Projects of Common Interest 2018 - 2019

Meeting of TEN-E GAS BEMIP & NSI WEST Priority corridors

27 March 2019
DG ENER, Networks & Regional Initiatives

Web-stream link: https://ec.europa.eu/eusurvey/runner/PCIGASMEETING27

Energy

Agenda

European Commission

1. Welcome and general introduction
2. Identification of system needs per region methodology
3. Regional needs identification and validation
4. First insight in the PCI assessment methodology
5. Conclusions
6. Next steps

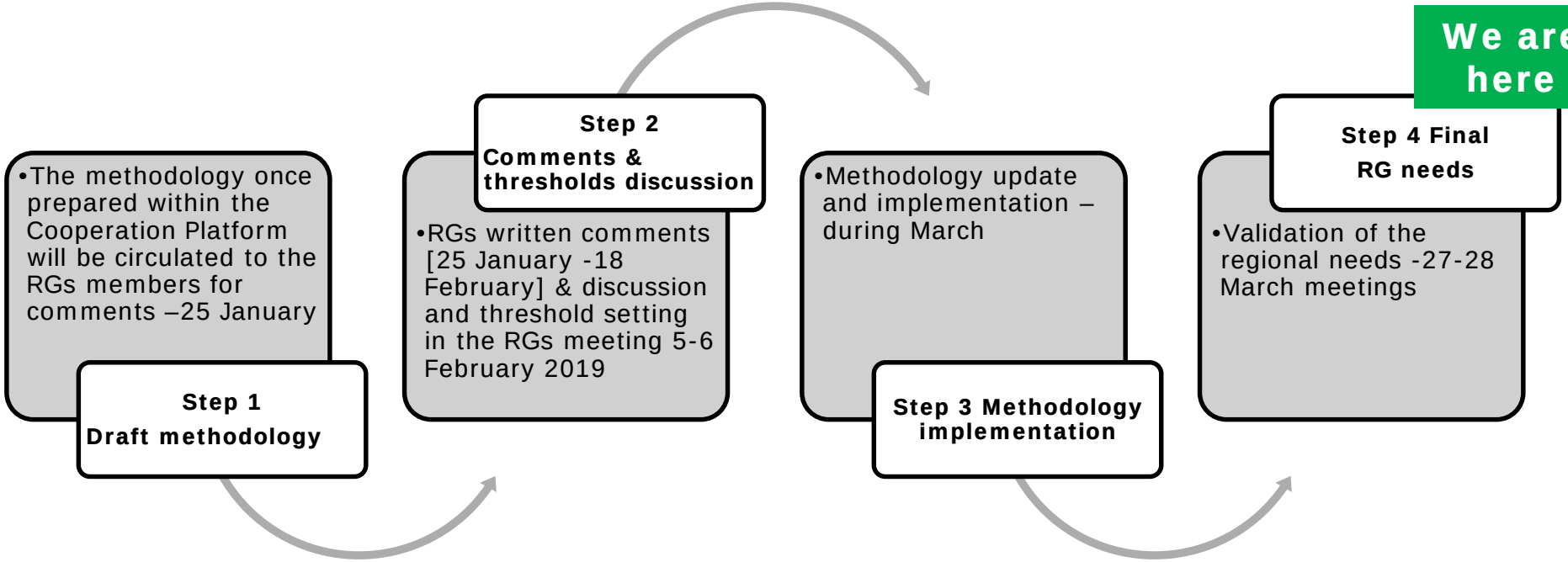
European Commission

Identification of system needs per region methodology

[Presentation on the methodology for the identification of system needs that can be addressed through infrastructure in the context of the identification of PCI projects for the 4th PCI-list: purpose, use of indicators and proposed thresholds for indicators]

Energy

Needs identification process



Written comment received from: E3G, Food & Water Europe, Friends of the Earth Europe, MT [MS], SK [MS], ES [MS], CZ [MS, TSO, NRA], PL [TSO], RO [promoter].

Principles

European Commission

- The PCI needs identification is to reflect the objectives of Regulation (EU) 347/2013, along the pillars of the EU energy policy
- The Regional Groups are to use the same methodology for the needs identification
- The thresholds used to frame the needs are to be identical along all the Regional Groups
- The timeframe to be considered for the PCI needs analysis is 2030 in line with the EU 2030 targets and consistent with the electricity PCI exercise
- The infrastructure level used for this exercise is to be the “low infrastructure level”
- The scenario to be used in this exercise is “Distributed Generation”

Indicators framing

European Commission

Meaningful:

An indicator/threshold that results in all countries or no country being impacted is not well defined

Fit for purpose:

Within the PCI process indicators and thresholds are used to identify critical European needs/problems

Use of indicators and thresholds

Consistent:

Indicators must be based on consistently defined and calculated data available for all relevant countries

Indicators

European Commission

Security of Supply

- Curtailed Demand [CD]
- Single Largest Infrastructure Disruption [SLID]

Competition

- Supply Source Dependence [SSD]
- Supply Source Access [SSA]
- LNG and Interconnection Capacity Diversification [LICD].

Market integration

- Market integration [import prices at the borders and the hub procurement prices]

Security of Supply - CD

European Commission

The curtailed demand [CD] is the demand that cannot be satisfied in a given area due to climate stress conditions combined with the supply source disruption.

Route Disruption/ Regional Group	NSI WEST	NSI EAST	SGC	BEMIP
Ukraine transit disruption	X	X	X	
Belarus transit disruption	X	X		X
Baltic states and Finland disruption				X
Algerian route disruption	X			

Need identification steps:

1. Set disruption route which is relevant for the region
2. Compute the CD for each of the Member State
3. Apply the threshold of 100 [percentage - %] - meaning that we look to having all the demand being covered
4. Analyse the results in corroboration with the Member States input and the overall regional discussion

Country 1	100%
Country 2	153%
Country 3	125%
Country 4	177%
Country 5	-28%
Country 6	100%
Country 7	161%
Country 8	-54%
Country 9	-55%
Country 10	128%
Country 11	100%
Country 12	189%
Country 13	151%

Security of Supply - SLID

European Commission

The Single Largest Infrastructure Disruption [SLID] measures the [%] of demand in a specific country that risks being curtailed in case of the disruption of a country single largest infrastructure.

Need identification steps:

1. Compute the curtailed demand value [under single largest infrastructure disruption in the country], for each of the Member State

2. Apply the threshold of zero [percentage - %] - meaning that we look to having all the demand being covered

3. Analyse the results in corroboration with the Member States input and the overall regional discussion

Country 10	-21%
Country 13	0%
Country 14	-5%
Country 15	0%
Country 18	-29%
Country 2	0%
Country 20	0%
Country 23	-37%
Country 24	-39%
Country 25	0%
Country 3	-85%
Country 6	0%
Country 7	-20%

Competition - SSD

European Commission

Supply source dependence [SSD] identifies countries showing a strong dependence to a specific supply source and allows identifying cases where this dependence is related to an infrastructure bottleneck (physical dependence).

Need identification steps:

1. Compute the SSD value for each of the Member State
2. Apply the threshold of 25 [%]
3. Analyse the results in corroboration with the Member States input and the overall regional discussion

Country 1	7%
Country 2	3%
Country 3	1%
Country 4	0%
Country 5	27%
Country 6	26%
Country 7	13%
Country 8	45%
Country 9	45%
Country 10	3%
Country 11	0%
Country 12	9%
Country 13	0%
Country 14	27%
Country 15	0%

Competition - SSA

European Commission

The Supply Source Access indicator (SSA) measures the number of supply sources an area can access. The ability of an area to access a given source is measured through a supply source diversification metric. SSA provides the aggregate view across all supply sources.

Need identification steps:

1. Apply the 20 [percentage -%] threshold to the ENTSOG market data for 2030 – meaning that the supply cost of a country is 20 % responsive to a decrease in price of source S.

2. Sum up the number of sources [as identified in Step 1] a Member State has access to. If a country has access to less than three sources, that country has a SSA problem.

3. Analyse the results in corroboration with the Member States input and the overall regional discussion

Country 1	3
Country 2	3
Country 3	5
Country 4	4
Country 5	4
Country 6	3
Country 7	3
Country 8	3
Country 9	2
Country 10	3
Country 11	2
Country 12	3

Competition - LICD

European Commission

LNG and Interconnection Capacity Diversification indicator [LICD] measures how balanced the import capacity of a given country is. This indicator shows the diversification from the perspective of market integration. It measures the diversification of paths that gas can flow through to reach a market area.

Need identification steps:

1. Compute the LICD value for each of the Member State.

2. Apply the threshold of 5000- meaning that all the countries with the LICD higher than 5000 have a competition problem.

3. Analyse the results in corroboration with the Member States input and the overall regional discussion

Country 1	3333
Country 2	2096
Country 3	10000
Country 4	10000
Country 5	5070
Country 6	5000
Country 7	10000
Country 8	5000
Country 9	10000
Country 10	3070
Country 11	1670
Country 12	10000
Country 13	3558

Market integration Indicator

European Commission

A Market integration need is identified by assessing the import prices at the borders and the hub procurement prices [Euros/MWh] in each of the EU member states for the period 2015-2018 [inclusive].

Need identification steps:

1. Collect the average import prices at the border and the hub procurement prices in each of the EU member states for 2015 to 2018 inclusive.

2. Calculate the threshold to be used: min EU +10%

3. Analyse the results in corroboration with:
   - the reason of this high prices – is this due to the tariffs or due to need of infrastructure?
   - the Member States input and the overall discussions in the Regional Groups.

	2018	2017	2016	2015
Country 3	26,76	16,16	19,74	18,29
Country 20	24,71	18,42	20,39	18,59
Country 7	22,50	17,00	19,64	18,60
Country 24	23,44	17,57	20,76	20,24
Country 25	26,72	20,15	19,47	20,25
Country 23	23,98	18,25	21,17	20,39
Country 6	22,23	17,53	19,79	20,69
Country 18	22,05	15,87	19,76	20,71
Country 10	23,18	17,63	20,74	20,71
Country 2	22,00	15,93	19,63	20,78
Country 15	23,88	17,91	20,24	20,94
Country 14	23,24	17,74	20,24	21,32
Country 13	**24,39**	**17,68**	**21,26**	**21,46**
Country 17	**28,91**	**17,73**	**19,78**	**21,54**
Country 21	26,50	17,21	19,66	21,69
Country 26	21,99	16,18	19,97	21,85
Country 8	**28,22**	**20,48**	**22,02**	**22,52**
Country 9	**27,21**	**18,35**	**23,49**	**24,19**
Country 4	**24,42**	**20,51**	**22,24**	**24,21**
Country 5	**24,42**	**20,51**	**22,24**	**24,21**
Threshold - Min EU value+10%	**24,19**	**17,45**	**21,42**	**20,12**

Other indicators

Within this category, we include:

- **Physical isolation** – meaning Member States that are physically isolated from its EU neighbours and are at the periphery of Europe.

- **Access to a new source** – meaning allowing the European Union to tap into new sources of gas that currently are not reaching any of the European Union Member States markets. This indicator does consider European Union as one entry point and it does not look if a region within Europe increases its access to other sources, which are currently accessed by other EU regions.

Regional needs BEMIP identification and validation

[In this part of the meeting we will:

- identify which market, security of supply or competition problems/bottlenecks/needs are having a significant impact on the countries in the TEN-E priority corridor

- validate the methodology for the identification of system needs that can be addressed through infrastructure

- agree the list of system needs that can be addressed by infrastructure in the TEN-E priority corridor.]

Germany needs

European Commission

Needs identified by Member States

- No contribution received

Outcome of the needs methodology

- No need identified with regard to the corridor of BEMIP in gas

Sweden needs

European Commission

Needs identified by Member States

- Only one supply point from Denmark, therefore a second supply point will increase security of supply
- Limited storage capacity

Outcome of the needs methodology

Security of Supply
- **Single Largest Infrastructure Disruption**

Competition
- LNG and Interconnection Capacity Diversification

Market Integration
- Wholesale price

Denmark needs

European Commission

Needs identified by Member States

- Identified no additional needs beyond the Baltic Pipe

Outcome of the needs methodology

Competition

- **Increase Market diversification**

Poland needs

European Commission

Needs identified by Member States

Competition
- Reduction of dependence on single supply source
- Access to new supply sources (NO, LNG)

Sustainability
- Limitation of air pollution & CO2 emission reduction
- Integration of RES and local energy sources
- System adjustment for bio-methane and hydrogen

Market integration
- Creation of physical connections with neighbouring countries

Security of Supply
- Diversification of supply sources and suppliers
- Risk mitigation of supply disruption

Outcome of the needs methodology

Competition
- **Supply Source Dependence**

Finland needs

European Commission

Needs identified by Member States

- No needs expressed by the Member State following the commissioning of the Baltic Connector later in 2019

Outcome of the needs methodology

Security of Supply

- **Curtailed Demand**
- Single Largest Infrastructure Disruption

Competition

- Supply Source Dependence
- Supply Source Access
- Increase Market diversification

Market Integration

- Wholesale price

*Certain results of the methodology are inherent to the geographical location and independent to the infrastructure development

Estonia needs

European Commission

Needs identified by Member States

- Market integration to create a larger market and to increase liquidity and competition
- Increase SoS to diversify gas sources, to diversify supplier, to eliminate the dependence on a dominant gas supplier

Outcome of the needs methodology

Security of Supply
- **Curtailed Demand**
- Single Largest Infrastructure Disruption

Competition
- **Supply Source Dependence**

Market Integration
- Wholesale price

Latvia needs

European Commission

Needs identified by Member States

- Dependence on a single supplier (RU)
- Hydrogen fitness
- Cyber security

Outcome of the needs methodology

Competition

- **Supply Source Dependence**

Lithuania needs

European Commission

Needs identified by Member States

- Lack of access to 3 sources, i.e. no connection to third gas source
- Lack of access to the continental European network
- Price Spreads TTF/Baltics, e.i. existing differences in wholesale gas prices

Outcome of the needs methodology

Security of Supply
- **Curtailed Demand**
- Single Largest Infrastructure Disruption

Competition
- **Supply Source Dependence**
  Increase Market diversification

Market Integration
- Wholesale price

List of regional needs CAS BEMIP

European Commission

Curtailed Demand: Estonia, Finland, Lithuania

Single Largest Infrastructure: Sweden

Supply Source Dependence: Estonia, Latvia, Lithuania, Poland

Increase Market Diversification: Denmark

Regional needs NSI WEST identification and validation

[In this part of the meeting we will:

- identify which market, security of supply or competition problems/bottlenecks/needs are having a significant impact on the countries in the TEN-E priority corridor

- validate the methodology for the identification of system needs that can be addressed through infrastructure

- agree the list of system needs that can be addressed by infrastructure in the TEN-E priority corridor.]

France needs

European Commission

Needs identified by Member States

- No market demand for new major gas infrastructure

<u>Security of Supply</u>

- Decline in L-gas output from Groningen, conversion from L-gas to H-gas

Outcome of the needs methodology

- No need identified which is relevant for NSI WEST region

Ireland needs

European Commission

Needs identified by Member States

Security of Supply
- Single Largest Infrastructure Disruption

Competition
- Decline of indigenous gas resources
- LNG and Interconnection Capacity Diversification

Sustainability:
- Gas as energy source increasingly important as back-up for RES generation

Outcome of the needs methodology

Security of Supply
- **Single Largest Infrastructure Disruption**

Competition
- **LNG and Interconnection Capacity Diversification**

Portugal needs

European Commission

Needs identified by Member States

Security of Supply
- Single Largest Infrastructure Disruption

Competition
- Supply Source Dependence LNG
- Supply Source Access

Market Integration
- Wholesale price

Sustainability
- Phase out of coal power plants, increased demand for gas

Outcome of the needs methodology

Security of Supply
- **Curtailed Demand**
- **Single Largest Infrastructure Disruption**

Competition
- **Supply Source Access**
- **LNG and Interconnection Capacity Diversification**

UK needs

European Commission

Needs identified by Member States

Security of Supply

- Northern Ireland depend on one interconnector with only flows one way

Competition

- Current gas supply flexibility is expected to decline further as indigenous production from the North sea declines

Outcome of the needs methodology

Security of Supply

- **Single Largest Infrastructure Disruption**

Competition

- **LNG and Interconnection Capacity Diversification**

Malta needs

European Commission

Needs identified by Member States

Security of Supply
- Isolation from European gas network

Competition
- Supply Source Dependence LNG

Market Integration
- Wholesale price

Outcome of the needs methodology

- **Physical isolation**

Germany needs

European Commission

Needs identified by Member States

- Security of supply (L/H gas)

Outcome of the needs methodology

- No need was identified which is relevant for the RG NSI WEST

Spain needs

European Commission

Needs identified by Member States

Competition
- LNG cannot be considered a single source from a physical nor market prospective

Market Integration
- Wholesale market indicator should be flexible in the period assessed where regulation or market dynamics have changed

Outcome of the needs methodology

Security of Supply
- **Curtailed Demand**
- Single Largest Infrastructure Disruption

Competition
- **Supply Source Access**
- **LNG and Interconnection Capacity Diversification**

Netherlands needs

European Commission

Needs identified by Member States

- No specific needs identified

Outcome of the needs methodology

- No need was identified which is relevant for the RG NSI WEST

Italy – needs

European Commission

Member State identified need

Market Integration:
- reduction of structural price spread

Security of supply:
- Further flexibility in case of peak demand (pressing need) and Ukrainian disruption

Competition:
- replace Algerian route

Sustainability:
- Begin analysing and removing all possible barriers for gas and electricity sector coupling

Outcome of the needs methodology

- No need was identified which is relevant for the RG NSI WEST

Denmark needs

European Commission

Needs identified by Member States

- Identified no additional needs beyond the Baltic Pipe

Outcome of the needs methodology

- No need was identified which is relevant for the RG NSI WEST

Belgium needs

European Commission

Needs identified by Member States

- Security of supply (L/H gas)

Outcome of the needs methodology

- No need was identified which is relevant for the RG NSI WEST

Luxembourg needs

European Commission

Needs identified by Member States

- No needs identified

Outcome of the needs methodology

- No need was identified which is relevant for the RG NSI WEST

List of regional needs CAS RG NSI WEST

European Commission

Market integration-Mitigate high price differentials: : Spain*

Curtailed Demand: Portugal, Spain

Single Largest Infrastructure Disruption: Ireland, Portugal, United Kingdom

Supply Source Access: Portugal, Spain

LNG and Interconnection Diversification: Ireland, Portugal, Spain, United Kingdom

Physical isolation: Malta

Adaptation to high-calorific gas*: France, Belgium, Germany

* updated after the 27-28 March meeting based on the Spanish and German justification

First insight in the PCI assessment methodology

[Introductory presentation and discussion on the next step in the PCI process: methodology for the assessment of candidate PCI projects; update on the ongoing study on storage benefits (Navigant consultancy)]

Principles

European Commission

PCI candidates that are already/will be completed by end 2019, or that do not fulfil the relevant criteria and requirements as set out in this Regulation cannot be on the next Union list.

All the PCI candidates [including existing PCIs] are be subject to the same selection process for the establishment of regional lists and for the establishment of the Union list of PCIs.

Each individual proposal for a project of common interest requires, in order to be on the Union list, the approval of the Member States, on whose territory the project is build.

PCI technical requirements - I

European Commission

Transmission infrastructure

- transmission pipelines for the transport of natural gas and bio gas that form part of a network which mainly contains high-pressure pipelines, excluding high-pressure pipelines used for upstream or local distribution of natural gas;

- any equipment or installation essential for the system to operate safely, securely and efficiently or to enable bi-directional capacity, including compressor stations;

- for gas transmission, the project concerns investment in reverse flow capacities or changes the capability to transmit gas across the borders of the Member States concerned by at least 10 % compared to the situation prior to the commissioning of the project;

PCI technical requirements - II

European Commission

Gas storage

- underground storage facilities connected to the above-mentioned high-pressure gas pipelines;
- reception, storage and regasification or decompression facilities for liquefied natural gas (LNG) or compressed natural gas (CNG);
- for gas storage or liquefied/compressed natural gas, the project aims at supplying directly or indirectly at least two Member States or at fulfilling the infrastructure standard (N-1 rule) at regional level

Criteria for candidate PCIs – art. 4

European Commission

Necessary for the EU energy pillars

- The project is **necessary for at least one of the energy infrastructure priority corridors and areas**

- The project **contributes to at least one of the following specific criteria**:
  - market integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks; interoperability and system flexibility
  - security of supply, inter alia through appropriate connections and diversification of supply sources, supplying counterparts and route
  - competition, inter alia through diversification of supply sources, supplying counterparts and routes;
  - sustainability, inter alia through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas;

Criteria for candidate PCIs – art. 4

European Commission

Project benefits outweigh costs

- the **potential overall benefits of the project**, assessed according to the respective specific criteria in paragraph 2, **outweigh its costs,** including in the longer term;

Impacts EU Member States

- meets **any** of the following:
  - involves at least two Member States by directly crossing the border of two or more Member States;
  - is located on the territory of one Member State and has a significant cross-border impact as set out in Annex IV.1;
  - crosses the border of at least one Member State and a European Economic Area country.

Prioritization

European Commission

EU energy pillars

- The assessment of the candidate PCIs will take into consideration benefits related to security of supply competitiveness and market integration.

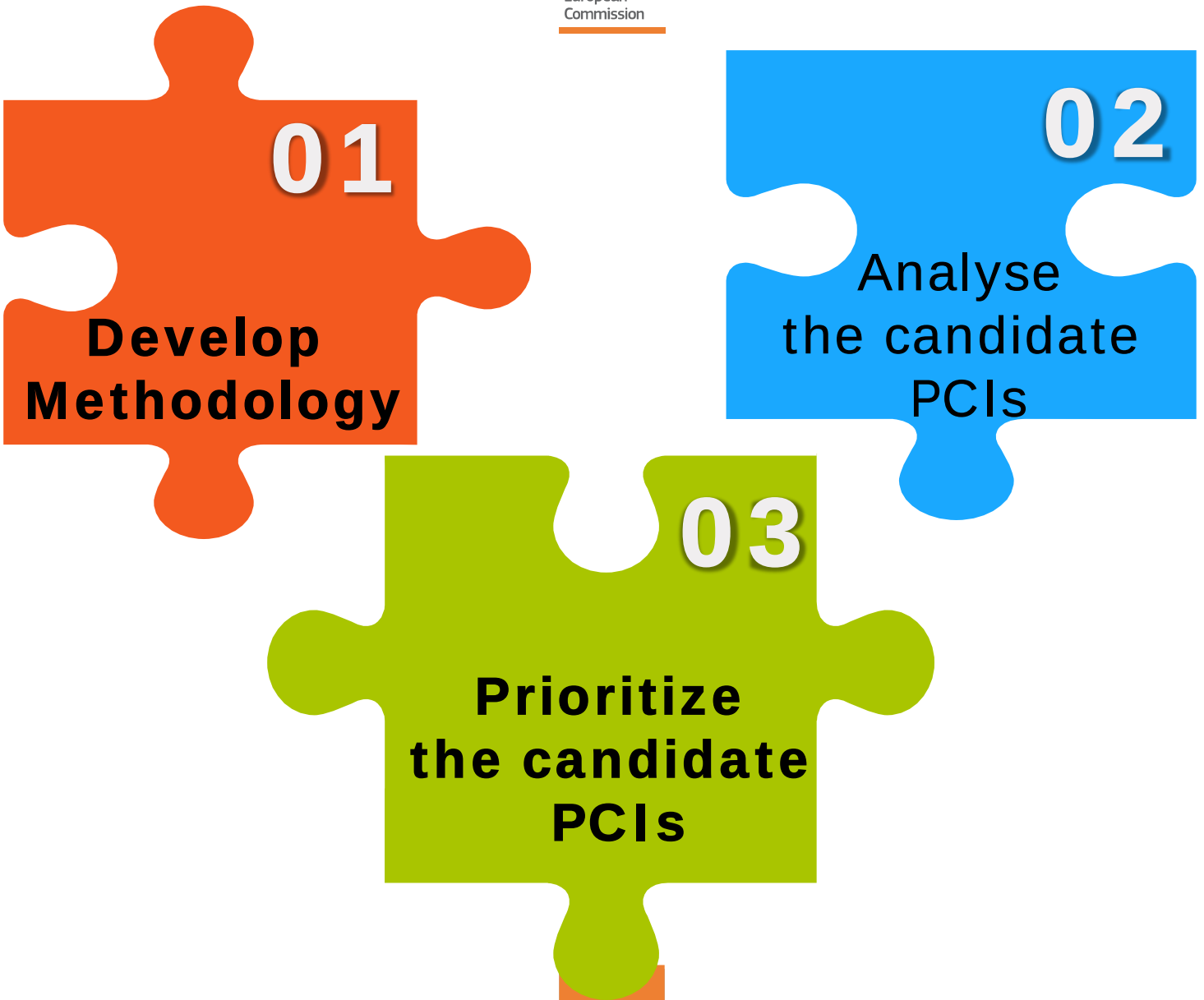
Multi-criteria approach

- The candidate PCIs prioritization will be done using a multi-criteria approach, therefore taking into account the monetized and non-monetized benefits along with the projects' costs.

TYNDP 2018 data

- The data from TYNDP PS-CBA project fiches will be used in the candidate PCIs assessment.

PCIs assessment steps

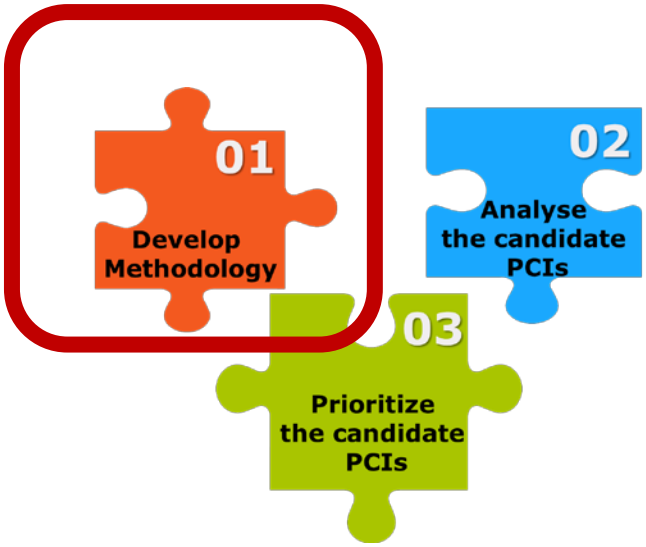


Methodology development

European Commission

- Around mid-April ’ 19: RGs members will receive the draft methodology for comments until mid-May

- End May’ 19: considering the Rgs comments the EC [within the Cooperation Platform frame] will update the methodology which will be circulated to the RGs -> final PCI assessment methodology

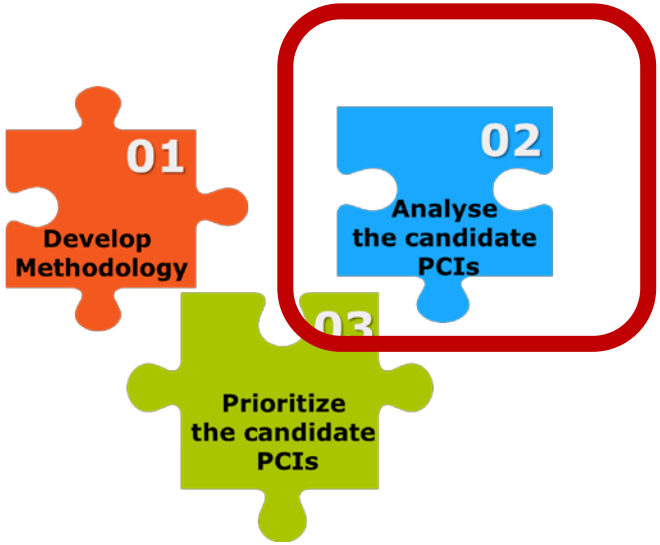


Candidate projects - scrutiny

European Commission

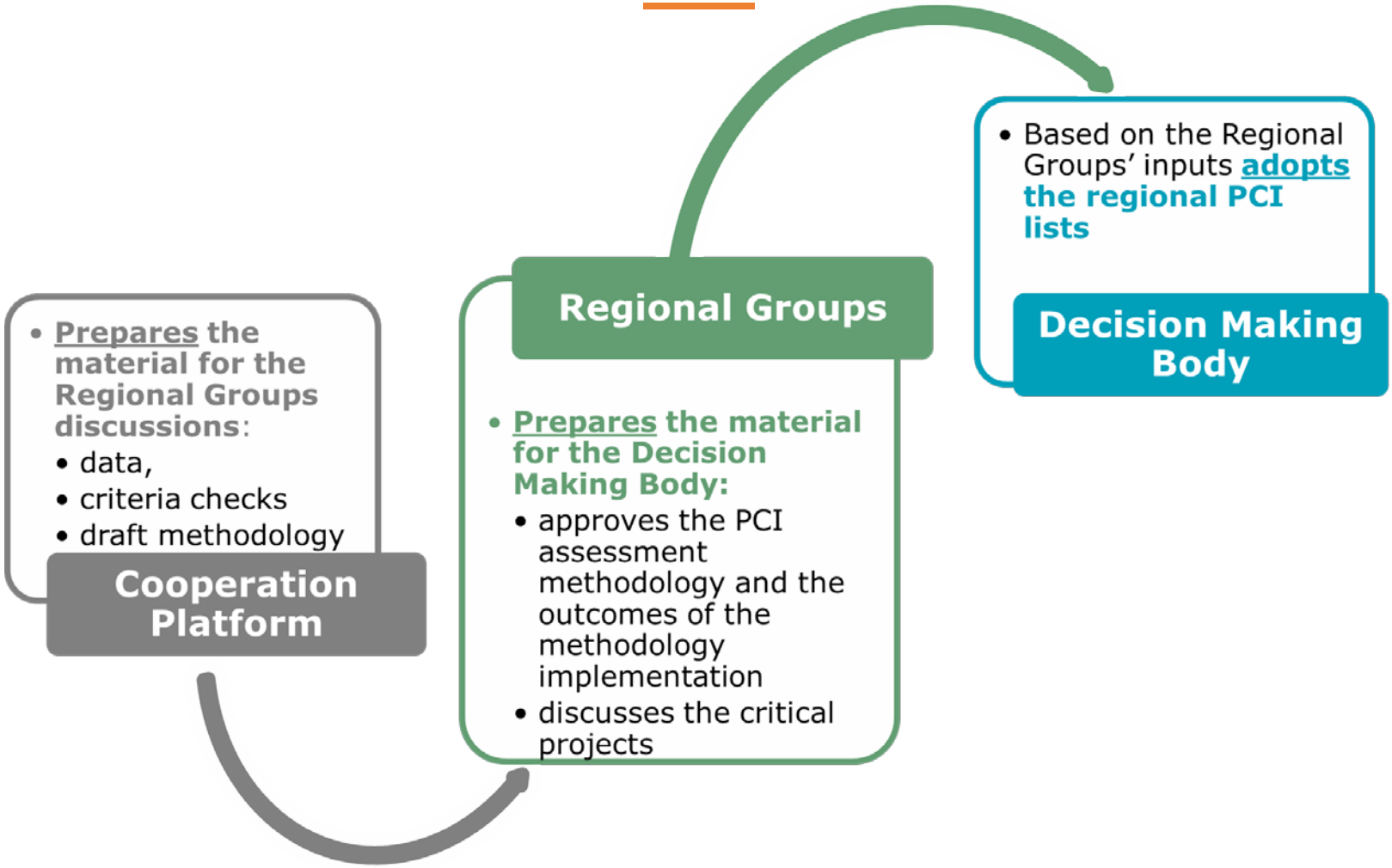
7-8 May meeting:

- Project promoters will present their projects and justify how their project satisfies the Regional needs, explain the project status and any delays in the project implementation
- NRAs will present their point of view on all the candidate PCI project which are to be implemented in their respective MS.
- Stakeholders: direct participation in the meeting
- EC: view on the projects situation (progress, delays)



Reminder: Overview of roles & responsibilities

European Commission

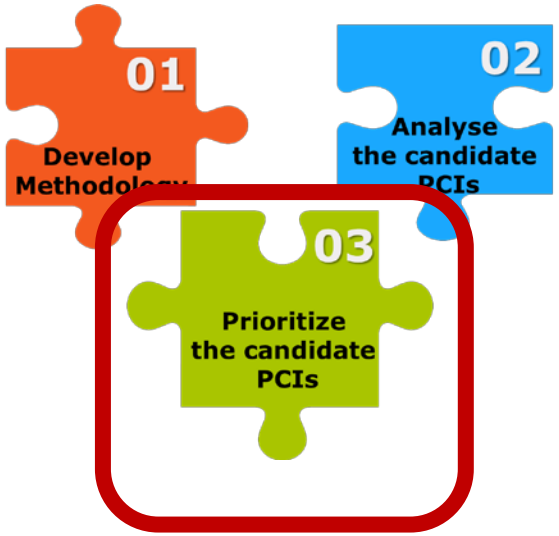


Candidate projects - prioritization

European Commission

- end May/start June 19 – application of the PCI assessment methodology. The resulting projects ranking will delivered only to the RGs members [in line with the TEN-E Regulation]

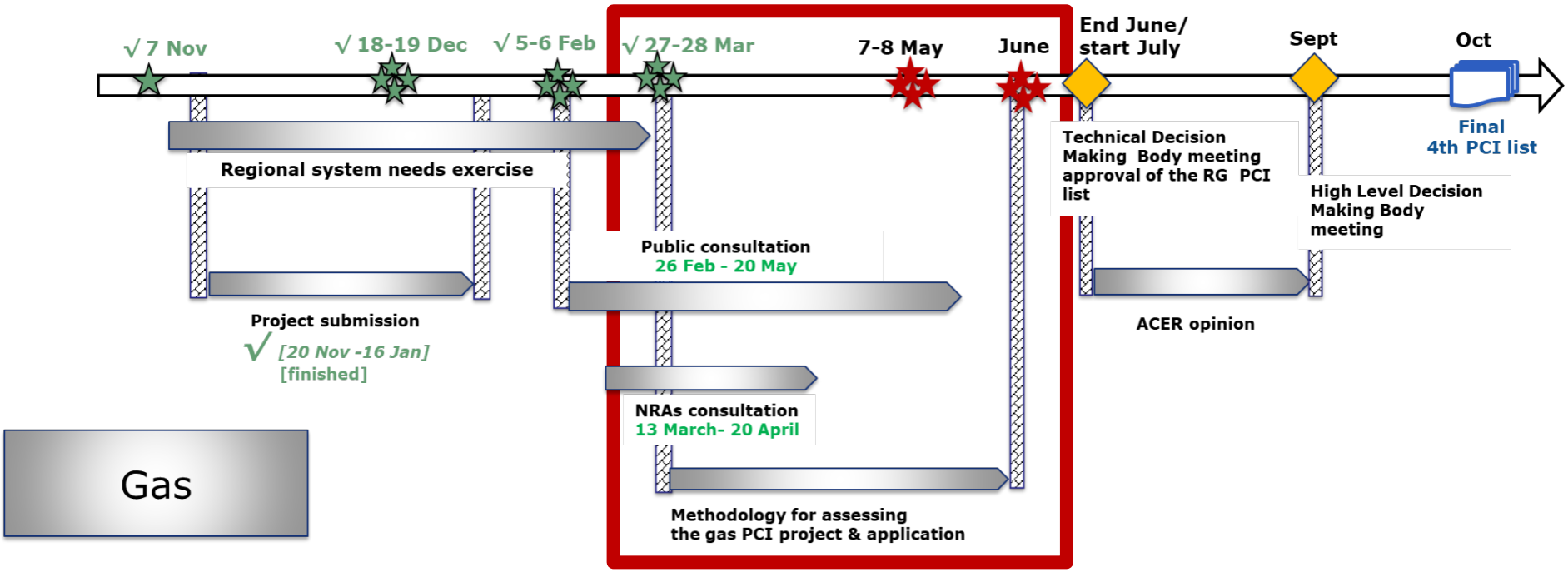
- mid June – RGs meetings to validate the draft regional lists



European Commission

Next steps

Overall process – Next steps



European Commission

Energy