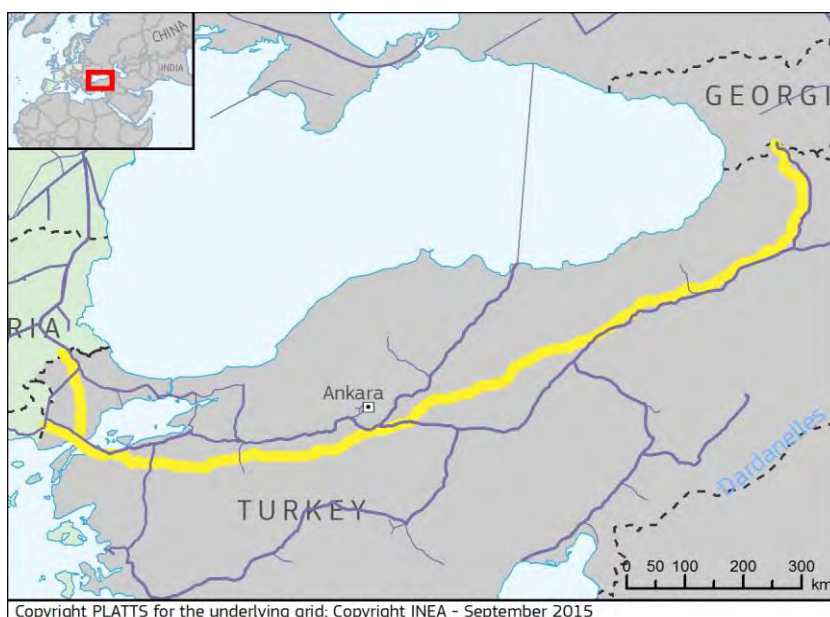
www.acer.europa.eu

European Network of Transmission
System Operators for Gas (ENTSO-G)
www.entsog.eu

Engineering studies for TANAP SCADA System and Crossings under Dardanelle Strait and Evros River

7.1.1-0014-TR-S-M-15

Part of Project of Common Interest 7.1.1



This Action is part of the PCI 7.1.1 "Gas pipeline from the EU to Turkmenistan via Turkey, Georgia, Azerbaijan and the Caspian, currently known as the combination of the "Trans Anatolia Natural Gas Pipeline" (TANAP), the "Expansion of the South-Caucasus Pipeline" (SCP-(F) X) and the "Trans-Caspian Gas Pipeline" (TCP)".

The Action focuses on the implementation of the TANAP pipeline in Turkey and is composed of 3 activities: detailed Engineering for SCADA (a real-time supervisory, control and data acquisition system), for Evros River Crossing and for Dardanelle Strait Crossing.

The expected result of the Action is the development of sound engineering packages, allowing the minimisation of construction risks and safe transmission operations, as per the defined requirements stipulated in the relevant project documents, such as the basis of design and technical specifications.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Romania

Implementation schedule

Start date: January 2015

End date: June 2016

Budget:

Estimated total cost of the action:

€3,038,684

Maximum EU contribution:

€1,519,342

Percentage of EU support: 50%

Beneficiary:

TRANSGAZ S.A.

www.transgaz.ro/en

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)

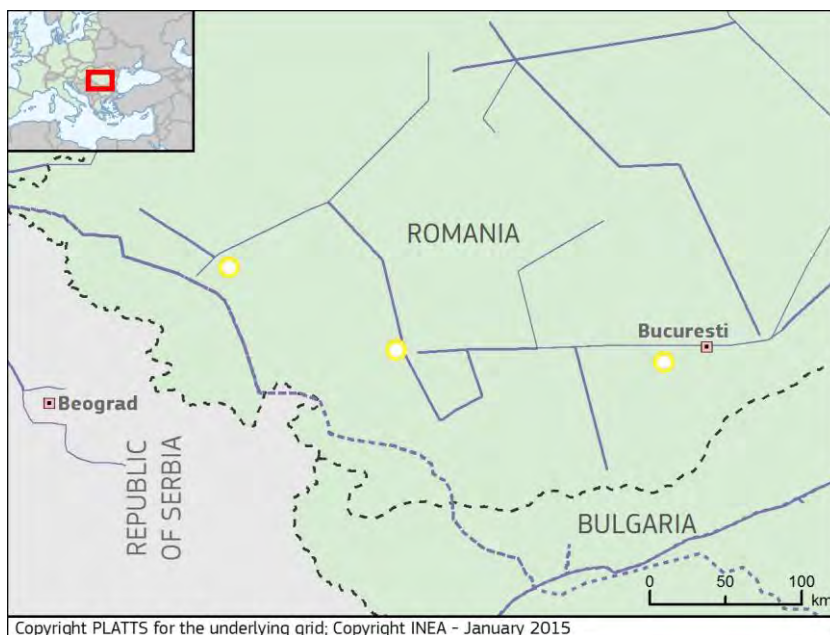
www.acer.europa.eu

European Network of Transmission
System Operators for Gas (ENTSO-G)
www.entsog.eu

FEED for three Compressor Stations in the corridor PCI 7.1.5 – Romanian section

7.1.5-0026-RO-S-M-14

Part of Project of Common Interest 7.1.5



The current Action is a part of the PCI 7.1.5, the gas pipeline from Bulgaria to Austria, via Romania and Hungary. The Romanian part of this PCI consists of a pipeline and three compressor stations.

The scope of the Action is the preparation of the Front End Engineering Design for the construction of three Gas Compressor Stations, on the Romanian territory.

The FEED Action aims at providing all construction details for the stations, as set out in the Scope of Work, the bill of quantities and the material take-off for the construction of three Compressor Stations located at Podisor, Bibesti and Jupa areas, as well as granting of all approvals, permits and authorizations necessary for the construction permit mandatory for works execution.

The expected results of the Action are the technical-economical documentation, the tender documentation for the purchase of the compressor units, the tender documentation for the procurement and execution phase, the permits and the construction permit for the three compressor stations. The achievement of these results will lead to an increased maturity of the project, will provide relevant information to the promoter for the purpose of the investment decision and will allow the start of the necessary activities for the execution phase of the compressor stations.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Cyprus, Greece

Implementation schedule

Start date: May 2015

End date: December 2017

Budget:

Estimated total cost of the action:

€4,000,000

Maximum EU contribution:

€2,000,000

Percentage of EU support: 50%

Beneficiary:

IGI Poseidon S.A.

www.igi-poseidon.com

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

European Network of Transmission System Operators for Gas (ENTSO-G)

www.entsog.eu

Eastern Mediterranean Natural Gas Pipeline – Pre-FEED Studies

7.3.1-0025-ELCY-S-M-15

Part of Project of Common Interest 7.3.1



The Action is part of the PCI 7.3.1 "Pipeline from offshore Cyprus to Greece mainland via Crete".

The Action includes the performance of the activities and studies in relation to the Pre-FEED (Front-End-Engineering Design) phase of the PCI Eastern Mediterranean Gas Pipeline (East Med), namely Technical Feasibility Studies, Reconnaissance Marine Survey and Economic, Financial and Competitiveness Studies.

The objective of the current Action is to provide the necessary information to producers and downstream gas market operators, allowing the assessment and possible selection of the project, as preferred export option, for part of the Levantine Basin gas resources, ensuring a new reliable source of supply via a diversified route.

The Action is expected to enhance the maturity of the project with a detailed and complete technical and economic assessment, enabling the project promoter to provide reliable data to the upstream producers and to downstream operators for the selection of the PCI as preferred export route.

The completion of the proposed Action, in case of selection as preferred export option, will allow project promoters to timely proceed with the development of the PCI and in particular with the FEED phase.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Bulgaria

Implementation schedule

Start date: March 2015

End date: January 2016

Budget:

Estimated total cost of the action:
€380,000

Maximum EU contribution:
€190,000

Percentage of EU support: 50%

Beneficiary:

Bulgartransgaz EAD

www.bulgartransgaz.bg/en

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

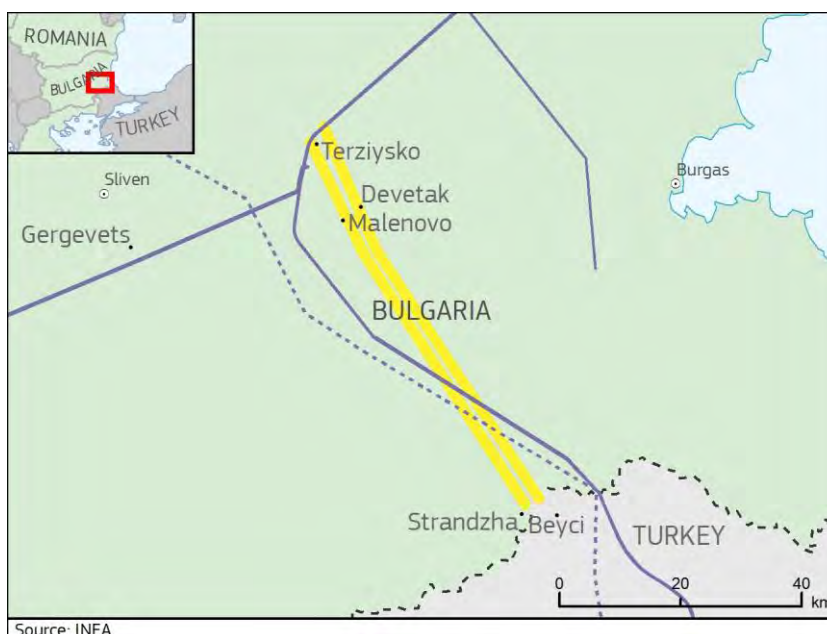
European Network of Transmission System Operators for Gas (ENTSO-G)

www.entsog.eu

Feasibility Study for the Interconnection Turkey-Bulgaria (ITB)

7.4.2-0061-BG-S-M-14

Part of Project of Common Interest 7.4.2



The Action is part of the PCI 7.4.2 "Interconnector between Turkey and Bulgaria" currently known as "ITB", which aims at the creation of alternative supply routes, as well as of the relevant infrastructure and is a new onshore pipeline of about 200 km (approx. 75 km Bulgarian section and approx. 130 km Turkish section) and with a daily capacity of 9 MCM/day (3 BCM/y).

The main scope of the present Action is to prepare the Feasibility Study (FS), including all technical, economic, environmental, market and social aspects of the PCI "Interconnection Turkey-Bulgaria", for the section on the Bulgarian territory. The goal of the planned Feasibility Study is to assess the technical, financial and market aspects, as well as the potential of the respective PCI to the level of detail that would allow Bulgartransgaz to evaluate and select the optimal option of the PCI realization. Preliminary data such as length, diameter, capacity, pressure, **above ground equipment**, financial results, as well as the time schedule will be precised by the Feasibility Study results.

The current Action will be implemented in close cooperation with the Turkish part, in order to have a common and coordinated approach, in terms of process and deadlines, for the development of the Interconnection Turkey Bulgaria (ITB) project.

The Action **has ended**.

8.

Baltic Energy Market Interconnection Plan in gas

Connecting Europe Facility ENERGY

Member States involved:

Finland, Estonia

Implementation schedule

Start date: August 2014

End date: March 2018

Budget:

Estimated total cost of the action:

€10,801,173

Maximum EU contribution:

€5,400,586

Percentage of EU support: 50%

Beneficiaries:

Baltic Connector Oy

Gasum Oy

www.gasum.com

Elering Gaas AS

www.gaas.elering.ee

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)

www.acer.europa.eu

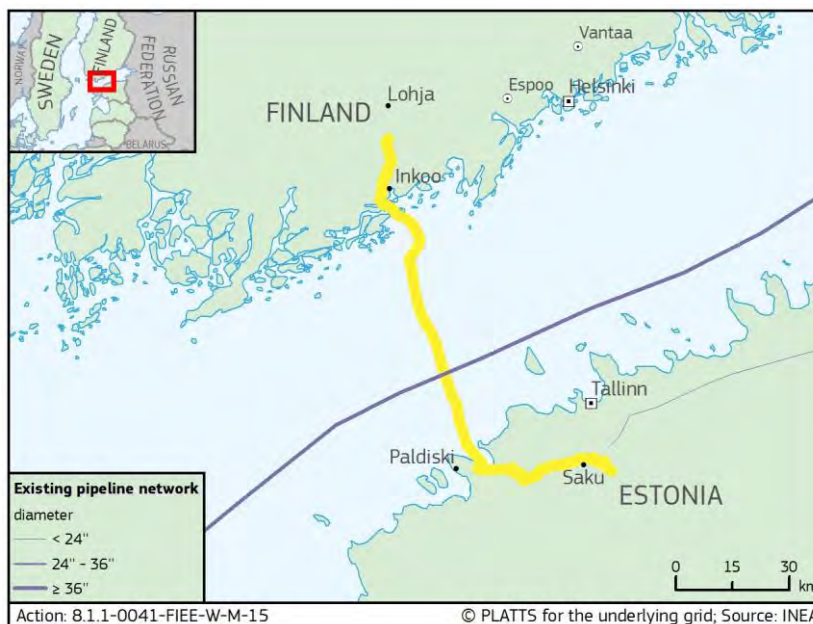
European Network of Transmission
System Operators for Gas
(ENTSO-G)

www.entsog.eu

Studies for Balticconnector

8.1.1-0040-FIEE-S-M-2014

Part of Project of Common Interest 8.1.1



This Action relates to the Project of Common Interest (PCI) 8.1.1. Interconnector between Estonia and Finland ("Balticconnector"), which is a bi-directional offshore pipeline that will physically connect the Finnish and Estonian gas networks.

The Balticconnector pipeline consists of three sections: the +/- 22 km onshore pipeline in Finland (including a compressor and custody metering station), the +/- 81 km offshore pipeline, and the +/- 54 km onshore pipeline in Estonia (including a compressor and custody metering station).

This particular Action will undertake preparatory studies which aim to get comprehensive technical and financial information in order to obtain the necessary permits for the pipeline's offshore and onshore sections, as well as prepare the Final Investment Decision (FID) for Balticconnector. It includes both business model and environmental and technical studies. The business model studies are composed of the market analysis/market modelling and preparations for the business plan and investment request to the national regulatory authorities. The environmental and technical studies consist of the Environmental Impact Assessment (EIA) report, Front-End Engineering Design (FEED) and detailed engineering tasks, including geotechnical and geophysical studies of the pipeline and the procurement procedures for construction.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Lithuania

Implementation schedule

Start date: July 2014

End date: March 2016

Budget:

Estimated total cost of the action:

€60,642,857

Maximum EU contribution:

€27,592,500

Percentage of EU support: 45.5%

Beneficiary:

Ambergrid

www.ambergrid.lt

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

European Network of Transmission System Operators for Gas (ENTSO-G)

www.entsog.eu

Construction of the Klaipeda-Kursenai Gas Transmission Pipeline

8.2.3-0001-LT-P-M-14

Part of Project of Common Interest 8.2.3



This specific Action contributes to the implementation of the Project of Common Interest (PCI) 8.2.3. Capacity enhancement of Klaipeda-Kiemenai pipeline in Lithuania.

It involves the construction of the Klaipeda-Kursenai gas transmission pipeline, which will connect the LNG (liquefied natural gas) terminal infrastructure in Klaipeda to the gas transmission system towards Kursenai. The +/- 111 km pipeline will have a nominal diameter of DN 800 mm (DN 250 mm and DN 150 mm of the bypass line in valve stations and exhaust pipes) and a designed pressure of 5.4 MPa.

The construction of the pipeline will eliminate a bottleneck in the transmission system and enhance the capacity of the Klaipeda-Kiemenai pipeline, enabling substantial gas volumes (up to 10.3 mcm/d) to be transported from the new supply route (LNG terminal in Klaipeda). It will also enhance the security of the gas supply, as well as competition in the gas market of the Baltic states (Lithuania, Latvia and Estonia).

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Denmark, Poland

Implementation schedule

Start date: September 2015

End date: December 2016

Budget:

Estimated total cost of the action:
€800,000

Maximum EU contribution:
€400,000

Percentage of EU support: 50%

Beneficiaries:

ENERGINET.DK
<http://energinet.dk>

GAZ-SYSTEM
<http://en.gaz-system.pl>

Additional information:

European Commission
http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive
Agency (INEA)
<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy
Regulators (ACER)
www.acer.europa.eu

European Network of Transmission
System Operators for Gas (ENTSO-G)
www.entsog.eu

Feasibility Study regarding the PCI Poland - Denmark interconnection "Baltic Pipe" TRA-N-271

8.3-0019-DKPL-S-M-15

Part of Project of Common Interest 8.3



The Action contributes to the implementation of Project of Common Interest (PCI) 8.3 Poland - Denmark interconnection "Baltic Pipe", an offshore gas pipeline through the Baltic Sea that will connect the Danish and Polish gas transmission systems.

This specific Action covers the analysis of the economic feasibility, the technical feasibility study, the analysis of the regional market model development, as well as the plan and preparation of the Environmental Impact Assessment (EIA) of Baltic Pipe.

The Action relates to the bidirectional offshore gas pipeline and the related auxiliary installations which are needed to connect the offshore part of the pipeline with the national grids in both countries, namely the onshore pipelines, receiving terminals and compressor stations in Denmark and Poland. The estimated length of the pipeline will be of approx. 200 km to 290 km and its estimated capacity will be of approx. 6 bcm/y, but other capacity scenarios will be assessed, ranging from 2 to 10 bcm/y.

The main objectives of the Action are to define the most optimal scenario to develop Baltic Pipe and determine the ultimate efficient definition of the project from the commercial and technical point of view (scope of the necessary investments, demand, dimensioning, routing, capacity allocation model and cost) and provide a solid basis for a decision on the next phase of the Baltic Pipe project.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Poland, Lithuania

Implementation schedule

Start date: September 2014

End date: September 2017

Budget:

Estimated total cost of the action:

€21,191,976

Maximum EU contribution:

€10,595,988

Percentage of EU support: 50%

Beneficiaries:

Ambergrid

www.ambergrid.it

GAZ-System

<http://en.gaz-system.pl>

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

European Network of Transmission System Operators for Gas (ENTSO-G)

www.entsog.eu

Preparatory works for the Gas Interconnection Poland-Lithuania up to building permission(s) obtainment

8.5-0045-LTPL-S-M-14

Part of Project of Common Interest 8.5



The Action contributes to the implementation of the Project of Common Interest (PCI) 8.5 Poland-Lithuania interconnection ("GIPL" or Gas Interconnection Poland-Lithuania), which is a gas pipeline that will connect the Polish and Lithuanian gas transmission systems. This interconnection will allow diversification of the gas supply routes and sources, as well as increased security of the gas supply and enhanced competition in the gas markets of the Baltic States.

This specific Action relates to the Poland-Lithuania interconnection and its auxiliary installations. In Poland, these are the +/- 357 km gas pipeline between Rembelszczyna and the Lithuanian border, and the respective compressor stations in Rembelszczyna and Gustorzyn. In Lithuania, the includes the +/- 177 km gas pipeline between Jauniunai and the Polish border, as well as gas pressure reduction and metering stations located near the two countries' border.

The Action covers all of the pre-investment steps needed for the preparatory documentation and permits up to the actual building permission for the GIPL (tendering documentation for the localisation decision and territory planning, basic and detailed engineering studies, EIA and related activities for compressor stations (if applicable)). The objective is to provide the Front-End Engineering Design (FEED), possible environmental approvals and legally binding permissions, which are a crucial step for the construction of GIPL.

The Action is ongoing.

Connecting Europe Facility ENERGY

Member States involved:

Poland, Lithuania

Implementation schedule

Start date: May 2016

End date: December 2019

Budget:

Estimated total cost of the action:

€492,311,000

Maximum EU contribution:

€295,386,600

Percentage of EU support: 60%

Beneficiaries:

Ambergrid

www.ambergrid.it

GAZ-SYSTEM

<http://en.gaz-system.pl>

Additional information:

European Commission

http://ec.europa.eu/energy/infrastructure/index_en.htm

Innovation and Networks Executive Agency (INEA)

<http://inea.ec.europa.eu>

Agency for the Cooperation of Energy Regulators (ACER)

www.acer.europa.eu

European Network of Transmission System Operators for Gas (ENTSO-G)

www.entsog.eu

Construction of the Gas Interconnection Poland-Lithuania [GIPL] including supporting infrastructure

8.5-0046-PLLT-P-M-14

Part of Project of Common Interest 8.5



The Action contributes to the implementation of the Project of Common Interest (PCI) 8.5 Poland-Lithuania interconnection, which is a gas pipeline that will connect the Polish and Lithuanian gas transmission systems, currently known as GIPL.

This specific Action will establish a physical interconnection between the Polish and Lithuanian gas transmission systems. It consists of the construction of the GIPL pipeline and its supporting infrastructure. A +/- 534 km gas pipeline will be built to connect the Rembelszczyna compressor station in Poland with the Jauniunai compressor station in Lithuania. 67% of the total pipeline (+/- 357 km) is in Poland and 33% (+/- 177 km) lies in Lithuania. The supporting infrastructure includes the extension of the compressor station in Rembelszczyna and the construction of a new compressor station in Gustorzyn in Poland, as well as the construction of one gas pressure reduction and metering station in Lithuania.

The Action's completion is a crucial step for the implementation of GIPL. It will constitute an important element of expansion of the BEMIP gas network, connecting the isolated Baltic states (Lithuania, Latvia and Estonia) to the EU gas market. Furthermore, GIPL will open the way to new sources and routes of gas supplies, significantly enhancing the competitiveness and strengthening the liberalisation of the gas market in the Baltic countries.

The Action will start in **May 2016**.



Innovation and Networks Executive Agency (INEA)

2016