



Connecting Europe Facility

# ENERGY

*Supported actions - May 2018*

# Table of Contents

---

- 4 FOREWORD
- 5 INTRODUCTION
- 6 CEF ENERGY PORTFOLIO
- 11 MAPS OF CEF ENERGY ACTIONS BY SECTOR
- 16 CEF ENERGY ACTIONS PER CORRIDORS AND THEMATIC AREAS
  - 17 Northern Seas offshore grid
  - 33 North-South electricity interconnections in Western Europe
  - 40 North-South electricity interconnections in Central Eastern and South Eastern Europe
  - 62 Baltic Energy Market Interconnection Plan in electricity
  - 71 North-South gas interconnections in Western Europe
  - 84 North-South gas interconnections in Central Eastern and South Eastern Europe
  - 108 Southern Gas Corridor
  - 122 Baltic Energy Market Interconnection Plan in gas
  - 133 Smart grids deployment

# Foreword

The European Commission's Framework [Strategy](#) for a Resilient Energy Union with a Forward-Looking Climate Change Policy has created a new momentum to achieve energy security, sustainability and competitiveness. Europe remains the frontrunner in terms of our ambitious contribution to the Paris agreement and when it comes to the implementation of the energy transition on the ground. Energy transmission infrastructure, being the backbone of the energy systems, remains vital. Developing a fully integrated internal energy market, with adequate infrastructure enabling interconnectivity of energy networks and supporting clean energy transition, is a precondition for a genuine Energy Union.

To ensure the timely construction of the necessary grid infrastructure, in 2013 the European Union adopted the [Regulation](#) on guidelines for trans-European energy networks. This was accompanied by the [Connecting Europe Facility \(CEF\)](#) created to support financially the realisation of key infrastructure projects - [Projects of Common Interest \(PCIs\)](#). The comprehensive policy framework has allowed for a focussed approach to identify and to support the realisation of the PCIs. The success of this approach based on an objective and inclusive selection process prioritising the most needed projects is increasingly evident. Already 30 PCIs have either been completed or will be in operation by the end of 2018. The Union's financial support under the CEF has enabled the implementation of many of them.

By the summer 2018, the [Innovation and Networks Executive Agency](#) (INEA) that manages the implementation of CEF, will have signed 109 energy grant agreements for a total amount of €2.46 billion, split equally between electricity and gas sectors. All these actions contributing to the swift implementation of PCIs are presented in this brochure. In addition, seven grant agreements have been signed for actions involving [synergies](#) with the transport sector. Let us highlight a few examples. The first ever CEF grant for a smart grids PCI was awarded to the SINCRO GRID project (Slovenia/Croatia). The €40.5 million [grant](#) supports the PCI by focusing on solving network voltage, frequency control and congestion issues and integrating new active elements into the Slovenian and Croatian transmission and distribution grid. In the electricity sector, a grant of €578 million, the largest CEF-Energy grant ever awarded, is instrumental for the construction of the Biscay

Gulf France-Spain interconnection. The new electricity link will better integrate the Iberian Peninsula into the internal electricity market. This new link will nearly double the interconnection capacity between both countries and allow for an enhanced incorporation of renewable energies. In natural gas, grants worth €193 million were awarded to carry out [studies](#) and [works](#) for the Balticconnector project. This PCI will make it possible to establish a physical interconnection between the Finnish and Estonian gas transmission systems, triggering the expansion of the gas network in the Baltic region and connecting Finland to the EU gas market.

A new list of PCIs is established every two years in line with the evolving needs of the EU energy system. The [third list](#), which entered into force in April 2018, records an increasing share of electricity projects. Out of 173 PCIs, 110 projects are in the electricity transmission and smart grids, 53 are in the gas and six are in oil transportation. For the first time there are also PCIs (four of them) in the area of cross-border carbon dioxide transportation.

This increasing prominence of electricity on the PCI list is an inevitable element of energy transition. The role of electricity, where renewables will constitute half of the electricity generation by 2030, will increasingly be driving the decarbonisation of sectors so far dominated by fossil fuels, such as transport, industry and heating and cooling. Moreover, focus will need to be put on the reinforcement of the electricity transmission and distribution grids, digitalisation and smartening of the grids and deployment of new infrastructure solutions, particularly in the electricity storage area, and the impact of self-consumption.

We are committed to ensuring that CEF continues providing the necessary stimulus to all the projects that Europe needs to live up to its energy and climate goals and commitments.



Director-General, DG Energy  
Dominique Ristori



Director, INEA  
Dirk Beckers

# Introduction

Since its launch in 2013, the [Connecting Europe Facility](#) (CEF) has been a key EU funding instrument to support the development of high performing, sustainable and efficiently interconnected trans-European networks in the areas of transport, energy and telecommunications.

In the energy field, the CEF programme pursues the following main objectives:

- increasing EU competitiveness by promoting further integration of the internal energy market and interoperability of electricity and gas networks across borders;
- enhancing the Union's security of energy supply;
- contributing to a sustainable development and environmental protection, through *inter alia* integrating energy from renewable sources into the transmission network and developing smart energy networks and carbon dioxide networks.

To achieve these objectives, the CEF Energy programme promotes the implementation of the [Projects of Common Interest \(PCIs\)](#) in electricity, natural gas, smart grids and carbon dioxide.

Within the framework of the CEF Energy programme, a project is understood as a PCI. The list of the PCIs is adopted by the European Commission based on the needs of the European energy infrastructure network and reviewed every two years.

The total grant budget to support energy projects for the 2014-2020 period under the CEF Energy programme is €4.5 billion.

Within the framework of the CEF Energy programme, an Action is an activity or set of activities, running over a set timeframe, which contribute to the implementation of one or several PCIs. An Action can be works or a study. Completion of an Action does not necessarily coincide with the completion of a PCI.

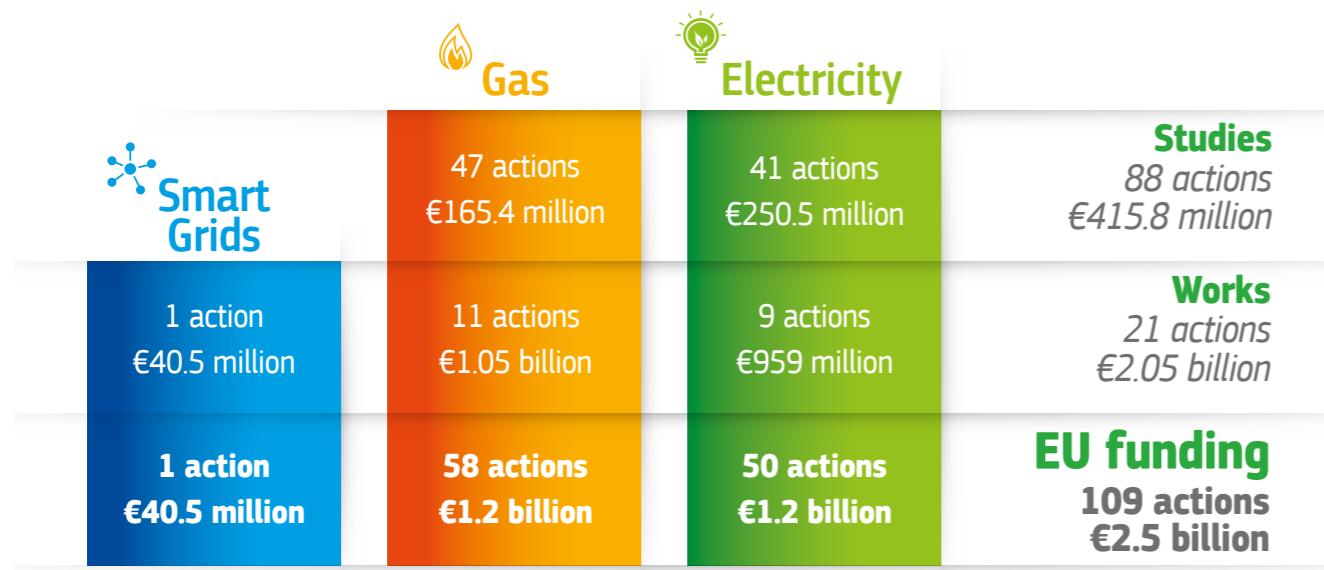
Over the first four years of this period, until the end of 2017, six calls for proposals have been launched under CEF Energy. As a result, the European Commission has allocated EU funding to [109 actions](#) for a total amount of €2.46 billion, [contributing](#) to the implementation of 80 PCIs. By May 2018, 45 of those actions have already been implemented. The [Innovation and Networks Executive Agency](#) (INEA) manages the call for proposals and follows up on the technical and financial implementation of the actions with the beneficiaries, providing technical expertise and high quality programme management.

This brochure presents the outline and status of the 109 actions supported by the CEF Energy programme for which grant agreements will have been signed by the summer of 2018. New actions will be selected in [two further calls](#) for proposals organised in 2018. The first call was launched in March 2018 with a submission deadline at the end of April. The second call will be launched in June with a deadline in mid-October. The total budget for the two calls for proposals is €900 million.

- ▶ [Watch video on PCIs](#)
- ▶ [Watch video on EU energy grid](#)
- ▶ [What is INEA doing?](#)
- ▶ [INEA's 10th anniversary](#)

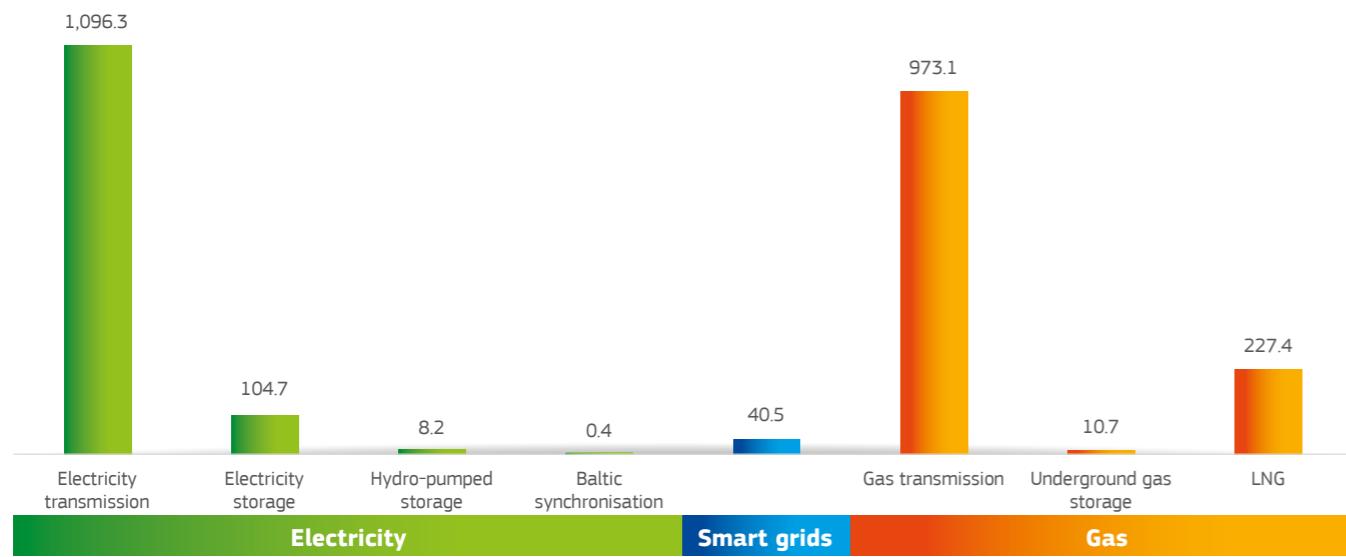
# CEF Energy portfolio

CEF Energy currently contributes €2.5 billion in EU support to the implementation of 80 PCIs, for a total investment of €5.8 billion. The current CEF energy portfolio consists of 109 actions, most of which are studies, which account for 17% of the total CEF Energy funding. The largest share of funding goes to work actions (83%), especially those supporting the development of gas infrastructure (42%), followed by electricity infrastructure (39%) and smart grids (2%).



## DEVELOPING INFRASTRUCTURE

Gas transmission and electricity transmission assets attract the largest share of funding under the CEF Energy programme (84%).



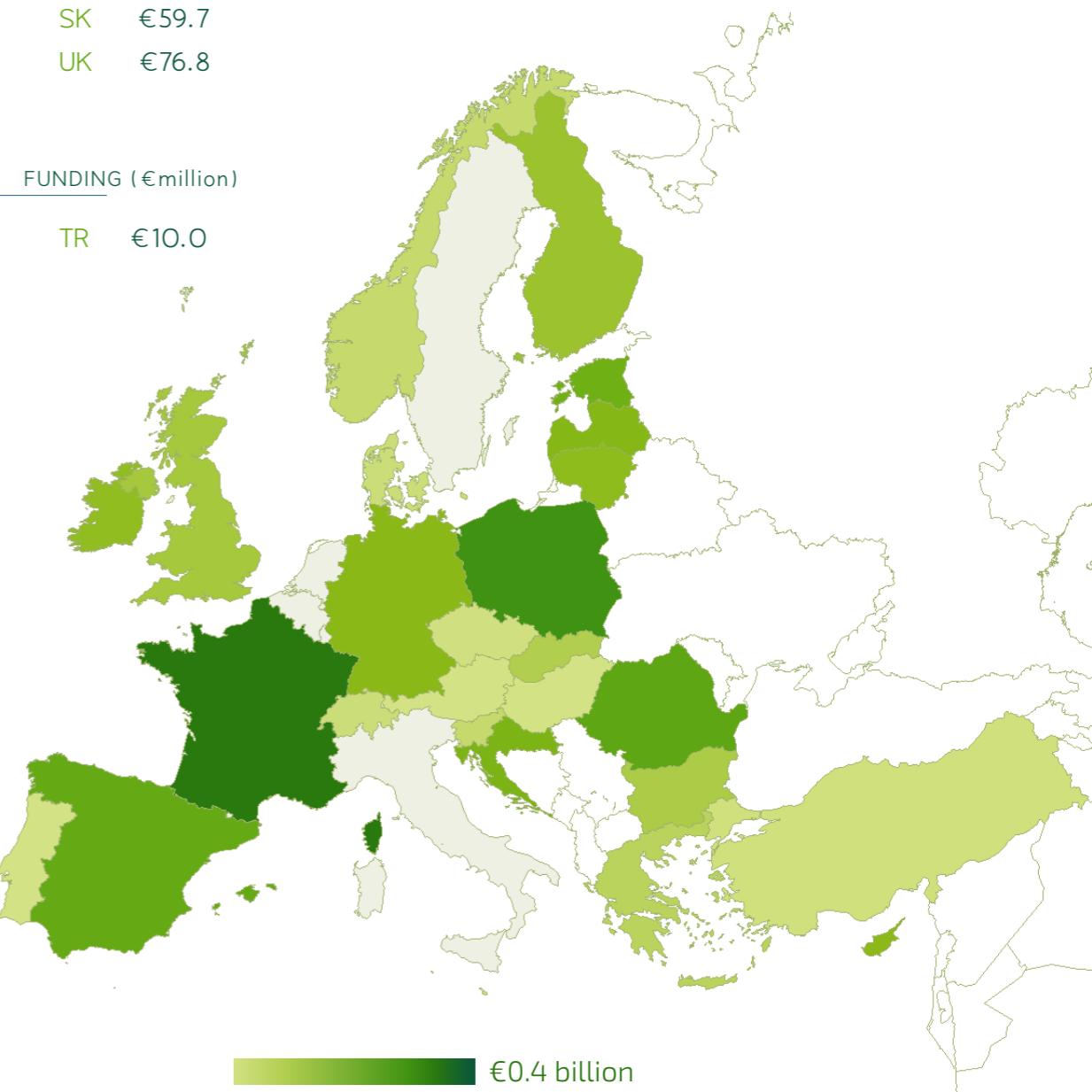
## FUNDING PER COUNTRY

### EU Member States FUNDING (€million)

AT	€0.01	HU	€2.5
BG	€69.1	IE	€110.3
CY	€117.1	LT	€112.9
CZ	€6.6	LV	€128.8
DE	€120.1	MT	€4.1
DK	€16.0	PL	€297.5
EE	€166.4	PT	€1.0
EL	€43.8	RO	€207.9
ES	€193.2	SI	€27.5
FI	€94.1	SK	€59.7
FR	€411.0	UK	€76.8
HR	€144.7		

### Other countries FUNDING (€million)

CH	€14.0	TR	€10.0
NO	€26.4		



The table and the map show funding per beneficiary's country of origin excluding international organisations, European Economic Interest Groupings (EEIG) and Joint Undertakings.

## FOCUS ON PRIORITY CORRIDORS AND THEMATIC AREA

CEF Energy supports actions under eight priority corridors, four in the electricity sector, four in the gas sector and one thematic area on smart grids.

The North-South electricity interconnections in Western Europe whose goal is to integrate electricity from renewable energy sources and reinforce internal grid infrastructures to promote market integration in the region, receives the largest share of funding in the electricity sector with €629 million.

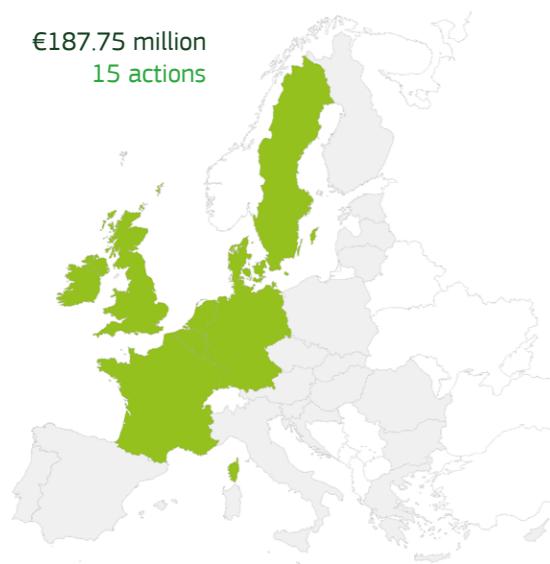
The Baltic Energy Market Interconnection Plan (BEMIP), whose goal is to end dependency on a single supplier, to reinforce internal gas networks and to increase diversification and security of gas supply in the Baltic region, receives the largest share of funding in the gas sector with €547 million. So far, one CEF Energy action was signed in the smart grids thematic area (which covers the entire EU) for a total of €40.5 million.

**CEF Funding per Priority Corridors (ELECTRICITY)**

€ million  
number of actions

1. Northern Seas Offshore Grid (NSOG)

€187.75 million  
15 actions



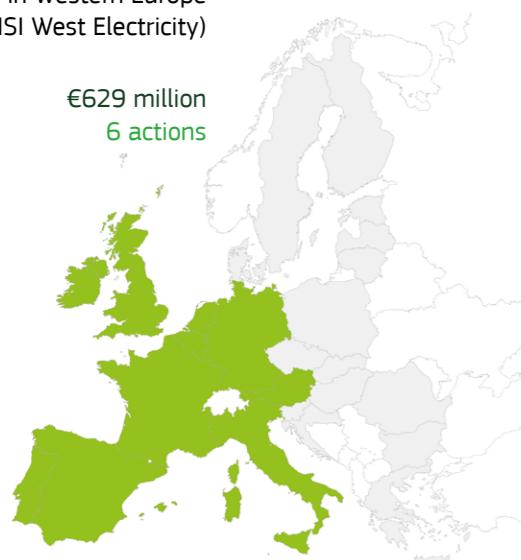
3. North-South electricity interconnections in Central Eastern and South Eastern Europe (NSI East Electricity)

€188 million  
21 actions



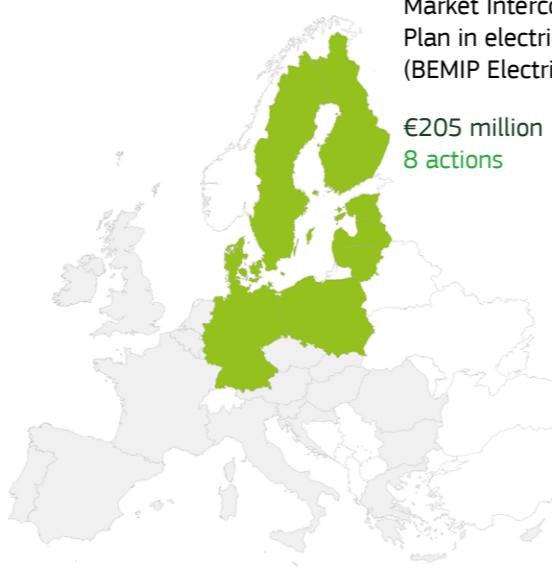
2. North-South electricity interconnections in Western Europe (NSI West Electricity)

€629 million  
6 actions



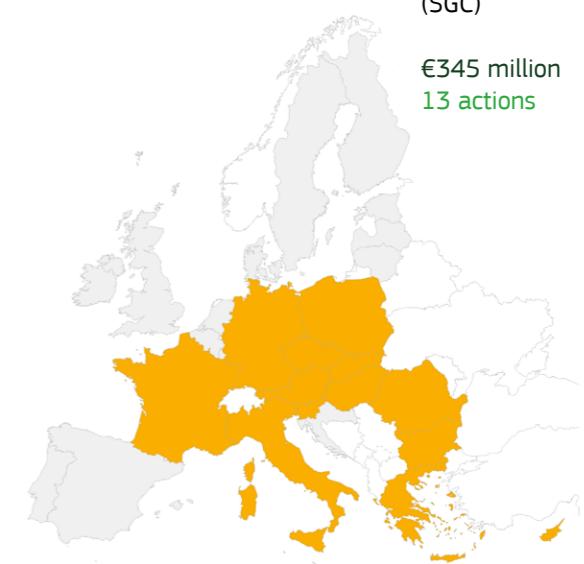
4. Baltic Energy Market Interconnection Plan in electricity (BEMIP Electricity)

€205 million  
8 actions



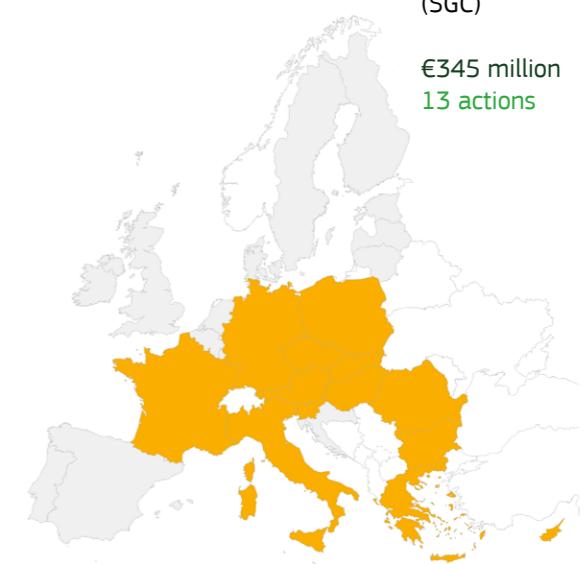
5. North-South gas interconnections in Western Europe (NSI West Gas)

€63 million  
12 actions



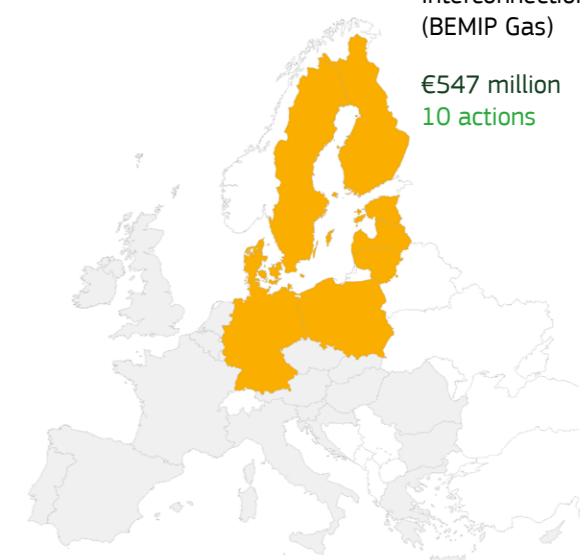
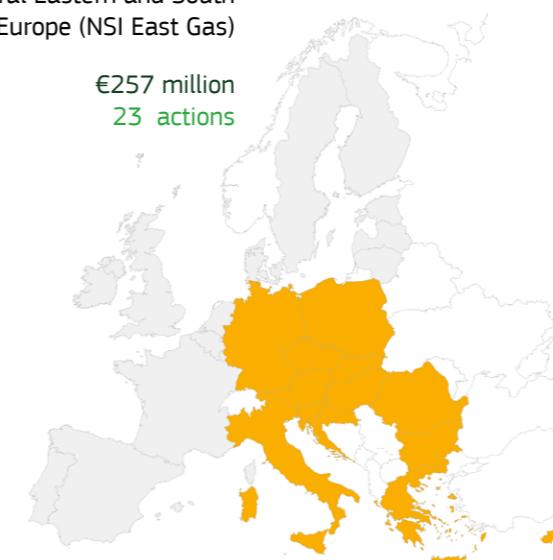
7. Southern Gas Corridor (SGC)

€345 million  
13 actions



6. North-South gas interconnections in Central Eastern and South Eastern Europe (NSI East Gas)

€257 million  
23 actions



8. Baltic Energy Market Interconnection Plan in gas (BEMIP Gas)

€547 million  
10 actions

## SUPPORTING PROJECTS OF COMMON INTEREST

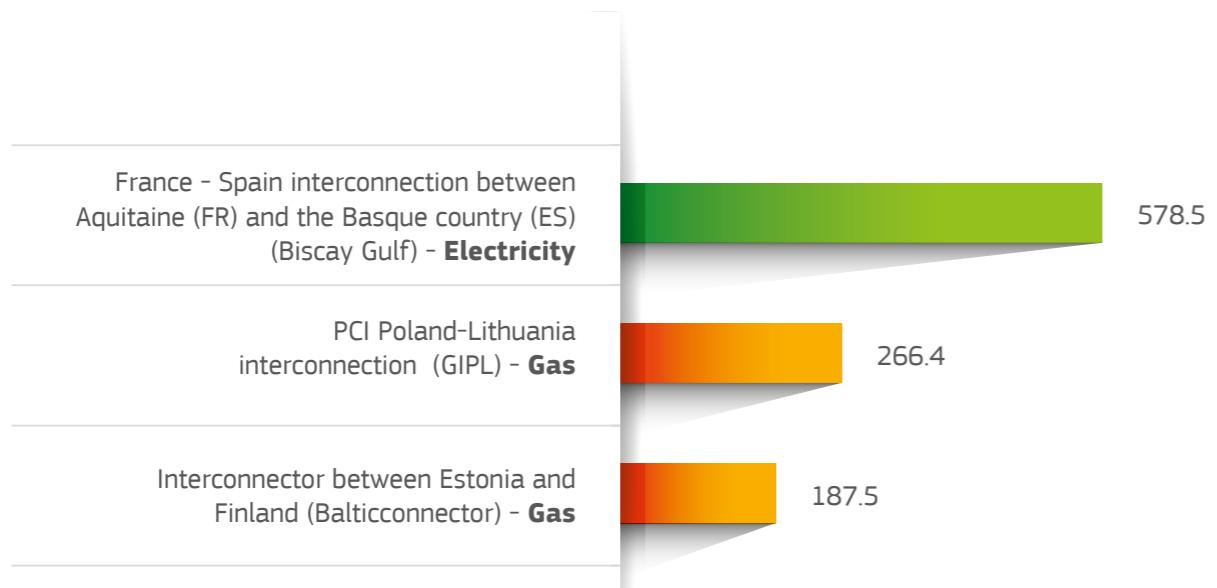
The 109 CEF Energy actions contribute to the implementation of 80 PCIs. For both studies and works, the PCIs that receive the largest share of CEF Energy funding are in the electricity sector.

## Maps of CEF Energy actions

by sector

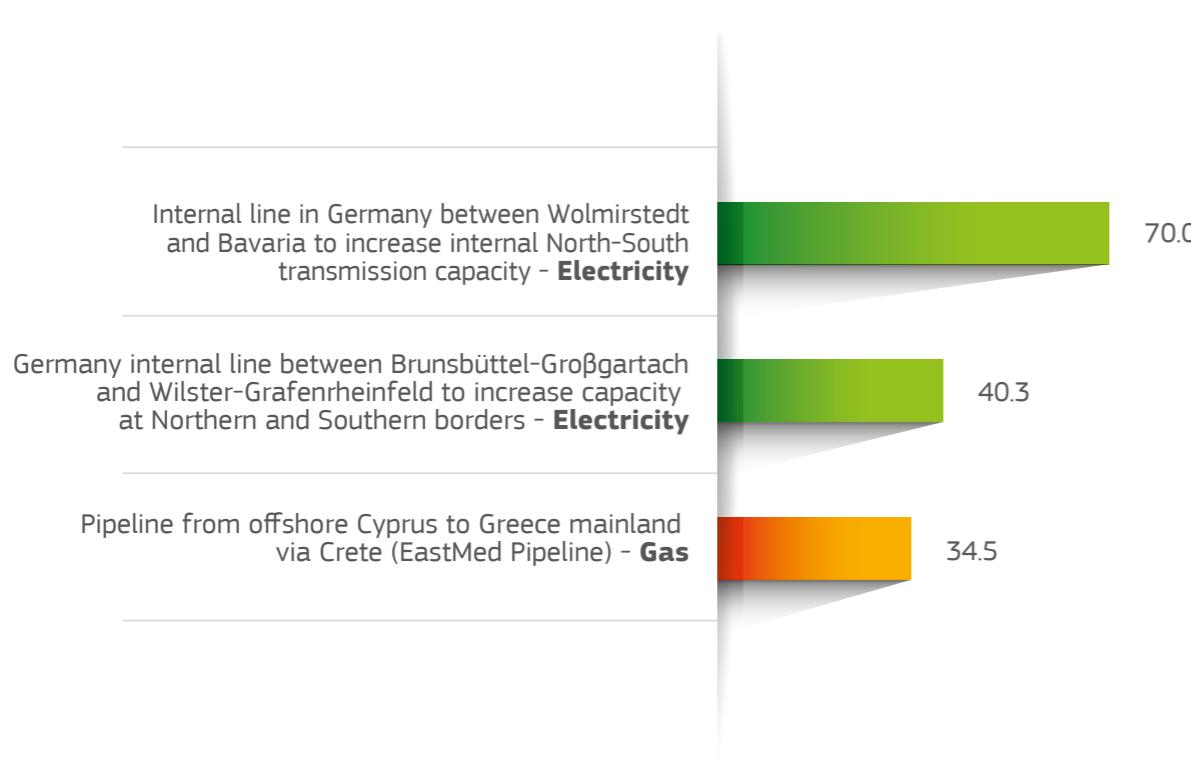
### Top 3 PCIs by CEF Energy Funding - WORKS

€ million

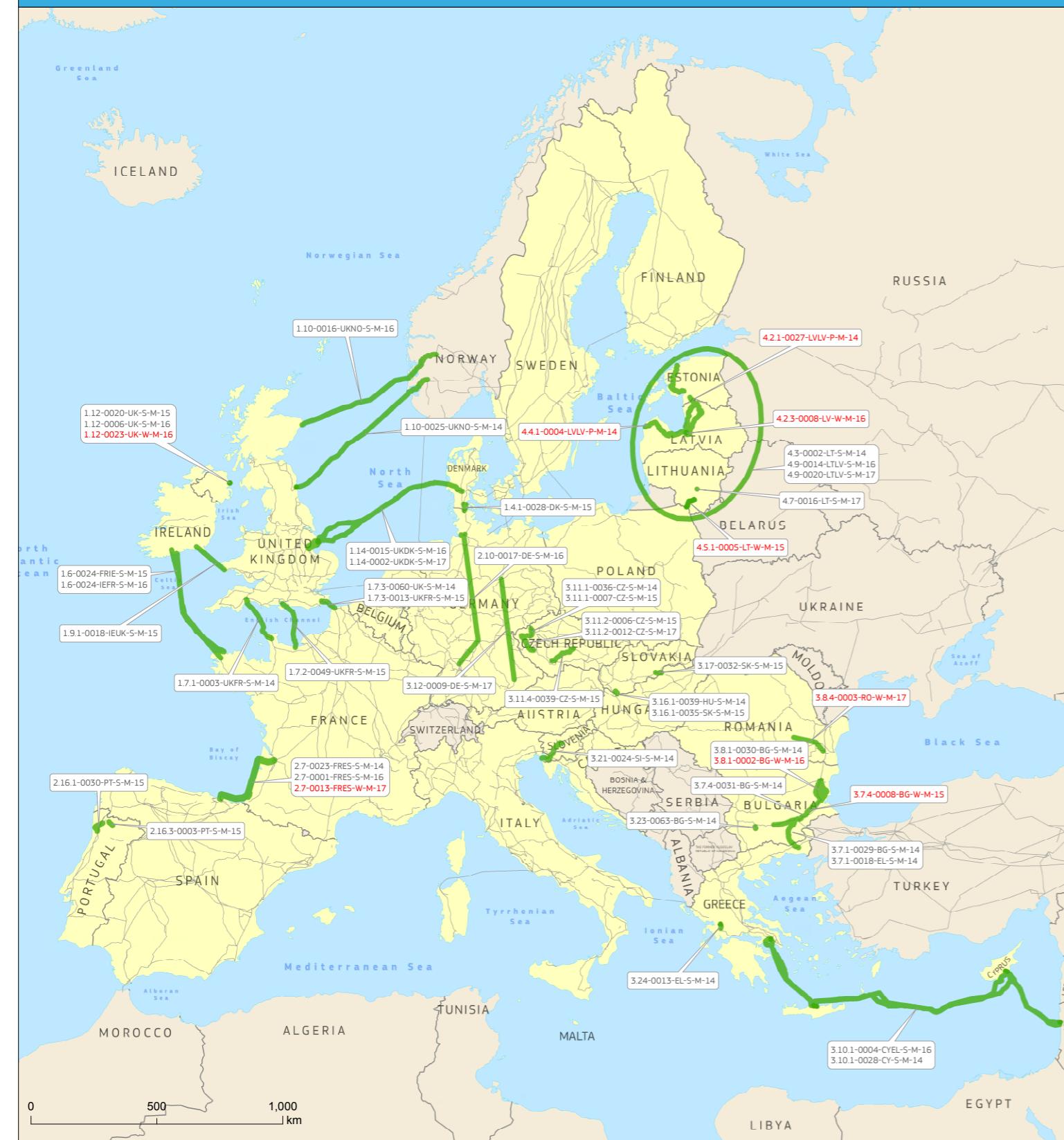


### Top 3 PCIs by CEF Energy Funding - STUDIES

€ million



## ELECTRICITY CEF supported actions by May 2018



Please note:  
codes indicated on the map  
correspond to the action fiches  
presented in the brochure

Main transmission lines

Electricity actions managed by INEA

studies works

Cartography: INEA, April 2018  
© EC, DG MOVE, TEN-T for TEN-T network  
© EuroGeographics 2001 for the administrative boundaries  
© PLATTS for existing power and gas lines

## GAS CEF supported actions by May 2018



Please note:  
codes indicated on the map  
correspond to the action fiches  
presented in the brochure

Existing pipeline network

Gas actions managed by INEA

studies works

Cartography: INEA, May 2018  
© EC, DG MOVE, TEN-T for TEN-T network  
© EuroGeographics 2001 for the administrative boundaries  
© PLATTS for existing power and gas lines

## CEF supported actions by May 2018



Please note:  
codes indicated on the map  
correspond to the action fiches  
presented in the brochure

Main transmission lines

Smart Grid actions managed by INEA

studies works

Cartography: INEA, April 2018  
© EC, DG MOVE, TEN-T for TEN-T network  
© EuroGeographics 2001 for the administrative boundaries  
© PLATTS for existing power and gas lines

# CEF Energy actions

by corridor and thematic area

1.

Northern Seas Offshore Grid

---

Member State(s) indicated on each action fiche refer to the beneficiary's country of origin.  
For actions where the implementation period ended but the status appears as "Ongoing", the administrative closure  
is still ongoing.

**Call year:**  
2015

**Member State(s):**  
Denmark

**Implementation schedule:**  
October 2015 to August 2017

**Maximum EU contribution:**  
€950,000

**Estimated total cost:**  
€1,900,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Energinet.dk  
<http://www.energinet.dk>

**Status:**  
Ongoing

**Energy corridor:**  
Northern Seas offshore grid

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
1.4.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

## Feasibility Study regarding the interconnector between Kassø (DK) and Audorf (DE)

1.4.1-0028-DK-S-M-15



The Action is a part of the Project of Common Interest (PCI) 1.4.1 - Interconnection between Kassø (DK) and Audorf (DE), which aims to construct a new double circuit 400 kV AC overhead line of 120 km from Kassø to Audorf, to dismantle the existing 220 kV AC overhead line from Kassø to Audorf and to expand and rearrange the substation in Kassø according to the new interconnector.

The objective of this Action is to prepare a feasibility study regarding the Danish section of the transnational interconnector.

The scope of this Action includes environmental impact assessment (EIA) studies including Natura 2000 site investigations, the approval of the final EIA report by the competent authorities and the optimisation of the design of the so-called eagle pylon towers.

Once completed the Action would enable to proceed with the construction of the Danish section of the overhead line from Kassø to Audorf.

**Call year:**  
2015

**Member State(s):**  
France, Ireland

**Implementation schedule:**  
April 2015 to August 2016

**Maximum EU contribution:**  
€3,558,893

**Beneficiaries:**  
EirGrid plc  
<http://www.eirgrid.com>

RTE Réseau de Transport d'Électricité  
<http://www.rte-france.com>

**Status:**  
Closed

**Energy corridor:**  
Northern Seas offshore grid

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
1.6

**Executive summary:**  
Executive Summary available [here](#)

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

## Celtic Interconnector Feasibility Study

1.6-0024-FRIE-S-M-15



The Action is a part of the Project of Common Interest (PCI) 1.6 Interconnection between La Martre (FR) and Great Island or Knockraha (IE), currently known as the Celtic Interconnector, which aims to build a new 320 kV - 500 kV high-voltage direct current (HVDC) subsea connection of approx. 600 km and with a capacity of around 700 MW (offshore).

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

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

The aim of the marine surveys was 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 was 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 was 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.

**Call year:**  
2016

**Member State(s):**  
France, Ireland

**Implementation schedule:**  
November 2016 to December 2018

**Maximum EU contribution:**  
€4,000,000

**Estimated total cost:**  
€8,000,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
EirGrid plc  
<http://www.eirgrid.com>

RTE Réseau de Transport d'Electricité  
<http://www.rte-france.com>

**Status:**  
Ongoing

**Energy corridor:**  
Northern Seas offshore grid

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
1.6

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Initial Design and Pre-Consultation of France - Ireland Interconnector

1.6-0024-IEFR-S-M-16



The Action contributes to the Project Common Interest (PCI) 1.6 for the construction of a high-voltage direct current (HVDC) interconnection between France and Ireland. The length is 600 km and the capacity is 700MW.

The objective of the Action is to complete the next development phase of the PCI, that of Initial Design and Pre-Consultation.

The scope of the Action is comprised of 1) Technical design-related Studies; 2) Pre-Consultation; 3) Legal Governance; 4) Economic Analysis; 5) Financing Strategy; 6) Engineering, Procurement, and Construction contract preparation; and 7) Integrated Initial Design and Pre-Consultation Report.

Upon completion of the Action the PCI will be sufficiently advanced to commence the detailed design and consents phase.

**Call year:**  
2014

**Member State(s):**  
France, United Kingdom

**Implementation schedule:**  
July 2014 to November 2017

**Maximum EU contribution:**  
€7,235,000

**Estimated total cost:**  
€14,470,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Transmission Investment  
<http://www.transmissioninvestment.com>

Réseau de Transport d'Electricité (RTE)  
<http://www.rte-france.com>

**Status:**  
Ongoing

**Energy corridor:**  
Northern Seas offshore grid

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
1.7.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

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

1.7.1-0003-UKFR-S-M-14



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 Menuel, France, with voltage-source converter (VSC) station at both locations. The expected rated capacity is 1000-1400 MW.

This 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, environmental impact assessment (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.

**Call year:**  
2015

**Member State(s):**  
France, United Kingdom

**Implementation schedule:**  
October 2015 to March 2017

**Maximum EU contribution:**  
€5,957,000

**Estimated total cost:**  
€11,914,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
National Grid Interconnector Holdings Limited  
<http://www2.nationalgrid.com>

RTE Réseau de Transport d'Electricité  
<http://www.rte-france.com>

**Status:**  
Ongoing

**Energy corridor:**  
Northern Seas offshore grid

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
1.7.2

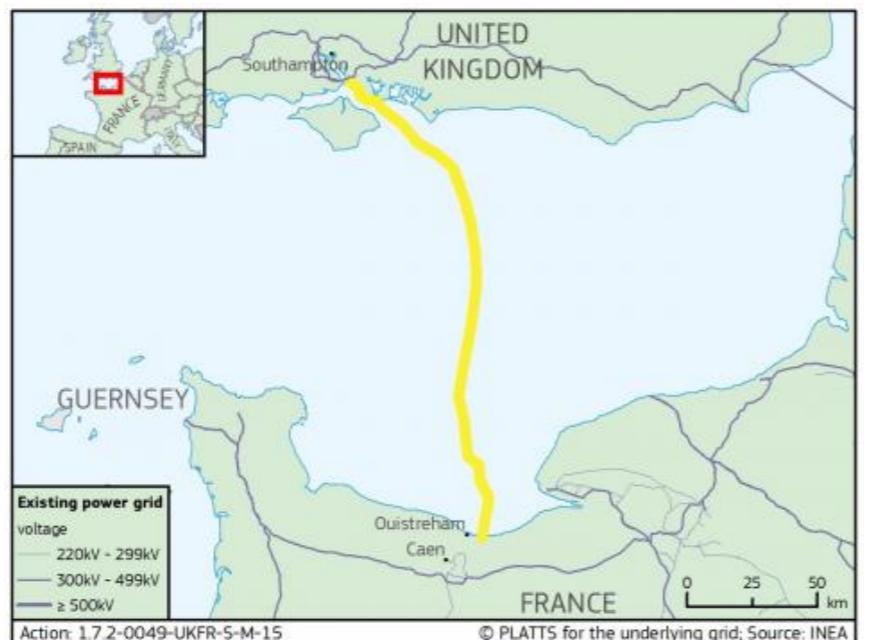
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

## IFA2 Final Project Development

1.7.2-0049-UKFR-S-M-15



The Action is a part of the Project of Common Interest (PCI) 1.7.2 France - United Kingdom interconnection between Tourbe (FR) and Chilling (UK) (currently known as the IFA2 project), which aims to construct a new subsea 1000 MW and 320 kV high-voltage, direct current (HVDC) interconnector.

The objective of this Action was to prepare the necessary studies required to enable positive Final Investment Decision (FID) decisions on behalf of both beneficiaries and signature of construction contracts.

The scope of this Action included i) completion of the environmental impact assessments (EIA) and stakeholder consultation in order to obtain onshore and offshore planning approvals; ii) definition of plant and equipment specifications and undertaking procurement processes to award key contracts for the construction and operation of the cable & converters; and iii) development of business case and commercial arrangements between the beneficiaries as well as establishment of specific economic regulatory conditions for the PCI with national regulatory authorities.

**Call year:**  
2014

**Member State(s):**  
United Kingdom

**Implementation schedule:**  
September 2014 to September 2015

**Maximum EU contribution:**  
€602,282

**Beneficiaries:**  
ElecLink Limited  
<http://www.eleclink.co.uk>

**Status:**  
Closed

**Energy corridor:**  
Northern Seas offshore grid

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
1.7.3

**Executive summary:**  
Executive Summary available [here](#)

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

## ElecLink

1.7.3-0060-UK-S-M-14



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.

The Action's objective was to complete a set of studies required to obtain the permits, authorisations, certain regulatory exemptions and financing in order to allow the construction work to begin.

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

**Call year:**  
2015

**Member State(s):**  
United Kingdom

**Implementation schedule:**  
April 2015 to March 2016

**Maximum EU contribution:**  
€200,365

**Beneficiaries:**  
ElecLink Limited  
<http://www.eleclink.co.uk>

**Status:**  
Closed

**Energy corridor:**  
Northern Seas offshore grid

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
1.7.3

**Executive summary:**  
Executive Summary available [here](#)

### ElecLink

1.7.3-0013-UKFR-S-M-15



Copyright PLATTS for the underlying grid. Copyright INEA - June 2015

The Action is a part of the Project of Common Interest (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 was 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 was 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.

**Call year:**  
2015

**Member State(s):**  
Ireland

**Implementation schedule:**  
April 2015 to December 2016

**Maximum EU contribution:**  
€809,545

**Estimated total cost:**  
€1,619,090

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Element Power Ireland Limited  
<http://www.greenlinkinterconnector.eu>

**Status:**  
Ongoing

**Energy corridor:**  
Northern Seas offshore grid

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
1.9.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Greenwire Interconnector

1.9.1-0018-IEUK-S-M-15



Copyright PLATTS for the underlying grid. Copyright INEA - October 2015

The Action is a part of the Project of Common Interest (PCI) 1.9.1 Interconnection between Co. Offaly (IE), Pembroke and Pentir (UK), which aims to deliver additional transmission capacity between IE and UK. The Action covers the Greenwire Interconnector (the so-called Greenlink), between Great Island, Wexford County (IE) and Pembroke (UK). Greenlink will approximately be a 320kV high-voltage, direct current (HVDC) sub-sea cable of a capacity of 500 -700 MW and have a length of approximately 172km.

The objective of the Action was to conduct a series of environmental studies & surveys and address the regulation, grid and financial aspects as well as stakeholder involvement issues in UK and IE. It also comprised 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 Environmental impact assessment (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. However, some of these activities were not or only partial completed.

**Call year:**  
2014

**Member State(s):**  
Norway, United Kingdom

**Implementation schedule:**  
August 2014 to September 2018

**Maximum EU contribution:**  
€31,300,000

**Estimated total cost:**  
€62,600,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
National Grid Interconnector Holdings Limited  
<http://www.nationalgrid.com>

Statnett SF  
<http://www.statnett.no>

**Status:**  
Ongoing

**Energy corridor:**  
Northern Seas offshore grid

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
1.1

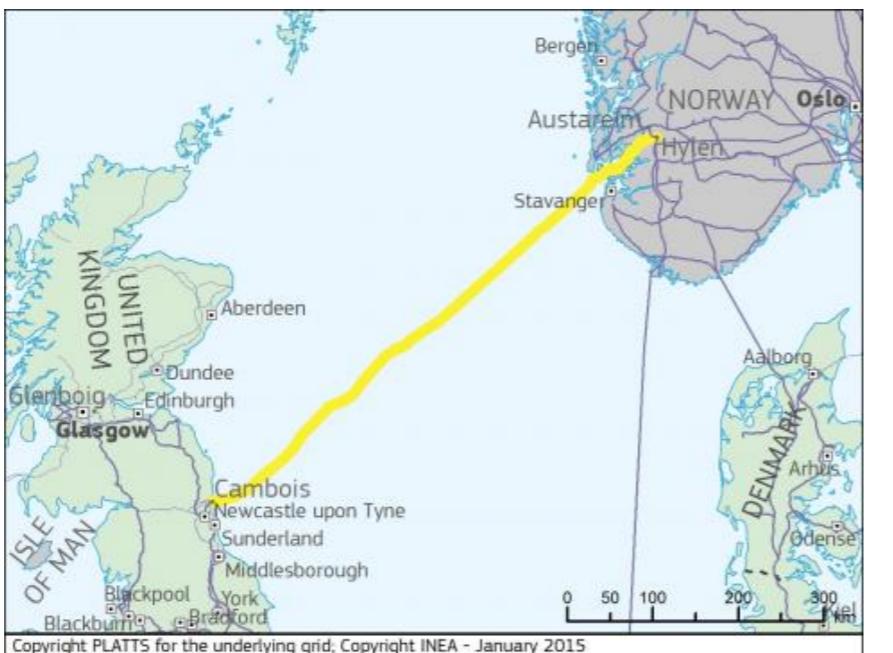
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

## NSN Technical Design Studies

1.10-0025-UKNO-S-M-14



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.

**Call year:**  
2016

**Member State(s):**  
Norway

**Implementation schedule:**  
November 2016 to September 2019

**Maximum EU contribution:**  
€10,756,224

**Estimated total cost:**  
€21,512,448

**Percentage of EU support:**  
50%

**Beneficiaries:**  
NORTHCONNECT KS  
<http://www.northconnect.no>

**Status:**  
Ongoing

**Energy corridor:**  
Northern Seas offshore grid

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
1.1

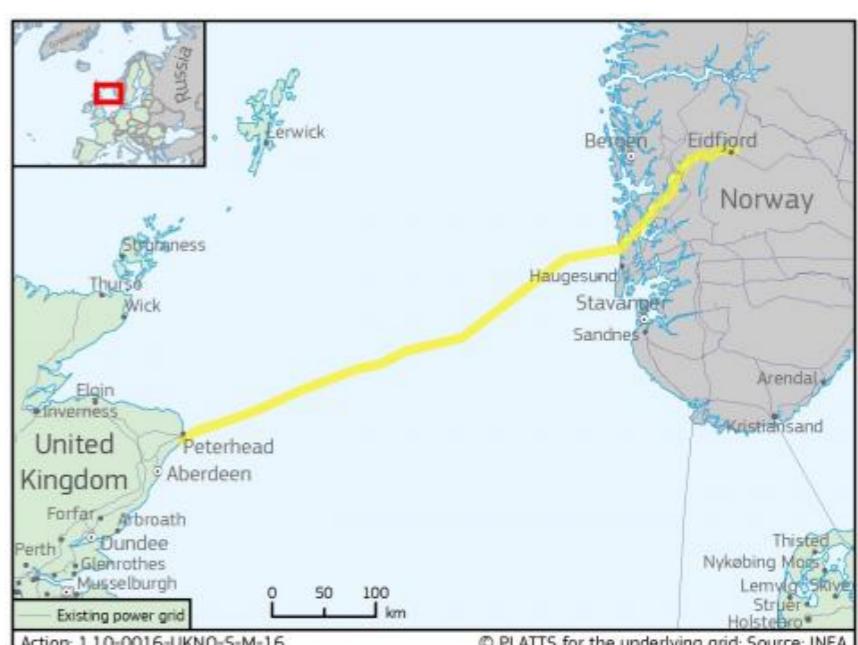
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

## NorthConnect Studies and preparatory activities leading to investment decision

1.10-0016-UKNO-S-M-16



The Action contributes to the Project of Common Interest (PCI) 1.10 for the construction of a high-voltage, direct current (HVDC) interconnection between Norway and the United Kingdom. The length is 655 km and the capacity is 1400 MW.

The objective of this Action is to prepare a comprehensive package of studies, investigations and pre-investment activities that are necessary for a final investment decision for the PCI.

The scope of the proposed Action includes the development of the design concept and business case, obtaining of all necessary consenting for the implementation of the PCI as well as preparation of contracts ready for execution in the later construction phase (not part of this Action).

Once the action is completed the PCI will be ready to take a Final Investment Decision. Following successfully passing this milestone, the PCI will continue into the construction, commissioning and operational phases.

**Call year:**  
2015

**Member State(s):**  
Ireland

**Implementation schedule:**  
May 2015 to June 2017

**Maximum EU contribution:**  
€6,465,000

**Estimated total cost:**  
€12,930,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Gaelectric Energy Storage Ltd  
<http://www.project-caeslarne.co.uk>

**Status:**  
Ongoing

**Energy corridor:**  
Northern Seas offshore grid

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
1.12

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### CAES Larne EIA & FEED

1.12-0020-UK-S-M-15



The Action is a part of the Project of Common Interest 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 annual storage capacity of approximately 1,426 GWh.

The objective of the Action was to conduct the necessary studies preparing the PCI for the application of licences and to provide system services to 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 involved submission of a planning application to the Planning Service in Northern Ireland. As part of the planning application an Environment Impact Analysis (EIA) had to be submitted and its completion was part of the Action. It also involved 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.

**Call year:**  
2016

**Member State(s):**  
Ireland

**Implementation schedule:**  
September 2016 to December 2018

**Maximum EU contribution:**  
€0

**Percentage of EU support:** 50%

**Beneficiaries:**  
Gaelectric Energy Storage Limited  
<http://www.gaelectric.ie>

**Status:**  
Terminated

**Energy corridor:**  
Northern Seas offshore grid

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
1.12

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Appraisal well, detailed design & commercial structure

1.12-0006-UK-S-M-16



The Action is part of the Project of Common Interest (PCI) 1.12 Compressed air energy storage (CAES) in Larne (UK) to build a CAES facility using air storage caverns to be created in bedded salt deposits with a generation and an annual storage capacity of approx. 330 MW and 1,426 GWh respectively.

The Action involved application for consent to drill, planning for tendering for construction of the appraisal well pad; procurement of services for temporary provision of a suitable drilling rig and equipment; drilling the Permian salt to approx. 1,800 m below ground; well geophysical surveys; rock mechanical and solution mining validation tests. It also comprised EPC framework contracts; technical due diligence; application for consents and permits as well as commercial, legal and financial steps required to achieve financial close. Furthermore, it included detailed design of production wells and storage caverns, solution mining equipment, CAES turbo machinery, 275kV High Voltage transmission equipment, high pressure gas metering & filtering equipment and other balance of plant components; system modelling of CAES performance in order to optimise design for provision of system services.

The Action has started but due to mainly lack of planning permission progress has been very limited. Hence the Action was terminated.

**Call year:**  
2016

**Member State(s):**  
Ireland

**Implementation schedule:**  
May 2018 to December 2021

**Maximum EU contribution:**  
€0

**Percentage of EU support:** 22%

**Beneficiaries:**  
Gaelectric Energy Storage Limited  
<http://www.gaelectric.ie>

**Status:**  
Terminated

**Energy corridor:**  
Northern Seas offshore grid

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
1.12

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

## CAES Larne Implementation

1.12-0023-UK-W-M-16



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

The objective of the Action was to carry out the necessary works to complete the PCI.

The scope of the Action comprised of the purchase of long-lead items, on-site preparatory earthworks, connection of construction phase power requirements, construction of Horizontal Directional Drilling intake and outfall pipelines, intake pumping station to deliver sea water for leaching purposes and leaching plant and associated solution mining pipework connecting the caverns below ground to solution mining infrastructure above ground, the creation of storage caverns, the purchase of remaining items. It also comprised of the installation of all above-ground components of the CAES facility and the integration of the sub-surface and above ground CAES infrastructure and commissioning of the completed facility.

The Action has not started due to mainly lack of planning permission and was terminated.

**Call year:**  
2016

**Member State(s):**  
Denmark, United Kingdom

**Implementation schedule:**  
April 2016 to August 2018

**Maximum EU contribution:**  
€14,824,179

**Estimated total cost:**  
€29,648,358

**Percentage of EU support:**  
50%

**Beneficiaries:**  
National Grid Interconnector Holdings Limited  
<http://www2.nationalgrid.com>

Energinet.dk  
<http://www.energinet.dk>

**Status:**  
Ongoing

**Energy corridor:**  
Northern Seas offshore grid

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
1.14

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

## Viking Link Final Project Development

1.14-0015-UKDK-S-M-16



The Action is a part of the Project of Common Interest (PCI) 1.14 Interconnection between Revsing (DK) and Bicker Fen (UK) [currently known as "Viking Link"], which aims to build a new high-voltage direct current (HVDC) 500 kV subsea cable of approximately 740 km and with a capacity of up to 1400 MW between the UK and Denmark (onshore and offshore).

The scope of the Action covers activities related to Action Governance & Stakeholder Engagement, Technical Specification, Procurement, Safety, Health, Environmental and Quality Management, Economic and Regulation and Commercial Arrangements, Seabed Survey and Consenting - onshore/offshore (DK/UK).

The deliverables of this Action are completed sea bed survey, acquired relevant consenting permissions, permits, approval of final investment decision and award of key Engineering, Procurement and Construction contract(s) for cable and converters to enable the PCI to commence the construction phase.

**Call year:**

2017

**Member State(s):**

Denmark, United Kingdom

**Implementation schedule:**

October 2017 to February 2019

**Maximum EU contribution:**

€2,813,902

**Estimated total cost:**

€5,627,804

**Percentage of EU support:**

50%

**Beneficiaries:**

National Grid Interconnector Holdings Limited

<http://www2.nationalgrid.com>

Energinet

<http://www.energinet.dk>

**Status:**

GA preparation

**Energy corridor:**

Northern Seas offshore grid

**Energy sector:**

Electricity

**Project(s) of Common Interest:**

1.14

**Additional information:**

European Commission, DG ENER

<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy

Regulators (ACER)

<http://www.acer.europa.eu/>

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

<http://www.entsoe.eu/>

### Viking Link Unexploded Ordnance Risk Mitigation Stage 1

1.14-0002-UKDK-S-M-17



The Action is a part of the PCI 1.14 Interconnection between Reving (DK) and Bicker Fen (UK) [currently known as "Viking Link"], which aims to build a new HVDC 500 kV subsea cable of ca. 740 km and with a capacity of up to 1400 MW between the UK and Denmark (onshore and offshore). The objective of the Action is to mitigate the risk of unexploded ordnance (UXO) along the cable route prior to the link commencing construction, thus supporting the operational target date of 2022.

The Action consists of a single activity, Unexploded Ordnance Risk Mitigation Stage 1, comprised of UXO related studies and tasks which will be completed by external contractors and supported by internal resources. The deliverables of the Action are to procure and award the external UXO contracts, review existing survey data, acquire the relevant permits to carry out the UXO survey, complete the geophysical survey via the chartering of a marine vessel equipped with special instruments capable of remotely measuring the characteristics of features on the sea bed and report findings including the identification of sites which may require a second stage of further inspection. Upon completion of the Action the possible second phase namely UXO Risk Mitigation Stage 2 may commence.

## 2.

### North-South electricity interconnections in Western Europe

**Call year:**  
2014

**Member State(s):**  
France, Spain

**Implementation schedule:**  
September 2014 to September 2017

**Maximum EU contribution:**  
€3,250,000

**Estimated total cost:**  
€6,500,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Réseau de Transport d'Electricité  
<http://www.rte-france.com>

RED ELECTRICA DE ESPAÑA S.A.U.  
<http://www.ree.es>

**Status:**  
Ongoing

**Energy corridor:**  
North-South electricity interconnections in Western Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
2.7

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

## Studies for a new Atlantic electrical interconnection between Spain and France

2.7-0023-FRES-S-M-14



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

The main objective of the Action was to complete the set of studies needed to determine the precise feasibility and impact of the new interconnector between Spain and France.

The Action was comprised of geological studies, environmental and social acceptance studies of the Action stakeholders, studies for the technological solutions (high voltage direct current (HVDC) technology, rate of the converters, cable and route design) and installation processes (subsea cable laying and protection).

**Call year:**  
2016

**Member State(s):**  
France, Spain

**Implementation schedule:**  
September 2016 to March 2019

**Maximum EU contribution:**  
€6,250,000

**Estimated total cost:**  
€12,500,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
RESEAU DE TRANSPORT D'ELECTRICITE  
<http://www.rte-france.com>

RED ELECTRICA DE ESPAÑA S.A.U.  
<http://www.ree.es>

**Status:**  
Ongoing

**Energy corridor:**  
North-South electricity interconnections in Western Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
2.7

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

## Additional studies for the new Atlantic electrical interconnection between Spain and France

2.7-0001-FRES-S-M-16



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

The main objective of the Action is to complete the set of studies needed to determine the precise feasibility and impact of the envisaged new interconnection between Spain and France, studying the entire route from both substations in both countries.

The Action comprises of submarine studies, environmental studies for the permitting process and technical studies in order to prepare the specifications for the tender phase of cable system and converter stations. The studies will identify the final feasibility of the selected route and detail the technical means to secure it. It will also provide relevant information for the start of the consultation and permitting phase of the PCI after the completion of the action.

Once the Action is completed the Final Investment Decision will be prepared and the subsequent phase, which includes technical equipment procurement, will be launched.

**Call year:**  
2017

**Member State(s):**  
France, Spain

**Implementation schedule:**  
June 2018 to December 2024

**Maximum EU contribution:**  
€578,487,000

**Estimated total cost:**  
€1,630,000,000

**Percentage of EU support:**  
35%

**Beneficiaries:**  
Red Eléctrica de España S.A.U. (REE)  
<http://www.ree.es>

Réseau de Transport d'Électricité (RTE)  
<http://www.rte-france.com>

**Status:**  
GA preparation

**Energy corridor:**  
North-South electricity interconnections in  
Western Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
2.7

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Works for Biscay Gulf electricity France-Spain interconnection

2.7-0013-FRES-W-M-17



The Action implements Project of Common Interest (PCI) 2.7 "France-Spain interconnection between Aquitaine (France) and the Basque country (Spain) through the Biscay Gulf. The length of the cable is estimated to be approximately 370km.

Its main objective is the construction of the new interconnection between Spain and France through the Gulf of Biscay. The Action comprises of the purchase, supply and deployment of components, systems and services, as well as the construction and installation activities related to the Capbreton canyon marine drilling, four converter stations and the cable system.

Once the Action is completed, the interconnection will be ready to start commissioning tests.

**Call year:**  
2016

**Member State(s):**  
Germany

**Implementation schedule:**  
November 2016 to May 2019

**Maximum EU contribution:**  
€40,250,000

**Estimated total cost:**  
€80,500,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
TransnetBW GmbH  
<http://www.transnetbw.com>

TenneT TSO GmbH  
<http://www.tennet.eu>

**Status:**  
Ongoing

**Energy corridor:**  
North-South electricity interconnections in  
Western Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
2.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Developing the SuedLink

2.10-0017-DE-S-M-16



The Action contributes to the Project of Common Interest (PCI) 2.10 for the construction of the underground onshore internal lines of high voltage direct current (HDVC) with a transmission capacity of 2GW and a length of approx. 700 km between Brunsbüttel-Großgartach and Wilster-Grafenrheinfeld (DE) to increase capacity at Northern and Southern borders.

The main objective of the Action is to define a 1000 metres wide corridor route from the north to the south of Germany. This corridor proposal will be assessed within an administrative procedure called Federal Sectoral Planning (Bundesfachplanung) executed under the competent authority (the Bundesnetzagentur, BNetzA).

The Action comprises of the preparation and submission of the initial and final Federal Sectoral Planning application and the administrative decision, taken by the competent authority. The Action also covers the beneficiaries' contribution to the scoping conferences and public hearings as well as the implementation of other public acceptance measures. These include citizen information events such as expert debates, information markets and round tables and the dissemination of around 15,000 information materials.

Once the Action is completed, the Planning Approval Procedure can start, aiming to identify a more specific route of a 1,000 metres wide corridor.

**Call year:**  
2015  
**Member State(s):**  
Portugal  
**Implementation schedule:**  
March 2016 to March 2019

**Maximum EU contribution:**  
€250,000  
**Estimated total cost:**  
€500,000

**Percentage of EU support:**  
50%  
**Beneficiaries:**  
REN – Rede Eléctrica Nacional, S.A.  
<http://www.ren.pt>

**Status:**  
Ongoing  
**Energy corridor:**  
North-South electricity interconnections in Western Europe  
**Energy sector:**  
Electricity

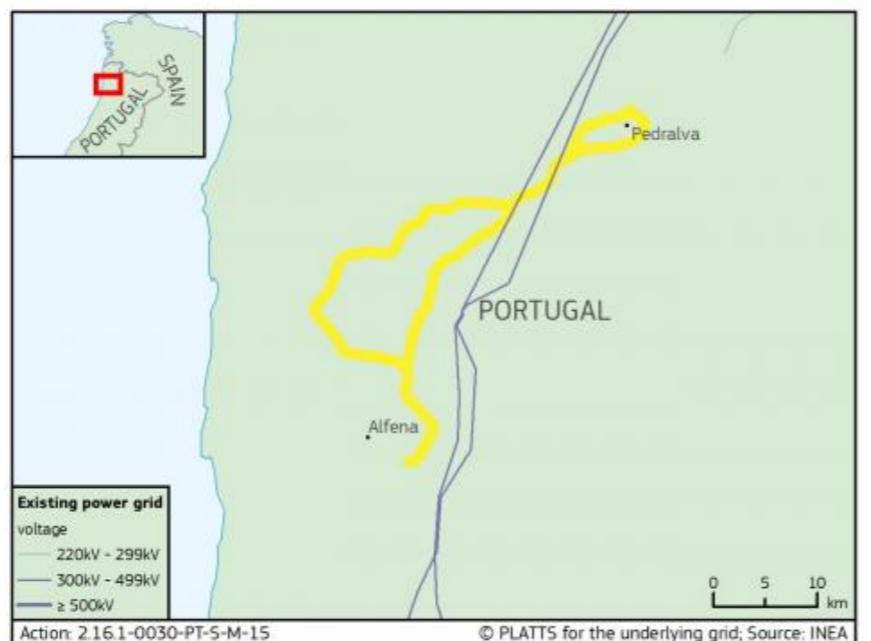
**Project(s) of Common Interest:**  
2.16.1  
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Environmental and engineering studies for the development of the internal Pedralva and Alfena 400 kV double circuit OHL

2.16.1-0030-PT-S-M-15



The Action is part of the Project of Common Interest (PCI) 2.16.1. The studies concern approximately 67 km, 400 kV, double circuit Over Head Line (OHL) linking the future Sobrado substation to the existing Pedralva substation.

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

- a) Basic study which will provide the large scale condition factors and determine the alternative line routes. It also includes a stakeholder consultation and
- b) 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 OHL which will be used for the Environmental Impact Assessment (EIA). The Action will end with the issuance of an Environmental Impact Declaration (EID).

**Call year:**  
2015  
**Member State(s):**  
Portugal  
**Implementation schedule:**  
October 2015 to March 2019

**Maximum EU contribution:**  
€250,000  
**Estimated total cost:**  
€500,000

**Percentage of EU support:**  
50%  
**Beneficiaries:**  
REN – Rede Eléctrica Nacional, S.A.  
<http://www.ren.pt>

**Status:**  
Ongoing  
**Energy corridor:**  
North-South electricity interconnections in Western Europe  
**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
2.16.3  
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://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



The Action is part of the Project of Common Interest (PCI) 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:

- a) Basic Study which will provide the large scale condition factors and determine the alternative line routes. It also includes a stakeholder consultation and
- b) 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).

### 3.

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



**Call year:**

2014

**Member State(s):**

Greece

**Implementation schedule:**

January 2015 to July 2017

**Maximum EU contribution:**

€340,000

**Estimated total cost:**

€680,000

**Percentage of EU support:**

50%

**Beneficiaries:**

Independent Power Transmission Operator (IPTO) S.A.

<http://www.admie.gr>

**Status:**

Ongoing

**Energy corridor:**

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

**Energy sector:**

Electricity

**Project(s) of Common Interest:**

3.7.1

**Additional information:**

European Commission, DG ENER

<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)

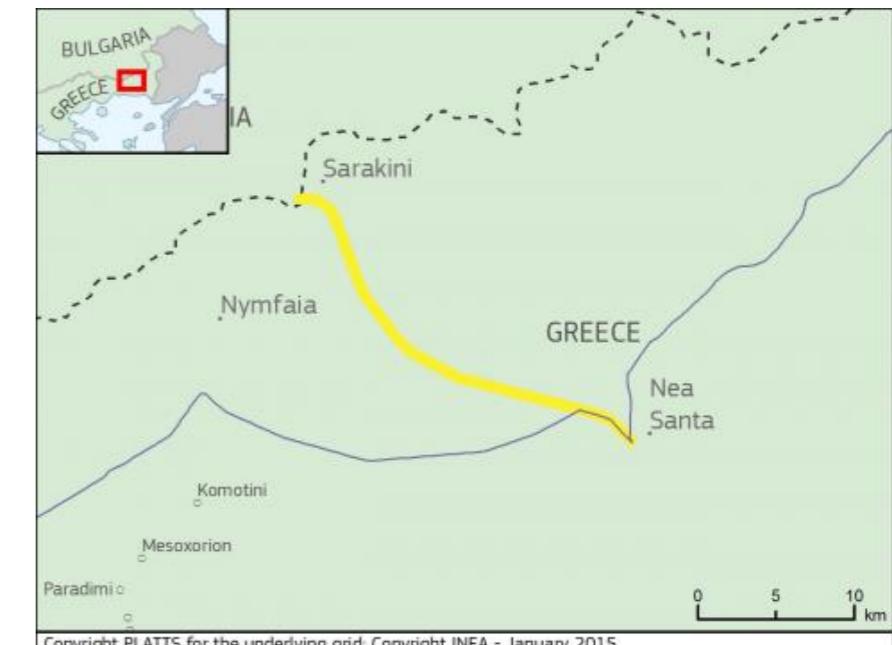
<http://www.acer.europa.eu/>

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

<http://www.entsoe.eu/>

**Studies and preparatory actions for the construction of the Greek part of the 2nd interconnector between Bulgaria and Greece**

3.7.1-0018-EL-S-M-14



Copyright PLATTS for the underlying grid. Copyright INEA - January 2015

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 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 were 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 was prepared that will allow an investment request to be submitted to relevant national regulatory authorities of Bulgaria and Greece.

**Call year:**  
2014

**Member State(s):**  
Bulgaria

**Implementation schedule:**  
November 2014 to March 2018

**Maximum EU contribution:**  
€306,000

**Estimated total cost:**  
€612,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Elektroenergen Sistemen Operator EAD  
<http://www.tso.bg>

**Status:**  
Ongoing

**Energy corridor:**  
North-South electricity interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
3.7.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://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



The Action belongs to the 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 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 ITO/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.

**Call year:**  
2014

**Member State(s):**  
Bulgaria

**Implementation schedule:**  
January 2015 to July 2017

**Maximum EU contribution:**  
€269,740

**Beneficiaries:**  
Elektroenergen Sistemen Operator EAD  
<http://www.tso.bg>

**Status:**  
Closed

**Energy corridor:**  
North-South electricity interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
3.7.2, 3.7.3, 3.7.4

**Executive summary:**  
Executive Summary available [here](#)

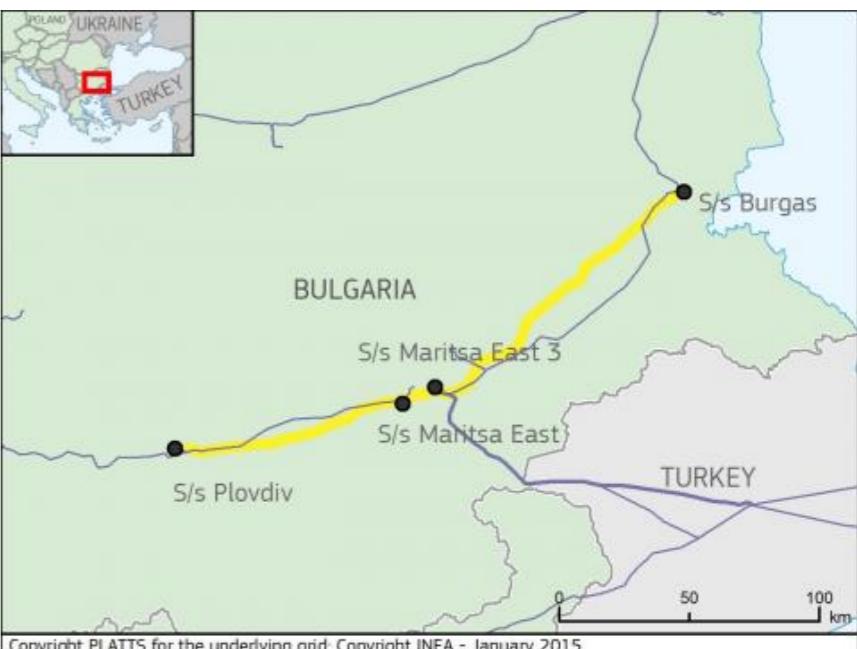
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://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



The Action included 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.

The Action delivered the documentation necessary for the final investment decision. It included the final detailed development plans and of the detailed work designs for the construction of the three PCI lines. The tender dossiers for the selection of construction contractors for PCIs 3.7.3 and 3.7.4 were also prepared as part of the Action.

**Call year:**  
2015  
**Member State(s):**  
Bulgaria  
**Implementation schedule:**  
January 2016 to July 2021

**Maximum EU contribution:**  
€28,996,650

**Estimated total cost:**  
€57,993,300

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Elektroenergen Sistemen Operator EAD  
<http://www.tso.bg>

**Status:**  
Ongoing

**Energy corridor:**  
North-South electricity interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
3.7.4

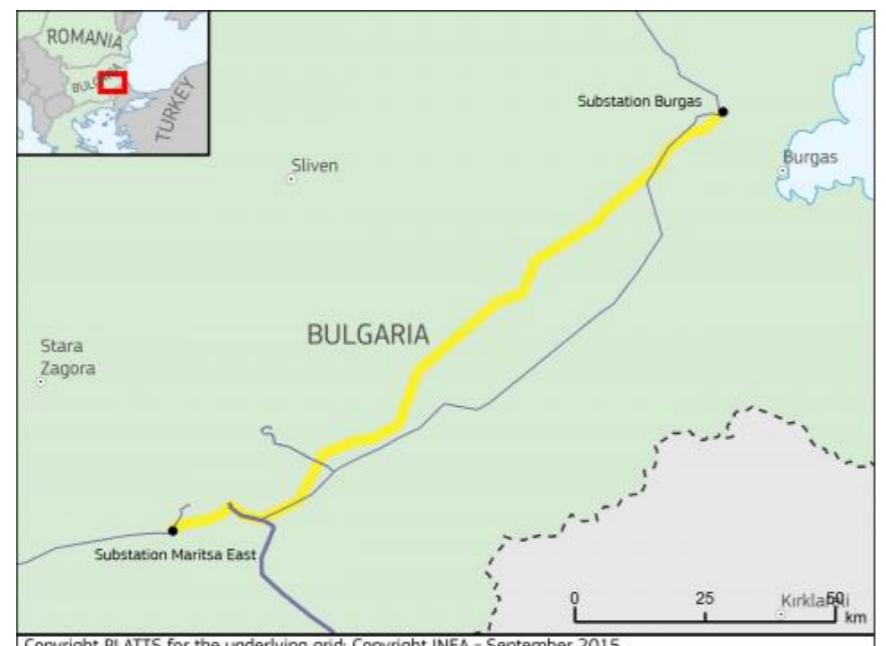
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Construction of new 400 kV OHTL between Maritsa East and Burgas

3.7.4-0008-BG-W-M-15



The Action implements the Project of Common Interest (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, supervision of the construction and Action management, public acceptance, visibility, communication and transparency activities.

**Call year:**  
2014

**Member State(s):**  
Bulgaria

**Implementation schedule:**  
January 2015 to April 2018

**Maximum EU contribution:**  
€315,000

**Estimated total cost:**  
€630,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Elektroenergen Sistemen Operator EAD  
<http://www.tso.bg>

**Status:**  
Ongoing

**Energy corridor:**  
North-South electricity interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
3.8.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://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



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 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.

**Call year:**  
2016

**Member State(s):**  
Bulgaria

**Implementation schedule:**  
January 2017 to December 2020

**Maximum EU contribution:**  
€29,857,500

**Estimated total cost:**  
€59,715,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Elektroenergen Sistemen Operator EAD  
<http://www.tso.bg>

**Status:**  
Ongoing

**Energy corridor:**  
North-South electricity interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
3.8.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Construction of a new 400 kV line between Dobrudja and Burgas

3.8.1-0002-BG-W-M-16



The Action contributes to the implementation of the Project of Common Interest (PCI) 3.8.1. The objective of the Action is the construction of an approximately 100 km long overhead transmission line on the territory of Bulgaria between Dobrudja and Burgas. The power capacity of this line will be 1500 MW at a voltage of 400 kV. This Action builds upon the preparatory studies financed under CEF Action 3.8.1-0030-BG-S-M-14.

The Action is composed of: the construction works of the line; the construction works and the acceptance tests of the facilities for the connection of the newly built line to the existing electricity grid; the supervision of these construction works; and activities for visibility, communication and transparency.

**Call year:**  
2017

**Member State(s):**  
Romania

**Implementation schedule:**  
November 2017 to December 2020

**Maximum EU contribution:**  
€27,085,000

**Estimated total cost:**  
€54,170,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Compania Nationala de Transport al Energiei Electrice "Transelectrica" SA  
<http://www.transelectrica.ro>

**Status:**  
Ongoing

**Energy corridor:**  
North-South electricity interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
3.8.4

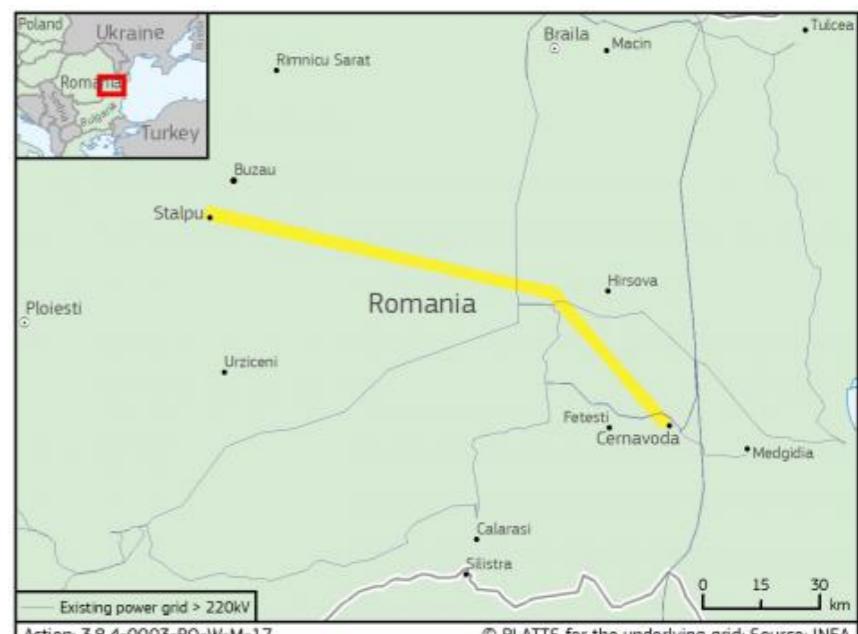
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Internal line between Cernavoda and Stalpu (PCI 3.8.4)

3.8.4-0003-RO-W-M-17



The Action fully implements the Project of Common Interest (PCI) 3.8.4. "Internal line between Cernavoda and Stalpu" (RO), which belongs to PCI Cluster 3.8 Bulgaria – Romania capacity increase [currently known as "Black Sea Corridor"] and reinforces the internal network of Romania by connecting the area of the Black sea coast to the rest of Europe, including the large scale integration of new renewable energy sources (RES), as well as increases the cross-border transfer capacity between Romania and Bulgaria.

The objective of the Action is the construction and commissioning of 400kV alternative current (AC) double circuit overhead transmission line (OHL) of approx. 160 kilometres with a capacity of 2x1380MW with an input/output circuit at the Gura Ialomitei substation between Cernavoda and Stalpu (RO). Stalpu substation will also be upgraded from 220 kV to 400 kV and the Cernavoda and Gura Ialomitei substations will be extended with 400kV switchgears that are required to support this new connection.

Once the Action is completed, the PCI will be operational.

**Call year:**  
2014

**Member State(s):**  
Cyprus

**Implementation schedule:**  
January 2015 to November 2016

**Maximum EU contribution:**  
€1,325,000

**Estimated total cost:**  
€2,650,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
DEH QUANTUM ENERGY LTD  
<http://www.euroasia-interconnector.com>

**Status:**  
Ongoing

**Energy corridor:**  
North-South electricity interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
3.10.1, 3.10.2, 3.10.3

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### EuroAsia Interconnector - Design, Implementation and Environmental Studies

3.10.1-0028-CY-S-M-14



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

The Action defined the Technical and Technological Solution, selected the preferred route corridor among those already pre-defined including a Reconnaissance Survey, provided useful results for the cable engineering and produced the environmental study in Cyprus, Greece and Israel.

**Call year:**  
2016

**Member State(s):**  
Cyprus

**Implementation schedule:**  
June 2017 to December 2020

**Maximum EU contribution:**  
€14,500,000

**Estimated total cost:**  
€29,000,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
EuroAsia Interconnector Limited  
<http://www.euroasia-interconnector.com>

**Status:**  
Ongoing

**Energy corridor:**  
North-South electricity interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
3.10.1, 3.10.2, 3.10.3

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### EuroAsia Interconnector - Final Detailed Studies

3.10.1-0004-CYEL-S-M-16



The Action contributes to the implementation of the cluster of Projects of Common Interest (PCIs) 3.10. The EuroAsia Interconnector consists of a 500 kV DC underwater electric cable and associated equipment for interconnecting the Cypriot, Israeli and Greek transmission networks. The first phase of the interconnector will have a capacity of 1000 MW and a total length of around 1,518 km.

Building upon the preparatory studies financed under CEF Action 3.10.1-0028-CY-S-M-14, the objective of this Action is to finalise the design of the interconnector and to procure the associated works contracts. The scope entails the Detailed Geophysical and Geotechnical Route Study; the Submarine Power Cable Installation Study; the Territorial Civil Works Study; the Front End Engineering Design Study; and procurement consultancy services.

Upon completion of the Action, the construction of the PCIs will be launched.

**Call year:**  
2014

**Member State(s):**  
Czech Republic

**Implementation schedule:**  
August 2014 to May 2016

**Maximum EU contribution:**  
€1,013,024

**Beneficiaries:**  
ČEPS a.s.  
<http://www.ceps.cz>

**Status:**  
Closed

**Energy corridor:**  
North-South electricity interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
3.11.1

**Executive summary:**  
Executive Summary available [here](#)

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

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

3.11.1-0036-CZ-S-M-14



The Action is a part of the Project of Common Interest (PCI) 3.11.1 Internal line between Vernerov and Vítkov, Czech Republic. It is a 400 kV AC double circuit overhead line of approximately 75 km, with a capacity of 2x1730 MVA.

The Action consisted 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 Vítkov (onshore), as well as the documentation for the zoning and building permits for the construction of the 400 kV Vítkov substation. These documents are obligatory under the Building Act of the Czech Republic (No. 183/2006 Coll.), and among the grant permits which need to be obtained before the start of the PCI's construction.

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

**Call year:**  
2015

**Member State(s):**  
Czech Republic

**Implementation schedule:**  
July 2015 to March 2017

**Maximum EU contribution:**  
€271,408

**Beneficiaries:**  
ČEPS, a.s.  
<http://www.ceps.cz>

**Status:**  
Closed

**Energy corridor:**  
North-South electricity interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
3.11.1

**Executive summary:**  
Executive Summary available [here](#)

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Final project documentation for substation Vítkov

3.11.1-0007-CZ-S-M-15



The Action is a part of the Project of Common Interest (PCI) 3.11.1 Internal line between Vernerov 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 aimed to complete the preparatory work for the construction of the substation Vítkov and consisted 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.

**Call year:**  
2015

**Member State(s):**  
Czech Republic

**Implementation schedule:**  
May 2015 to June 2016

**Maximum EU contribution:**  
€926,804

**Beneficiaries:**  
ČEPS, a.s.  
<http://www.ceps.cz>

**Status:**  
Closed

**Energy corridor:**  
North-South electricity interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
3.11.2

**Executive summary:**  
Executive Summary available [here](#)

### Documentation for zoning permit of the line Vítkov-Přeštice

3.11.2-0006-CZ-S-M-15



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

The Action consisted 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 was 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.

**Call year:**  
2017

**Member State(s):**  
Czech Republic

**Implementation schedule:**  
October 2017 to December 2018

**Maximum EU contribution:**  
€1,314,082

**Estimated total cost:**  
€2,628,164

**Percentage of EU support:**  
50%

**Beneficiaries:**  
ČEPS, a.s.  
<http://www.ceps.cz>

**Status:**  
Ongoing

**Energy corridor:**  
North-South electricity interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
3.11.2

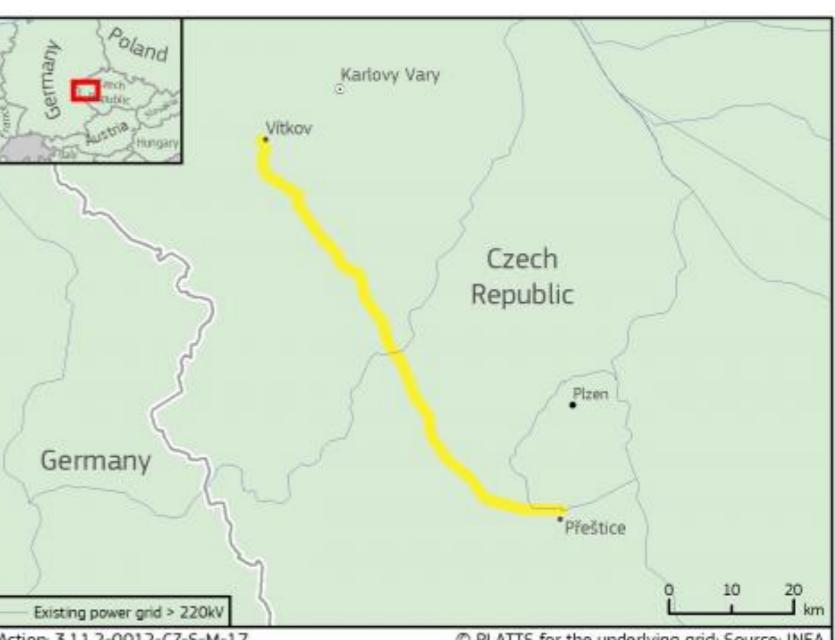
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Final project documentation for the line between Vítkov and Přeštice

3.11.2-0012-CZ-S-M-17



The Action contributes to the implementation of the Project of Common Interest (PCI) 3.11.2 Internal line between Vítkov and Přeštice (CZ) which concerns the building of a new 400 kV AC double circuit overhead transmission line (OHTL) of approximately 86 km and with a capacity of 2x1730 MVA between Vítkov and Přeštice in the Czech Republic. This Action builds upon the results of CEF Action 3.11.2-0006-CZ-S-M-15 under which the application to the Zoning Permit of the line was prepared.

The main objective of the Action is to support the issuance of all the technical reports constituting the final project documentation as defined under the Czech Building Act and of the tender documentation for the line Vítkov-Přeštice. The outcome will be the launch of the tendering procedure for the electricity line Vítkov-Přeštice.

Upon completion of the Action, the selection of contractors for the construction works will be carried out.

**Call year:**  
2015

**Member State(s):**  
Czech Republic

**Implementation schedule:**  
November 2015 to June 2018

**Maximum EU contribution:**  
€1,818,000

**Estimated total cost:**  
€3,636,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
ČEPS, a.s.  
<http://www.ceps.cz>

**Status:**  
Ongoing

**Energy corridor:**  
North-South electricity interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
3.11.3, 3.11.4

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Final project documentation of the electricity line Kočín-Mírovka

3.11.4-0039-CZ-S-M-15



The Action contributes to the implementation of the Project of Common Interest (PCI) 3.11.3 Internal line between Přeštice and Kočín (CZ) and PCI 3.11.4 Internal line between Kočín and Mírovka (CZ).

The Action consists of the preparation of the final project documentation and tender documents for the extension and upgrade of the existing substation Kočín, for the construction of the loop between the OHL V413/416 and the existing substation Mírovka, and for the construction of the electricity line Kočín-Mírovka. The final project documentation is an obligatory documentation for the implementation of the entire PCI according to the Czech Building Act.

**Call year:**  
2017

**Member State(s):**  
Germany

**Implementation schedule:**  
October 2017 to March 2022

**Maximum EU contribution:**  
€70,000,000

**Estimated total cost:**  
€140,000,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
TenneT TSO GmbH  
<http://www.tennet.eu>

50Hertz Transmission GmbH  
<http://www.50hertz.com>

**Status:**  
Ongoing

**Energy corridor:**  
North-South electricity interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
3.12

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Developing the SuedOstLink

3.12-0009-DE-S-M-17



The Action contributes to the implementation of the Project of Common Interest (PCI) 3.12 "Internal line in Germany between Wolmirstedt and Bavaria to increase internal North-South transmission capacity" with a capacity of at least 2,000 MW and an approx. length of 600 km.

The main objective of the Action is the granting of the Federal Sectoral Planning (Bundesfachplanung) and of the Planning Approval (Planfeststellungsverfahren) for the construction of the electricity line. These planning procedures are part of the German Grid Expansion Acceleration Act (Netzausbaubeschleunigungsgesetz, NABEG).

The scope of the Action covers the preparation and submission of the applications to the Federal Sectoral Planning and to the Planning Approval along with the execution of supporting technical studies, as well as public acceptance and consultation measures. The outcome will be the granting of the Federal Sectoral Planning and of the Planning Approval by the competent authority.

Upon completion of the Action, the construction works of the electricity line will be ready to start.

**Call year:**  
2014

**Member State(s):**  
Hungary

**Implementation schedule:**  
August 2014 to September 2017

**Maximum EU contribution:**  
€188,959

**Estimated total cost:**  
€377,918

**Percentage of EU support:**  
50%

**Beneficiaries:**  
MAVIR Magyar Villamosenergia-ipari Átviteli Rendszerirányító ZRt.  
<http://www.mavir.hu>

**Status:**  
Ongoing

**Energy corridor:**  
North-South electricity interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
3.16.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

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

3.16.1-0039-HU-S-M-14



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 referred 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 aimed 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 included 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.

**Call year:**  
2015

**Member State(s):**  
Slovakia

**Implementation schedule:**  
September 2016 to June 2018

**Maximum EU contribution:**  
€460,565

**Estimated total cost:**  
€921,130

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Slovenská elektrizačná prenosová sústava, a. s.  
<http://www.sepsas.sk>

**Status:**  
Ongoing

**Energy corridor:**  
North-South electricity interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
3.16.1

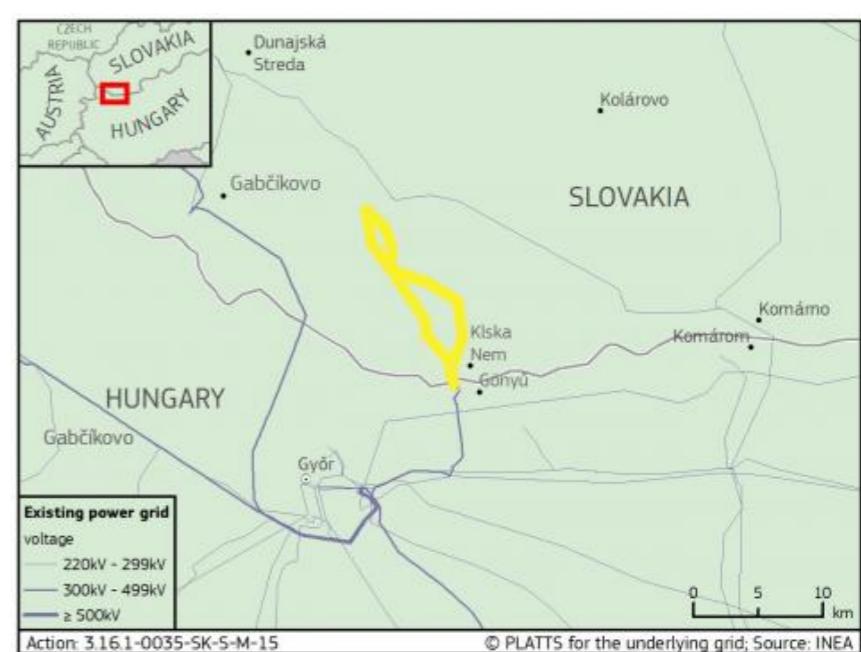
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Design documentation and activities related to permit granting process and final building approval process

3.16.1-0035-SK-S-M-15



The Action contributes to the implementation of the Project of Common Interest (PCI) 3.16.1 "Interconnection between Gönyű (HU) and Gabčíkovo (SK)", which aims to build an interconnector of approximately 18.5 km of 400 kV AC double line with GTC contribution 1000 MW between Slovakia and Hungary.

The Action covers the administrative preparation for the construction of approximately 20 km of the line which will be built on Slovak territory.

The main objective of the Action is to prepare all necessary documentation required for the permit granting procedures and to ensure the issuance of the permits by the Building Office (Competent Authority) for the construction of the PCI. The Action also covers the preparation of the tendering procedure for construction contractor.

The deliverables of the Action are the issuance of a territorial decision and building permit, and the preparation of the public procurement documentation for construction contractor.

**Call year:**  
2015  
**Member State(s):**  
Slovakia  
**Implementation schedule:**  
September 2016 to June 2018

**Maximum EU contribution:**  
€643,750  
**Estimated total cost:**  
€1,287,500

**Percentage of EU support:**  
50%  
**Beneficiaries:**  
Slovenská elektrizačná prenosová sústava, a. s.  
<http://www.sepsas.sk>

**Status:**  
Ongoing  
**Energy corridor:**  
North-South electricity interconnections in Central Eastern and South Eastern Europe  
**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
3.17

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)

<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Design documentation and activities related to permit granting process and final building approval process

3.17-0032-SK-S-M-15



The Action contributes to the implementation of the Project of Common Interest (PCI) 3.17 "Interconnection between Sajoivánka (HU) and Rimavská Sobota (SK)", which aims to build an electricity interconnector between Slovakia and Hungary and consists of approximately 49 km of 400 kV AC double line with GTC contribution of 800 MW. The line is a double line with two circuits on the Slovak territory and preliminary equipped with one circuit on the Hungarian territory.

The Action covers the administrative preparation of the construction for the approximately 27 km of the line which will be built on the Slovak territory.

The main objective of the Action is to prepare all the necessary documentation required for the permit granting procedures and to ensure the issuance of the permits by the Building Office (Competent Authority) for the construction of the PCI. The Action also covers the preparation of the documentation for the tendering procedure of the construction contractor.

The deliverables of the Action are the issuance of the territorial decision, issuance of the building permit and the preparation of the documentation for public procurement for the construction contractor.

**Call year:**  
2014  
**Member State(s):**  
Slovenia  
**Implementation schedule:**  
November 2014 to June 2016

**Maximum EU contribution:**  
€181,951

**Beneficiaries:**  
ELES, Ltd., Electricity Transmission System Operator  
<http://www.eles.si>

**Status:**  
Closed

**Energy corridor:**  
North-South electricity interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
3.21

**Executive summary:**  
Executive Summary available [here](#)

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

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

3.21-0024-SI-S-M-14



The Action was a study for the implementation of a part of the Project of Common Interest (PCI) 3.21 PCI Italy-Slovenia interconnection up to 1000 MW between Salgareda (IT) and Divača - Beričeve region (SI). The Action covered only Slovenian territory, from Divača or Beričeve 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 Beričeve - which is yet to be determined.

The main objectives of the Action were 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 PCI.

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

**Call year:**  
2014

**Member State(s):**  
Bulgaria

**Implementation schedule:**  
August 2014 to January 2018

**Maximum EU contribution:**  
€3,213,000

**Estimated total cost:**  
€6,426,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
NATSIONALNA ELEKTRICHESKA KOMPANIA  
EAD  
<http://www.nek.bg>

**Status:**  
Ongoing

**Energy corridor:**  
North-South electricity interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
3.23

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Hydro-pumped storage in Bulgaria - Yadenitsa

3.23-0063-BG-S-M-14



The Action is part of the 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 Action aimed at preparing all of the required documentation, procedures and permits for the completion of the PCI. It included: 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.

**Call year:**  
2014

**Member State(s):**  
Greece

**Implementation schedule:**  
August 2014 to December 2016

**Maximum EU contribution:**  
€4,915,000

**Estimated total cost:**  
€9,830,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
TERNA ENERGY S.A.  
<http://www.terna-energy.com>

**Status:**  
Ongoing

**Energy corridor:**  
North-South electricity interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
3.24

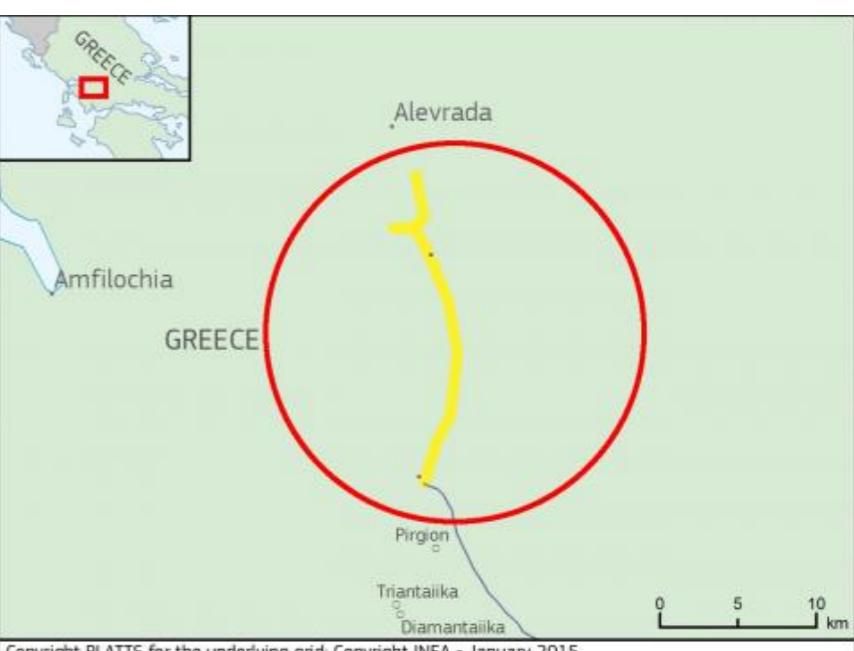
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Design and EIA of the PCI 3.24 Hydro-pumped storage in Greece - Amfilochia

3.24-0013-EL-S-M-14



The Action was 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.

The Action prepared the detailed design studies, including the tender documents for the Agios Georgios and Pyrgos reservoirs. Its deliverables included the detailed design reports, drawings, the decision on the environmental terms approval and the tender documents for the Agios Georgios and Pyrgos reservoirs.

## 4.

# Baltic Energy Market Interconnection Plan in electricity

**Call year:**

2014

**Member State(s):**

Estonia, Latvia

**Implementation schedule:**

January 2015 to December 2020

**Maximum EU contribution:**

€112,301,701

**Estimated total cost:**

€172,771,848

**Percentage of EU support:**

65%

**Beneficiaries:**

Elering AS

<http://www.elering.ee>

Augstsprieguma tīkls AS

<http://www.ast.lv>

Latvijas elektriskie tīkli AS

<http://www.let.lv>**Status:**

Ongoing

**Energy corridor:**

Baltic Energy Market Interconnection Plan in electricity

**Energy sector:**

Electricity

**Project(s) of Common Interest:**

4.2.1, 4.2.2

**Additional information:**

European Commission, DG ENER

<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)

<http://www.acer.europa.eu/>

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

<http://www.entsoe.eu/>

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

4.2.1-0027-LVLV-P-M-14



The 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. Secondly, 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.

**Call year:**  
2016

**Member State(s):**  
Latvia

**Implementation schedule:**  
April 2017 to December 2020

**Maximum EU contribution:**  
€9,990,000

**Estimated total cost:**  
€19,980,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
AS "Augstspriguma tīkls"  
<http://www.ast.lv>

Latvijas elektriskie tīkli AS  
<http://www.let.lv>

**Status:**  
Ongoing

**Energy corridor:**  
Baltic Energy Market Interconnection Plan in electricity

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
4.2.3

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Internal line between Riga CHP2 and RigaHPP (LV)

4.2.3-0008-LV-W-M-16



The Action implements the Project of Common Interest (PCI) 4.2.3 "Internal line between Riga CHP 2 and Riga HPP (LV)" which belongs to PCI Cluster 4.2 Estonia — Latvia between Kilingi-Nõmme and Riga.

The Action's scope is to build the internal line between two power plants: Riga's second Combined Heat Power Plant (Riga CHP2) and Riga Hydro Power Plant (HPP) in Latvia.

It will cover:

- construction of a new 330 kV transmission line between the 330 kV substations of Riga CHP2 and Riga HPP, including all the necessary design, construction and civil engineering works;
- construction of a new line bay in the existing Riga CHP2 330kV switchyard, including the installation of new high voltage AC equipment and switchgear components;
- conversion of the existing 330 kV Riga HPP substation from H-type scheme to two busbar scheme with a new AC switchgear and its auxiliary components.

**Call year:**  
2014

**Member State(s):**  
Lithuania

**Implementation schedule:**  
September 2014 to April 2015

**Maximum EU contribution:**  
€125,000

**Beneficiaries:**  
LITGRID AB  
<http://www.litgrid.eu>

**Status:**  
Closed

**Energy corridor:**  
Baltic Energy Market Interconnection Plan in electricity

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
4.3

**Executive summary:**  
Executive Summary available [here](#)

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://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



The Action was 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 was 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 evaluated various operating requirements and parameters of the synchronous zone and related costs compared to different scenarios. The study covered all system reinforcements, stability improvements, technical measures or operational limitations (if no other measures were available), as well as the implementation plan. Its main deliverable was the set up the package of the final technical requirements necessary for the integration of the large scale generating unit into the transmission network.

**Call year:**  
2014

**Member State(s):**  
Latvia

**Implementation schedule:**  
July 2014 to December 2019

**Maximum EU contribution:**  
€55,089,000

**Estimated total cost:**  
€122,420,000

**Percentage of EU support:**  
45%

**Beneficiaries:**  
Augstsprīguma tīkls AS  
<http://www.ast.lv>

Latvijas elektroenerģētikas tīkli AS  
<http://www.let.lv>

**Status:**  
Ongoing

**Energy corridor:**  
Baltic Energy Market Interconnection Plan in electricity

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
4.4.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Internal line between Ventspils, Tume and Imanta (LV)

4.4.1-0004-LVLV-P-M-14



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

The goal of this 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.

**Call year:**  
2015

**Member State(s):**  
Lithuania

**Implementation schedule:**  
April 2015 to February 2016

**Maximum EU contribution:**  
€27,375,582

**Beneficiaries:**  
LITGRID AB  
<http://www.litgrid.eu>

**Status:**  
Closed

**Energy corridor:**  
Baltic Energy Market Interconnection Plan in electricity

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
4.5.1

**Executive summary:**  
Executive Summary available [here](#)

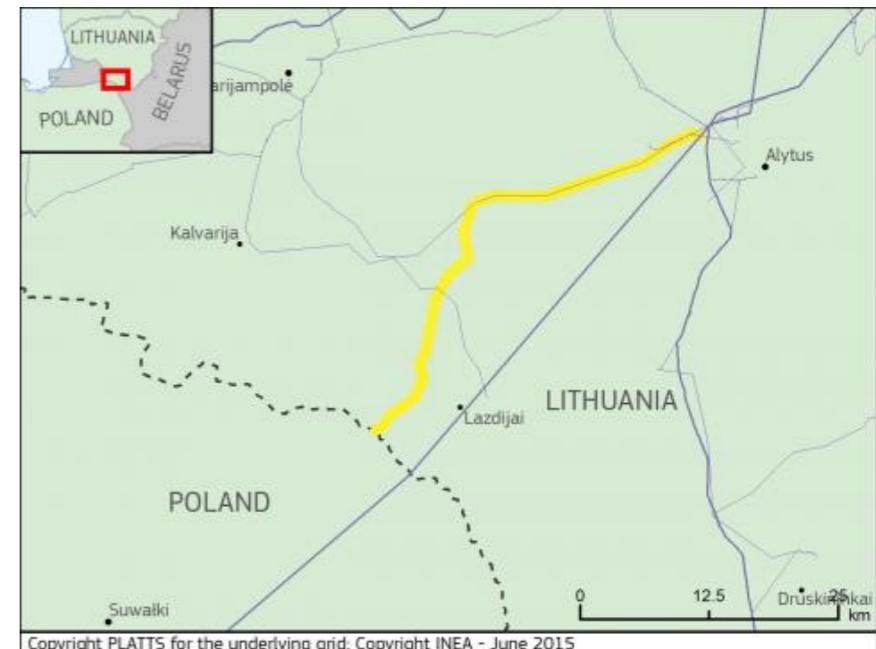
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### LitPol Link construction

4.5.1-0005-LT-W-M-15



The Action implemented 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 was the construction and commissioning of approximately 51 km double circuit 400 kV AC overhead line (OHL) between Alytus (Lithuania) to the Polish border. This consisted 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 is an 8 single-phase converter station transformers, of which 2 are spare ones.

The Action paves the way for the commencement of the second phase of the LitPol Link.

**Call year:**  
2017

**Member State(s):**  
Lithuania

**Implementation schedule:**  
December 2017 to March 2019

**Maximum EU contribution:**  
€62,500

**Estimated total cost:**  
€125,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Lietuvos energijos gamyba, AB  
<http://www.gamyba.lt>

**Status:**  
Ongoing

**Energy corridor:**  
Baltic Energy Market Interconnection Plan in electricity

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
4.7

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Evaluation of technical condition of the infrastructure and penstock site for the Kruonis PSPP Expansion

4.7-0016-LT-S-M-17



The Action contributes to the implementation of the Project of Common Interest (PCI) 4.7. "Capacity increase of hydro-pumped storage in Lithuania — Kruonis" which aims to install a new 225 MW variable speed (asynchronous) unit.

The Action aims to prepare a study in order to assess the condition of the technological infrastructure built in 1985 and its suitability for the implementation of the Kruonis pumped storage power plant (PSPP) PCI. The Action consists of two parts:

- data collection and testing related to the concrete strength of the building, characteristics of penstock poles and the geology of the penstock area
- the analysis of the data gathered and the preparation of summary reports which will include concrete strength protocols, geological survey report, technical documentation regarding the depth and structural integrity of the poles.

Once the Action is completed the PCI could enter the Final Investment Decision's phase.

**Call year:**  
2016

**Member State(s):**  
Estonia, Latvia, Lithuania

**Implementation schedule:**  
April 2016 to August 2017

**Maximum EU contribution:**  
€105,000

**Beneficiaries:**  
LITGRID AB  
<http://www.litgrid.eu>

AS "Augspsrieguma tīkls"  
<http://www.ast.lv>

Elering AS  
<http://www.elering.ee>

**Status:**  
Closed

**Energy corridor:**  
Baltic Energy Market Interconnection Plan in electricity

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
4.9

**Executive summary:**  
Executive Summary available [here](#)

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Study of Isolated Operation of Baltic Power System

4.9-0014-LTV-S-M-16



The Action was part of the Project of Common Interest (PCI) 4.9. "Various aspects of the integration of the Baltic States' electricity network into the continental European Network, including their synchronous operation".

The Study which determined if the Baltic States power system is capable of operating in isolated mode was carried out under the Action. It covered:

- Data collection, description of scenarios, creation of common model
- Steady state and transient stability analysis
- Set up of the technical requirements and
- Final report and stakeholder communication in the form of a press release and stakeholder workshop

The deliverable was the Final study report covering the analysis of continental Europe's or the Nordic Network for synchronous zone requirements for island operation, including guidelines and a timeline for performing the Test. The study provided the basis on which to prepare for the Test; the Test itself, however, was not within the Action's scope.

**Call year:**  
2017

**Member State(s):**  
Estonia, Latvia, Lithuania, Poland

**Implementation schedule:**  
December 2017 to July 2018

**Maximum EU contribution:**  
€105,000

**Estimated total cost:**  
€210,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
LITGRID AB  
<http://www.litgrid.eu>

AS "Augstsprīguma tīkls"  
<http://www.ast.lv>

ELERING AS  
<http://www.elering.ee>

Polskie Sieci Elektroenergetyczne S.A  
<http://www.pse.pl>

**Status:**  
Ongoing

**Energy corridor:**  
Baltic Energy Market Interconnection Plan in electricity

**Energy sector:**  
Electricity

**Project(s) of Common Interest:**  
4.9

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Electricity (ENTSO-E)  
<http://www.entsoe.eu/>

### Study on Dynamic behavior of synchronously interconnected Baltic States and Continental European electricity network

4.9-0020-LTLV-S-M-17



The Action contributes to the implementation of the Project of Common Interest (PCI) 4.9 "Various aspects of the integration of the Baltic States' electricity network into the Continental European network, including their synchronous operation".

The Action's goal is to carry out the dynamic study which will determine the feasibility of the extension of the Continental European synchronous zone in terms of stability phenomena facilitating the Baltic States' system synchronization process.

The Action will cover:

- the establishment of a consortium for the preparation of the study
- data collection, description of scenarios, creation of the steady state analysis
- transient and small signal stability analysis and
- preparation of final study report and stakeholder communication measures

Once the Action is completed, the feasibility of the extension of Continental European synchronous zone in terms of stability phenomena will be determined.

## 5.

### North-South gas interconnections in Western Europe

**Call year:**  
2016

**Member State(s):**  
Ireland

**Implementation schedule:**  
May 2017 to November 2018

**Maximum EU contribution:**  
€925,000

**Estimated total cost:**  
€1,850,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Gas Networks Ireland  
<http://www.gasnets.ie/>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Western Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
5.1.1

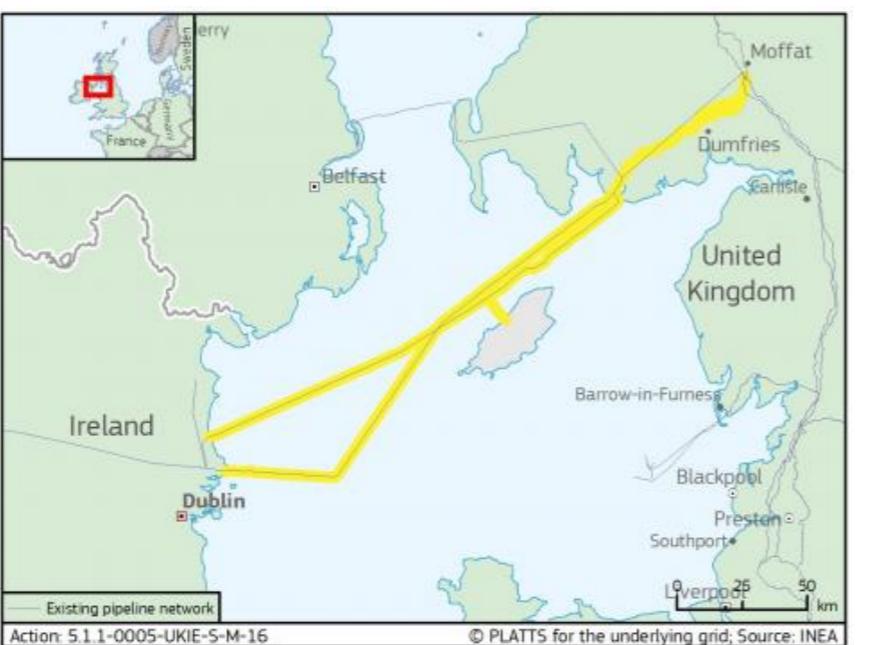
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Physical reverse flow at Moffat interconnection point (IE/UK)

5.1.1-0005-UKIE-S-M-16



The Action contributes to the implementation of Project of Common Interest (PCI) 5.1.1 "Physical reverse flow at Moffat interconnection point (IE/UK)", which aims to allow reverse flow of gas between Ireland and the UK, by building a compressor station in Ireland and deodorisation facilities at Moffat in Scotland, UK. This would enable bidirectional flow of gas from Great Britain to Ireland and for the first time from supply sources in Ireland to Great Britain.

The objective of the Action is a comprehensive multi-disciplinary study (including Pipeline Routing & Environmental screening, Networks Analysis Modelling, Conceptual Engineering and Design, Preliminary Planning Stakeholder consultations and Financial Viability analysis), which will assess all aspects of the proposed project to facilitate physical reverse flow between Scotland (Moffat) and Ireland.

The Action is the next logical step in the PCI development and it represents a significant enabler for the development of the Islandmagee Underground Gas Storage (UGS) facility in Northern Ireland (UK) (PCI 5.1.3).

**Call year:**  
2014

**Member State(s):**  
United Kingdom

**Implementation schedule:**  
August 2014 to January 2016

**Maximum EU contribution:**  
€2,500,000

**Beneficiaries:**  
InfraStrata plc  
<http://www.infrastrata.co.uk/>

**Status:**  
Closed

**Energy corridor:**  
North-South gas interconnections in Western Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
5.1.3

**Executive summary:**  
Executive Summary available [here](#)

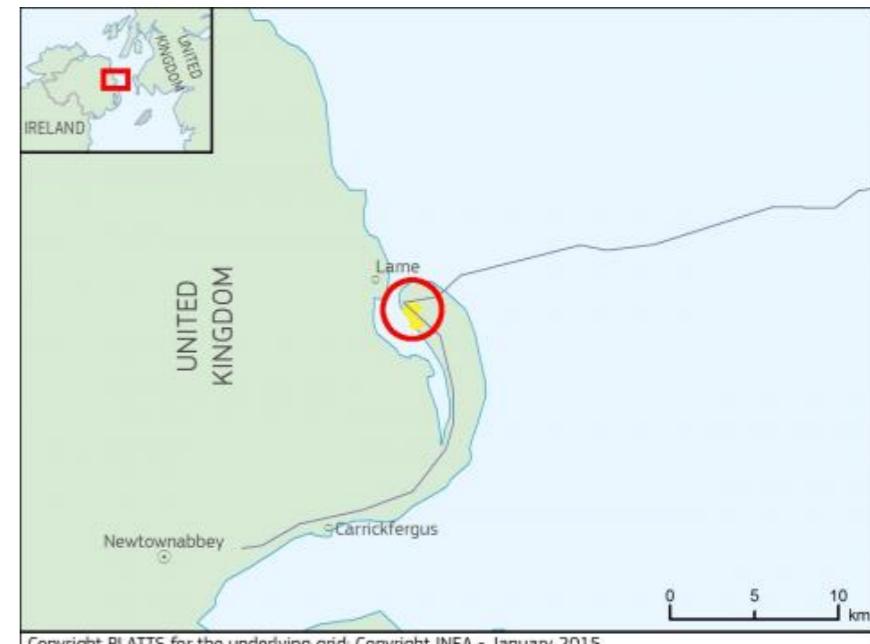
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Islandmagee Gas Storage Facility

5.1.3-0035-UKUK-S-M-14



This Action was 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.

The goal of the Action was to obtain salt core samples and related data to confirm the feasibility of the Permian salt layer for the creation of underground salt caverns and the delivery of an updated basis of design for the surface facilities.

The outcome of the Action has confirmed the feasibility of this development of an underground gas storage facility in salt caverns and confirmed the economic viability of the project.

**Call year:**  
2015

**Member State(s):**  
United Kingdom

**Implementation schedule:**  
July 2016 to December 2018

**Maximum EU contribution:**  
€4,024,000

**Estimated total cost:**  
€8,048,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
InfraStrata plc  
<http://www.infrastrata.co.uk>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Western Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
5.1.3

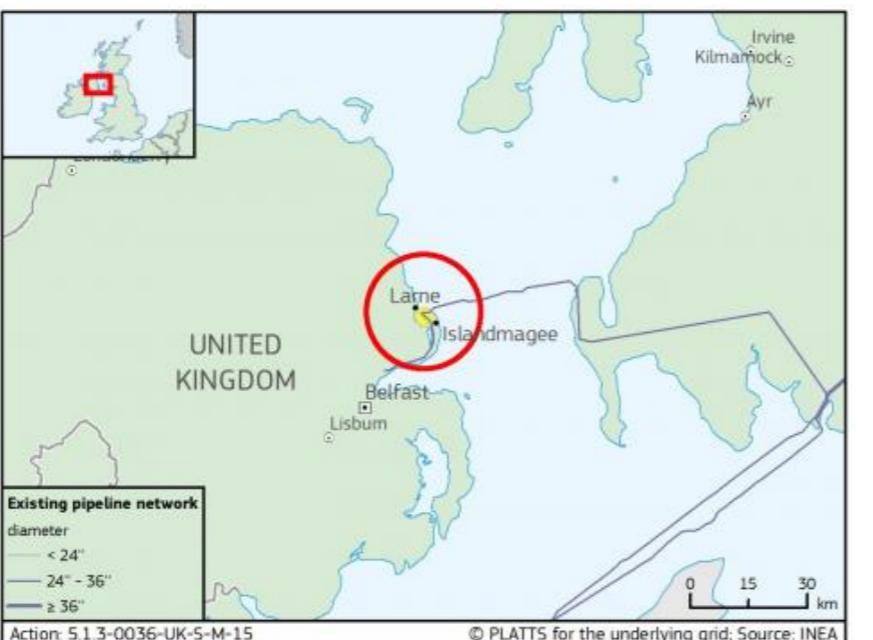
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsofog.eu/>

### Islandmagee Gas Storage Facility - FEED and In situ Downhole Testing

5.1.3-0036-UK-S-M-15



The current Action is part of 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 in Great Britain, Northern Ireland and the Republic of Ireland and enable greater interconnectivity across these three neighboring markets, whilst 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/day and an injection capacity of 12 MCM/day.

The goal of this Action is to perform the Front End Engineering and Design (FEED) study for the Islandmagee Storage Facility and carry out the in situ downhole testing to determine the stress state of the Permian salt, which will establish with greater accuracy safe operational pressure ranges for the salt caverns.

The FEED study will identify technical requirements and design parameters for the project which will provide greater certainty on the main project costs and key project risks.

**Call year:**  
2014

**Member State(s):**  
United Kingdom

**Implementation schedule:**  
August 2014 to November 2018

**Maximum EU contribution:**  
€33,764,185

**Estimated total cost:**  
€92,758,750

**Percentage of EU support:**  
36%

**Beneficiaries:**  
GNI (UK) Limited  
<http://www.gasnetworks.ie>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Western Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
5.2

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsofog.eu/>

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

5.2-0042-UK-P-M-14



This Action will implement the Project of Common Interest (PCI) 5.2 Twinning of Southwest Scotland onshore System between Cluden and Brighouse Bay in the UK. It involves 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 Action aims to address the current pressure restriction in the onshore system and complete a dual pipeline system between Ireland and the UK. It will also remove security of supply concerns, thus increasing the operational pressures by around 20% and gas capacity by around 10% in the network. Other activities associated with the Action's implementation include 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 7 km at Dumfries will be subject to the consent of the competent environmental authorities.

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

**Call year:**  
2015

**Member State(s):**  
Portugal

**Implementation schedule:**  
July 2015 to December 2017

**Maximum EU contribution:**  
€505,925

**Estimated total cost:**  
€1,011,850

**Percentage of EU support:**  
50%

**Beneficiaries:**  
REN-Gasodos, S.A.  
<http://www.ren.pt/>

**Status:**  
Pre-terminated

**Energy corridor:**  
North-South gas interconnections in Western Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
5.4

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.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



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

**Call year:**  
2017

**Member State(s):**  
Spain

**Implementation schedule:**  
February 2018 to December 2019

**Maximum EU contribution:**  
€1,701,375

**Estimated total cost:**  
€3,402,750

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Enagás Transporte S.A.U.  
<http://www.enagas.es/portal/site/enagas>

**Status:**  
GA preparation

**Energy corridor:**  
North-South gas interconnections in Western Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
5.5

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Studies for permit granting process of STEP (MIDCAT)

5.5-0011-ES-S-M-17



The Action contributes to the implementation of the Project of Common Interest (PCI) 5.5 Eastern Axis Spain-France interconnection point between Iberian Peninsula and France at Le Perthus [currently known as Midcat], which aims to interconnect Spain and France gas networks through the Eastern Pyrenees, and in particular to its first phase (South Transit East Pyrenees project, currently known as "STEP"). The Project will have an approximate length of 224 km, a maximum capacity of 180 GWh/d in the direction France to Spain and 230 GWh/d in the direction Spain to France and a maximum operating pressure of 80 bar(g).

The objective of this Action is to carry out the studies required for the permit granting process of the pipeline from Figueras to the French border and the Martorell compressor station on the Spanish side of STEP and includes a report on the outcome of the public consultation and the building permit application (authorisation request) for both infrastructures. The pipeline from Figueras to the French border will have an approximate length of 28 km, a diameter of DN 900 and a pressure design of 80 bar(g). The Martorell compressor station will have an installed power of 36 MW.

**Call year:**  
2015

**Member State(s):**  
France

**Implementation schedule:**  
January 2016 to September 2019

**Maximum EU contribution:**  
€4,150,000

**Estimated total cost:**  
€8,300,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
TRANSPORT ET INFRASTRUCTURES GAZ  
FRANCE  
<https://www.tigf.fr/>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Western Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
5.5

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Conceptual and FEED studies (French part of the Midcat project)

5.5-0048-FR-S-M-15



The current Action is part of the Project of Common Interest PCI 5.5 "Eastern Axis Spain-France interconnection point between Iberian Peninsula and France at Le Perthus [currently known as Midcat]" and aims to interconnect Spain and France gas networks through the Eastern Pyrenees. The PCI will have an approximate length of 180 km, a maximum capacity of 80 GWh/d in the direction France to Spain and 230 GWh/d in the direction Spain to France and a maximum operating pressure of 80 bar(g). The pipeline between Le Perthus and the compressor station of Barbaira will have an approximate length of 120 km.

The goal of this Action is to perform the conceptual and FEED studies as well as the public consultation for the implementation of the first phase of the project on the French side. This first phase of the Midcat project corresponds in France to the connection between the Spanish gas system at the border and the compressor station of Barbaira.

The outcome of the Action is to confirm the feasibility of the Midcat project from a technical, planning and financial point of view.

**Call year:**  
2015

**Member State(s):**  
Spain

**Implementation schedule:**  
January 2016 to December 2016

**Maximum EU contribution:**  
€1,477,125

**Estimated total cost:**  
€2,954,250

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Enagás Transporte S.A.U.  
<http://www.enagas.es/portal/site/enagas>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Western Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
5.5

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Engineering studies of Midcat project

5.5-0054-ESFR-S-M-15



This Action is part of the Project of Common Interest (PCI) 5.5 "Eastern Axis Spain-France interconnection point between Iberian Peninsula and France at Le Perthus [currently known as Midcat]" and aims to interconnect Spain and France gas networks through the Eastern Pyrenees. The PCI will have an approximate length of 180 km, a maximum capacity of 80 GWh/d in the direction France to Spain and 230 GWh/d in the direction Spain to France and a maximum operating pressure of 80 bar(g). The pipeline section between Figueras to the French border will have an approximate length of 28 km.

The goal of this Action is to carry out the engineering studies of Martorell compressor station and the engineering studies of the pipeline from Figueras to the French border, both associated to the implementation of the Midcat project on the Spanish side.

The outcome of this Action allows continuing with the next steps in the PCI implementation on the Spanish side, which are the procurement, the permitting and the construction of both infrastructures.

**Call year:**  
2015

**Member State(s):**  
Germany

**Implementation schedule:**  
April 2015 to November 2017

**Maximum EU contribution:**  
€1,232,000

**Estimated total cost:**  
€2,464,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Fluxys TENP GmbH  
<http://www.fluxys.com/>

Trans Europa Naturgas Pipeline GmbH & Co.  
KG  
<http://www.fluxys.com/>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Western Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
5.10

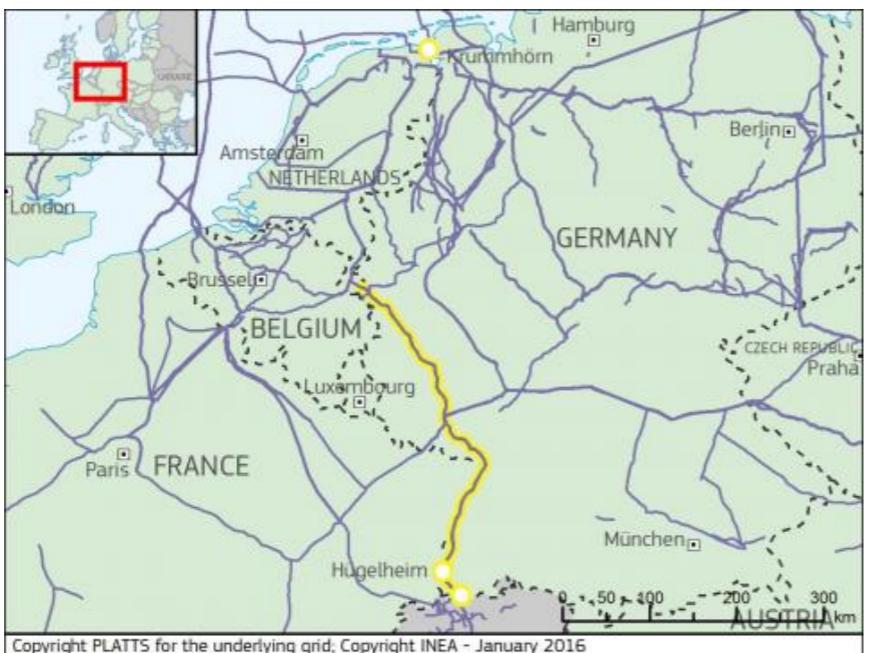
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

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

### Reverse Flow TENP - Studies

5.10-0010-DE-S-M-15



The Action "Reverse Flow on TENP - Studies" was 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.

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

The Action aims to simulate and assess under what operative conditions the gas flow from North to South could be reversed.

**Call year:**  
2015

**Member State(s):**  
Germany

**Implementation schedule:**  
July 2016 to October 2019

**Maximum EU contribution:**  
€8,665,000

**Estimated total cost:**  
€17,330,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Fluxys TENP GmbH  
<http://www.fluxys.com/>

Trans Europa Naturgas Pipeline GmbH & Co.  
KG  
<http://www.fluxys.com/>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Western Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
5.10

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

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

### Reverse Flow on TENP - Works

5.10-0031-DE-W-M-15



The Action "Reverse Flow on TENP - Works" implements 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.

The Action covers the procurement and execution of works necessary to enable the creation of 10 GWh/h of entry capacity at the cross-border interconnection point Wallbach towards the Virtual Trading Point (VTP) of the market area NetConnect Germany (NCG). The scope of this Action includes two Activities: the TENP reversal, which aims to add a reverse flow functionality at the compressor station of Hügelheim, and the construction of an innovative industrial-scale deodorisation facility in the district of Freiburg in order to remove the odorant in the gas.

The outcome of the Action will allow importing gas from Italy/France via Switzerland into Germany.

**Call year:**  
2015

**Member State(s):**  
Malta

**Implementation schedule:**  
July 2015 to June 2017

**Maximum EU contribution:**  
€400,000

**Estimated total cost:**  
€800,000

**Percentage of EU support:**  
50%

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

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Western Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
5.19

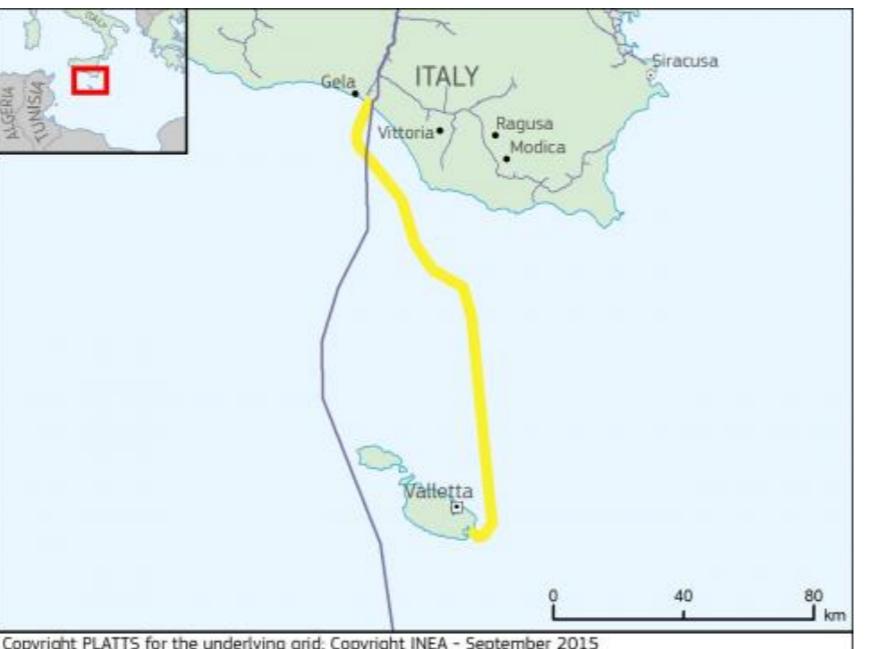
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.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



This Action is 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 completion of the Action allows commencing with the pre-application permitting procedures and the preparation of tender specifications for conducting future studies.

**Call year:**  
2017

**Member State(s):**  
Malta

**Implementation schedule:**  
November 2017 to October 2020

**Maximum EU contribution:**  
€3,680,000

**Estimated total cost:**  
€7,360,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Republic of Malta (Maltese State)  
<https://www.gov.mt/en/Pages/gov.mt%20homepage.aspx>

**Status:**  
GA preparation

**Energy corridor:**  
North-South gas interconnections in Western Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
5.19

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Studies for Malta-Italy Gas Interconnection: ESIA, marine survey, FEED, EPC tender preparation & financial engineering

5.19-0006-ITMT-S-M-17



The Action contributes to the implementation of the Project of Common Interest (PCI) 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. 159 km (151 km offshore and 8 km onshore) in length, DN 560, with a 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 is to conduct the permitting studies for the gas pipeline between Gela (Sicily) to Delimara (Malta). This includes the Environmental and Social Impact Assessment (ESIA) in Malta and Italy, a Preliminary Marine Route Survey (PMRS) of the entire offshore route and related post-survey studies, the Front-End Engineering Design study (FEED) as well as the preparation for an Engineering, Procurement and Construction (EPC) contract and the preparation and obtainment of the CBCA decision.

The completion of this Action will contribute to allow for the Final Investment Decision (FID) and the launch of the procurement procedure for the award of an EPC contract.

## 6.

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

**Call year:**

2014

**Member State(s):**

Czech Republic, Poland

**Implementation schedule:**

September 2014 to October 2017

**Maximum EU contribution:**

€1,523,736

**Estimated total cost:**

€3,047,472

**Percentage of EU support:**

50%

**Beneficiaries:**

NET4GAS, s.r.o.

<http://www.net4gas.cz>

Operator Gazociągów Przesyłowych GAZ-SYSTEM S.A.  
<http://www.gaz-system.pl>

**Status:**

Ongoing

**Energy corridor:**North-South gas interconnections in Central  
Eastern and South Eastern Europe**Energy sector:**

Gas

**Project(s) of Common Interest:**

6.1.1

**Additional information:**

European Commission, DG ENER

<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Gas (ENTSOG)  
<http://www.entsoe.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

Copyright PLATTS for the underlying grid. Copyright INEA - January 2015

The Action is part of preparatory activities for the implementation of Project of Common Interest (PCI) 6.1.1 Poland-Czech Republic Interconnection (Stork II). The scope covers pre-investment activities for the Poland-Czech Republic interconnector, i.e. the Libhošť (CZ) - Hať (CZ-PL) - Kędzierzyn (PL) pipeline (52 km on the Czech side and 55 km on the Polish side) with its auxiliary installations and the Kędzierzyn compressor station on the Polish side. The expected transmission capacity of the interconnector is around 13.7 mcm/day in the direction from PL to CZ and around 19.6 mcm/day in the reverse direction (Stage I).

On the Czech side, the activities cover preparation of the building permit documentation for the Libhošť - Hať pipeline, for tendering a general contractor and for the purchase of material. On the Polish side, the activities include obtaining location decisions, environmental consent, performing basic and detailed design and acquiring building permits for the Hať - Kędzierzyn pipeline and its auxiliary installations, as well as obtaining of location decision, performing FEED and basic design and acquiring building permit for the Kędzierzyn compressor station.

The completion of the Action will allow starting the construction of the Poland-Czech Republic gas interconnector.

**Call year:**  
2017

**Member State(s):**  
Czech Republic

**Implementation schedule:**  
January 2018 to December 2019

**Maximum EU contribution:**  
€268,750

**Estimated total cost:**  
€537,500

**Percentage of EU support:**  
50%

**Beneficiaries:**  
NET4GAS, s.r.o.  
<https://www.net4gas.cz/en/home/>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.1.12

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Design works for upgrade of CS Břeclav

6.1.12-0010-CZ-S-M-17



This Action is part of the PCI 6.1.12 "Tvrdonice-Libhošť pipeline, including upgrade of CS Břeclav (CZ)", which aims at the construction of a new onshore pipeline Tvrdonice - Libhošť and the upgrading of the Břeclav compressor station in the Czech Republic. This PCI is part of the cluster 6.1, consisting of 3 PCIs that address the construction of the Czech - Polish natural gas interconnection (known as STORK II) and reinforcements of the related infrastructure in western Poland.

The scope of the current Action covers the preparation of a set of documents for upgrading the existing compressor station in Břeclav (CZ) with an additional compression power. It aims at preparing the feasibility study and drawing up the basic and detailed design for the compressor station. This additional compression power will be fully dedicated to the Northern Moravian region and the CZ-PL gas interconnection (STORK II), allowing operating pressure at the cross-border point CZ-PL and PL-CZ (both directions).

This Action is complementary to CEF Action 6.1.1-0054-CZPL-S-M-14 (Preparatory activities for the Poland-Czech Republic interconnection - STORK II). The completion of this Action will significantly contribute to the implementation of the PCI 6.1.12 and will allow to obtain a building permit and proceed with the construction of the PCI.

**Call year:**  
2014

**Member State(s):**  
Poland, Slovakia

**Implementation schedule:**  
August 2014 to April 2018

**Maximum EU contribution:**  
€4,601,500

**Estimated total cost:**  
€9,203,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Operator Gazociągów Przesyłowych GAZ-SYSTEM S.A.  
eustream, a.s.

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.2.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

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

6.2.1-0065-PLSK-S-M-14



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. The Action covers pre-investment activities for the Poland-Slovakia interconnector, with a length of approx. 164 km and an expected transmission capacity of 12.9 mcm/day in the direction PL to SK and 15.6 mcm/day in the opposite direction.

On the Polish side, the activities cover obtainment of the relevant environmental consents, location decisions, Front-End Engineering Design (FEED), building permits and preparation of a basic engineering design for the Strachocina - Łupkowska pipeline, metering station and the compressor station. On the Slovak side, the Action entails preparation of spatial planning design, obtaining of location permits and environmental consents, completion of basic and detailed engineering and obtaining building permits for the Slovak pipeline and for the modification of the Veľké Kapušany compressor station.

Once implemented, the Action will complete preparation procedures on both sides of the Strachocina - Veľké Kapušany gas interconnection.

**Call year:**  
2016

**Member State(s):**  
Poland, Slovakia

**Implementation schedule:**  
January 2017 to December 2021

**Maximum EU contribution:**  
€107,741,144

**Estimated total cost:**  
€269,352,860

**Percentage of EU support:**  
40%

**Beneficiaries:**  
eustream, a.s.  
<http://www.eustream.sk>

Operator Gazociągów Przesyłowych GAZ-SYSTEM S.A.  
<http://www.gaz-system.pl>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.2.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoeu.eu/>

## Construction works for the Poland - Slovakia Gas Interconnection

6.2.1-0019-SKPL-W-M-16



The Action implements the Project of Common Interest (PCI) 6.2.1 Poland-Slovakia interconnector, which aims to connect the natural gas transmission networks from both countries. The scope of the Action is the construction of the Slovak and the Polish sections of the pipeline as well as the installation of the auxiliary infrastructure on both sides.

The range of tasks on the Slovak side covers the construction of a pipeline of approx. 106 km, DN 1000, with a maximum operating pressure (MOP) of 8.5 MPa from the PL-SK border to the metering station and 7.45 MPa from the metering station to the Veľké Kapušany compressor station. On the Slovak side, it also includes the modification of the compressor station in Veľké Kapušany. The Polish section covers the construction of a pipeline of approx. 59 km, DN 1000, MOP 8.4 MPa, from Łupkowska Pass (cross-border crossing point) to Strachocina, as well as the construction of the Strachocina compressor station, approx. 30 MW of installed power.

Once constructed, the total length of the pipeline will be approx. 165 km and the nominal transfer capacity will be up to 15.6 mcm/d in the direction from SK to PL and 12.9 mcm/d in the reverse direction. The Action will result in the first interconnection between the Polish and Slovak gas transmission systems being established.

**Call year:**  
2014

**Member State(s):**  
Austria, Czech Republic

**Implementation schedule:**  
October 2014 to December 2015

**Maximum EU contribution:**  
€41,993

**Beneficiaries:**  
NET4GAS, s.r.o.  
<http://www.net4gas.cz>

GAS CONNECT AUSTRIA GmbH  
<http://www.gasconnect.at>

**Status:**  
Closed

**Energy corridor:**  
North-South gas interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.4

**Executive summary:**  
Executive Summary available [here](#)

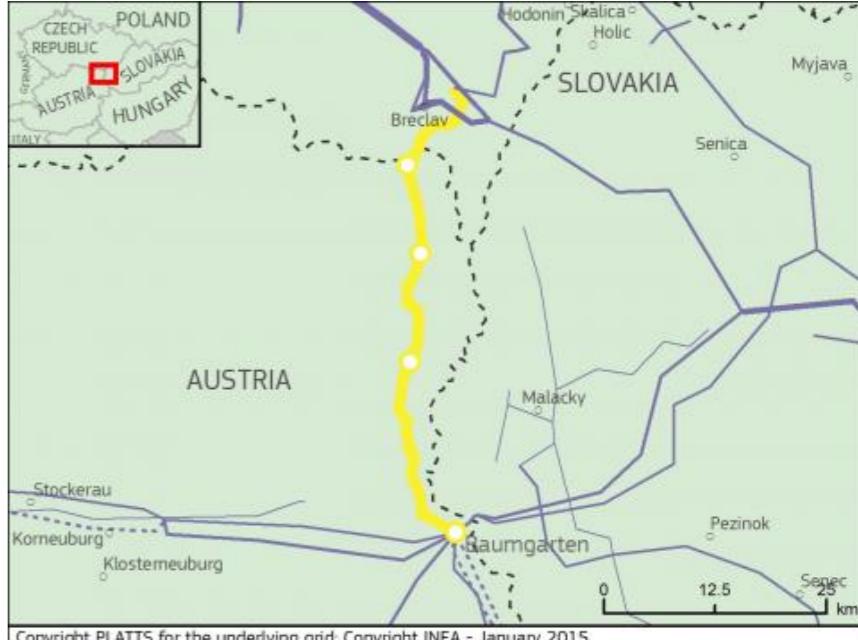
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoeu.eu/>

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

6.4-0055-CZAT-S-M-14



This Action was part 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.

In particular, Actions' activities included the establishment of a business plan, an assessment of market demand, a financial analysis, the performance of a cost-benefit analysis (CBA) and the preparation of a proposal for a cross-border cost allocation (CBCA) decision.

This Action, comprised of activities on both the Austrian and Czech sides, completed the preparatory stage necessary for the future joint investment request.

**Call year:**  
2014

**Member State(s):**  
Croatia

**Implementation schedule:**  
August 2014 to April 2017

**Maximum EU contribution:**  
€4,900,000

**Estimated total cost:**  
€9,800,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
LNG Hrvatska d.o.o.  
<http://www.lng.hr>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.5.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.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



This Action is part of the preparatory activities for the implementation of the Project of Common Interest (PCI) 6.5.1, Liquefied Natural Gas (LNG) terminal in Krk island in Croatia. The LNG terminal will be developed in 3 stages: 1) floating terminal, covering the installation of infrastructure for a floating storage and regasification unit (FSRU), approx. send-out capacity of 2 bcm/year; 2) onshore terminal, covering the installation of infrastructure for the onshore processing and storage of the LNG, approx. send-out capacity of 3.5 bcm/year and 3) onshore terminal, covering the installation of infrastructure for the onshore processing and storage of the LNG, approx. maximum send-out capacity of 5 bcm/year.

The Action covers business, legal and financial advising, Front-end engineering design, main design of the onshore LNG terminal, studies on power supply, preparation of tender documentation for the onshore terminal engineering, procurement and construction (EPC) services, as well as handling EPC procurement procedure for the offshore terminal.

As regards the onshore terminal, the completed Action will allow to launch the tender for EPC at the next stage of development. For the offshore part, the signed EPC contract will allow to proceed with the construction of the required for operation of the FSRU infrastructure.

**Call year:**  
2015

**Member State(s):**  
Croatia

**Implementation schedule:**  
July 2015 to March 2016

**Maximum EU contribution:**  
€514,994

**Beneficiaries:**  
LNG Hrvatska d.o.o.  
<http://www.lng.hr>

**Status:**  
Closed

**Energy corridor:**  
North-South gas interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.5.1

**Executive summary:**  
Executive Summary available [here](#)

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Field and laboratory investigation studies and preparation of reports

6.5.1-0026-HR-S-M-15



This Action was part of preparatory activities for the implementation of the Project of Common Interest (PCI) 6.5.1 LNG regasification vessel in Krk, which envisaged the construction of a first onshore LNG (liquefied natural gas) terminal on Krk island in Croatia. The final terminal was expected to have two 180,000 m<sup>3</sup> LNG storage tanks and an approximate maximum send-out capacity of 6 bcm/year.

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

The objective of the Action was to gather and assess data on the composition and the geological structure of the onshore LNG terminal foundation soil. The Action contributed to the design stage of the PCI 6.5.1 and provided important input for the onshore LNG terminal building permit.

**Call year:**  
2016

**Member State(s):**  
Croatia

**Implementation schedule:**  
March 2017 to May 2018

**Maximum EU contribution:**  
€747,000

**Estimated total cost:**  
€1,494,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
LNG Hrvatska d.o.o.  
<http://www.lng.hr>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.5.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Studies for the LNG terminal Krk FSRU solution

6.5.1-0014-HR-S-M-16



The Action contributes to the Project of Common Interest (PCI) 6.5.1, which consists of the phased development of an LNG terminal on the island of Krk in Croatia.

The Action activities cover the preparation of a series of comprehensive multi-disciplinary studies, which will assess all remaining aspects of the project in order to reach the Final Investment Decision (FID) and to start the construction of the floating LNG terminal (1st phase of PCI).

As a result of the Action, the requests for the development consent, the location permit and the construction permits will be submitted to the competent authorities. The Action will allow for the adoption of LNG terminal services tariffs and will initiate the update of the LNG terminal Rules of Operation. The deliverables of the Action will be, inter alia, the Environmental Impact Assessment, Front-End Engineering Design, Conceptual and Main designs completed for the floating unit's jetty, the connecting pipeline and related infrastructure as well as preparatory documents for the FSRU procurement. The Action is complementary to the studies carried out under other CEF Actions (6.5.1-0037-HR-S-M-14 and 6.5.1-0026-HR-S-M-15) and precedes the construction of the FSRU terminal, also financed by CEF under Action 6.5.1-0018-HR-W-M-16.

**Call year:**  
2016

**Member State(s):**  
Croatia

**Implementation schedule:**  
February 2018 to December 2019

**Maximum EU contribution:**  
€101,400,000

**Estimated total cost:**  
€363,180,516

**Percentage of EU support:**  
28%

**Beneficiaries:**  
LNG Hrvatska d.o.o.  
<http://www.lng.hr>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.5.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Construction of LNG terminal Krk

6.5.1-0018-HR-W-M-16



The Action implements the first phase of the Project of Common interest (PCI) 6.5.1 developing a Liquefied Natural Gas (LNG) terminal on the island of Krk in Croatia. The objective of the Action is to procure and put into operation a Floating Storage and Regasification Unit (FSRU) and to construct a dedicated jetty and a connecting pipeline with an approx. send-out capacity of 2 bcm/year. The investments will form an integrated facility to unload, store and regasify LNG and will allow for anchoring special purpose LNG vessels, refilling LNG into the tanks.

The planned activities include: construction of the jetty and auxiliary systems, construction of the connecting high-pressure (HP) gas pipeline and purchase and delivery of an FSRU.

The completion of the Action will enhance the diversification of natural gas supply for Central Eastern & South Eastern Europe, it will increase security of gas supply, improve competitiveness in the region and provide for a more effective integration of key infrastructure projects like in Central Eastern and South Eastern Europe into the European gas market. This Action represents the next step in the PCI development, following the preparatory studies carried out under other CEF-funded Actions (6.5.1-0037-HR-S-M-14, 6.5.1-0026-HR-S-M-15 and 6.5.1-0014-HR-S-M-16).

**Call year:**  
2017

**Member State(s):**  
Croatia

**Implementation schedule:**  
February 2018 to December 2019

**Maximum EU contribution:**  
€16,433,500

**Estimated total cost:**  
€32,867,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Plinacro d.o.o.  
<http://www.lng.hr>

**Status:**  
GA preparation

**Energy corridor:**  
North-South gas interconnections in Central  
Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.5.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Construction works for the LNG Evacuation Gas Pipeline section Omišalj-Zlobin

6.5.1-0014-HR-W-M-17



The Action contributes to the implementation of the Project of Common Interest (PCI) 6.5.1 Phased development of a Liquefied Natural Gas (LNG) terminal in Krk.

The Action covers the construction of the Omišalj – Zlobin gas pipeline, which will enable the transmission of re-gasified gas from the LNG terminal to the national gas transmission system. Upon construction, the pipeline will have a total approximate length of 18 km, with a diameter of DN 1000 and a maximum operating pressure (MOP) of 100 bar. It will initially ensure a nominal gas transfer capacity up to 2.6 bcm/y. This capacity will be increased up to 3.5 bcm/y and 6.5 bcm/y with the development of further stages of PCI 6.5.1 Phased development of an LNG terminal in Krk and 6.5.2 Zlobin-Bosiljevo-Sisak-Kozarac-Slobodnica Gas pipeline.

The completion of the Action will contribute to the enhancement of security of gas supply in the region and will increase competition in the regional gas market as an alternative source of gas will be available in South-Eastern and South-Central Europe. The Action represents the next step in the PCI development, following the preparatory studies (6.5.1-0037-HR-S-M-14, 6.5.1-0026-HR-S-M-15 and 6.5.1-0014-HR-S-M-16) and the LNG terminal construction works (6.5.1-0018-HR-W-M-16).

**Call year:**  
2015

**Member State(s):**  
Croatia

**Implementation schedule:**  
July 2015 to March 2019

**Maximum EU contribution:**  
€2,250,000

**Estimated total cost:**  
€4,500,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Plinacro d.o.o.  
<http://www.plinacro.hr>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Central  
Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.5.2

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Gas (ENTSOG)  
<http://www.entsoe.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



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 Zlobin-Bosiljevo-Sisak-Kozarac-Slobodnica pipeline located in Croatia. The total estimated length of the pipeline is 308 km. The only existing Kozarac-Slobodnica section 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 Action covers the feasibility study, market test, Cost-Benefit Analysis, business plan, preparation of documents for the Cross-border Cost Allocation decision and detailed design.

The Action will 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, will allow starting the construction of the PCI 6.5.2.

**Call year:**  
2015  
**Member State(s):**  
Croatia  
**Implementation schedule:**  
July 2016 to February 2019

**Maximum EU contribution:**  
€4,825,000

**Estimated total cost:**  
€9,650,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Plinacro d.o.o.  
<http://www.plinacro.hr>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Central  
Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.6

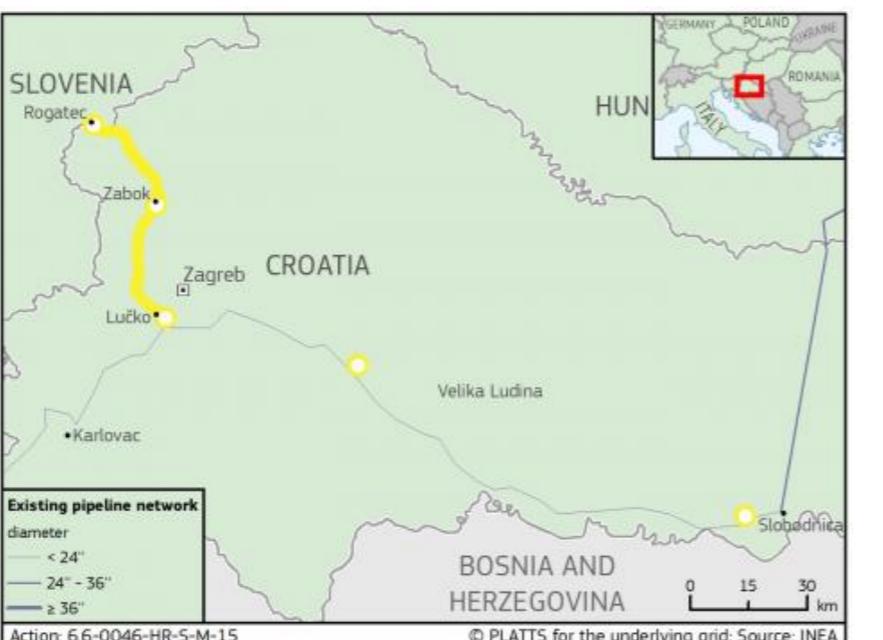
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Interconnection Croatia - Slovenia (Bosiljevo-Karlovac-Lucko-Zabok-Rogatec (SI)) - Studies for Phase I

6.6-0046-HR-S-M-15



The Action is part of preparatory activities for the implementation of the Croatian part of the Project of Common Interest (PCI) 6.6 Interconnection Croatia-Slovenia (Bosiljevo-Karlovac-Lucko-Zabok-Rogatec (SI)), which aims at constructing a bidirectional natural gas transmission pipeline of approximately 144 km with a capacity of 165 GWh/day in both flow directions and three compressor stations. The scope of the Action is limited to Phase I elements, namely the Lucko-Zabok-Rogatec pipeline section of approximate length 69 km, DN 700 diameter and maximum operating pressure 75 bar and the two compressor stations (location to be confirmed).

The activities of the Action cover preparation of the main and detailed design, functional specifications and basic documentation for the pipeline and the compressor stations. The Action also covers the preparation of the environmental impact assessment for the compressor stations.

The Action will result in the obtainment of the necessary location, environment and building permits, thereby allowing to proceed with the construction of the Phase I of the PCI.

**Call year:**  
2015  
**Member State(s):**  
Bulgaria  
**Implementation schedule:**  
January 2016 to October 2018

**Maximum EU contribution:**  
€850,000

**Estimated total cost:**  
€1,700,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Bulgartransgaz EAD (BTG)  
<https://www.bulgartransgaz.bg/en>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Central  
Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.8.2

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Preparatory activities in the frame of the PCI 6.8.2 Necessary rehabilitation, modernization and expansion of the Bulgarian transmission system

6.8.2-0055-BG-S-M-15



This Action contributes to the implementation of Project of Common interest 6.8.2 "Necessary rehabilitation, modernization and expansion of the Bulgarian transmission system", which aims at improving the transmission system's efficiency, reliability and flexibility, ensuring the necessary capacities. The project aims to adapt the existing gas infrastructure to the new market requirements and new realities, in the context of the infrastructure development plans in the region.

This Action consists of preparatory and engineering activities for the rehabilitation and reinforcement of the Bulgarian gas transmission system. It will mainly focus on executing activities linked to the Northern semi-ring of the gas transmission system and the modernization of three gas compressor stations (CSs), by means of integrating low emission gas turbine compressor units and in-line inspections of two pipeline sections. It will clarify detailed technical elements of the project and set-up a precise and detailed cost structure.

The results of this Action will serve as a basis for completing the preparatory phase of the overall PCI. The outcomes will allow Bulgartransgaz EAD to obtain the necessary decisions and building permissions and to prepare the actual launch of the construction works for the pipeline section of the Northern semi-ring.

**Call year:**  
2016  
**Member State(s):**  
Bulgaria  
**Implementation schedule:**  
November 2016 to December 2018

**Maximum EU contribution:**  
€182,000

**Estimated total cost:**  
€364,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Bulgartransgaz EAD  
<https://bulgartransgaz.bg/en>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Central  
Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.8.2

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Preparatory activities for rehabilitation of the transmission system's section PF Valchi dol-VS Preselka

6.8.2-0026-BG-S-M-16



The current Action contributes to the implementation of the Project of Common Interest (PCI) 6.8.2 "Necessary rehabilitation, modernization and expansion of the Bulgarian transmission system", which aims at adapting the existing gas infrastructure on the territory of Bulgaria to the new market requirements and new realities in the context of the infrastructure development plans in the region, as well as increasing its reliability and efficiency.

The Action is part of a series of preparatory activities necessary for the implementation of PCI 6.8.2. It is the next logical step in the PCI development and consists of pre-investment (preparatory) operations prior to the start of the construction and installation works regarding the necessary replacement of the pipeline section Pigging Facility (PF) Valchi Dol - Valve Station (VS) Preselka. It will, in addition, clarify detailed technical elements of the project and will provide for a more accurate cost structure.

The outcomes of the current Action will allow Bulgartransgaz EAD to complete the pre-investment (preparatory) phase for this PCI and to prepare for the launch of the construction works.

**Call year:**  
2014

**Member State(s):**  
Greece

**Implementation schedule:**  
August 2014 to September 2017

**Maximum EU contribution:**  
€1,755,000

**Estimated total cost:**  
€3,510,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
GASTRADE S.A.  
<http://www.gastrade.gr>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Central  
Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.9.1

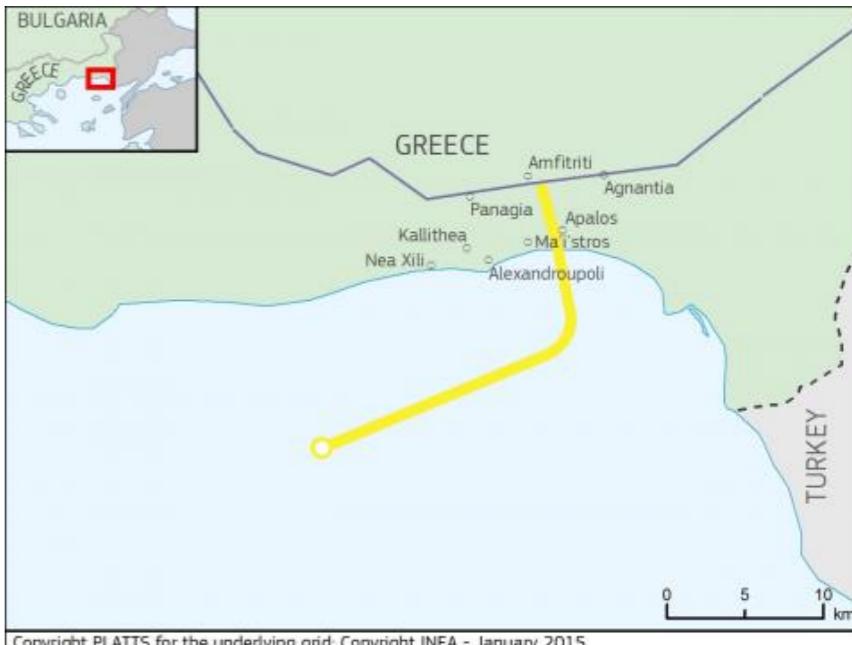
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

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

6.9.1-0021-EL-S-M-14



This Action is part 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 m<sup>3</sup> 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 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; 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.

The Action aims to develop system engineering for consolidated technical solutions and provide cost estimates. As a result of completed EPC/ITT, the beneficiary will be able to engage a construction contractor and purchase long lead items.

**Call year:**  
2014  
**Member State(s):**  
Greece  
**Implementation schedule:**  
January 2015 to July 2015

**Maximum EU contribution:**  
€0

**Beneficiaries:**  
Public Gas Corporation of Greece (DEPA) S.A.  
<http://www.depa.gr>

**Status:**  
Closed

**Energy corridor:**  
North-South gas interconnections in Central  
Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.9.2

**Executive summary:**  
Executive Summary available [here](#)

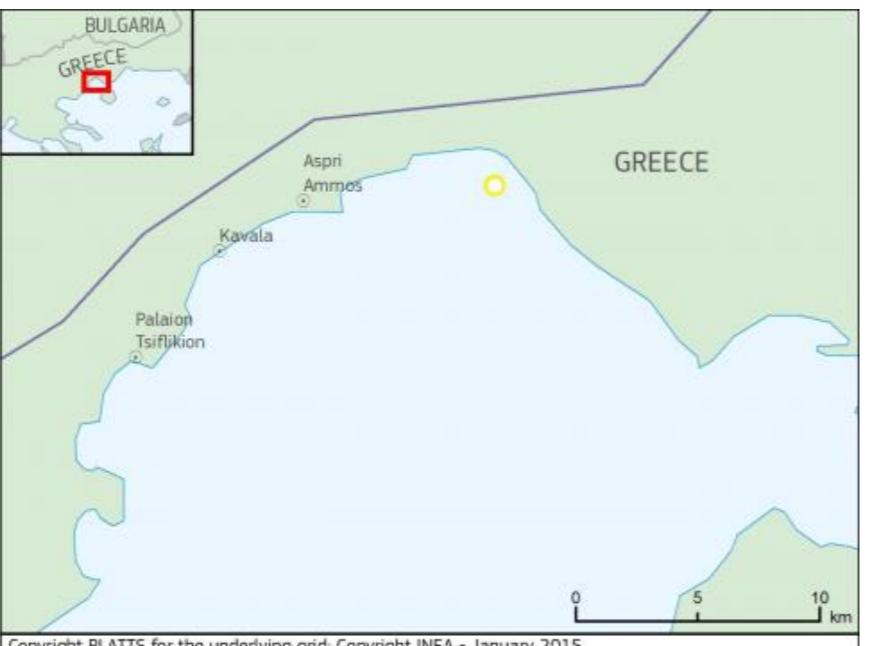
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Aegean LNG - Studies related to permitting procedure

6.9.2-0008-EL-S-M-14



This Action was part of preparatory activities for the implementation of the Project of Common Interest (PCI) 6.9.2 Aegean LNG import terminal, which aimed to construct a new Aegean offshore Liquefied Natural Gas (LNG) Floating Storage and Regasification Unit (FSRU) in Greece of a send-out capacity of 3-5 bcm/year and approximately 150.000 m<sup>3</sup> of storage capacity and a system of marine facilities such as a mooring terminal, ship-to-ship and ship-to-shore transfer system.

The activities included studies on safety, operation and maintenance of the FSRU, an investigation for the potential marine antiquities in the area of the future LNG infrastructure and a study on the environmental impact of dispersal of cold seawater returning after the LNG regasification process. The goal of the Action was to assess the functionality and different LNG supply chain models of progressively (from 25,000 m<sup>3</sup> to 150,000 m<sup>3</sup>) increasing FSRU.

The Action was to lead to the next stage of the PCI's implementation, i.e. Front-End Engineering Design (FEED) and obtaining of environmental and installation permits. The Action was terminated due to the development of the alternative project - LNG terminal in Northern Greece (Alexandroupolis LNG - PCI 6.9.1).

**Call year:**  
2015

**Member State(s):**  
Hungary

**Implementation schedule:**  
August 2016 to July 2017

**Maximum EU contribution:**  
€1,377,000

**Estimated total cost:**  
€2,754,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
FGSZ Natural Gas Transmission Private  
Company Limited by Shares  
<http://www.fgsz.hu>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Central  
Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.13.1, 6.13.2, 6.13.3, 6.14

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Preparation of the Basic Engineering Documentation for the Hungarian part of the Romania-Hungary-Austria transmission corridor

6.13.1-0043-HU-S-M-15



The Action contributes to the implementation of the Projects of Common Interest (PCIs): 6.13.1, 6.13.2, 6.13.3 and 6.14, that together aim to implement the Hungarian part of the Romanian-Hungarian-Austrian natural gas transmission corridor. PCI 6.13.1 concerns the construction of Városföld-Ercsi-Györ pipeline (approx. 210 km, DN1000, PN100) and reinforcement of the existing Városföld compressor station (CS) with an additional power of 5.7 MW. PCI 6.13.2 concerns the construction of Ercsi-Százhalombatta pipeline (approx. 11 km, DN800, PN63). Merged PCIs 6.13.3 and 6.14 concern an upgrade of the Csanádpalota CS with an additional power of 13.5 MW. Cumulatively, the above investments will increase the annual bidirectional transmission capacity HU-RO up to 4.17 bcm and AT-HU up to 4.93 bcm.

The Action's activities cover the preparation of the basic engineering package for the above investments in Hungary, aiming to define their geographical location and prepare the technical design documentation of pipeline and compressor stations.

Once completed, the Action will allow launching the preparation of the Environmental Impact Assessment for these infrastructures.

**Call year:**  
2015

**Member State(s):**  
Bulgaria

**Implementation schedule:**  
July 2015 to December 2017

**Maximum EU contribution:**  
€3,900,000

**Estimated total cost:**  
€7,800,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Bulgartransgaz EAD  
<http://www.bulgartransgaz.bg/en>

**Status:**  
Suspended

**Energy corridor:**  
North-South gas interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.20.2

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>  
  
Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>  
  
European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.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



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 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. 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.

**Call year:**  
2016

**Member State(s):**  
Bulgaria

**Implementation schedule:**  
September 2016 to December 2017

**Maximum EU contribution:**  
€130,000

**Estimated total cost:**  
€260,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Bulgartransgaz EAD  
<https://www.bulgartransgaz.bg/en>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.20.2

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Implementation of a software package to model and determine the optimum operating regimes of the Chiren UGS expansion project

6.20.2-0011-BG-S-M-16



The Action contributes to the implementation of the Project of Common Interest (PCI) 6.20.2 "Chiren UGS Expansion (BG)", which aims at undertaking the necessary measures (performance of studies and subsequent works) for a staged capacity expansion in the existing Underground Gas Storage (UGS) facility of Chiren, in order to achieve a projected working gas volume of between 720 MCM and 1000 MCM, projected withdrawal capacity maximum 10 MCM/day and projected injection capacity 8-10 MCM/day.

The objective of the Action was the customisation, supply and installation of a software package (called Programme product for determining the optimum operating mode - PPDOOM) to model and determine the optimum operating regimes of Chiren UGS, in connection with its expansion.

However, the Action's implementation has not started until its completion date, as the Action has been negatively impacted by the delays incurred during the implementation of the "3D seismic survey study, part of the project for the expansion of Chiren UGS" 6.20.2". The Action has thus been closed.

**Call year:**  
2014  
**Member State(s):**  
Slovenia  
**Implementation schedule:**  
January 2015 to December 2017

**Maximum EU contribution:**  
€375,000  
**Estimated total cost:**  
€750,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Plinovodi, Družba za upravljanje s prenosnim sistemom, d.o.o.  
<http://www.plinovodi.si>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.23

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.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-14



This Action is part 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 bidirectional gas pipeline connecting Hungary and Slovenia. It is expected that the pipeline will be approximately 113 km and it will ensure maximum transmission capacity of 3.4 mcm/day.

In particular, the Action's activities cover the development of the National Spatial Plan (analysing 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 ways to avoid and/or mitigate its negative effects.

Once completed, the Action will lead to the adoption of the Decree on the National Spatial Plan in Slovenia; it will secure the environmental consent and will allow proceeding with the detailed design study and requesting the building permit for the interconnector.

**Call year:**  
2016  
**Member State(s):**  
Hungary  
**Implementation schedule:**  
May 2017 to December 2018

**Maximum EU contribution:**  
€922,500  
**Estimated total cost:**  
€1,845,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
FGSZ Natural Gas Transmission Private Company Limited by Shares  
<http://www.fgsz.hu>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Central Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.24.1, 6.24.4, 6.24.5, 6.24.6, 6.24.9

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Preparation of EIA and obtainment of the environmental permits for the Hungarian part of the RO-HU-AT corridor

6.24.1-0011-HU-S-M-16



The Action contributes to the implementation of the cluster of Projects of Common Interest (PCIs) 6.24, which concerns a bidirectional phased capacity increase in the Bulgaria-Romania-Hungary-Austria transmission corridor (known as ROHUAT/BRUA) and will complete the RO-HU-AT section of the Vertical Transmission Corridor, by creating conditions for transportation of 1.75 bcm/y from and to RO (phase I) and 4.4 bcm/y on the RO-HU border and 5.2 bcm/y on the HU-AT border (phase II).

The Action concerns the Hungarian part of the BRUA section only and its activities cover studies needed for the obtainment of the following: Emission Point Source Permit of Operation and Greenhouse Gases Emissions Permit for Point-Source for PCIs 6.24.1 (construction of approx. 9 MW compressor station in Csanádpalota) and 6.24.9 (its upgrade to approx. 13.5 MW); Environmental Impact Assessment permits for PCI 6.24.4 (construction of Városföld-Ercsi-Győr pipeline) and for PCI 6.24.5 (construction of Ercsi-Százhalombatta pipeline); amended Integrated Pollution Prevention and Control Permit for PCI 6.24.6 (upgrade of Városföld compressor station).

The Action will allow proceeding with the engineering design studies and requesting the building permits for the infrastructure on the Hungarian side of the mentioned PCIs.

**Call year:**  
2016

**Member State(s):**  
Slovakia

**Implementation schedule:**  
November 2016 to September 2018

**Maximum EU contribution:**  
€1,000,000

**Estimated total cost:**  
€2,000,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
eustream, a.s.  
<http://www.eustream.sk>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Central  
Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.25.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Gas (ENTSOG)  
<http://www.entsofog.eu/>

## Feasibility Study for the Eastring project

6.25.1-0010-SKHU-S-M-16



This Action is the first step in the implementation of the Project of Common Interest (PCI) 6.25.1 Pipeline system from Bulgaria to Slovakia (currently known as EASTRING), which aims to develop a new bi-directional transmission pipeline system that will interconnect the natural gas transmission networks of Bulgaria, Hungary, Romania and Slovakia.

The objective of the Action is to conduct a Feasibility Study. The study activities cover defining the main technical aspects of the planned interconnections, including the possible routing options, identifying the viability of the project under various scenarios at several implementation stages. Overall, nine routing options will be defined and analysed, out of which three final routes will be selected and further assessed with a focus on the costs (CAPEX and OPEX), hydraulics and on the potential environmental and social impacts and benefits of the project.

The completion of this Action will contribute to the implementation of the PCI 6.25.1 by bringing relevant information on the legal, technical and economic feasibility of the project. The outcome of the Feasibility Study will form the grounds for further basic and detailed engineering works and will contribute to the further decision making process for the PCI 6.25.1.

**Call year:**  
2016

**Member State(s):**  
Bulgaria

**Implementation schedule:**  
January 2017 to September 2018

**Maximum EU contribution:**  
€920,500

**Estimated total cost:**  
€1,841,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Bulgartransgaz EAD  
<https://bulgartransgaz.bg/en>

**Status:**  
Ongoing

**Energy corridor:**  
North-South gas interconnections in Central  
Eastern and South Eastern Europe

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
6.25.4

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Gas (ENTSOG)  
<http://www.entsofog.eu/>

## Feasibility Study on the Balkan Gas Hub

6.25.4-0015-BG-S-M-16



This Action contributes to the implementation of Project of Common Interest (PCI) 6.25.4, which aims at the construction of a gas distribution centre on the territory of Bulgaria. The Balkan Gas Hub concept includes additional infrastructure aiming to bring new gas to Central/Western, South-Eastern and Eastern Europe in order to enhance security of supply by providing access to additional large-scale, high capacity supply streams.

The objective of the feasibility study is to assess project's commercial and technical viability, define the precise business model, assess project risks, finalise the regulatory design and structure project financing. The results shall allow Bulgartransgaz EAD to decide upon the implementation of PCI 6.25.4, define a detailed schedule for the upcoming development phases until the commercial operation date and develop a detailed financing structure that can be discussed with international financial institutions and private sector investors.

The results shall serve as the basis for subsequent engineering works. The study will provide information on data such as length, diameter, pressure and necessary above-ground equipment.

The outcome of the Action will determine the further development of the Balkan Gas Hub project.

## 7.

### Southern Gas Corridor



**Call year:**

2014

**Member State(s):**

Turkey

**Implementation schedule:**

August 2014 to December 2019

**Maximum EU contribution:**

€2,014,740

**Estimated total cost:**

€6,715,800

**Percentage of EU support:**

30%

**Beneficiaries:**

Tanap Doğalgaz İletim Anonim Şirketi  
<http://www.tanap.com/>

**Status:**

Ongoing

**Energy corridor:**

Southern Gas Corridor

**Energy sector:**

Gas

**Project(s) of Common Interest:**

7.1.1

**Additional information:**

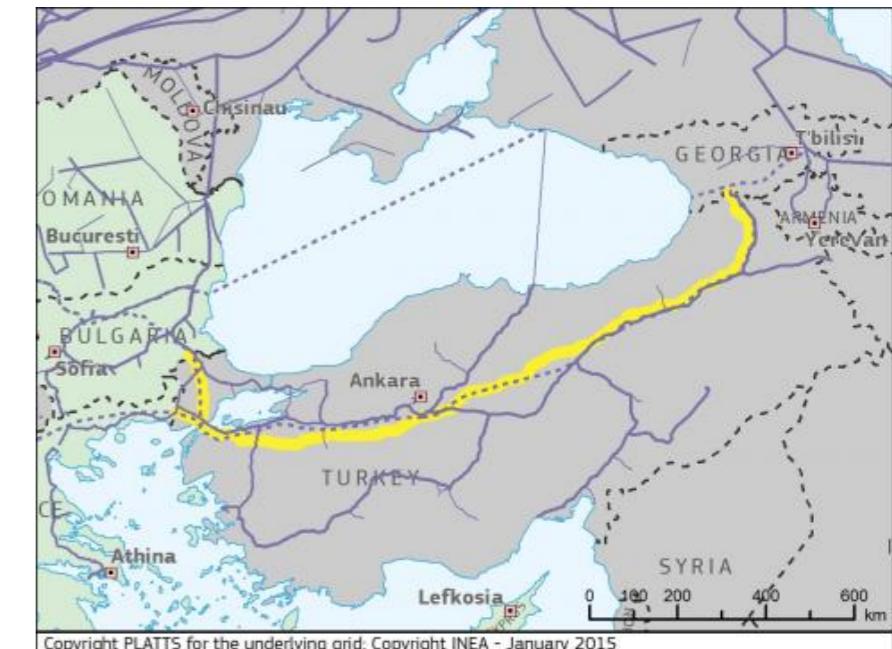
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Environmental monitoring

7.1.1-0051-TR-S-M-14



Copyright PLATTS for the underlying grid. Copyright INEA - January 2015

The Action is part of the Project of Common Interest (PCI) 7.1.1, concerning the gas pipeline from the Georgian-Turkish border at Türközü/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.

**Call year:**  
2015

**Member State(s):**  
Turkey

**Implementation schedule:**  
May 2015 to July 2017

**Maximum EU contribution:**  
€2,559,000

**Estimated total cost:**  
€5,118,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Tanap Doğalgaz İletim Anonim Sirketi  
<http://www.tanap.com/>

**Status:**  
Ongoing

**Energy corridor:**  
Southern Gas Corridor

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
7.1.1

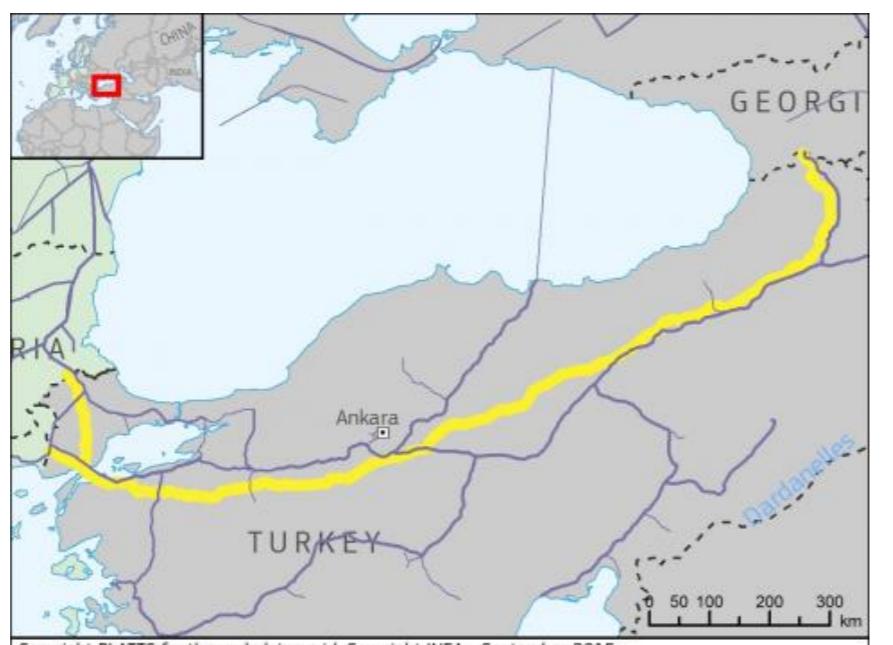
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

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

7.1.1-0014-TR-S-M-15



Copyright PLATTS for the underlying grid. Copyright INEA - September 2015

This Action is part of the Project of Common Interest (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.

**Call year:**  
2015

**Member State(s):**  
Turkey

**Implementation schedule:**  
November 2015 to June 2016

**Maximum EU contribution:**  
€1,846,540

**Beneficiaries:**  
Tanap Doğalgaz İletim Anonim Sirketi  
<http://www.tanap.com/>

**Status:**  
Closed

**Energy corridor:**  
Southern Gas Corridor

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
7.1.1

**Executive summary:**  
Executive Summary available [here](#)

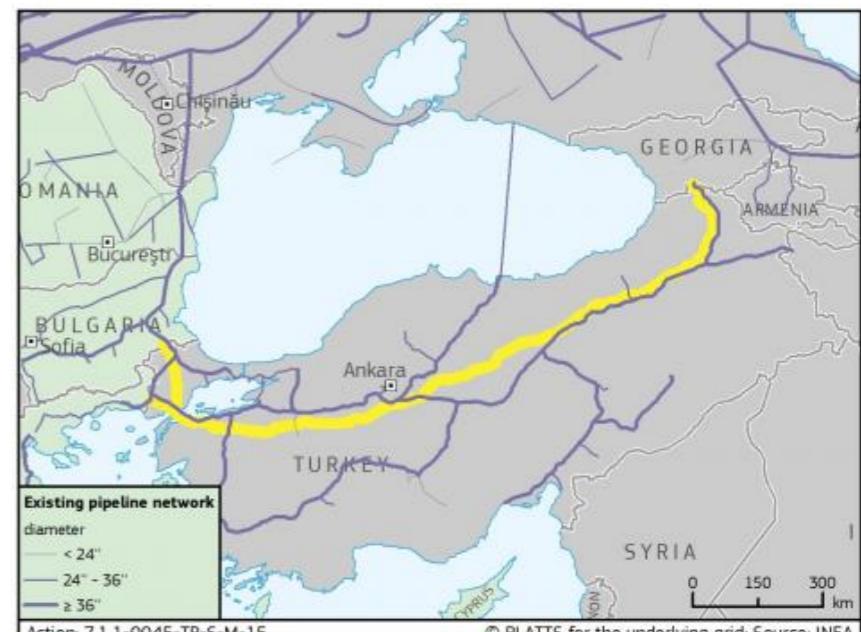
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Detailed Engineering for Pipeline Security System (PSS)

7.1.1-0045-TR-S-M-15



This Action is part of the Project of Common Interest (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 was composed of one main activity concerning the detailed engineering for the Pipeline Security System (PSS), covering 4 metering stations (including the pigging areas), 2 compressor stations (including off take compressor station and pigging areas), 49 block valve stations, 5 pigging areas of future possible compressor stations and 2 pigging stations located at each side of Dardanelle Straight Crossing.

The completion of this Action ensured the delivery and installation of a proper PSS package in accordance with international and local rules and standards and enables the security operator to supervise all stations from the local security room or in a centralized manner from the control centres. It also enhanced the security of gas transmission through the TANAP pipeline, ensuring the uninterrupted flow of gas to the European market.

**Call year:**  
2016

**Member State(s):**  
Turkey

**Implementation schedule:**  
July 2016 to July 2018

**Maximum EU contribution:**  
€3,535,000

**Estimated total cost:**  
€7,070,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Tanap Doğalgaz İletim Anonim Şirketi  
<http://www.tanap.com/>

**Status:**  
Ongoing

**Energy corridor:**  
Southern Gas Corridor

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
7.1.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

## Design of Commercial Operations and Asset Integrity Management Systems

7.1.1-0010-TR-S-M-16



**Project(s) of Common Interest:**  
7.1.1

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

The Action is composed of two main activities aiming to develop two software systems. The first activity concerns the design and development of AIMS (Asset Integrity Management System). The second activity concerns the design and development of COS (Commercial Operations System).

The completion of this Action will result in the development and delivery of two specialised software platforms: one will reduce the overall risk of equipment and pipeline failure, contributing to a reliable gas delivery to the European gas market; and the other one will enable gas market operators to use a common Commercial Operations System, upon completion of all commercial arrangements.

**Call year:**  
2017

**Member State(s):**  
United Kingdom

**Implementation schedule:**  
April 2018 to March 2019

**Maximum EU contribution:**  
€1,871,725

**Estimated total cost:**  
€3,743,450

**Percentage of EU support:**  
50%

**Beneficiaries:**  
W-Stream Caspian Pipeline Company Ltd  
<http://www.white-stream.com/>

**Status:**  
GA preparation

**Energy corridor:**  
Southern Gas Corridor

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
7.1.1

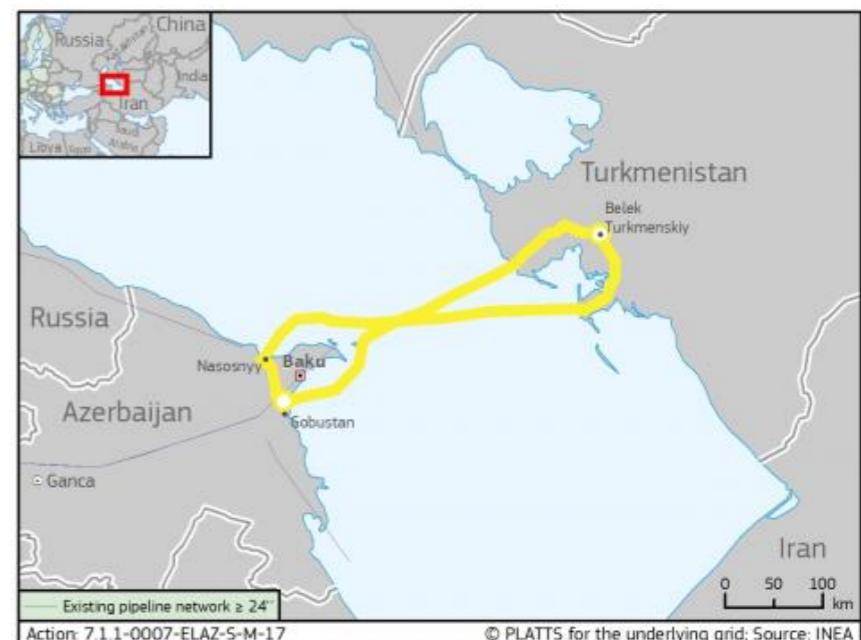
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

## Pre-FEED, Reconnaissance Surveys and Strategic and Economic Evaluations of the Trans-Caspian Pipeline

7.1.1-0007-ELAZ-S-M-17



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

The main aim of the Action is to define the pre-Front-End Engineering Design (pre-FEED) of the Trans Caspian Pipeline (TCP) to transport natural gas from Turkmenistan to Azerbaijan crossing the Caspian Sea. The pre-FEED design is divided in two sections. An initial phase, where the basic data, engineering and preliminary routing will be established and a follow-up phase where the proposed route reconnaissance survey contracts will be defined and awarded and where the mechanical design will be developed to proceed with the FEED.

The implementation of the current Action will contribute to the further development of the PCI by establishing and evaluating the feasibility and basic cases for the routing and the mechanical design of the pipeline. The completion of the current Action will lead to a satisfactory level of development of the pre-FEED, enabling the implementation of a detailed FEED, including a reliable estimation of materials and costs needed for a successful development of the PCI.

**Call year:**  
2016

**Member State(s):**  
Switzerland

**Implementation schedule:**  
November 2016 to September 2018

**Maximum EU contribution:**  
€14,018,347

**Estimated total cost:**  
€28,036,694

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Trans Adriatic Pipeline AG  
<https://www.tap-ag.com/>

**Status:**  
Ongoing

**Energy corridor:**  
Southern Gas Corridor

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
7.1.3

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Archaeological Trial Trench Investigations & Rescue Excavations

7.1.3-0013-ELIT-S-M-16



The Action contributes to the implementation of Project of Common Interest (PCI) 7.1.3 "Gas pipeline from Greece to Italy via Albania and the Adriatic Sea [currently known as the "Trans-Adriatic Pipeline" (TAP)]", which aims to transport natural gas from the Shah Deniz II field in Azerbaijan to Europe. The project is currently in its implementation phase. The construction of the pipeline has started in 2016.

The objective of the Action is to carry out a series of archaeological trial trench investigations in the Greek regions of Kavala, Drama, Kilkis, Thessaloniki, Serres, Florina, Pella, Imathia, Kozani and Kastoria, in order to determine the presence of buried archaeological remains, as well as any rescue excavation activities which arise as a result of the trial cuts or from chance finds. The proposed Action's deliverables are full and complete clearance of all cultural heritage issues that arise or might arise along the proposed pipeline route in Greece.

Once built, TAP will provide a direct and cost-effective transportation route completing the Southern Gas Corridor, a 3500 km gas value chain stretching from the Caspian Sea to Europe. TAP will be 879 km in length and will cross the territory of Greece (551 km), Albania (215 km), the Adriatic Sea (105 km) and Italy (8 km).

**Call year:**  
2014

**Member State(s):**  
Romania

**Implementation schedule:**  
January 2015 to June 2017

**Maximum EU contribution:**  
€1,519,342

**Estimated total cost:**  
€3,038,684

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Societatea Natională de Transport Gaze Naturale TRANSGAZ S.A.  
<http://www.transgaz.ro/en>

**Status:**  
Ongoing

**Energy corridor:**  
Southern Gas Corridor

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
7.1.5

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

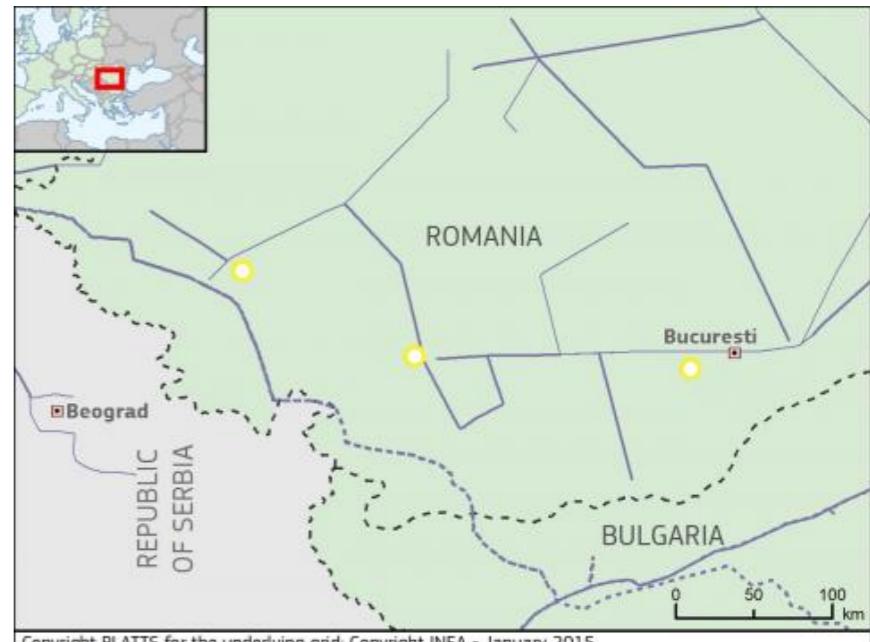
Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### FEED for three Compressor Stations in the corridor PCI

#### 7.1.5 - Romanian section

7.1.5-0026-RO-S-M-14



The Action is part of the Project of Common Interest (PCI) 7.1.5, the gas pipeline from Bulgaria to Austria, via Romania and Hungary. The Romanian part of this PCI consisted of a pipeline and three compressor stations.

The scope of the Action was the preparation of the Front End Engineering Design (FEED) for the construction of three Gas Compressor Stations on the Romanian territory.

The FEED Action aimed 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 Action resulted in obtaining 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 led to an increased maturity of the project, contributed to providing relevant information to the promoter for the purpose of the investment decision and allowed the start of the necessary activities for the execution phase of the compressor stations.

**Call year:**  
2015  
**Member State(s):**  
Romania  
**Implementation schedule:**  
July 2016 to August 2020

**Maximum EU contribution:**  
€179,320,400  
**Estimated total cost:**  
€448,301,000

**Percentage of EU support:**  
40%

**Beneficiaries:**  
Societatea Natională de Transport Gaze  
Naturale TRANSGAZ S.A.  
<http://www.transgaz.ro/en>

**Status:**  
Ongoing

**Energy corridor:**  
Southern Gas Corridor

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
7.1.5

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Development on Romanian territory of the National Gas Transmission System on the Bulgaria-Romania-Hungary-Austria direction, execution works Stage 1

7.1.5-0029-RO-W-M-15



The Action contributes to the implementation of the Project of Common Interest (PCI) 7.1.5 "Gas pipeline from Bulgaria to Austria via Romania and Hungary", which consists in a new onshore pipeline with a length of approx. 1318 km and with a delivery capacity of 6.1 mcm/day in Bulgaria, 6.1 mcm/day in Romania, 6.1 mcm/day in Hungary and 52 mcm/day in Austria. The initial throughput capacity is of 23 bcm/year. The power of the compressor stations amounts to a total of 345 MW.

The Action implements the Stage 1 of the PCI and consists in the construction of a gas transmission pipeline from the Technological Node (TN) Podisor up to the TN Recas, as well as three compressor stations.

The achievement of this Action will ensure the interconnection of the gas transmission systems in Bulgaria and Hungary with the gas transmission system in Romania through the interconnection pipelines Romania-Bulgaria and Romania-Hungary, ensuring the interconnectivity between the low pressure system in Romania and the high pressure systems in Bulgaria and Hungary.

The performance of the works and services related to the current Action will allow for the implementation of Stage 2 of PCI 7.1.5, by upgrading the transmission capacity and increasing the related pressures.

**Call year:**  
2016

**Member State(s):**  
Greece

**Implementation schedule:**  
May 2016 to March 2018

**Maximum EU contribution:**  
€243,250

**Estimated total cost:**  
€486,500

**Percentage of EU support:**  
50%

**Beneficiaries:**  
HELLENIC GAS TRANSMISSION SYSTEM OPERATOR (DESFA) S.A.  
<http://www.desfa.gr/>

**Status:**  
Ongoing

**Energy corridor:**  
Southern Gas Corridor

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
7.1.6

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Front End Engineering Design (FEED) Metering Regulating station at Nea Messimvria for the interconnection with TAP

7.1.6-0007-EL-S-M-16



This Action is part of the Project of Common Interest (PCI) 7.1.6 Metering and Regulating Stations for the Connection of the Greek transmission system with the Trans-Adriatic Pipeline (TAP), which consists of two metering and regulating stations, one at Komotini and one at Nea Messimvria respectively, which will enable the flow of gas from TAP to the Greek National Natural Gas System (NNGS).

The Action consists of the Front End Engineering and Design (FEED) study for the construction of the metering and regulating station at Nea Messimvria. The FEED study will define technical requirements, such as operational systems and technical specifications and will identify design parameters for the project required to start the tendering of the Engineering Procurement Construction (EPC) contract. The Action will also help defining the exact length and location of the pipeline as well as the tie-in point and the technical capacity (minimum 3.65 bcm/y).

The objective of the Action is to define the precise interconnecting point of the NNGS and TAP to enable the unidirectional flow from TAP to the NNGS, as well as preparing the required procedures for land acquisition, which will include an environmental assessment.

**Call year:**  
2015

**Member State(s):**  
Greece

**Implementation schedule:**  
May 2015 to March 2018

**Maximum EU contribution:**  
€2,000,000

**Estimated total cost:**  
€4,000,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
NATURAL GAS SUBMARINE  
INTERCONNECTOR GREECE-ITALY  
<http://www.igi-poseidon.com/en/>

**Status:**  
Ongoing

**Energy corridor:**  
Southern Gas Corridor

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
7.3.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

The Action is part of the Project of Common Interest (PCI) 7.3.1 "Pipeline from offshore Cyprus to Greece mainland via Crete".

The Action included 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, as well as economic, financial and competitiveness studies.

The objective of the Action was 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 contributed to enhancing 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 Action has allowed project promoters to timely proceed with the development of the PCI and in particular with the FEED phase.

### Eastern Mediterranean Natural Gas Pipeline - Pre-FEED Studies

7.3.1-0025-ELCY-S-M-15



**Call year:**  
2017

**Member State(s):**  
Greece

**Implementation schedule:**  
May 2018 to December 2021

**Maximum EU contribution:**  
€34,500,000

**Estimated total cost:**  
€69,000,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Natural Gas Submarine Interconnector  
Greece-Italy Poseidon S.A.  
<http://www.igi-poseidon.com/en/>

**Status:**  
GA preparation

**Energy corridor:**  
Southern Gas Corridor

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
7.3.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### EastMed Pipeline Project - Development Phase

7.3.1-0023-CYEL-S-M-17



The Action contributes to the implementation of the PCI 7.3.1 'EastMed Pipeline', aiming at contributing to the diversification of gas supply sources and routes to the EU, ending the isolation of Cyprus and Crete, developing new gas production in the Eastern Mediterranean region and facilitating gas exchanges in Southeast Europe.

The main objective of the Action is to carry out the studies required to provide the necessary technical inputs for starting the implementation phase of the PCI. The Action will build on the results of the Pre-FEED analysis and include the main remaining steps, leading to the Final Investment Decision for the PCI. In particular, the Action entails detailed design (FEED) and marine survey activities, including all the engineering details for project implementation, as well as permitting activities in Cyprus and Greece.

The successful completion of the Action will lead to the identification of the project routing, the definition of the project costs and the technical specifications required for tendering the construction phase of the project, and will result in the submission of the Environment Impact Assessment (EIA) application to obtain the relevant permits from the competent authorities in Cyprus and Greece, paving the way to start of the construction and operation of the EastMed Pipeline.

**Call year:**  
2017  
**Member State(s):**  
Cyprus  
**Implementation schedule:**  
March 2018 to December 2020

**Maximum EU contribution:**  
€101,255,320  
**Estimated total cost:**  
€253,138,300

**Percentage of EU support:**  
40%

**Beneficiaries:**  
Republic of Cyprus represented by the  
Ministry of Energy, Commerce, Industry and  
Tourism  
<http://www.mcit.gov.cy/>

**Status:**  
GA preparation

**Energy corridor:**  
Southern Gas Corridor

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
7.3.2

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Removing internal bottlenecks to end isolation & allow transmission of NG from Eastern Mediterranean (CyprusGas2EU)

7.3.2-0026-CY-W-M-17



The Action contributes to the implementation of the Project of Common Interest (PCI) 7.3.2 "Removing internal bottlenecks in Cyprus to end isolation and to allow for the transmission of gas from the Eastern Mediterranean region". The main objective of the Action is to build the LNG infrastructure for importing natural gas on the island of Cyprus and facilitate its use mainly for power generation purposes but also for other industrial and urban uses.

The Action entails the deployment of an offshore LNG facility (Floating Storage and Regasification Unit - FSRU) as well as the construction of several onshore natural gas facilities along the Port of Lemesos - Terminal 2 (Vassiliko), namely: a jetty for the unit's safe mooring, a jetty-borne natural gas pipeline, an onshore gas pipeline, a shoreside block valve facility, an onshore natural gas buffer solution and a pressure reduction and metering station. These facilities constitute a critical infrastructure prerequisite for the successful import of natural gas on the island of Cyprus.

As an outcome of the Action, the island of Cyprus will acquire an entry point for natural gas and possible synergies between Cyprus and other Member States will occur in the procurement of natural gas optimizing delivery schedules, creating economies of scale and enhancing solidarity.

**Call year:**  
2014

**Member State(s):**  
Bulgaria

**Implementation schedule:**  
March 2015 to January 2016

**Maximum EU contribution:**  
€142,620

**Beneficiaries:**  
Bulgartransgaz  
<https://www.bulgartransgaz.bg/en>

**Status:**  
Closed

**Energy corridor:**  
Southern Gas Corridor

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
7.4.2

**Executive summary:**  
Executive Summary available [here](#)

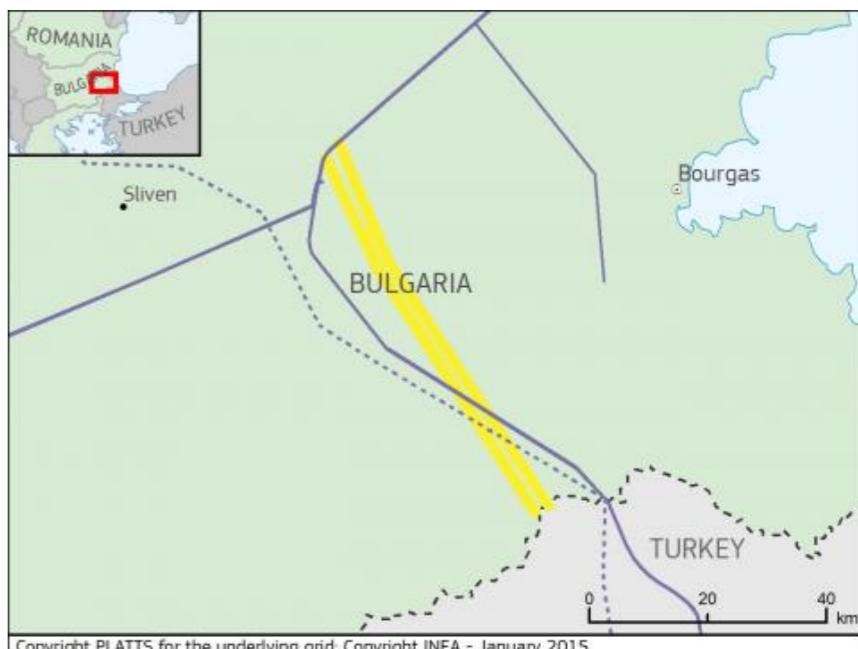
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy  
Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System  
Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Feasibility Study for the Interconnection Turkey-Bulgaria (ITB)

7.4.2-0061-BG-S-M-14



The Action was part of the Project of Common Interest (PCI) 7.4.2 "Interconnector between Turkey and Bulgaria" currently known as "ITB", which aims to create alternative supply routes, as well as 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 Action was 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 FS was 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 implementation. Preliminary data such as length, diameter, capacity, pressure, above ground equipment, financial results, as well as the time schedule have been defined in the FS.

The Action was 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 ITB project.

## 8.

# Baltic Energy Market Interconnection Plan in gas



### Call year:

2014

### Member State(s):

Estonia, Finland

### Implementation schedule:

August 2014 to March 2018

### Maximum EU contribution:

€5,400,586

### Estimated total cost:

€10,801,172

### Percentage of EU support:

50%

### Beneficiaries:

Elering AS

<http://www.elering.ee>

Gasum Oy

<http://www.gasum.com>

Baltic Connector Oy

<http://www.balticconnector.fi>

### Status:

Ongoing

### Energy corridor:

Baltic Energy Market Interconnection Plan in gas

### Energy sector:

Gas

### Project(s) of Common Interest:

8.1.1

### Additional information:

European Commission, DG ENER

<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)

<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)

<http://www.entsog.eu/>

## Studies for Balticconnector

8.1.1-0040-FIEE-S-M-14



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.

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

The objective of this Action was to carry out preparatory studies aimed at getting 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 included both business model and environmental and technical studies.

The business model studies were 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 consisted of the Environmental Impact Assessment (EIA) report, Front-End Engineering Design (FEED) and detailed engineering tasks, including geotechnical and geophysical studies and procurement procedures for construction.

**Call year:**  
2016

**Member State(s):**  
Estonia, Finland

**Implementation schedule:**  
May 2017 to June 2020

**Maximum EU contribution:**  
€187,500,000

**Estimated total cost:**  
€250,000,000

**Percentage of EU support:**  
75%

**Beneficiaries:**  
Baltic Connector Oy  
<http://www.balticconnector.fi>

Elering AS  
<http://www.elering.ee>

**Status:**  
Ongoing

**Energy corridor:**  
Baltic Energy Market Interconnection Plan in gas

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
8.1.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Balticconnector works

8.1.1-0004-FIEE-W-M-16



The Action implements the Project of Common Interest (PCI) 8.1.1 Interconnector between Estonia and Finland (currently known as "Balticconnector"), which aims to interconnect the natural gas transmission networks of both countries.

The scope of the Action is the construction of three pipeline sections: an onshore pipeline section in Finland (approx. 22 km, DN500, 80 bar), an onshore section in Estonia (approx. 50 km, DN700, 55 bar) and an offshore section between Estonia and Finland (approx. 80 km, DN500, 80 bar), as well as the installation of auxiliary equipment including a pressure reduction station in Estonia and compressor and metering stations in both countries. This specific Action covers the purchase of equipment and the construction works for the whole infrastructure.

The Action will fully implement PCI 8.1.1 and will result in establishing a physical interconnection between the Finnish and Estonian gas transmission systems, which will become an important element of expansion of the BEMIP gas network, connecting Finland to the EU gas market. Furthermore, Balticconnector (together with the enhancement of the EE-LV interconnection) will increase the diversification of gas supplies in the Baltic region, enhancing competitiveness and strengthening the liberalization process of the gas markets in the Baltic States.

**Call year:**  
2017

**Member State(s):**  
Latvia, Lithuania

**Implementation schedule:**  
October 2017 to September 2018

**Maximum EU contribution:**  
€175,000

**Estimated total cost:**  
€350,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
AS Conexus Baltic Grid  
<http://www.conexus.lv>

AB Amber Grid  
<http://www.ambergrid.lt>

**Status:**  
GA preparation

**Energy corridor:**  
Baltic Energy Market Interconnection Plan in gas

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
8.2.1

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### The Feasibility Study and Cost-Benefit Analysis for the Enhancement of Latvia-Lithuania Interconnection

8.2.1-0001-LTLV-S-M-17



The Action contributes to the implementation of the Project of Common Interest (PCI) 8.2.1 Enhancement of Latvia-Lithuania, which aims to increase the interconnection capacity between the gas systems of both Member States.

The objective of this Action is to prepare a feasibility study and a cost-benefit analysis (CBA) aimed at analysing the possibility to enhance the interconnection capacity between Latvia and Lithuania, in order to address the increasing demand of gas flow between both countries as well as to adapt to a changing gas market. The feasibility study will determine the precise technical scope of the project. It will detail the needed infrastructure elements and related technical parameters, assess the available technical options and identify the most efficient solution, as well as determine the needed cross-border capacity for the elimination of the possible bottlenecks between Latvia and Lithuania. Furthermore the study will evaluate the need for a cross-border cost allocation (CBCA).

The completion of this Action will contribute to the implementation of the PCI 8.2.1 by preparing a solid basis for taking further crucial steps towards the Final Investment Decision (FID) to implement the project and start the design and construction phase.

**Call year:**  
2016

**Member State(s):**  
Estonia

**Implementation schedule:**  
July 2016 to December 2019

**Maximum EU contribution:**  
€18,625,000

**Estimated total cost:**  
€37,250,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Elering AS  
<http://www.elering.ee>

**Status:**  
Ongoing

**Energy corridor:**  
Baltic Energy Market Interconnection Plan in gas

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
8.2.2

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Estonia-Latvia gas interconnection enhancement

8.2.2-0005-EE-W-M-16



The Action implements the Project of Common Interest (PCI) 8.2.2 "Enhancement of Estonia-Latvia interconnection".

The scope of the Action is the construction of gas network infrastructure in three different locations: a gas metering station near the Estonia-Latvia border in Karksi; a border valve in Lilli (between Karksi and the Estonia-Latvia border) and a bidirectional compressor station in South Estonia in Puiatu.

This Action covers the tendering for engineering, procurement and construction, as well as the execution of the construction works and the commissioning of the whole infrastructure.

The Action will fully implement the PCI 8.2.2 and its completion will result in improving the gas transmission infrastructure to allow bidirectional gas flow between the Estonian and Latvian gas transmission systems as well as increasing the overall cross-border transmission capacity.

**Call year:**  
2014

**Member State(s):**  
Lithuania

**Implementation schedule:**  
July 2014 to March 2016

**Maximum EU contribution:**  
€24,739,293

**Beneficiaries:**  
AB "Amber Grid"  
<http://www.ambergrid.lt>

**Status:**  
Closed

**Energy corridor:**  
Baltic Energy Market Interconnection Plan in gas

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
8.2.3

**Executive summary:**  
Executive Summary available [here](#)

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Construction of the Klaipeda-Kuršėnai Gas Transmission Pipeline

8.2.3-0001-LT-P-M-14



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

This Action involved the construction of the Klaipeda-Kuršėnai gas transmission pipeline, which connects the LNG (liquefied natural gas) terminal infrastructure in Klaipeda to the gas transmission system towards Kuršėnai. The +/- 111 km pipeline has 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 this pipeline has eliminated a bottleneck in the gas transmission system and has enhanced the capacity of the Klaipeda-Kiemenai pipeline, enabling the transport of substantial gas volumes (up to 10.3 mcm/d) from the new supply route (the LNG terminal in Klaipeda).

Furthermore this Action has contributed to enhance security of the gas supply and competition in the gas market of the Baltic states.

**Call year:**  
2016  
**Member State(s):**  
Latvia  
**Implementation schedule:**  
February 2017 to November 2017

**Maximum EU contribution:**  
€150,000

**Estimated total cost:**  
€300,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Conexus Baltic Grid  
<http://www.conexus.lv>

**Status:**  
Ongoing

**Energy corridor:**  
Baltic Energy Market Interconnection Plan in gas

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
8.2.4

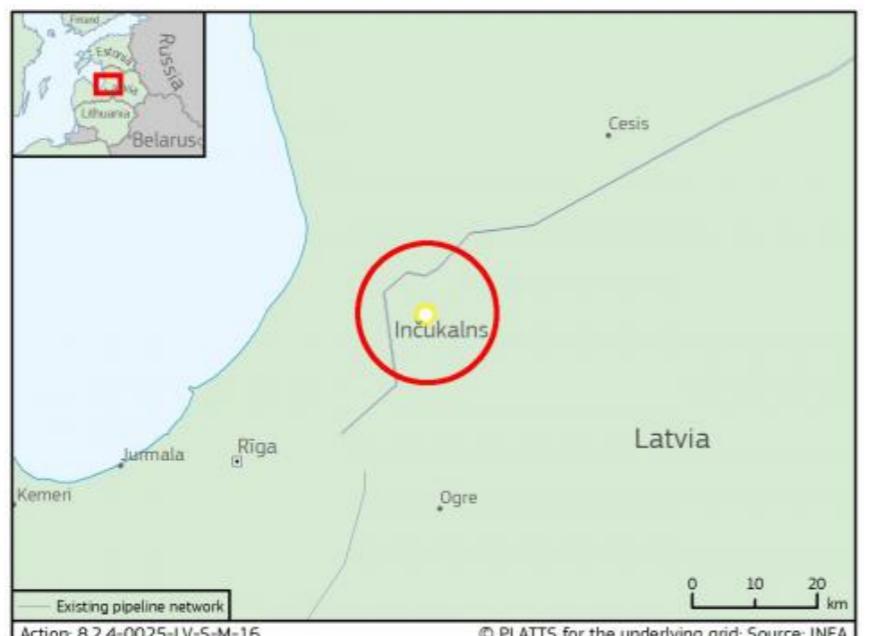
**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Inčukalns underground gas storage- study of increased flexibility and use as strategic gas storage

8.2.4-0025-LV-S-M-16



The Action contributes to the implementation of the Project of Common Interest (PCI) 8.2.4 Enhancement of Inčukalns Underground Gas Storage (LV) which aims to upgrade and extend an existing aquifer gas storage facility in Latvia.

The objective of this Action was to carry out a study aimed at analysing the possibility to enhance the existing Inčukalns UGS both from a technical and commercial point of view, as well as to increase the use of the storage and better contribute to the regional security of supply.

The study covered five main elements:

- Market analysis on the need and value for a more flexible gas storage
- Security of gas supply analysis
- Assessment and modelling of reservoir and well
- Surface facilities analyses in view of increased flexibility
- Preparation of business plan, cost benefit analysis and a roadmap in view of a change in the use of the storage

The completion of the Action has contributed to the implementation of the PCI 8.2.4 by enhancing the use of the Inčukalns UGS facility, which will result in improved security of gas supply and will contribute to ending energy isolation and to market integration in the Baltic Energy Market Interconnection Plan (BEMIP) region.

**Call year:**  
2015  
**Member State(s):**  
Denmark, Poland  
**Implementation schedule:**  
September 2015 to December 2016

**Maximum EU contribution:**  
€400,000

**Estimated total cost:**  
€800,000

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Energinet  
<http://www.energinet.dk>

Operator Gazociągów Przesyłowych GAZ-SYSTEM S.A.  
<http://www.gaz-system.pl>

**Status:**  
Ongoing

**Energy corridor:**  
Baltic Energy Market Interconnection Plan in gas

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
8.3

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

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

8.3-0019-DKPL-S-M-15



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 Action covered 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 main objectives of the Action were 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). Furthermore this Action contributed to provide a solid basis for making decisions on the next phase of the Baltic Pipe project.

**Call year:**  
2017  
**Member State(s):**  
Denmark, Poland  
**Implementation schedule:**  
October 2017 to May 2020

**Maximum EU contribution:**  
€33,149,601  
**Estimated total cost:**  
€66,299,202

**Percentage of EU support:**  
50%

**Beneficiaries:**  
Operator Gazociągów Przesyłowych GAZ-SYSTEM S.A.  
<http://www.gaz-system.pl>

Energinet  
<http://www.energinet.dk>

**Status:**  
GA preparation

**Energy corridor:**  
Baltic Energy Market Interconnection Plan in gas

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
8.3

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

### Preparatory works for the Baltic Pipe Project up to obtainment of all necessary permission(s) in Poland and in Denmark

8.3-0025-PLDK-S-M-17



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

The objective of this Action is to carry out preparatory studies, geophysical and geotechnical surveys, engineering works and pre-construction activities as well as to prepare the necessary project documentation up to the obtainment of the building permits for a number of key infrastructure elements, part of the Baltic Pipe project. These infrastructure elements are the offshore pipeline connecting Poland and Denmark (estimated length of 260-310 km, DN900, design pressure of 120-150 bar); the onshore pipeline in Poland (estimated length of 40-154 km, DN1000); one receiving terminal in Poland; two compressor stations in Poland and one in Denmark; as well as a small section of the onshore pipeline in Denmark (estimated length of approx. 10 km, DN 900) connecting the Zealand compressor station to the landfall on the East coast of Zealand.

The completion of this Action will contribute to the implementation of the PCI 8.3 by preparing a solid basis for taking further crucial steps towards the Final Investment Decision (FID) to start the construction phase.

**Call year:**  
2014

**Member State(s):**  
Lithuania, Poland

**Implementation schedule:**  
September 2014 to July 2019

**Maximum EU contribution:**  
€10,152,087

**Estimated total cost:**  
€20,304,174

**Percentage of EU support:**  
50%

**Beneficiaries:**  
AB "Amber Grid"  
<http://www.ambergrid.lt>

Operator Gazociągów Przesyłowych GAZ-SYSTEM S.A.  
<http://www.gaz-system.pl>

**Status:**  
Ongoing

**Energy corridor:**  
Baltic Energy Market Interconnection Plan in gas

**Energy sector:**  
Gas

**Project(s) of Common Interest:**  
8.5

**Additional information:**  
European Commission, DG ENER  
<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)  
<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)  
<http://www.entsoe.eu/>

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

8.5-0045-LTPL-S-M-14



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 Action relates to the GIPL pipeline and its auxiliary installations. GIPL includes, on the Polish side, a gas pipeline between Hołowczyce and the PL-LT border (approx. range between 310 and 357 km, DN 700) and a compressor station in Gustorzyn; on the Lithuanian side, a gas pipeline between the PL-LT border and Jauniunai (approx. 177 km, DN 700) as well as gas pressure reduction and metering station(s) located near the PL-LT 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, environmental impact assessment (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.

**Call year:**

2014

**Member State(s):**

Lithuania, Poland

**Implementation schedule:**

May 2016 to December 2021

**Maximum EU contribution:**

€266,386,516

**Estimated total cost:**

€443,967,571

**Percentage of EU support:**

60%

**Beneficiaries:**

Operator Gazociągów Przesyłowych GAZ-SYSTEM S.A.

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

## AB "Amber Grid"

<http://www.ambergrid.lt>
**Status:**

Ongoing

**Energy corridor:**

Baltic Energy Market Interconnection Plan in gas

**Energy sector:**

Gas

**Project(s) of Common Interest:**

8.5

**Additional information:**

European Commission, DG ENER

<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)

<http://www.acer.europa.eu/>

European Network of Transmission System Operators for Gas (ENTSOG)

<http://www.entsoe.eu/>

### Construction of the Gas Interconnection Poland-Lithuania (GIPL) including supporting infrastructure

8.5-0046-PLLT-P-M-14



The Action contributes to the implementation of the Project of Common Interest (PCI) 8.5 Poland-Lithuania interconnection, currently known as GIPL.

The objective of the Action is to establish a physical interconnection between the Polish and Lithuanian gas transmission systems. The Action consists of the construction of the GIPL pipeline and its supporting infrastructure. GIPL includes, on the Polish side, a gas pipeline between Hołowczyce and the PL-LT border (approx. range between 310 and 357 km, DN 700) and on the Lithuanian side a gas pipeline between the PL-LT border and Jauniunai (approx. 177 km, DN 700). The supporting infrastructure includes the construction of a new compressor station in Gustorzyń in Poland, the extension, modernization of the pipeline to the Hołowczyce node, the extension of the Hołowczyce compressor station, as well as the construction of gas pressure reduction and metering station(s) located near the PL-LT border in Lithuania.

The implementation of GIPL will constitute an important element of expansion of the BEMIP gas network, connecting the isolated Baltic States 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.

**10.**

## Smart grids deployment

**Call year:**

2016

**Member State(s):**

Croatia, Slovenia

**Implementation schedule:**

November 2016 to November 2021

**Maximum EU contribution:**

€40,489,013

**Estimated total cost:**

€79,390,221

**Percentage of EU support:**

51%

**Beneficiaries:**

ELES, Ltd., Electricity Transmission System Operator

<http://www.eles.si>

Croatian Transmission System Operator Ltd.

<http://www.hops.hr>

SODO Electricity Distribution System Operator d.o.o.

<http://www.taktik.si>

HEP-Operator distribucijskog sustava d.o.o.

<http://www.hep.hr>

**Status:**

Ongoing

**Energy corridor:**

Smart grids deployment

**Energy sector:**

Smart grid

**Project(s) of Common Interest:**

10.3

**Additional information:**

European Commission (DG ENER)

<http://ec.europa.eu/energy/en/topics/infrastructure>

Agency for the Cooperation of Energy Regulators (ACER)

<http://www.acer.europa.eu/>

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

<http://www.entsoe.eu/>

## Implementation of the SINCRO.GRID PCI - Phase 1

10.3-0022-SIHR-W-M-16



The Action contributes to the Project of Common Interest (PCI) 10.3 SINCRO.GRID (Slovenia/Croatia), which aims at solving network voltage, frequency control and congestion issues and enabling further deployment of renewables (RES) and displacement of conventional generation by integrating new active elements in the transmission and distribution grids into the virtual cross-border control centre based on advanced data management and common system optimisation. The Action aims to complete the PCI with the exception of one of the compensation devices in Slovenia which will be deployed at a later stage.

The scope of the Action comprises of the i) deployment of five compensation devices to address at cross-border level overvoltage and voltage instability issues within the regional transmission grid; ii) deployment of advanced dynamic thermal rating (DTR) systems in the Slovenian and Croatian transmission grids; iii) deployment of electricity storage systems; iv) integration of distributed renewable generation (DG); and v) deployment of a virtual cross-border control centre (VCBCC) consisting in dedicated IT infrastructure and software to be used by system operators for the efficient and coordinated management of RES.

**FOR MORE INFORMATION**

**INNOVATION AND NETWORKS  
EXECUTIVE AGENCY**

European Commission  
W910  
B-1049 Brussels

-  [inea@ec.europa.eu](mailto:inea@ec.europa.eu)
-  [@inea\\_eu](https://twitter.com/inea_eu)
-  INEA
-  <http://ec.europa.eu/inea>

Visual elements on cover © Shutterstock