

**OPINION No 19/2019**  
**OF THE EUROPEAN UNION AGENCY**  
**FOR THE COOPERATION OF ENERGY REGULATORS**

**of 25 September 2019**

**ON THE DRAFT REGIONAL LISTS OF PROPOSED**  
**GAS PROJECTS OF COMMON INTEREST 2019**

THE EUROPEAN UNION AGENCY FOR THE COOPERATION OF ENERGY REGULATORS,

Having regard to Regulation (EU) No 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009<sup>1</sup>, and, in particular, Annex III.2(12) thereto,

Having regard to the favourable opinion of the Board of Regulators of 24 September 2019, delivered pursuant to Article 22(5)(a) of Regulation (EU) 2019/942 of the European Parliament and of the Council of 5 June 2019 establishing a European Union Agency for the Cooperation of Energy Regulators (ACER)<sup>2</sup>,

Whereas:

**1. INTRODUCTION**

- (1) According to Article 3 of Regulation (EU) No 347/2013, a Union list of Projects of Common Interest ('PCIs')<sup>3</sup> shall be established every two years, on the basis of the regional lists adopted by the decision-making bodies of the Regional Groups as set out in Annex III.1 to the same Regulation.

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<sup>1</sup> OJ L 115, 25.4.2013, p.39.

<sup>2</sup> OJ L 158, 14.6.2019, p. 22–53.

<sup>3</sup> In this Opinion, the term "proposed PCIs" indicates projects which are included in the document of the draft regional lists submitted to ACER, either in category I or II of that document, and the term "candidate projects" indicates projects for which an application for selection was submitted.

- (2) The draft regional lists of proposed projects falling under the categories set out in Annex II.1 and 2 to Regulation (EU) No 347/2013 drawn up by the Regional Groups shall be submitted to ACER six months before the adoption date of the Union list. The draft list shall be accompanied by the opinions of Member States to whose territory a proposed project does not relate, but on which the proposed project may have a potential net positive impact or a potential significant effect, which were presented to a Regional Group specifying their concerns.
- (3) According to Annex III.2(7) to Regulation (EU) No 347/2013, the NRAs, and if necessary ACER, shall check the consistent application of the criteria and cost-benefit analysis methodology and evaluate the cross-border relevance of PCIs. They shall present their assessment to the Group.
- (4) The draft regional lists and the accompanying opinions shall be assessed by ACER within three months of the date of receipt. ACER shall provide an opinion on the draft regional lists, in particular on the consistent application of the criteria and the cost-benefit analysis across regions. The opinion of ACER shall be adopted in accordance with the procedure referred to Article 22(5) of Regulation (EU) 2019/942.
- (5) ACER, striving to coordinate NRA inputs in view of the requirement provided in recital (3), developed a questionnaire. With the help of the questionnaire, NRAs provided structured assessments of the candidate projects. The assessments were presented to the participants in the meetings of the Regional Groups (“RGs”) held on 7 and 8 May 2019, as NRA input to the evaluation of the candidate projects. These individual or joint NRA assessments were also considered as an input for preparing this Opinion.
- (6) The European Commission presented in the meetings of the Regional Groups held on 27 and 28 June 2019 the ranking and scoring of the candidate projects proposed for inclusion in the draft Union lists of PCIs, to be submitted to the technical Decision Making Body.
- (7) The meeting of the technical Decision Making Body pursued the goal of approving the inclusion of particular PCI candidates in the draft PCI list. On 5 July 2019, the technical Decision Making Body decided which projects shall be included in the draft lists.
- (8) On 12 July 2019, the European Commission submitted to ACER for its opinion the draft regional lists of proposed PCIs (cf. Annex 3 to this Opinion) falling under the categories set out in Annex II.2 to Regulation (EU) No 347/2013. The document contains the draft lists of gas projects per priority corridor (NSI West, NSI East, SGC and BEMIP), as well as lists of “projects still under analysis and consideration for possible inclusion in the regional lists” and of “projects, which did not prove that their overall benefits outweigh costs”.
- (9) The draft list submitted to ACER marks the objections of some Member States voiced during the meeting over certain PCI candidates as “technical opinions” and “reservations”. The document provides information about comments made by certain

Member States regarding proposed projects, as well as, in some instances, information about adjustments made to the assessments of the projects, in particular to the calculations of the indicated costs and benefits. No substantiated reasons as to why Member States did not approve a given project were attached to the document.

## **2. ASSESSMENT OF THE DOCUMENT**

### **2.1.1. Assessment of the process and the methodology used for the drafting of the PCI lists Organisation of the PCI selection process**

(10) ACER welcomes the following positive aspects of the PCI selection process<sup>4</sup>:

- The involvement of various stakeholders, including non-governmental organisations, in the Regional Group meetings. The discussions on individual project proposals enabled all stakeholders to get realistic and up-to-date information about essential project features of most candidate projects.
- The five-week time window (from 13 March 2019 to 25 April 2019) available for NRA consultations<sup>5</sup> and assessments of the proposed PCIs was longer than in previous PCI selection processes. However, ACER notes that the results of project specific CBAs were made available with a delay of one week after the start of the NRA consultation process and that the CBA results did not contain all the information which NRAs need for a thorough assessment of the projects.

(11) In order to improve the efficiency of future PCI selection processes, ACER recommends that:

- the information available in ACER's most recent PCI monitoring report be taken into account, as the report contains information which is newer than the one available in the most recent TYNDP.
- more transparency be provided on the PCI assessment process, where needed. ACER notes that the results of the calculations carried out by the Joint Research Centre (JRC)<sup>6</sup> were presented at the Regional Group meetings held on 27-28 June 2019. However, the results presented at these meetings only

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<sup>4</sup> The [first list of PCIs](#) was published in 2013, the [second](#) one in 2015, and the [third](#) one in 2017.

<sup>5</sup> Pursuant to Annex III, 2(7) to Regulation (EU) 347/2013, NRAs shall check the consistent application of the criteria/cost-benefit analysis methodology and evaluate the cross-border relevance of the PCI candidates. ACER collected the NRA assessments of these aspects, as well as their views on the implementation status, date of commissioning and projects overall description considering the NRAs knowledge, promoters input to the PCI process and the information available in the TYNDP.

<sup>6</sup> As per the PCI assessment methodology, JRC carried out a transformation of the numerical values of the indicators as provided by ENTSOG into project "scores". A presentation on the approach of JRC was made during Regional Group meetings on 27 June 2019.

covered those projects which were selected for inclusion in the draft regional lists, meaning that calculations were not made available to all Regional Groups' members for all projects proposed by the Regional Groups<sup>7</sup>. Besides, due to lack of relevant information (e.g. formulas, procedures, techniques) about the PCI assessment methodology, the calculations could not be reproduced by the members of the Regional Groups.

- the proposed draft PCI list, details of how the assessment was carried out and the justification for the inclusion or exclusion of certain candidate projects from the draft list be provided to all members of the Regional Groups sufficiently in advance of the meeting of the technical Decision Making Body.
- detailed information, including on the complementary evaluations (if any) carried out by the Decision Making Body on top of the assessment carried out in the Regional Groups<sup>8</sup>, be made available to the Regional Groups.
- the necessary documents be circulated sufficiently in advance of every Regional Group meeting, in order to enable the members of the Regional Groups to better prepare for the meetings.

#### 2.1.2. Cooperation Platform activities

- (12) ACER welcomes the discussions with the European Commission and the European Network of Transmission System Operators for Gas (ENTSOG) held in the framework of the Cooperation Platform<sup>9</sup> established for the PCI selection. The Cooperation Platform allowed ACER and ENTSOG to provide input to the European Commission for the purpose of developing draft methodologies for the identification of infrastructure problems and needs<sup>10</sup> and for the assessment of the candidate projects.
- (13) The European Commission led and chaired the proceedings of the PCI Cooperation Platform, and facilitated the ongoing activities during the PCI selection process. ACER regrets that some of the European Commission's requests to ACER and ENTSOG for inputs to the Cooperation Platform were made on a very short notice, and that the level of acceptance of ACER's and NRAs' contributions was below their expectations.

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<sup>7</sup> For example, no calculation results were provided for four LNG projects in BEMIP, and these projects were not ranked.

<sup>8</sup> *Idem.*

<sup>9</sup> See Annex A.1.1 to this Opinion.

<sup>10</sup> The needs constitute an input for establishing whether candidate projects are necessary in at least one of the Priority Corridors, i.e. whether the candidate projects address such identified needs. *Cf.*, for example, "Problems and infrastructure needs in the GAS corridors", overview tables listing the regional needs for the gas TEN-E corridors, 27-28 March 2019, as distributed to the Regional Groups.

- (14) ACER recommends addressing the main topics for discussion in the Cooperation Platform well in advance of deciding on project assessment methods and preparing the Regional Groups meetings in future PCI selection processes. In particular, the draft methodologies for identifying specific regional needs and for the assessment of the PCI candidates should be discussed at least 6 months earlier.

2.1.3. Identification of infrastructure needs and related preparatory activities

- (15) ACER finds that the methodology used for the identification and assessment of infrastructure problems and needs helps to identify whether a candidate project addresses an infrastructure gap, or whether it may lead to redundant capacities in the existing network. ACER positively notes the comparative assessment of projects vs. system development needs foreseen in the methodology for the establishment of the draft PCI list.
- (16) During the development of the methodology for the identification of infrastructure needs in the Cooperation Platform, ACER proposed to include three additional indicators: a market status indicator based on the Herfindahl-Hirschman Index (HHI) that measures the degree of market concentration; a market integration indicator; and an indicator for the need for additional capacity based on security of supply (SoS) considerations. ACER welcomes the inclusion in the needs assessment methodology of the market integration indicator, originating from past ACER Market Monitoring Reports, which takes into account the convergence of the average import prices at the border and the hub procurement prices in each Member State from 2015 to 2018.
- (17) ACER believes that the methodology for assessing market integration needs could be further elaborated by taking into account not only price convergence, but also more specific criteria, such as price correlation, day-ahead transportation tariffs, number of days when day-ahead hub spreads exceed year-ahead tariffs, number of days with sufficient capacity availability, yearly transportation tariffs, number of days when day-ahead hub spreads exceeds daily tariffs, and number of days with high capacity utilisation. ACER recommends looking, in the Cooperation Platform, at possible practical ways in which at least some of these criteria could become part of the methodology for identifying and assessing market integration needs, and eventually incorporate those criteria in the future needs assessment methodology.
- (18) ACER welcomes that the PCI assessment methodology - which was applied after the needs identification - established a clear link between the infrastructure needs and the expected contribution of the project candidates to resolve such needs.
- (19) ACER commends the high level of consistency between the outputs of the methodology for the identification of infrastructure needs and the methodology for assessing PCI candidate projects, achieved by the use of the same indicators (identical to those of the TYNDP 2018). In general, and also in view of the possibility to replicate the results of the assessment, ACER stresses that – even though the assessment is based on TYNDP 2018 project-specific CBA (PS-CBA) data - the

project information contained therein has several shortcomings. Specifically in view of the purpose of the PCI assessment, in the PS-CBA:

- The monetary benefits provided are expressed on a yearly basis and not discounted. As there is no information on the distribution of benefits over time, it is not possible to calculate the overall discounted value of the benefits.
- The same non-availability of discounted values applies to costs, in particular regarding operational expenditure. Moreover, some project promoters did not provide - or did not allow a full disclosure of - their projects' cost information.
- It is not always possible to have a clear picture of the distribution of benefits across the Member States impacted by the project, as benefits are usually provided at an aggregated level. Hence, it is not clear how the project will be assessed against a certain need of a specific Member State.

(20) ACER notes that the TYNDP indicators used by ENTSOG, which were the only ones on which the identification of needs relied, are in some cases abstract and stakeholders find them difficult to understand. Besides, the TYNDP indicators may not adequately capture the contribution of the candidate PCIs to sustainability. Furthermore, the absence of as full monetisation of the expected benefits of projects as possible renders the CBA not fit for the purpose of correctly comparing all the costs and all the expected benefits associated with the projects' planned implementation. Moreover, the system-wide modelling used for arriving at project assessments relies solely on tools and analytical processes implemented by ENTSOG, which cannot be replicated by any other entity.

(21) ACER reiterates its recommendation that an assessment of infrastructure needs be retained in the Regional Groups and improvements for the assessment of needs be designed for the future rounds of PCI selection.

(22) ACER notes that the process of identifying the infrastructure needs did not include an assessment of alternative ways for resolving a specific need, such as regulatory or market based measures, rather than building new infrastructure. Such measures could, for example, include better enforcement of the internal market rules on congestion management, capacity use, or the setting of tariffs at levels incentivising - or at least not deterring - more cross-border flows.

#### 2.1.4. Candidate projects assessment methodology

(23) The European Commission's methodology for assessing the candidate gas PCI projects was circulated to the Regional Groups on 17 June 2019 for comments by 25 June 2019. ACER regrets that ACER and ENTSOG did not have a chance to review and comment on the draft assessment methodology before it was circulated to the Regional Groups, and that the time available for providing comments was rather short.

ACER notes that the process of developing and finalising the PCI assessment methodology was delayed by more than a month, possibly leading to the late circulation of the methodology.

- (24) ACER notes that the PCI assessment methodology used for the scoring and the ranking of the candidate projects only used non-monetised indicators, i.e. the methodology relies entirely on multi-criteria analyses and assessments, and completely bypasses the capabilities of the existing 2<sup>nd</sup> CBA Methodology to monetise benefits, as well as any already available information about monetised benefits. Even when taking into consideration the serious limitations of the 2<sup>nd</sup> CBA Methodology for monetising benefits, the reliance solely on non-monetised indicators obscures a fundamental feature of the proposed projects, namely the balance of costs and benefits which projects are expected to bring. Furthermore, ACER regrets that the Economic Performance Indicators of projects were not always available to the Regional Groups.
- (25) Furthermore, the 2<sup>nd</sup> CBA Methodology should be of such nature and implementation modality as to allow all stakeholders independently to replicate the CBA results. ACER proposes that the PCI assessment methodology contain clear procedures and techniques allowing Regional Groups members independently to replicate its results, should they wish to do so.
- (26) Given some deficiencies in the application of the PS-CBA, e.g., the consideration of LNG as a single supply source or ignoring cross border tariffs in the simulations, ACER recommends making relevant adjustments in the PS-CBA, in order to address these flaws in future PCI selection rounds. Failure to make such adjustments may give advantages to some types of PCI candidates vs. other types of PCI candidates in the assessment, e.g. pipelines vs. LNG or storage, or vice versa, and thus lead to inconsistencies in the assessment of projects involving different types of infrastructure.
- (27) ACER notes that in the current PCI selection process, the European Commission discretionarily established the thresholds which projects must meet or exceed in order to be eligible for inclusion in the draft PCI list, after the ranking of the projects and without disclosing the way in which the thresholds were calculated. ACER recommends that information on thresholds (or the rules for their determination) be provided to the Regional Group members in advance of the approval of the PCI assessment methodology.
- (28) ACER notes that the contribution of the PCI candidate projects to sustainability in general and to meeting the climate change policy goals of the European Union in particular, is not quite clear. ACER believes that the preliminary assessment provided by ENTSOG, which assigned a positive sustainability benefit to each and every candidate project, is tenable only under the specific assumptions that gas will be a substitute of more polluting fuels in the European Union's primary energy mix, and also that the total volume of consumed gas will be within a range that ensures that overall greenhouse gas emissions resulting from gas use will stay below the European Union's policy targets.

- (29) ACER acknowledges the practical difficulties of assessing the sustainability effects of infrastructure, rather than those deriving from the use of the fuel carried by that infrastructure. However, ACER notes that the approach adopted in the PCI selection process, namely of not using the sustainability assessment provided by ENTSOG and not suggesting any alternative, is suboptimal, as it leads to a large lacuna in the assessment of important merits or disadvantages of the projects. The absence of a sound assessment of the projects' contribution to sustainability leads to great uncertainty and doubts about the viability (or even the need) for the projects in the long run.
- (30) ACER invites ENTSOG to consider proposals for analytical tools and procedures which will enable proper assessments of the contribution of proposed PCI projects to sustainability, in particular to the transition to a carbon-neutral future by implementing renewable gas projects and making sure that infrastructure can handle such gases in sufficient volumes in a competitive and market-oriented way. ACER recommends the European Commission to foresee the relevant data collection and provision tools, which should enable all stakeholders, including NRAs, TSOs, and ENTSOG, to assess the impact of energy supply-side and demand-side scenarios on various proposed projects, and the individual contribution of the proposed PCIs to sustainability.
- (31) When assessing a project's contribution to an identified infrastructure need (e.g., in the case of anticipated future congestions), the potential effects of the project on existing infrastructure that could serve the same need should be examined. In particular, ACER recalls its view expressed in its Opinion on ENTSOG's TYNDP 2017<sup>11</sup>, namely that "the Agency recommends that the existing infrastructure and its use, including the level of physical congestion, be also analysed in the TYNDP. This level of use should be one baseline against which proposed projects should be analysed, in order to avoid the risk of stranded investments." ACER reiterates that an assessment of the potential impacts of the candidate projects on the use of the existing infrastructure, in terms of flows and the level of bookings of impacted infrastructure, would provide valuable information, and recommends the assessment of such impacts in future PCI selection rounds.
- (32) ACER recommends that the European Commission provide sufficient time to discuss the draft PCI assessment methodology in the Cooperation Platform, and, once the methodology becomes available, allow sufficient time to NRAs to become acquainted with it ahead of the Regional Groups meetings.
- (33) ACER recalls its view that the ENTSOG TYNDP inputs should be improved, and in particular the application of the PS-CBA, so that the TYNDP would produce an output for each project which unambiguously demonstrates whether project's benefits exceed

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<sup>11</sup> Cf. [Agency Opinion No 06/2017 on the ENTSOG Draft Ten-Year Network Development Plan 2017](#)

its costs in monetary terms, and indicate the economic value of all the net benefits individually for all proposed projects on a comparable basis.

## 2.2. Assessment of the proposed PCIs in the draft Regional Lists

- (34) During the NRAs consultation of candidate PCIs which took place between 13 March and 25 April 2019, NRAs assessed 39 out of 56 PCI candidates. For 25 PCI candidates, NRAs provided coordinated assessments (i.e., at least two NRAs providing a coordinated assessment of the same project).
- (35) The NRAs assessed the presence of the PCI candidates in the National Development Plans, the cross border relevance of the candidates, the compliance with the policy criteria provided in Article 4(2)(b) of Regulation (EU) No 347/2013, the consistency of the cost and benefit data provided by the project promoters, the qualitative analysis, and the estimated commissioning dates.
- (36) ACER welcomes the fact that the draft PCI list contains a much smaller number of projects in comparison to the 3<sup>rd</sup> PCI list, with the number being more than halved. ACER notes that the draft PCI list is now about 75% shorter than the 1<sup>st</sup> PCI list. ACER's findings in the course of its monitoring of the implementation of the PCI lists consistently provide evidence that only a small fraction of the proposed projects actually proceed to implementation as initially proposed, and that many of the projects are repeatedly postponed or rescheduled, which means that a number of projects do not serve a clearly present need. ACER appreciates the application of project assessment and ranking methodologies which now foresee stricter criteria, which were used across all the Regional Groups. ACER believes that such an improved and more critical approach to establishing the draft PCI list helps to avoid potential redundancy in gas infrastructure, while, at the same time, focusing on proposed projects which can address identified needs in an efficient way.
- (37) ACER regrets that not all the PCI candidates were subject to the same assessment and ranking process for the establishment of regional lists and the draft Union list of PCIs. The capacity increment of project TRA-N-161 (an investment item on the Spanish side) does not match the capacity increment on the other side of the interconnector by the project with investment item code TRA-N-252 (the firm capacity increment submission is 0 on the French side). As a consequence, after the application of the "lesser-of rule", the resulted firm capacity increment of the interconnector is 0 for the project group WEST-06 (known as "STEP", which includes both investment items), and consequently, the project group has not been modelled by ENTSOG as part of the PS-CBA modelling process in the second round of 2019 PCI selection process. As there was no ENTSOG CBA available for the project, it was not assessed within the

same process and was evaluated separately by the European Commission<sup>12</sup>. ACER notes that all projects should be evaluated on a common basis.

- (38) ACER recalls the importance of making the Economic Performance Indicators available to Regional Groups, in order to enable NRAs to carry out an in-depth assessment of the candidate PCIs. ENTSOG and project promoters should provide complete economic performance data in a timely manner, before the start of the NRA assessments.
- (39) ACER finds that the 2<sup>nd</sup> CBA Methodology and its application should be significantly improved, in particular regarding the maximum possible monetisation of the benefits, the provision of Economic Performance Indicators along with the CBA results, considering the results of ACER's study on the cost of disruption of gas supply (CoDG) in Europe for better monetising security of supply benefits, and other long-term improvements as outlined by ACER in its Opinion on the draft gas 2<sup>nd</sup> CBA Methodology.
- (40) ACER reiterates its recommendation provided in previous PCI selection processes, namely that the final assessments of candidate projects should be based on a PCI assessment methodology that takes into consideration cost data, monetised benefits, Economic Performance Indicators, the results of ACER's PCI monitoring reports and NRA project assessments,

HAS ADOPTED THIS OPINION:

1. ACER notes the considerable improvements demonstrated in the preparation of the draft Union PCI list in terms of:
  - Overall procedure and involvement of stakeholders, also via the Cooperation Platform;
  - Identification of infrastructure needs;
  - Quality of methodologies used for CBA;
  - Quality and selectiveness of project assessments;
  - Methods used for the ranking of candidate projects.
2. ACER positively notes that the outcome of the process, also in terms of a much shorter and more focused draft PCI list, clearly demonstrates the presence of such improvements.

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<sup>12</sup> European Commission mandated Pöyry to produce a “project specific” CBA (PS-CBA) for STEP consistent with the CBA methodology set out by ENTSOG at that moment. The CBA was published in November 2017 and it is available on the EC webpage: <https://publications.europa.eu/en/publication-detail/-/publication/13aad129-4cea-11e8-be1d-01aa75ed71a1/language-en>

3. However, ACER is of the view that a number of shortcomings are still present, regardless of the consistency of the application of the PCI selection methodology, criteria, and cost-benefit analysis, since these shortcomings are pertinent to the quality of the selection and ranking methodology and criteria and to the features of the cost-benefit analysis methodology, rather than to the consistency of their application. Such shortcomings include, in particular:
- Lack of ability to monetise all benefits to the maximum possible extent and not using monetised benefits;
  - Not properly considering the merits of the projects in terms of potential contribution to sustainability;
  - Lack of full transparency of needs and project assessment methodologies;
  - Non-replicability of the results of the application of the methodologies;
  - Discretionary setting of thresholds which projects must meet in order to be selected for the draft PCI list;
  - Not applying the assessment methodology in the same manner to all PCI candidates.
4. In particular, ACER notes that the quality of the 2<sup>nd</sup> CBA Methodology and the modality of its application are still lacking, as indicated in ACER's Opinion on the 2<sup>nd</sup> CBA methodology for gas<sup>13</sup>. ACER also notes that the method for the calculation of the Economic Performance Indicators has significant shortcomings and these Indicators are not applied in a fully consistent manner across all corridors.
5. ACER recommends the development and the application in future PCI selection rounds of methods, procedures and techniques for the proper assessment of the projects' contribution to sustainability, including in view of the long-term policy de-carbonisation goals of the European Union.
6. ACER underlines that the European Commission should continue to work on improving the transparency of the process, the quality of the methodologies and their use in the future PCI selection processes, also taking into account, to the extent possible, ACER's recommendations as provided in this Opinion.
7. ACER strongly recommends taking immediate further steps leading to the remedy of the identified shortcomings, in particular in view of the fact that the duration of the project life cycle from inception to decommissioning typically exceeds decades. In practical terms, making the right or the wrong choice now may have a lasting impact on the quality and adequacy of the European Union's gas infrastructure and markets, on the value provided to

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<sup>13</sup> Cf.

[https://www.acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Opinions/Opinions/ACER%20Opinion%2015-2017.pdf](https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Opinions/Opinions/ACER%20Opinion%2015-2017.pdf)

consumers and to the public at large, and possibly facilitate or hamper the attainment of the climate goals of the European Union in the long run. For this reason, achieving a passable quality in the consistent application of the criteria and the cost-benefit analysis across regions in the PCI selection may not suffice any more in future rounds of PCI selection: improved consistency is required without delay, even if the required improvements may be exacting in terms of effort and stakeholder involvement.

8. In view of the overall balance between the achieved improvements and the remaining shortcomings, ACER is of the view that the European Commission's draft PCI list generally meets the objectives of Regulation (EU) No 347/2013 and Regulation (EC) No 715/2009 but remains insufficiently selective in terms of consistent application of the criteria and the cost-benefit analysis across regions. ACER recommends the prompt initiation of work leading to the elimination of the identified shortcomings from future PCI selection rounds.

This Opinion is addressed to the European Commission.

Done at Ljubljana on 25 September 2019.

**- SIGNED -**

*For the Agency*  
*Director ad interim*  
Alberto POTOTSCHNIG

Annexes:

Annex I – Process and main activities for establishing the draft PCI list

Annex II – NRAs assessments of candidate projects

Annex III – The draft regional lists and NRAs' comments on the individual projects

## ANNEXES

### **Annex 1. Process and main activities for establishing the draft PCI list**

#### A.1.1 PCI Cooperation Platform

The Cooperation Platform was the main forum of discussion during the PCI selection process between the European Commission, ACER, NRAs, and ENTSOG, As a result of the discussions, concrete proposals were presented to the Regional Groups for use in their decision-making. The participants in the Cooperation Platform regularly discussed bilaterally or trilaterally key issues during numerous teleconferences held between January 2019 and July 2019. In many instances, the participants in the Cooperation Platform expressed divergent views. In these instances, the final proposals to the Regional Groups were formulated by the European Commission.

The joint work in the Cooperation Platform facilitated the development of a methodology for the identification of infrastructure needs and of the methodology for the assessment of PCI candidates.

#### A.1.2 Identification of infrastructure needs

The indicators used to identify the infrastructure needs were the following:

##### *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 [differences between import prices at the borders and the hub procurement prices]

ACER considers such an exercise essential for identifying those regions and Member States where only infrastructure developments can solve an existing bottleneck and, consequently, where project promoters are expected to put forward project proposals. In order to facilitate the assessment of the proposed projects, promoters had to indicate, in the course of the call for PCI applications, which infrastructure need(s) their candidate project would serve.

#### A.1.3 Process schedule and main activities

The European Commission convened an introductory and 5 regular meetings of the gas Regional Groups between 7 November 2018 and 28 June 2019. The milestones of the PCI selection process are highlighted in the table below.

**Table 1 - Main activities carried out in the framework of the Regional Groups in the PCI selection process**

| Date                | Milestone / meeting  |
|---------------------|--|
| 7 November 2018     | PCI cross-regional gas meeting - PCI process (2018 – 2019) in view of preparing the 4th Union list   |
| 20 November 2018    | Opening call for gas projects to be submitted as candidates for the 4th European Union PCI list  |
| 18-19 December 2018 | Meetings of the TEN-E Regional Groups on gas - identification of system needs per region   |
| 16 January 2019     | Deadline for project promoters to submit their PCI applications through ENTSOG's online tool.  |
| 5-6 February 2019   | Meetings of the TEN-E Regional Groups on gas – specific country needs and presentation of the methodology for the identification of system needs   |
| 26 February 2019    | Start of the public consultation on PCI candidates list in gas   |
| 13 March 2019       | Start of NRA assessments of the consistent application of the criteria/CBA methodology and the evaluation of the cross-border relevance of the PCI candidates  |
| 20 March 2019       | Distribution of the PS-CBA results by ENTSOG   |
| 27-28 March 2019    | Meetings of the TEN-E Regional Groups on gas: presentation on the draft final methodology for the identification of system needs and regional needs identification and validation                                  |
| 25 April 2019       | Deadline for NRA assessments of the PCI candidate projects   |
| 7-8 May 2019        | Meetings of the TEN-E Regional Groups on gas: presentation of the draft methodology for the assessment of the candidate projects to the members of the Regional Groups and 360° scrutiny of the candidate projects |
|                     | Formal period for project promoters to complete the PS-CBA by providing cost data and other project information (e.g. qualitative analysis)  |
| 29 May 2019         | End of the public consultation on the candidate projects   |
| 27-28 June 2019     | Meetings of the TEN-E Regional Groups on gas: final PCI assessment methodology presentation, ranking of PCI candidate projects and a proposal for including projects in the draft PCI lists                        |
| 5 July 2019         | Meetings of the technical Decision Making Bodies, drawing up the draft regional lists  |
| 12 July 2019        | Draft regional lists submitted to ACER   |

#### A.1.4 ENTSOG's System Wide and the Project-specific CBA in the context of the PCI selection

ENTSOG provided the PS-CBA results to NRAs on 20 March 2019. The results were based on the application of the 2<sup>nd</sup> CBA Methodology<sup>14</sup>. Depending on the maturity of each project, the PS-CBA assessment evaluated the impact of projects under different infrastructure levels<sup>15</sup>, namely the “low infrastructure level” (existing infrastructure, as well as projects with final investment decision – FID - taken) and the “advanced infrastructure level”.

The impact of a given project was assessed by comparing the situations “with the project” and “without the project” (“incremental approach”) for each considered infrastructure level and for each demand scenario. Generally, benefits generated by projects tended to be higher in the low infrastructure level where the infrastructure grid is less developed (consisting of only existing infrastructure and FID projects), whereas in the case of the advanced infrastructure level, the infrastructure gaps may be already (partially) filled by possible competing projects.

ENTSOG's 2<sup>nd</sup> CBA Methodology is essentially a multi-criteria analysis method which combines some monetised benefits with non-monetised or quantitative elements. Benefits have been calculated for the years 2020, 2025, 2030 and 2040.

For the purpose of the PCI selection process, PCI candidates were assessed only for the timeframe until 2030, in line with the EU 2030 targets and consistent with the electricity PCI exercise. The assessment of PCI candidates was based on benefits calculated by using the TYNDP 2018 “Distributed Generation” scenario. The infrastructure level used for the project assessments was the “low infrastructure level”. In the case of competing projects, the results calculated by using the advanced infrastructure level were considered.

Ultimately, only the non-monetised indicators from the PS-CBA were taken into account in a multi-criteria analysis and candidate project assessments. According to the European Commission, the results for monetised benefits tend to show too high benefits, which could be an issue of how the CBA methodology had been applied, or an issue of its quality in the first

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<sup>14</sup>[https://www.entsog.eu/sites/default/files/2019-03/1.%20ADAPTED\\_2nd%20CBA%20Methodology\\_Main%20document\\_EC%20APPROVED.pdf](https://www.entsog.eu/sites/default/files/2019-03/1.%20ADAPTED_2nd%20CBA%20Methodology_Main%20document_EC%20APPROVED.pdf)

<sup>15</sup> ENTSOG uses different infrastructure configurations (called “levels”) when considering the available infrastructure on the basis of which the PCI candidates are assessed at system-wide level in order to identify how they mitigate the investment gaps:

1. The “low infrastructure level” considers only the existing infrastructure and FID projects; it is the reference point for the identification of infrastructure needs.
2. The “advanced infrastructure level” considers the existing infrastructure, FID projects, and “advanced” projects. This level represents a certain configuration of the infrastructure with reasonable confidence, therefore providing a meaningful basis for the energy system-wide assessment of the concerned projects.

instance. In ACER's view, assessing the benefits by only using non-monetised indicators essentially makes it impossible to demonstrate that a given project's benefits exceed its cost.

#### A.1.5 TYNDP related issues – cost data, distinction of the TYNDP and the PCI selection process

As in past opinions, ACER reiterates that cost estimates for the candidate projects<sup>16</sup> constitute an essential part of the project attributes, given the requirement to demonstrate that a candidate project's benefits exceed its costs. As the potential overall benefits of the project must outweigh its costs<sup>17</sup>, no substantive assessment of the fulfilment of this criterion can be carried out without a comparison of the project's monetised benefits and its cost.

Regarding the criteria established in the Regulation which requires that a PCI candidate be included in the TYNDP, ACER points out that being included in ENTSOG's TYNDP is a necessary, but not a sufficient condition for a project to be put forward as a PCI candidate. PCI candidates must contribute significantly to optimising EU's gas network development by addressing clearly present needs, to the Union's overall energy and climate policy objectives, and to the creation and the efficient functioning of the single gas market.

#### A.1.6 Establishment of project groups for the PS-CBA, treatment of maturity and of complementary and competing projects

As in the 2017 PCI selection process, candidate projects were grouped so that the CBA could assess the combined benefits for those projects which are complementary<sup>18</sup> in nature. The grouping was finalised and circulated to NRAs on 12 March 2019. NRA assessments of the consistent application of the criteria and the CBA methodology<sup>19</sup>, and the evaluation of the cross-border relevance of candidate projects were carried out on the basis of these project groups.

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<sup>16</sup> Including both the total investment costs up to the commissioning of the project and the entire lifetime costs.

<sup>17</sup> Cf. Article 4(1b) of Regulation (EU) No 347/2013.

<sup>18</sup> This includes projects which are dependent on each other (i.e. enabler and enabled project) or which mutually enhance each other's benefits. Competing projects were not included in the same group.

<sup>19</sup> Cf. further details of the NRA assessments in Annex 2.

## Annex 2. NRA assessment of candidate projects<sup>20</sup>

In line with the provisions of Annex III 2(7) to Regulation (EU) No 347/2013, the NRAs cooperating in the framework of ACER checked the consistent application of the criteria and the CBA methodology and evaluated the cross-border relevance of the proposed projects. The NRA checks and evaluations were carried out between 13 March and 25 April 2019. The scope of the assessments covered the candidate projects and project groups. The summary of the assessment results was communicated to the Regional Groups on 7-8 May 2019<sup>21</sup>.

The assessment included the following main elements:

- Presence of the candidate projects in the National Development Plans of the hosting Member States;
- Compliance with the criteria of cross-border relevance<sup>22</sup>, in line with Article 4.1(c) of Regulation (EU) No 347/2013;
- Compliance with the specific policy criteria<sup>23</sup>, in line with Article 4.2(b) of Regulation (EU) No 347/2013;
- Consistency of the indicated capital expenditure (CAPEX) and operational expenditure (OPEX) data of the project and the information available to the NRA from other sources;
- Consistency and validity of the simulation results and the Economic Performance Indicators<sup>24</sup>;
- Consistency of the qualitative analysis;
- Whether the overall benefits to be delivered by the project outweigh its costs;
- NRAs' own assessment of the realism of the indicated commissioning date; and
- Objections (if any) to the inclusion of the candidate project in the draft regional list.

The NRAs examined 39 (70%) out of the 56 candidate projects and found that all meet at least one of the specific policy criteria, except for three cases<sup>25</sup> where NRAs had divergent views.

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<sup>20</sup> The results in this section cover all candidate projects that were grouped and communicated to the Regional Groups on 7 May 2019, thus including a broader scope of projects than those on the draft regional lists.

<sup>21</sup> ACER shared the detailed data table including the NRA assessment with the European Commission.

<sup>22</sup> These criteria scrutinise whether the candidate project involves at least two Member States by directly crossing the border between them, or it is located in one Member State but has a significant cross-border impact, or it crosses the border of an EU Member State and a country of the European Economic Area.

<sup>23</sup> These are: security of supply, market integration, competition and sustainability.

<sup>24</sup> Including net present value, the benefit-to-cost ratio and the sensitivity of the cost figures, where applicable, due to non-availability of the Economic Performance Indicator data for NRAs, unless direct requests for such data were made by the NRAs to project promoters.

<sup>25</sup> Including the following proposed PCIs: EAST\_12a (Slovenian-Hungarian interconnector), EAST\_12b (Slovenian-Hungarian interconnector), EAST\_04 (known as "BACI").

In one instance (WEST\_06, STEP), two NRAs were of the view that the project does not meet any specific criterion.

Regarding cross-border relevance, NRAs found that three projects<sup>26</sup> did not meet the relevant criteria of Article 4(1)(c) of the Regulation (EU) No 347/2013.

Five of the candidate projects are not included in the NDPs of one or more hosting Member State(s), nine are only partially included in the NDPs.

By looking at other elements, NRAs confirmed for 19 of the candidate projects that the data for CAPEX is consistent.

In 30 cases, NRAs saw as credible the candidate projects' specific simulation results identifying benefits and the description of the qualitative benefits.

As regards the planned commissioning dates, NRAs estimated that 20 of the assessed projects could be completed by the indicated deadline. For 7 of the assessed projects, NRAs indicated that their commissioning could realistically take place at a later date than the one indicated by the promoter, and for 6 projects the NRAs were unable to assess the credibility of the indicated commissioning date.

Overall, the results demonstrate that more than half (30) of the candidate projects received a positive evaluation by the respective NRAs. The second most frequent reply of NRAs was that they are not able to assess a specific criterion, for instance due to lack of data. ACER notes that Economic Performance Indicators were not provided by ENTSOG to NRAs, and that instead NRAs needed to request certain data directly from the promoters if the NRAs wished properly to assess the candidate project. Consequently, in many instances the NRAs were unable to assess the projects or responded that no data had been provided.

### **NRA assessments by corridor**

| <b>Corridor</b> | <b>Number of candidate projects</b> |              |  |
|-----------------|-------------------------------------|--------------|--|
|                 | <b>NRA assessments</b>              | <b>Total</b> | <b>Assessments in coordination with other NRAs</b> |
| <b>NSI West</b> | <b>8</b>                            | <b>9</b>     | <b>7</b>   |
| <b>NSI East</b> | <b>20</b>                           | <b>24</b>    | <b>9</b>   |
| <b>SGC</b>      | <b>6</b>                            | <b>8</b>     | <b>6</b>   |
| <b>BEMIP</b>    | <b>5</b>                            | <b>15</b>    | <b>3</b>   |
| <b>TOTAL</b>    | <b>39</b>                           | <b>56</b>    | <b>25</b>  |

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<sup>26</sup> BEMIP\_03, NSIWEST\_11 and NSIWEST\_13.

NRAs did not provide assessments for: WEST\_02, EAST\_08, EAST\_10, EAST\_11, EAST\_16, EAST\_19 (partially), SGC\_06, SGC\_08, BEMIP\_01a, BEMIP\_01b, BEMIP\_03a, BEMIP\_03b (partially), BEMIP\_06, BEMIP\_07, BEMIP\_08, BEMIP\_10, BEMIP\_11 and BEMIP\_12.

### Consistency of CAPEX figures

| Corridor     | Number of assessed candidate projects |              |                  |                  |                         |
|--------------|---------------------------------------|--------------|------------------|------------------|-------------------------|
|              | Consistent                            | Inconsistent | No data provided | Unable to assess | Divergent views of NRAs |
| NSI West     | 3                                     | 0            | 0                | 5                | 0                       |
| NSI East     | 11                                    | 4            | 1                | 0                | 3                       |
| SGC          | 4                                     | 0            | 0                | 3                | 0                       |
| BEMIP        | 4                                     | 0            | 0                | 1                | 0                       |
| <b>TOTAL</b> | <b>22</b>                             | <b>4</b>     | <b>1</b>         | <b>9</b>         | <b>3</b>                |

Divergent views of NRAs were expressed for EAST\_12a, EAST\_12b and EAST\_17.

### Consistency of OPEX figures

| Corridor     | Number of assessed candidate projects |              |                  |                  |                         |
|--------------|---------------------------------------|--------------|------------------|------------------|-------------------------|
|              | Consistent                            | Inconsistent | No data provided | Unable to assess | Divergent views of NRAs |
| NSI West     | 3                                     | 0            | 0                | 5                | 0                       |
| NSI East     | 8                                     | 2            | 2                | 5                | 2                       |
| SGC          | 4                                     | 0            | 0                | 2                | 1                       |
| BEMIP        | 4                                     | 0            | 0                | 1                | 0                       |
| <b>TOTAL</b> | <b>19</b>                             | <b>2</b>     | <b>2</b>         | <b>13</b>        | <b>3</b>                |

Divergent views of NRAs were expressed for EAST\_12a, EAST\_12b and SGC\_03a.

**Specific simulation results (identifying benefits)**

| Corridor     | Number of assessed candidate projects |              |                  |                         |                  |                         |
|--------------|---------------------------------------|--------------|------------------|-------------------------|------------------|-------------------------|
|              | Credible                              | Not credible | No data provided | Group not mature enough | Unable to assess | Divergent views of NRAs |
| NSI West     | 2                                     | 0            | 1                | 0                       | 5                | 0                       |
| NSI East     | 17                                    | 0            | 1                | 0                       | 0                | 1                       |
| SGC          | 6                                     | 0            | 0                | 0                       | 0                | 1                       |
| BEMIP        | 5                                     | 0            | 0                | 0                       | 0                | 0                       |
| <b>TOTAL</b> | <b>30</b>                             | <b>0</b>     | <b>2</b>         | <b>0</b>                | <b>5</b>         | <b>2</b>                |

Divergent views of NRAs were expressed for EAST\_04 and SGC\_03a.

**Economic Performance Indicators (NPV, IRR, B/C ratio)**

| Corridor     | Number of assessed candidate projects |              |                  |                         |                  |                         |
|--------------|---------------------------------------|--------------|------------------|-------------------------|------------------|-------------------------|
|              | Credible                              | Not credible | No data provided | Group not mature enough | Unable to assess | Divergent views of NRAs |
| NSI West     | 2                                     | 0            | 3                | 0                       | 3                | 0                       |
| NSI East     | 8                                     | 0            | 3                | 0                       | 4                | 4                       |
| SGC          | 2                                     | 0            | 5                | 0                       | 0                | 0                       |
| BEMIP        | 0                                     | 0            | 0                | 0                       | 5                | 0                       |
| <b>TOTAL</b> | <b>12</b>                             | <b>0</b>     | <b>11</b>        | <b>0</b>                | <b>12</b>        | <b>4</b>                |

Divergent views of NRAs were expressed for EAST\_04, EAST\_12a, EAST\_12b and EAST\_17.

**Qualitative analysis seen as credible (i.e. apparently reasonable, valid, truthful)**

| Corridor     | Number of assessed candidate projects |              |                  |                  |                         |
|--------------|---------------------------------------|--------------|------------------|------------------|-------------------------|
|              | Credible                              | Not credible | No data provided | Unable to assess | Divergent views of NRAs |
| NSI West     | 2                                     | 2            | 1                | 3                | 0                       |
| NSI East     | 17                                    | 0            | 0                | 1                | 1                       |
| SGC          | 6                                     | 0            | 0                | 0                | 1                       |
| BEMIP        | 5                                     | 0            | 0                | 5                | 0                       |
| <b>TOTAL</b> | <b>30</b>                             | <b>2</b>     | <b>1</b>         | <b>4</b>         | <b>2</b>                |

Divergent views of NRAs were expressed for EAST\_04 and SGC\_03a.

NRAs did not consider the analysis as credible for WEST\_06 and WEST\_12.

**Do benefits outweigh the costs?**

| Corridor     | Number of assessed candidate projects |              |                  |                         |                  |                         |
|--------------|---------------------------------------|--------------|------------------|-------------------------|------------------|-------------------------|
|              | Credible                              | Not credible | No data provided | Group not mature enough | Unable to assess | Divergent views of NRAs |
| NSI West     | 2                                     | 2            | 1                | 0                       | 3                | 0                       |
| NSI East     | 13                                    | 0            | 0                | 0                       | 5                | 1                       |
| SGC          | 6                                     | 0            | 0                | 0                       | 0                | 1                       |
| BEMIP        | 5                                     | 0            | 0                | 0                       | 0                | 0                       |
| <b>TOTAL</b> | <b>26</b>                             | <b>2</b>     | <b>1</b>         | <b>0</b>                | <b>8</b>         | <b>2</b>                |

Divergent view of NRAs were expressed for EAST\_04 and SGC\_03a.

Benefits are lower than costs in the case of WEST\_06 and NSIWEST\_12.

**NRAs assessment of the date of commissioning indicated by project promoters**

| Corridor     | Number of assessed candidate projects |          |          |                   |                  |                         |
|--------------|---------------------------------------|----------|----------|-------------------|------------------|-------------------------|
|              | In the same year                      | Sooner   | Later    | Not likely at all | Unable to assess | Divergent views of NRAs |
| NSI West     | 2                                     | 0        | 1        | 1                 | 4                | 0                       |
| NSI East     | 12                                    | 0        | 4        | 0                 | 1                | 2                       |
| SGC          | 1                                     | 0        | 2        | 0                 | 1                | 3                       |
| BEMIP        | 5                                     | 0        | 0        | 0                 | 0                | 0                       |
| <b>TOTAL</b> | <b>20</b>                             | <b>0</b> | <b>7</b> | <b>1</b>          | <b>6</b>         | <b>5</b>                |

Divergent views of NRAs were expressed for EAST\_04, EAST\_17, SGC\_01a, SGC\_01b and SGC\_03a

**Do NRAs object to the inclusion of the project in the final PCI list?**

| Corridor     | Number of assessed candidate projects |           |                  |                         |
|--------------|---------------------------------------|-----------|------------------|-------------------------|
|              | Yes                                   | No        | Unable to assess | Divergent views of NRAs |
| NSI West     | 2                                     | 4         | 2                | 0                       |
| NSI East     | 0                                     | 15        | 1                | 3                       |
| SGC          | 0                                     | 6         | 0                | 1                       |
| BEMIP        | 0                                     | 5         | 0                | 0                       |
| <b>TOTAL</b> | <b>2</b>                              | <b>30</b> | <b>3</b>         | <b>4</b>                |

Divergent views of NRAs were expressed for EAST\_04, EAST\_12a, EAST\_12b and SGC\_03a.

Objections were raised for WEST\_06 and NSIWEST\_12.

### Annex 3. Draft regional lists<sup>27</sup> and NRA comments on individual projects

#### 1. NSI West Gas

| No. | Project   | NRA comments   |
|-----|---|--|
| 1   | Adaptation from low to high calorific gas in France and Belgium           | CRE and CREG: This project is of major importance for the region and for the integration of the EU gas market in general. It is part of ENTSOG's reference infrastructure grid.  |
| 2   | Interconnection Spain-Portugal (3rd IP, 1st phase)                        | <p>ERSE – This project was included in the last NDP proposal presented by the Portuguese TSO, but was not included on the NDP approved by the Government in 2018. This project is not needed for n-1 security criteria.</p> <p>CNMC- On the Spanish side, the project is not included in the NDP, which is dated in 2008. The Spanish NRA does not have competences to approve the NDP and in any case, the project should be analysed before its inclusion in a new NDP.</p> <p>In order to be included on the PCI list, the projects should be included in the NDPs.</p>   |
| 3   | Connection of Malta to the European Gas Network via a new subsea pipeline |  |
| 4   | STEP interconnection Spain-France   | <p>CRE and CNMC: With its current characteristics, the benefits of the project cannot be considered credible and do not outweigh the costs. We do not deem the 2022 commissioning date as realistic according to the current maturity of the project.</p> <p>We suggest removing the project from the PCI list based on the following reasons:</p> <ol style="list-style-type: none"> <li>1. TSOs have failed to submit a project that will offer firm interconnection capacity;</li> <li>2. The market has shown no commercial interest for new capacity in the interconnection;</li> <li>3. The current gas interconnection capacity between France and Spain is not congested;</li> </ol> |

<sup>27</sup> As submitted to ACER for its Opinion, including project names.

|   |  |  |
|---|--|--|
|   |  | <p>4. The cost of the project is high when compared with European standards;</p> <p>5. The project does not guarantee price coupling between gas hubs in France and Iberia;</p> <p>6. The project's cost-benefit analysis does not clearly show that its benefits outweigh its costs in the most credible scenarios.</p> |
| 5 | Shannon LNG Terminal and Connecting Pipeline |  |

## 2. SGC

| No. | Project  | NRA comments  |
|-----|--|---|
| 1   | <p>Trans-Caspian pipeline from Turkmenistan to Azerbaijan / Future Expansion of the South Caucasus Pipeline from Azerbaijan to Turkey / Trans Adriatic Pipeline (TAP) Greece-Albania-Italy, including compressor station and metering and regulating station at Nea Messimvria in Greece / TAP interconnection in Italy</p> <p>(NB Trans Anatolian Pipeline – TANAP- in Turkey is completed)</p> |   |
| 2   | <p>EastMed Pipeline from Levantine Basin to Cyprus and Greece, including metering and regulating station at Megalopoli / Poseidon pipeline Greece-Italy (offshore section) / Adriatica Line in Italy / Matagiola - Massafra pipeline in Italy</p>  | <p>Regarding the project EastMed, CERA and RAE agree to the inclusion in the final PCI list.</p>  |
| 3   | <p>LNG terminal in Cyprus (Cyprus Gas2EU)</p>  | <p>Regarding the project CyprusGas2EU, CERA, agrees to the inclusion in the final PCI list. CyprusGas2EU project is the only candidate PCI project that ends the energy isolation of an EU Member State. Among other benefits this project will:</p> <ul style="list-style-type: none"> <li>• lead to the end of the energy isolation of the island,</li> <li>• increase the security of supply for the Republic of Cyprus by enabling the import of NG for the first time, while it will complement the PCI EastMed Pipeline, when it will supply gas to Cyprus, offering diversification and security.</li> <li>• lead to market integration synergies and to interoperability with other Member States (e.g. Greece, Italy) and other regional markets.</li> </ul> |

|  |  |   |
|--|--|---|
|  |  | <ul style="list-style-type: none"><li>• contribute to EU's energy and climate goals as it facilitates the gasification of Cyprus and the reduction of oil in its energy mix and the respective dependence from oil. It will also encourage the development of an optimal fuel mix at regional level minimizing CO2 emissions and utilizing greener sources of energy.</li></ul> |
|--|--|---|

### 3. NSI East Gas

| No. | Project  | NRA comments  |
|-----|--|---|
| 1   | Interconnection Croatia-Slovenia-Austria   |   |
| 2   | Depomures underground gas storage in Romania   |   |
| 3   | Infrastructure necessary for a Balkan Gas Hub (Interconnector Greece-Bulgaria (IGB) // Compressor Station Kipi in Greece // Rehabilitation, modernization and expansion of the Bulgarian gas transmission system // Interconnection Bulgaria-Serbia) |   |
| 4   | LNG terminal at Krk, Croatia, and evacuation pipeline (Phase 1, 2.6 bcm/y capacity)  |   |
| 5   | Slovenia-Hungary-Italy interconnector , development in two phases  |   |
| 6   | Sarmasel underground gas storage in Romania  |   |
| 7   | BRUA pipeline corridor (incl. infrastructure in Romania needed for Romania-Hungary reverse flow Phase 1 and 2 and Slovakia-Hungary interconnector capacity enhancement)  |   |
| 8   | Chiren underground gas storage expansion in Bulgaria   |   |
| 9   | Poland - Slovakia interconnection and the necessary internal reinforcements in Poland  |   |
| 10  | 2nd LNG terminal in Greece (at Alexandroupolis)  |   |
| 11  | South Kavala underground gas storage in Greece   | RAE: This project is very important for the security of supply and the development of a regional market, serving as a buffer to the seasonality of LNG prices and thus a hedging tool for the regional players. |

|  |  |   |
|--|--|---|
|  |  | <p>ECA: It is not clear why this project that does not present benefit effects in the score rankings as presented by the European Commission on 28 June 2019 to the stakeholder has been upgraded into the PCI list, while other projects which present benefits for the region are excluded.</p> |
|--|--|---|

#### 4. BEMIP Gas

| No. | Project  | NRA comments   |
|-----|--|--|
| 1   | LNG terminal in Gothenburg, Sweden                       |  |
| 2   | Gas Interconnection Poland-Lithuania (GIPL)              |  |
| 3   | Baltic Pipe project – gas pipeline Norway-Denmark-Poland |  |
| 4   | Enhancement of Latvia-Lithuania interconnection          | <p>PUC: Project together with other regional scale projects (GIPL, Balticconnector, enhancement of LV-EE interconnection) is important for the development of regional market, will help to diversify sources and routes, and will enable competition in the regional gas market, eliminate bottleneck for alternative gas flows once Balticconnector and GIPL will be in operation.</p>   |
| 5   | Enhancement of Incukalns underground gas storage         | <p>PUC: UGS is significantly important for LV and Regional security of supply as the region is located far away from deposit areas and main gas transmission routes. With working gas capacity of 24 TWh Incukalns UGS represents the largest available gas storage in the Baltic Sea region. Project will facilitate competition in the developing regional market and can be considered as additional gas source in winter, contributing to the market integration, ensuring Security of Supply and sustainability. The aim of the project is to enhance the operations of the storage to allow the Incukalns UGS to maintain its functionality after pressure upgrade in Baltic transmission system. The key benefit from the implementation of the Project is the ability to reduce the dependence of withdrawal capacity on the volume of gas reserves in the IUGS. Also, other regional scale projects (GIPL, Balticconnector, enhancement of LV-LT, EE-LV interconnections) can be used more effectively from the successful implementation of the Incukalns UGS enhancement project.</p> |

**5. Project still under analysis and consideration for possible inclusion in the regional list**

| No. | Project  | NRA comments |
|-----|--|--------------|
| 1   | Upgrade of LNG terminal in Świnoujście, Poland [BEMIP] |              |

**6. Projects which did not prove that their overall benefits outweigh costs**

| No. | Project  | NRA comments  |
|-----|--|---|
| 1   | Physical reverse flow at Moffat interconnection point between Ireland and the UK (Moffat Reverse Flow // Shannon LNG Terminal and Connecting Pipeline) [NSI WEST]                      |   |
| 2   | Interconnection Spain-Portugal (3rd IP, 2nd phase) [NSI WEST]  |   |
| 3   | Physical reverse flow at Moffat interconnection point between Ireland and the UK // Reverse Flow from NI to GB and IE via SNIP pipeline // Islandmagee Gas Storage Facility [NSI WEST] | NIAUR would expect that a large gas storage facility, such as the Islandmagee project, in conjunction with the other projects in the group, would bring real security of supply benefits to the UK and Ireland. It is not clear how the PCI assessment methodology identified and scored these benefits. The calculations to determine the scale of the benefits should also be provided and explained. |
| 4   | Algeria-Italy interconnection (GALSI) [NSI WEST]   |   |
| 5   | Austria-Czechia Interconnector (BACI) [NSI EAST]   | E-Control: The realisation of the BACI project, which allows for a direct interconnection between Austria and Czech Republic, will play an important role in fostering the market integration between these two countries and those interconnected like Slovenia and Italy. This project will open up the possibility to  |

|   |   |  |
|---|---|--|
|   |   | <p>investigate new market designs and serve as bridgehead and best practices for other Member States.</p> <p>As we believe in the important role of the existing gas network as storage opportunity of exceeding renewable electricity production by means of conversion into green/synthetic gas as well as of biogas, we consider BACI suitable for future shipments of alternative gases, that our government very much promoted during the Austrian Presidency and that we consider the future of this industry.</p> <p>BACI is beneficial for both Austria and Czech Republic for the contribution to decrease the price spread between the two markets. Considering the high transit volumes, the reduction of the price spread of some eurocents would have a huge positive welfare impact for the downstream final customers, representing thus a factual and undeniable common interest for the region.</p> <p>ERU considers that non-inclusion of the project is in line with the expected role of gas in carbon neutral future - respects the EU targets for 2050.</p> <p>ERU considers the results of assessment of the project as legit. They are in line with own assessment of ERU where the project did not prove that its overall benefits outweigh its costs</p> |
| 6 | Eastring pipeline corridor Bulgaria-Romania-Hungary-Slovakia [NSI EAST]                             | URSO: Important project ensuring gas supply diversification in eastern Europe. Ensuring alternative solution for new gas sources coming to Europe, and by this assuming security of supply.  |
| 7 | Poland-Czechia interconnection STORK II [NSI EAST]  |  |
| 8 | LNG terminal at Krk, Croatia and evacuation pipeline (Phase 2, above 2.6 bcm/y capacity) [NSI EAST] |  |

|    |  |  |
|----|--|--|
| 9  | Velke Kapusany underground gas storage in Slovakia [NSI EAST]  | URSO: This project is important from sustainability point of view.   |
| 10 | LNG terminal in Gdansk, Poland [NSI EAST]  |  |
| 11 | New internal gas pipelines in Bulgaria (incl. Varna-Oryahovo gas pipeline) [NSI EAST]                    |  |
| 12 | Compressor station (3rd unit) at Nea Messimvria and Compressor station at Ambelia, both in Greece ,[SGC] | RAE: The two compressor stations in the Greek Natural Gas System are needed to increase the transport capacity of gas from the north (where pipeline entries to the country are located) to the south (where most of the consumption is). The Greek System currently experiences a bottleneck between the two regions, which is expected to become more severe with the commercial operation of TAP and the Alexandroupolis FRSU, both in the north. In other words, the compressors will increase the technical capacity of the TAP/DESFA interconnection that is limited on DESFA's side and enable physical reverse flow at the IP. |
| 13 | White Stream pipeline between Georgia and Romania [SGC]  |  |
| 14 | Azerbaijan, Georgia, Romania "virtual interconnector" - AGRI [SGC]                                       |  |
| 15 | Ionian Adriatic Pipeline (IAP) between Albania and Croatia [SGC]   |  |
| 16 | Poseidon pipeline – onshore section in Greece [SGC]  |  |
| 17 | Tallinn LNG [BEMIP]  |  |
| 18 | Paldiski LNG Terminal [BEMIP]  |  |
| 19 | Skulte LNG [BEMIP]   | Significantly important project that will increase the security of supply in Baltic states, also could be considered as one of obstacles that will increase the competition in the developing regional gas market. Project will ensure the gas supply diversification and  |

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|  |  | <p>flexibility in the region (Baltic states and Finland regional market). Together with the construction of Balticconnector and GIPL, enhancement of Inčukalns UGS and enhancement of interconnections Latvia - Lithuania, Estonia - Latvia the Skulte LNG terminal can play a significant role in the region.</p> |
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