Frequent questions and answers PCI/PMI process

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This document aims to reply to the most frequently asked questions regarding the establishment of the second Union list under Regulation (EU) 2022/869 and will be continuously updated as new developments, information and questions arise. This document does not reflect a legally binding interpretation of the provisions of Regulation (EU) 2022/869, nor does it represent the official position of the European Commission. We reserve the right to update and review this document over time.

Contents

ABBREVIATIONS

ACER	Agency for the Cooperation of Energy Regulators
CAPEX	Capital Expenditure
CB	Cross-border
CBA	Cost-benefit Analysis
CEF	Connecting Europe Facility
DSO	Distribution System Operator
EHB	European Hydrogen Backbone
eNPV	economic Net Present Value
ENTSO-E	European Network of Transmission System Operators for Energy
ETS	Emissions Trading System
fNPV	financial Net Present Value
GHG	Greenhouse Gas
ICT	Information and Communications Technologies
JRC	Joint Research Centre
KPI	Key Performance Indicators
MS	Member State
NCA	National Competent Authority
NRA	National Regulatory Authority
OPEX	Operational Expenditure
PCI	Projects of common interest
PLI	Profit Loss Indicator
PMI	Projects of mutual interest
RES	Renewable Energy Sources
SGG	Smart Gas Grids
TEN-E	Trans-European Networks for Energy
TYNDP	Ten-Year Network Development Plan

1 Process

1.1 For projects already in TYNDP 2024, during their application for the PCI/PMI process, will it be possible to modify/update answers to the questions under the Section "Projects of common interest"/ "Projects of mutual interest" as was the case in the past?

Yes, as in the past, this should be possible subject to the changes required. In such cases, please get in touch with ENTSO-E/ENTSOG and the Commission (ENER-C4-PROJECTS@ec.europa.eu).

1.2 Is it possible to update the costs, the routing of the project (and other details) after the project submission into TYNDP and the PCI/PMI process?

Since a number of elements (e.g. costs, project capacity, etc) can significantly impact the project assessment in the TYNDP and the PCI/PMI process, it is very important to reflect the latest project developments. However, these changes are bound by the timeline/ step of the TYNDP and PCI/PMI process.

For any change into the projects part of the TYNDPs please do consult the ENTSOE/G guidelines for inclusion in the TYNDPs (electricity, hydrogen) where more information is detailed on the possible updated.

For projects that would have passed the PCI/PMI submission, please contact the Commission at ENER-C4-PROJECTS@ec.europa.eu. Note that changes considered at this stage are very limited in nature and must not alter the scope of the project.

1.3 Which is the information to be provided by the applicant to pass the eligibility check by the Regional Groups before needs/ranking?

The relevant eligibility criteria for each infrastructure category is set out in Article 4 and Annexes I, II and IV. Project promoters have to ensure that sufficient information is provided in the application to demonstrate that the candidate project complies with these criteria.

1.4 Are candidate projects accepted only if both sides of a project (e.g. interconnector) are applying for PCI/PMI status?

Yes, both sides of a candidate project need to apply for PCI/PMI status where this is required for the project to be completed and functional, as in the case of interconnectors. Otherwise, the project's EU relevance cannot be assessed.

1.5 Should a PCI/PMI application be made per TSO (per Member State/third country) or rather jointly by all relevant TSOs from more than one Member State/third country?

The submission of a candidate project shall be done jointly by all the project promoters of the project, e.g. an interconnector between Member State A and Member State/country B, if promoted by the national TSOs, shall be submitted jointly by those TSOs.

1.6 What is the difference between PCI/PMI status and status of renewable energy cross-border (CB RES) projects under the Connecting Europe Facility (CEF)?

Different criteria apply for projects to receive the status of PCIs/PMIs and the status of CB RES. The criteria for PCIs/PMIs are set out in the TEN-E Regulation (see also Q1.2). The criteria for CB RES projects are set out in Commission Delegated Regulation (EU)

2022/342[1]. Whereas the status of PCIs/PMIs generally applies to cross-border energy transmission infrastructure project, the focus of CB RES project is on generation projects.

1.7 Under the revised TEN-E Regulation natural gas infrastructure projects are no longer eligible for PCI status. However, there is a derogation for certain natural gas projects to maintain their status of PCI – could you explain in more detail?

The category of natural gas infrastructure projects no longer exists in the revised TEN-E Regulation and no more natural gas PCIs are possible. The sole exception to this rule concerns Malta and Cyprus. Given the location and situation of Malta and Cyprus and the fact that they are still not connected to the natural gas network, the co-legislators considered that a limited derogation should be granted for gas projects aiming to connect these Member States to the trans-European gas network. This derogation is limited in time and subject to very strict conditions in view of the Union's overall energy and climate policy objectives.

Nevertheless, the revised TEN-E contains a transitional provision whereas natural gas PCIs, like all other PCIs included in the fifth Union list of projects of common interest established pursuant to Regulation (EU) No 347/2013, can continue to benefit from the accelerated permitting regime under the TEN-E Regulation for a period of 4 years if their permitting application file was accepted for examination by the competent authority while they were a PCI (Article 32(3)). This does not in any manner prolong their PCI status or grant them any additional rights.

1.8 Can a project be relevant for more than one priority corridor (see article 4(1)(a) where it says 'at least one of the energy infrastructure corridors'? How do I know under which regional group to apply, if my project runs across two regional groups?

The TEN-E Regulation defines a number of regional groups for electricity, offshore, hydrogen and electrolysers. If a promoter wants to submit a cluster of projects that extend across more regions we recommend to split the project per region and to mention in the application the connection with the other parts of the cluster. To note, that in the PCI/PMI process the overall benefits of the cluster of projects will be considered.

1.9 Is it possible to present the application for PCI with more than one coordinator (for example jointly with two coordinators)?

The PCI application should be made jointly by all project promoters involved in the development of the project. However, there should be only one coordinating applicant that acts as the main point of contact.

1.10 Could you please confirm that a project promoter of a TYNDP project can also apply through its 100% subsidiary?

This is a technical matter that pertains to the platform of ENTSO-E/ENTSOG and should be checked with ENTSO-E (tyndp@entsoe.eu)/ ENTSOG (projects@entsog.eu). In accordance with the TEN-E Regulation, the project promoters submitting a project could change either during the PCI/PMI selection process or during implementation. This will require a notification in this respect to the relevant regional group, through the Commission, where also information on the status of the new project promoter is included demonstrating its ability to further pursue the development of the project.

[1] http://data.europa.eu/eli/reg_del/2022/342/oj

1.11 Could you elaborate on the differences between including partners as affiliated entities or promoters?

The projects submitted for the PCI/PMI selection process need to be submitted by their project promoters. In accordance with the TEN-E Regulation a 'project promoter' means one of the following:

(a) a transmission system operator (TSO), a distribution system operator (DSO) or another operator or investor developing a project on the Union list;

(b) in the case of more than one such TSO, DSO, other operator or investor, or any group thereof, the entity with legal personality under the applicable national law which has been designated by contractual arrangement between them and which has the capacity to undertake legal obligations and assume financial liability on behalf of the parties to the contractual arrangement.

If an affiliated organisation is included in the project application, it should be explained in which manner the affiliated organisation(s) are relevant for the project.

1.12 Which scenario(s) for demand and supply are promoters expected to use to calculate the required indicators?

The scenario/s to be used for this process are to be further defined in the PCI/PMI process. These scenarios must be chosen from the scenarios developed by ENTSOs for their 2024 TYNDP and must be in line with the requirements as set out in the revised TEN-E Regulation.

1.13 Annex III.2 refers to projects having reached sufficient degree of maturity. But what does "sufficient degree of maturity" mean? Is there a definition somewhere?

No definition is provided for sufficient degree of maturity. However, given that maturity is linked in this context to the possibility to submit a CBA, projects in an incipient stage of development, where not enough information are available, may not submit a CBA. However, like all candidate PCIs and PMIs, such projects still have to prove a positive benefit to cost ratio and, without a CBA, it might be difficult to achieve such proof. Therefore, all project promoters should strive as much as possible to submit as complete as possible CBAs.

1.14 Why should the shadow cost of carbon and not the ETS value be used?

ENTSO-E has an additional indicator of societal cost of carbon (B2) that should account for the difference in ETS value (as used in the overall modelling) and the shadow cost. The shadow (social) cost of carbon as used in other Union policies is used in the CBA methodologies of the ENTSOs in line with the requirement in Annex V(9). The methodologies for harmonised system-wide cost benefit analysis developed for other infrastructure categories, also include the reference as regards the shadow (social) cost of carbon to be considered.

1.15 How can the NCA and NRA comment adequately on a project while benefits have not yet been specified?

NRAs and other authorities can also ask for additional information from project promoters necessary to form their views if such information is not already available.

1.16 Can project promoters withdraw the PCI/PMI application/candidature at any time?

Yes. A project promoter can withdraw the project/s from the PCI/PMI process at any time.

1.17 If a hydrogen project fails to obtain PCI status, can it still be incorporated into Regional/National Development Plans, and if so, by what means?

The TEN-E Regulation does not contain provisions in this respect.

1.18 Can projects that will also be completed after 2035 be submitted as candidate PCIs or PMIs?

Each applicant should decide whether a project is at the right stage to apply for the PCI/PMI status. The TEN-E Regulation does not impose any requirements as regards maturity, but this does, of course, play a role in the accurate calculation of the costs and benefits of the projects. Please note that delays in the implementation of PCI/PMI are monitored and unjustified delays can be taken into account in future PCI/PMI processes in the assessment of the respective projects.

2 Projects of mutual interest [PMIs]

2.1 How does the selection process for PMIs look like, e.g. will there be a separate list or a different timeline?

PMIs will be part of the same Union list of Projects of Common Interest (PCIs) and Projects of Mutual Interest (PMIs). PMIs will follow the same process as PCIs and the same the timing of the process applies. However, some criteria for PMIs are different from those for PCIs (see below).

2.2 For PMI candidate projects, who will calculate the significant benefits at EU level?

Annex IV.2 states that the calculation of the benefits for the Member States shall be performed and published by the ENTSO for Electricity and ENTSO for gas in the framework of the Unionwide ten-year network development plan. The project promoters will receive the results in due time for consideration in the PMI selection process.

2.3 Will there be a need to choose if to apply for PMI or PCI status?

When submitting a project for PCI/PMI list, project promoters need to choose whether they apply for PCI or PMI status given that some of the criteria differ substantially. This approach is taken for all infrastructure categories applicable to PMIs. For projects involving third countries, project promoters are encouraged to apply for PMI status.

2.4 How do I decide if I should apply for PCI or PMI status?

For projects involving third countries, project promoters are encouraged to apply for the PMI status. However, it is not excluded that certain projects involving third countries may still be eligible for PCI status if they fulfil all relevant conditions, in particular, if they are able to prove a significant cross-border impact between two Member States in accordance with Annex IV (1). In the case of PMIs, only the proof of benefits at Union level is required, meaning benefits going beyond one Member State.

2.5 Can EEA countries (NO, ICE) apply for PCI or PMI status?

EEA countries are considered third countries. In principle, projects with EEA countries should apply for PMI status.

2.6 Regarding PMIs, will the NRAs consultation consider the view of the NRA from the third country?

The views of competent regulatory authorities from third countries on PMI candidates

can be taken into account by the Regional Group. They can be invited as stakeholders to the meetings.

2.7 How will the following general criteria for PMIs under Art. 4(2) be assessed:?
The criteria will be assessed as follows:

a) ***significant contribution to the Union's and the third countries' overall energy and climate objectives***

Candidate projects should provide evidence that the project is mutually beneficial and necessary for the energy transition and contributes significantly to the achievement of the climate targets of the EU and the decarbonisation and sustainability of the energy system of the third countries. This should in particular demonstrate the project's contribution to the integration of additional renewable energy into the grid. It should also include evidence that the project does not hinder the capacity of the third country to phase out fossil fuel generation assets for its domestic consumption. Evidence should be provided through the CBA results or through other types of assessment.

b) ***the potential overall benefits of the project at Union level outweigh it costs within the Union***

Subject of CBA assessment as explained above but benefits and costs limited to Union level.

c) The project is located on the territory of at least one Member State and on the territory of at least one third country and has a significant-cross border impact as set out in point (2) Annex IV

For electricity transmission projects, the significant cross-border impact, as specified in point (2)(a) of Annex IV, must be demonstrated by:

- an increase in NTC, between the countries concerned by the candidate project without setting a specific threshold.
- significant benefits as specified under Article 4(3). In line with Recital 20 significant benefits at Union level should be understood as going beyond one Member State and as confirmed in the project's CBA as performed and published by ENTSO-E.

For hydrogen transmission project the significant cross-border impact, as specified in point (2)(b) of Annex IV, must be demonstrated by:

- enabling the transmission of hydrogen across at the border of a Member State with one or more third countries
- bringing significant benefits, either directly or indirectly (via interconnection with a third country) under the specific criteria listed in Article 4(3), at Union level. In line with Recital 20 significant benefits at Union level should be understood as going beyond one Member State and as confirmed in the project's CBA as performed and published by ENTSOG.

c) ***For the part located on Member State territory, project is in line with Directive 2009/73/EC and (EU) 2019/944***

The operator of the section of an interconnector which is located on EU territory needs to be certified operator in accordance with Regulation (EU) 2019/943 and Directive (EU) 2019/944 or, as transmission system operator for gas, where relevant, in accordance with Article 3 of Regulation (EC) No 715/2009 and Article 11 of Directive 2009/73/EC as amended. In case the operator is not certified at the point of application for PCI/PMI status, the project promoters need to explain how they will ensure compliance with the relevant provisions.

d) ***high level of convergence of the third country's policy framework with that of the EU and demonstration of legal enforcement mechanisms to support the policy objectives of the Union***

As set out in recital 20 of the TEN-E Regulation, a high level of convergence of the policy framework should be presumed for the European Economic Area, Energy Community Contracting Parties or can be demonstrated in the case of other third countries through bilateral agreements that include relevant provisions on climate and energy policy objectives on decarbonisation and further assessed by the appropriate regional group with the support of the Commission. The corresponding documents need to be presented at the time of application for PMI status.

f) commitment of third countries to complying with a similar timeline for accelerated implementation and other policy and regulatory support measures as applies to PCIs

A third country with which the Union cooperates in the development of projects of mutual interest should facilitate a similar timeline for accelerated implementation and other policy support measures, as the ones provided for in the TEN-E Regulation for PCIs. The timeline for accelerated implementation and policy/regulatory support measures in the third country should be demonstrated at the time of application for PMI status and confirmed in writing.

2.8 Who has to demonstrate the compliance with the general criteria for PMIs provided for by Article 4(2) of the TEN-E Regulation?

Project promoters have to submit all the evidence needed to show that their projects fulfil all the conditions in Article 4(2). This may include documents authored by other parties, such as the concerned Member States or third countries, if necessary to demonstrate compliance with these criteria.

2.9 Are hydrogen offshore grids included in the PMI category or only electricity grids?

Both electricity grids (including offshore) and hydrogen pipelines are eligible categories for PMI status. Whether the hydrogen pipelines linked to a possible offshore project are assessed together will depend on the project and the interdependency between the two.

2.10 Can smart electricity grid and smart gas grid projects apply for PMI status?

Smart electricity grid (SEG) and gas grid project (SGG) can only apply for PCI status as defined in Article 2(6). They are outside the scope of PMI status.

2.11 Is it possible to combine a PCI and a PMI project within one application if there are clear interlinks/interfaces?

Project promoters need to choose whether to apply for PCI or PMI status, see also 2.3 and 2.1.

2.12 When do letters of support/agreements from or with the third country need to be submitted for the PMI status?

In line with Section 2(1) of Annex III, when they submit the PMI application, project promoters of potential PMI candidates also need to submit the letters of support from the governments of the directly affected countries expressing their support for the project or other non-binding agreements with the third countries, demonstrating the fulfilment of the general criteria for PMIs as provided by Article 4(2) of the TEN-E Regulation.

2.13 Can an application for the PMI status be submitted by one TSO / project promoter?

Similarly to PCIs, the submission of a candidate project shall be done jointly by all the project promoters of the project, e.g. an interconnector between Member State A and country B, if promoted by the national TSOs, shall be submitted jointly by those TSOs. For commercial (exempted) projects, a project could also be submitted by only one investor if they hold the power of attorney to represent the other parties.

2.14 Can an electricity transmission project apply for a PMI status with a different design than in the TYNDP? How should this change be reflected in the project assessment?

The electricity PMI candidates need to be included in the latest TYNDP, so the design of a project submitted for a PMI status should reflect its design as included in the TYNDP. It is possible to submit a project in a slightly different form, bearing in mind the possible impacts of such changes on the validity of the TYNDP CBA calculations which, in line with Annex IV Point (2)(a), are to be used for the PMI assessment. This means that no significant changes in the design from what was included in the latest TYNDP are possible in the PMI application.

2.15 What type of electricity transmission projects involving third countries are eligible for PMI status?

In line with recital 20, of the TEN-E Regulation the PMI status supports infrastructure projects linking Union's networks with third-country networks.

3 Electricity and offshore category

3.1 How will the sustainability criteria apply for electricity transmission projects?

All electricity transmission candidate projects have to prove that they contribute significantly to sustainability. Article 4(3)(a) refers inter alia to the integration of renewable energy into the grid and to reducing energy curtailment. This is reflected in ENTSO-E's CBA Guideline in the following indicators: Renewable integration, CO2 in a monetized form or in terms of tonnes as well as non-CO2 elements. How these elements will be defined and will come into play for the PCI/PMI process is yet to be defined and discussed in the Regional Groups.

3.2 Will project promoters for electricity projects be responsible for conducting the CBAs, or will this task be undertaken by another party?

In line with the revised TEN-E Regulation the promoters of a candidate project are required to submit an application that includes among others an analysis of the fulfilment of the relevant criteria laid down in Article 4. This includes, for projects having reached a sufficient degree of maturity, a project-specific cost-benefit analysis consistent with the methodologies drawn up pursuant to Article 11.

Both electricity transmission (including radial and hybrid off-shore interconnectors) and electricity storage projects are part of the ENTSO-E TYNDP and the ENTSO-E will perform the respective CBAs in line with the TYNDP 2024 CBA methodology and in agreement with the project promoters. The promoters can then submit these CBA calculations in the PCI/PMI process. This allows the Regional Groups to perform a consistent and detailed assessment.

3.3 How will electricity storage projects be assessed since ENTSO-E CBA does not capture all benefits of these projects?

Indeed, it might be the case that the model used for the TYNDP 2024 does not have the granularity to capture all benefits for storage projects, in particular ancillary services. The approved CBA methodology for electricity storage projects does not indicate who has to perform the CBA calculations. ENTSO-E will calculate the energy storage projects benefits under the TYNDP 2024 CBA and these could be used by the project promoters when applying for the PCI status, since they are in line with the approved methodology. Project promoters could also submit alternative/additional calculations of the projects' benefits, if in line with the methodology. All identified benefits, for which the relevant and consistent data and information is available, should be considered in the project assessment. It will be for the Regional Groups to decide if additional data and information could be used for projects assessment, taking into consideration the need for a coherent and comparable assessment of the projects.

3.4 How will the benefits of projects that involve both electrolysis and electricity storage be assessed?

The assessment is done separately within each infrastructure category based on the final methodology for each infrastructure category. The methodologies do not envisage comparison among projects of different infrastructure categories but they underline the importance of a consistent approach to individual benefits across different infrastructure categories. Thus, a project including an electrolyser and an electricity storage project would have to be split into two projects to be assessed based on different assessment criteria.

3.5 How can future PPAs on delivery of green energy be considered as a proof of sustainability in project assessment and CBA?

Future PPAs do not determine the assumptions used in the assessment of the project. The projects' CBA are based on the approved scenarios which use projections for the development of the energy systems in the countries affected by the projects. PPAs for delivery of 100% renewable electricity are private contracts, which can be terminated or modified in the future. The planned PPAs cannot be used as an assumption for CBA calculations that only green electricity would flow through an interconnector.

4 Smart electricity grids

4.1 Regarding smart electricity grids: assuming the criteria are met, do we understand correctly that a cross-border Citizen Energy Community could qualify for PCI?

Smart electricity grids can facilitate new market and business models and incorporate new types of consumption. As such, a smart electricity grid that enables a cross-border citizen energy community can indeed be a possibility, where it meets the applicable TEN-E criteria (e.g. voltage level, grid components/not the downstream, etc.).

4.2 In the case of DSO only projects, how can project promoters demonstrate that interoperability is ensured?

Smart electricity grid projects need to involve TSOs, TSOs and DSOs, or DSOs from at least two Member States. The project may involve only DSOs provided that they are from at least two Member States and provided that interoperability is ensured, in particular between the transmission and distribution network, at the planning (e.g. ensuring technological interface and exchanges of relevant data with the TSOs) and future operational level (e.g. ensuring the data exchange compatibility).

4.3 How can a smart electricity grid project fulfil the criteria that it decreases energy isolation of non-interconnected systems in one or more Member States?

Smart electricity grid projects need to involve TSOs, TSOs and DSOs, or DSOs from at least two Member States. The project may involve only DSOs provided that they are from at least two Member States and provided that interoperability is ensured. The project shall satisfy at least two of the following criteria: it involves 50 000 users, generators, consumers or prosumers of electricity, it captures a consumption area of at least 300 GW hours/year, at least 20 % of the electricity consumption linked to the project originates from variable renewable resources, or it decreases energy isolation of non-interconnected systems in one or more Member States. Therefore, the decrease of energy isolation of non-interconnected systems is only one of several criteria which does not need to be met by all projects.

5 Smart gas grids

5.1 What is the scope of the category?

The smart gas grids category covers equipment and/or installations that enable the decarbonisation of the gas system by ensuring the uptake of renewable and low carbon gases into the gas transmission grid and the smartening of the gas distribution grid by supporting the uptake of innovative and digital solutions for network management and facilitating smart energy sector integration and demand response.

5.2 Would smart gas grids investments in gas upstream, i.e. between wellhead and public TSO grid, also be eligible under the revised TEN-E?

In principle, the TEN-E Regulation does not cover upstream infrastructure. The smart gas grids category aims at facilitating the integration of renewable and low carbon gases in the gas grids.

5.3 Many of the potential smart gas grid projects could be quite local in their nature – how could their cross-border impact be demonstrated?

Project promotors must provide evidence that the project has a significant cross-border impact as set out in point (1) of Annex IV of the TEN-E Regulation, which specifies that for smart gas grids, a project should involve TSOs, TSO and DSOs or DSOs from at least two Member States and that DSOs may be involved, but only with the support of the TSOs of at least two Member States that are closely associated to the project and ensure interoperability.

5.4 What would be deemed an acceptable level of involvement of TSO/DSOs from two Member States? Are there any examples or guidelines for this?

The specificities may vary from project to project. Project promoters may demonstrate the cross-border impact of their project and the involvement of TSOs/DSOs from at least two Member States by providing information on governance aspects, such as agreements, support letters and memoranda of understanding between the project promoters of the involved Member States, and by submitting information showing how TSOs from at least two Member States have been closely associated in the substantive project design, such as detailed plans on how the smart gas grid project will be technically integrated with the infrastructure of the TSOs or joint assessments of the intended market and environmental impact. The Commission prepared a non-paper on the cross-border impact of potential candidate projects and circulated it among the members of the Smart Gas Grid Thematic Area Group. The non-paper can be obtained by any new member of the Group upon request.

5.5 Will a national DSO-TSO reverse flow project be eligible for PCI status as smart gas grid project (enabling biomethane flows across border) or shall the adjacent TSO from neighbouring country be part of the project?

For SGG candidate projects, while the projects can be located on the territory of only one MS, the cross-border impact requirements provided by the TEN-E Regulation must be complied with in all cases (see reply to Q 5.3).

5.6 Will the SGG category include projects for enhancing capacity at interconnection points by addressing gas quality issues?

One of the main purposes of the SGG category is to improve the efficiency and interoperability of gas grids. Hence, if the project aims at enhancing the grid functioning, incl. interconnection points and addressing challenges resulting from the injection of gases of different qualities, in particular renewable gases, then the SGG project might be eligible for PCI status. Candidate projects need to fulfil all applicable criteria, including the mandatory sustainability criterion.

5.7 Can you give some practical examples of smart gas grids projects? For example, can the replacement of compressors for transportation of hydrogen qualify as smart gas grid project? Can projects related to modification of natural gas transmission networks to transport blends be included in smart gas grids?

Some investments under SGG may enable higher methane-hydrogen blends. For example, investment in digital solutions may enable a more efficient network management in case the gas quality is affected by injecting hydrogen into the grid. Equipment for DSO-TSO reverse flows could enable the integration of, not only biomethane, but also hydrogen produced in a decentralized way.

One of the examples can be equipment needed to enable reverse flows from DSO to TSO level. Another example can be installation of ICT systems which improve data gathering and better monitoring/forecasting of transmission/distribution/storage.

5.8 Regarding smart gas grid: is there a threshold of intake of renewable and low carbon gases in the transmission network up to which a project can be considered a smart gas grid?

There is no such threshold. We will assess the share of renewable and low carbon gases gases injected to the grid linked to the project and we will assess the GHG emissions savings achievable through the project.

5.9 Biomethane projects are frequently limited in size: Can a CBA encompass a constellation of projects to limit administrative cost on small projects?

Only projects that show a relevance for the Union are eligible for PCI status. PCI candidates must abide by all the eligibility requirements including as regards cross-border impact which means that the project has to involve at least two Member States. The candidate project will have to abide by all these conditions, but there is no requirement regarding size.

5.10 In the calculation of integration of RES gas and low-carbon gases, is priority given to RES gas, or are both gases treated equally in the evaluation?

Annex IV to the TEN-E Regulation provides details on how RES and low-carbon gases need to be taken into account. For smart gas grids sustainability is measured by assessing the share of renewable and low-carbon gases integrated into the gas network, the related greenhouse gas emission savings towards total system decarbonisation and the adequate detection of leakage.

5.11 The TEN-E Regulation provides some broad examples of what types of investments could be included in a smart gas grid project. What could be included?

The main purpose of the smart gas grid category is to smarten and make existing infrastructure more intelligent with a view to integrating low-carbon and particularly renewable gases. To be eligible, equipment and installations need to meet certain criteria of the Regulation, for example fit within the range of investments listed in Annex II (2). In particular, it would be necessary to explain in the application how such project falls within the scope of the three main sub-groups of investments mentioned in Annex II:

- **Digital systems and components** integrating ICT
- **Control systems and sensor technologies** to enable the interactive and intelligent monitoring, metering, quality control and management of gas production, transmission, distribution, storage and consumption within a gas network.
- **Equipment to enable reverse flows** from the distribution to the transmission level, incl. the related physical upgrades.

At the same time, it is essential, even if the project is located on the territory of one Member State, to ensure that TSOs (and DSOs) on both sides of the border are closely associated and committed to ensure interoperability.

5.12 What investments in metering/control/monitoring of hydrogen which will require new equipment to measure gas quality can be included?

The SGG thematic area aims to integrate a plurality of renewable and low-carbon gases, incl. biomethane and hydrogen. Thus, in theory, this thematic area can also cover

investments in control systems and sensor technologies which are necessary to enable the monitoring, metering, quality control to accommodate small shares of hydrogen in the gas system without making significant network upgrades (such as pipeline coating, compressor upgrades/changes, change of other hardware equipment). Investment in digital solutions may also enable a more efficient network management in case the gas quality is affected by injecting hydrogen into the grid. However, the objective of the smart gas grids thematic area was not to capture physical network upgrades needed for hydrogen blending and to ensure that such projects do not create problems with interoperability.

6 Hydrogen

6.1 What does the hydrogen infrastructure category include?

The hydrogen infrastructure category encompasses new or repurposed hydrogen infrastructure for transportation, storage and reception facility as defined in Annex II.3. Additionally, the TEN-E Regulation specifies a distinct infrastructure category for electrolysers (annex II.4), which related to hydrogen production.

6.2 Would a liquid hydrogen reception facility and storage be eligible for the PCI/PMI submission?

The infrastructure sub-category set out in Annex II.3(c) of the TEN-E Regulation refers to 'reception, storage and regasification or decompression facilities for liquefied hydrogen or hydrogen embedded in other chemical substances with the objective of injecting the hydrogen, where applicable, into the grid.' For assessing the eligibility of project components it would be important that they are directly connected with and serve the regasification and afterwards injection into the hydrogen grid. Such installations may also be connected with an equipment or installation allowing for hydrogen or hydrogen-derived fuels use in the transport sector in line with annex II)3)e.

6.3 Are investments such as jetty, ammonia cracker, pressure swing adsorption (PSA) purification unit, ammonia flare, hydrogen storage and export compression system, eligible under the TEN-E Regulation annex II.3(c)?

Annex II.3(c) of the TEN-E Regulation provides that equipment linked to 'reception, storage and regasification or decompression facilities for liquefied hydrogen or hydrogen embedded in other chemical substances with the objective of injecting the hydrogen, where applicable, into the grid' is eligible. For assessing the eligibility of the ammonia and hydrogen-related project components it would be important that they are directly connected with and serve the regasification and afterwards injection into the hydrogen grid.

6.4 Must hydrogen or electrolyser projects be part of **the TYNDP** 2024 **to be eligible for PCI/PMI submission?**

All hydrogen projects (including transmission, storage, and reception facilities) must be part of the TYNDP 2024 to apply for the PCI/PMI list. Conversely, electrolyser projects do not need to be included in the TYNDP 2024 to apply for the PCI/PMI list. However, inclusion in the TYNDP may facilitate the project submission process and potentially ease subsequent ENTSOG assessment.

6.5 Will project promoters for hydrogen and electrolyser projects be responsible for conducting the CBAs, or will this task be undertaken by another party?

In line with the revised TEN-E Regulation the promoters of all candidate projects are required to submit an application that includes among others an analysis of the fulfilment of the relevant criteria laid down in Article 4. This includes, for projects having reached a sufficient degree of maturity, a project-specific cost-benefit analysis consistent with the methodologies drawn up pursuant to Article 11.

In the case of hydrogen transmission, storage and reception facility projects, part of the TYNDP 2024, the ENTSOG performs the respective CBAs in line with the TYNDP CBA methodology and in agreement with the project promoters. The promoters can then submit these CBA calculations in the PCI/PMI process. This allows the Regional Groups to perform a consistent and detailed assessment.

For the electrolyser projects, the CBAs will need to be performed in line with the relevant methodologies (https://energy.ec.europa.eu/document/download/5ce8a08a-f3f7-4237-a4d7-ffc5121f6a08_en?filename=Electrolysers_CBA_metyhodology_FINAL.pdf). For the electrolyser projects part of the TYNDP 2024, ENTSOG may perform the CBA assessment in line with the TYNDP input.

The promoters should submit as much data relevant for the CBA analysis as possible during their application for PCI/PMI status. If considered necessary, promoters might be asked to complete with supplementary data necessary during the assessment.

6.6 What level of granularity is required for PCI applications within the *same infrastructure* category? For example, can the five H2 corridors from the EHB be considered as five large projects? Additionally, can a national backbone be submitted as a single project including all its components, or does it need to be divided into several smaller projects?

The granularity of the projects depends on their specificities: who are the promoters or different status of development, existence of available data, etc. It is up to the project promoters to decide how they submit their projects provided they abide by the eligibility criteria in the TEN-E Regulation including as regards significant cross-border impact. One PCI/PMI project can consist of one or several investment items.

6.7 Is it possible to submit one PCI/PMI application for a set of interlinked projects but falling under *different* infrastructure categories (each project with an own project promoter)?

If a project is cross-border and promoted by multiple entities, the submission should be coordinated among all the promoting entities.

Project promoters must decide whether to apply for PCI or PMI status. If projects belong to different categories, separate applications must be submitted for each individual project.

For electrolyser applications, if the electrolysers constitute a single coordinated project in line with the TEN-E Regulation, one application should be submitted. Otherwise, separate applications are required for each electrolyser project.

6.8 If a project encompasses both electrolyser/storage facilities and a connecting pipeline, are separate applications required for each component?

If the project consists of the electrolyser and the connection pipeline to the network, then they can submit it as one project.
However, a project including an electrolyser and a H2 storage project would have to be split depending on the size and type of the related H2 storage project. Storage and electrolyser projects will be assessed based on different assessment criteria.

6.9 There are situations where national legislation has only temporarily recognised that a project promoter can build a H2 project. Thus, the promoter could change in time and depending on the evolution of the regulatory framework. Will this affect the PCI application?

No. The promoter of a PCI can change even after the project becomes a PCI without affecting the status of the project. This will require a notification in this respect to the relevant regional group through the Commission where also information on the status of the new project promoter is included demonstrating its ability to further pursue the development of the project.

6.10 In view of the provisions of Article 31, are new assets required to be operated only with pure hydrogen from the beginning?

Article 31 of the TEN-E Regulation refers to assets converted from natural gas and is not impacting new assets that from the beginning will be carrying H2.

6.11 Can PCI projects ensuring repurposing of assets to H2 have their year of commissioning in the future pushed beyond 2030?

The end of 2029 deadline referred to in Article 31 applies only to assets repurposed from natural gas that want to initially transport a pre-defined blend of hydrogen with natural gas or biomethane gas. Repurposing projects with a commissioning date beyond end 2029 would be eligible for PCI status only if pure H2 is transported from the beginning of the operation of the repurposed asset.

6.12 Is it permissible to modify the technical parameters of a hydrogen project that has already been incorporated into the latest ENTSOG TYNDP and has already been pre-filled in the ENTSOG online platform?

The PCI application should reflect the project as accurately as possible independently of what has been included in the latest TYNDP. For changes in the TYNDP please contact ENTSOG directly, keeping DG ENER in copy.

6.13 Could a new-build gas pipeline project be eligible as PCI, provided that no later than 31/12/2029 the gas pipeline is repurposed to transport exclusively hydrogen?

Hydrogen pipelines are eligible for PCI/PMI status. More specifically, Annex II (3) states that "Any of the assets listed in points (a) to (d) may be newly constructed or repurposed from natural gas to hydrogen, or a combination of the two". Article 31 of the revised TEN-E Regulation provides for an exemption under which dedicated hydrogen assets might be used for predefined blend of hydrogen and natural gas for a transitional period until 2029. However, this transitional period applies only to dedicated hydrogen assets converted from natural gas assets, so a new pipeline would not fulfil these conditions.

Therefore, any pipeline which is not yet constructed could apply for PCI/PMI status only if it is proven that it will be used as a dedicated hydrogen asset already from the start of operation.

6.14 Will each Regional Group adopt its assessment method?

All regional groups dealing with one of the infrastructure categories will apply the assessment methodology taking into account regional specificities. The methodologies differ between the different infrastructure categories in line with the specific criteria provided by Article 4, but remain consistent amongst themselves.

7 Carbon dioxide networks

7.1 Which are the new elements included in this priority thematic area?

The scope of the carbon dioxide networks priority thematic area has been broadened to include infrastructure items related to CO2 storage, such as surface and injection facilities associated with infrastructure within a geological formation used for the permanent geological storage of CO2, that are necessary to allow the cross-border transport and storage of the CO2.

7.2 Is it possible for a CO2 storage project to apply for PCI/PMI status without including CO2 transport elements?

No. In order to ensure its cross-border dimension, CO2 storage projects must apply together with the CO2 transport projects to which they are linked. Standalone CO2 transport projects would still be able to apply for the PCI/PMI label.

7.3 Should CO2 networks projects with third countries apply as PMIs? What are the requirements?

The TEN-E Regulation has broadened its scope to PMI for some specific infrastructure categories/thematic areas, such as electricity transmission, H2 pipelines and CO2 transport and storage. Regarding the latter, this means the project can be used to transport and store anthropogenic carbon dioxide from at least two Member States and a third country. All projects with third countries are encouraged to apply as PMIs.

7.4 What is the requirement for cross-border impact for PMIs?

Projects need to cross the border of at least two Member States. If located in only one Member State, CO2 networks projects need to prove that the project is used to transport and, where applicable, store anthropogenic carbon dioxide originating from at least two Member States.

7.5 Can a project apply for PCI/PMI status if the CO2 comes from one single Member State and it is stored in another one?

Candidate projects need to have a significant cross-border impact. This would be fulfilled either by projects crossing the border between two Member States via pipeline or where the project is used to transport, and, where applicable, store anthropogenic carbon dioxide from at least two Member States.

7.6 What do you mean by pipelines "other than upstream"? Are pipelines collecting CO2 from CO2 emitters eligible (for instance, pipelines from emitters to a liquefied CO2 terminal)?

In the context of CO2 transport and storage infrastructure, “upstream” refers to pipelines that directly connect an emitting source, i.e. a producer of CO2 emissions, to the main transporting pipeline that is potentially shared across multiple sources and/or recipients.

In other words, pipelines that connect a single source to a broader network should be considered to be upstream and hence excluded from the PCI/PMI application.

7.7 If the CO2 is transported via shipping (i.e. outside the scope of the TEN-E) but the project presented in the application for the PCI list does foresee the involvement of two Members States - is it still required that the CO2 to be permanently stored will come from both Member States?

Candidate projects need to have a significant cross-border impact. If the CO2 is transported via shipping, like for transport via pipeline, the CO2 to be stored should come from at least two Member States.

7.8 Can you elaborate a bit on procedures and responsibilities for CO2 projects?

The CO2 promoters will be required to compute and provide their CBA in line with the requirements of the TEN-E Regulation. The promoters should in principle submit as much data relevant for the CBA analysis as possible during their application for PCI/PMI status. They will then be able to complete with supplementary data necessary during the process, and in particular once the CBA methodology is finalised. The regional groups will be supported by the Commission (DG ENER with the support of JRC) to apply the assessment methodology for CO2 projects.

7.9 In Annex III, it is specified that for CO2 networks, the project should be presented as part of a plan developed and presented by the MS involved by the project. What type of supporting document is required? Can you give an example?

There is no fixed template for the plan mentioned under Annex III.2(6). The plan should be submitted by the related Member States and clearly explain the coordination exercise between the Member States involved for the development of cross-border carbon dioxide transport and storage infrastructure.

7.10 How are negative emissions taken into account into the methodology?

The draft methodology for CO2 transport and storage takes into account GHG emissions under indicator B1. It is entitled 'Variation of GHG emissions', meaning the net GHG emission reductions with the GHG emissions caused by the realisation of the project deducted. It does not take into account negative emissions.

7.11 Are the general assumptions the same as the one of the 2017 methodology by EC/Ramboll/Ecorys?

The general assumptions chapter has been updated from the previous methodology in a harmonised way with other infrastructure categories.

7.12 Are there changes expected in counterfactual scenarios? The previous Methodology (2017) was clear on this matter: "do nothing" was the only counterfactual scenario.

"Do nothing" remains the main counterfactual scenario, applicable to CO2 transport and storage and other infrastructure categories. However, mention should be made that the counterfactual scenario to be considered in the CBA is different from the requirement to prove the absence of alternative technological solutions required for demonstrating sustainability benefits for the project.

7.13 As part of the CBA, is it correct that the financial analysis only involves the CAPEX and OPEX as actual project costs? More specifically, expected project incomes (i.e.

financial benefits) and consequently calculating a fNPV are, at this stage, not part of the analysis.

The fNPV, based on projected revenues (tariffs) and estimated costs (CAPEX+OPEX) could be included in the proposal as additional information under section III.2 "*Project value calculations*". However, the main part of the CBA under this section should be focused on the eNPV. The information provided by the applicant should allow the verification of the calculations through all the study horizon by calculating scenarios both with and without the project.

7.14 Can you confirm that in order to calculate the eNPV we should use the monetized project benefits (i.e, only B1- Variation of GHG emissions will be monetized) + project costs (CAPEX + OPEX), both discounted using the provided 4% discount rate?

This is correct. However, the project should also prove its eligibility, i.e. compliance with Art. 4, which requires also the compliance with the rest of (qualitative) indicators.

7.15 Can general national plans of bilateral cooperation agreements serve as equivalent to the Plan required in Annex III.2.(6)?

The Regulation requires a plan presented by at least 2 Member States for the development of cross-border carbon dioxide transport and storage infrastructure.

7.16 The plan for the project development must involve at least two Member States. This plan is to be presented to the European Commission separately in order for the project application to proceed. How should we proceed here?

The plan regarding the development of a PCI/PMI, which explains the collaboration between at least 2 Member States, should be ideally provided to the Commission during the project submission period. If this is not possible due to time constraints, then a justification about the expected timing should be included in the submission template, with the latter provided to the Commission services not later than the moment in which the final selection methodology is adopted. The plan, which could cover one or several PCIs/PMIs, is a minimum requirement without which the application cannot progress.

7.17 Does the PMI application need any support letters/endorsement from the government authorities?

Indeed, letters of support or other types of non-binding agreement from the third countries where the project is located are necessary for PMI applications to demonstrate the requirements of Article 4(2) of the TEN-E Regulation. The applicants should include the letter of support, as drafted by the related national authorities, within the submission template. The letters of support can be annexed to the application template. For a PCI candidate project, letters of support are not necessary.

7.18 What is the distinction between "Promoter" and "Affiliated Organisation" status?

The information to be covered in section I.2 of the template comprises the legal name and status of each applicant (usually, project promoter), including ideally at least one per Member State or third country where the project will be developed. An affiliated organisation would be other related parties that would have a complementary role in the development of the CO2 project.

7.19 Does the application require that the "full" value-chain – from CO2 capture to storage is described?

This is correct.

7.20 Could you please provide some additional information on what you expect in macroeconomic factors as regards the assumptions for the CBA?

It refers to general, national or international conditions that could be relevant for the assumptions, if any.

7.21 Is CO2 transportation to an import/export terminal, from where the CO2 is then exported by ship eligible?

Certain infrastructure elements in import/export CO2 terminals can be a component of a candidate pipeline PCI/PMI, according to Annex II.5.(b). The applicant can mention the transport solution chosen to provide a coherent holistic view of the candidate project. A candidate PCI can consider either CO2 transport elements, or CO2 transport and storage components. Standalone CO2 storage projects are not eligible as PCI/PMI.

7.22 Are only emissions during operation included in the GHG calculation? Shall we include also emissions occurring during the construction phase or for decommissioning?

As established in Annex IV.8 of the TEN-E Regulation, sustainability shall be measured by assessing the total expected project life-cycle GHG reductions and the absence of alternative technological solutions.

7.23 Regarding the shadow costs of carbon, can monetized values for CO2 until 2050 be used?

As stated in section 2.1 of the draft assessment methodology for CO2 transport and storage projects, values for the shadow cost of carbon within the study horizon should be aligned to shadow cost of carbon values in Tables 5 and 6 of Commission Notice 2021/C 373/01.

7.24 What does Projpipeline in the formula of the B1 indicator refer to? Are transport elements or receiving terminals included?

$Proj_{pipeline}$ refers to CO2 transport by pipeline, where onshore and offshore pipelines are eligible, but upstream pipelines are not. Rail and road transport could not be part of a CO2 network PCI/PMI, neither can shipping, as established in Annex II.5 of the TENE Regulation. If transport modes such as rail or truck are chosen as the preferred configuration for the candidate project, those elements will not be eligible for the PCI status and their related benefits will not be taken into account in the CBA. As indicated under 7.10, the B1 benefit takes into account the net GHG emission reductions with the GHG emissions caused by the realisation of the project deducted.

Receiving terminals could be a component of a CO2 pipeline PCI/PMI. The related emissions could be included in the calculation of project pipeline.

8 Blending

8.1 What are the conditions allowing for blending in hydrogen pipelines?

In line with Article 31 of the revised TEN-E Regulation, for a transitional period ending

in 2029, dedicated hydrogen assets converted from natural gas assets may be used for transport or storage of a predefined blend of hydrogen with natural gas or biomethane. The project promoters need to closely cooperate on project design and implementation in order to ensure interoperability of neighbouring networks. Sufficient evidence is required, including through commercial contracts, as to the fact that, by the end of the transitional period, the assets will cease to be natural gas assets and become dedicated hydrogen assets, and how the increased use of hydrogen will be enabled during the transitional period. Such evidence shall include an assessment of the supply and demand for renewable or low-carbon hydrogen as well as a calculation of the greenhouse gas emissions reduction enabled by the project.

ACER will verify the timely transition of the project to a dedicated hydrogen asset. Eligibility of such projects for Union financial assistance under Article 18 shall end on 31 **December 2027.**

9 Natural gas projects for Malta and Cyprus

9.1 Will these projects be automatically considered PCIs or do they need to submit an application for PCI status?

In line with the TEN-E Regulation, these projects shall maintain their status as PCIs if they demonstrate that the requirements provided by Article 24(1)(a, b and c) are met. In line with Article 24(1), these projects shall ensure the future ability to access new energy markets, including hydrogen. In line with Article 24(2), the project promoters shall provide sufficient evidence of how the interconnection will allow access to new energy markets, including hydrogen, in line with the Union's overall energy and climate policy objectives. Such evidence shall include an assessment of the supply and demand for renewable or low-carbon hydrogen as well as a calculation of the greenhouse gas emissions reduction enabled by the project.

The necessary documentation can be submitted by the project promoters to the Commission during the project assessment phase in the elaboration of the 2nd list of PCIs and PMIs under the revised TEN-E Regulation for verification by the Commission.

10 Monitoring and reporting

10.1 Why should project promoters report on a yearly basis if the ACER monitoring report is necessary now only every two years? Would projects no longer mentioned as PCIs in the delegated act adopted by the Commission still need to report in that year?

The TEN-E Regulation is very clear on the fact that projects promoters and national competent authorities need to report yearly on the status of their projects. These reports do not only feed into the ACER monitoring exercise, but allow all members of the regional groups to assess the development of PCIs and PMIs and tackle any delays in their implementation as per the requirements of the Regulation. Moreover, a project remains part of a certain Union list until the next Union list formally enters into force. We cannot

prejudge the outcome or the scrutiny period by the Council and Parliament and somehow exclude certain PCIs or PMIs from the reporting obligation.