

Targeted consultation on the revision of Regulation (EU) 347/2013 on guidelines for trans-European energy infrastructure (TEN-E Regulation)

Fields marked with * are mandatory.

Introduction

What is the TEN-E Regulation?

The European Green Deal confirms the EU's ambition to be climate neutral by 2050 and outlines a wide range of measures in different policy areas which need to be revised or newly introduced in order to meet this objective. In the energy sector, one of the key aims is to ensure that our energy infrastructure is fit for the purpose of achieving climate neutrality. In this sense, the Green Deal highlights the importance of smart infrastructure in this transition and specifically identifies the need to review and update the EU regulatory framework for energy infrastructure, including the Regulation (EU) No 347/2013 on guidelines for trans-European energy infrastructure (the "TEN-E Regulation"), to ensure consistency with the 2050 climate neutrality objective. As part of the political agreement between the European Parliament and the Council on the Connecting Europe Facility for the period 2021-2027 – the part of the EU budget which funds cross-border infrastructure projects for energy, transport and digital services – it was already agreed that the Commission should evaluate the effectiveness and policy coherence of the TEN-E Regulation. This revision of the TEN-E Regulation will also address the new policy ambition of the European Green Deal inter alia by integrating a significant increase in renewable energy in the European energy system and by putting the energy efficiency first principle into practice. More information on the European Green Deal is available on the [EC website](#).

The TEN-E Regulation lays down rules for the timely development and interoperability of cross-border energy infrastructure [TEN-E] networks in order to achieve the EU's energy policy objectives. Its key objective is the timely implementation of the projects of common interest (known as "PCIs") which interconnect the energy markets across Europe. Interconnected energy markets allow for better integration of renewable energy sources, better security of supply and higher competition within markets that keeps prices in check. The TEN-E Regulation sets out criteria for establishing the PCIs necessary to implement priority corridors and areas in the categories of electricity, gas, oil, smart grids and carbon dioxide networks.

More information on the TEN-E network is available on the [Europa website](#).

What is this survey about?

This survey is one of the elements of the wider stakeholder consultation strategy to inform about the revision of the TEN-E Regulation. The aim of this targeted survey is to collect information and gather views with respect to the implementation and functioning of the TEN-E Regulation from people with professional experience of how the current regulation works in practice. It also addresses forward looking questions as the evaluation is carried out in parallel with the impact assessment. Further background can be found in the Commission's [inception impact assessment](#).

Who should answer?

Professionals working for organisations involved in the design, implementation or permitting processes of energy infrastructure projects (notably Project Promoters of PCIs, National Regulatory Authorities and National Competent Authorities) or organisations with a strong interest in energy infrastructure and the topic it relates to.

It will only take approximately 30-40 minutes to complete this survey. Please note the information on the use of your input and personal data on the next page.

Your experience with the provisions of the TEN-E regulation in practice are of great value to us, which is why we would like to encourage you to provide explanations and examples in the open text boxes below the questions.

How is the survey structured?

The survey is structured in five main sections on (i) Effectiveness, (ii) Efficiency, (iii) Relevance, (iv) Coherence and (v) Value added by the EU Regulation.

The section on effectiveness is further broken down to collect your input on

- the permit granting process,
- public consultations,
- the PCI selection process,
- governance and the roles of different actors,
- cross-border cost allocation,
- and investment incentives.

How will this survey make a difference?

The survey aims to gather evidence to assess how the current TEN-E Regulation has worked in practice – which aspects have worked well, and not so well, and why – identifying factors which have helped or hampered achieving the objectives foreseen, and provide useful input for the Commission in the preparation of its revision. Your feedback will therefore help influence the future development of the regulatory framework for projects of common interest in the field of energy infrastructure.

Thank you for taking the time to respond to this survey – we highly appreciate your feedback! Should you have any questions concerning this survey or the study, you can contact us at TEN-E@ramboll.com.

Use of your input and personal data

Please refer to this document for the use of your personal data:

[TEN-E_personal_data.pdf](#)

Section 0: About you

Please indicate your name:

Caterina De Matteis

Please leave your email address:

cdm@iogp.org

*** Please select the country in which you are based:**

- Austria
- Belgium
- Bulgaria
- Croatia
- Cyprus
- Czechia
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Poland
- Portugal
- Romania
- Slovak Republic
- Slovenia

- Spain
- Sweden
- United Kingdom
- (other) Non-EU country

*** Please select what type of organisation you represent:**

- National Regulatory Authority
- National Competent Authority (ministry or other governmental body)
- Transmission system operator
- Distribution system operator
- Energy producer
- Industry
- Telecom company
- Local or regional authority
- Civil society
- Research, academia
- Other (please specify):

Please specify the name of the organisation you represent:

International Association of Oil&Gas Producers (IOGP)

Section 1: Effectiveness of the Regulation

The TEN-E Regulation (hereafter: the Regulation) was designed to help overcome some of the key barriers to the development of European wide energy infrastructure. The key questions asked to assess the effectiveness of the Regulation therefore concern the extent to which it has achieved its objectives, and the factors that influenced this.

To what extent do you agree with the following statements regarding the TEN-E Regulation's overall impact?

	Completely agree	Agree	Neither agree nor disagree	Disagree	Completely disagree	Do not know
* Contributing to energy market integration throughout Europe	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Achieving an adequate security of supply level	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Contributing to competitiveness in the EU energy market	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Achieving the 2020 climate and energy targets	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer:

the context of the European Green Deal, it is important that the framework for energy infrastructure is reviewed in order to take into consideration the transformation required by various sectors. Therefore, the priority should be to include the energy transition objectives while safeguarding and building upon the already substantial achievements of the internal gas market. As recently highlighted by EVP Timmermans, in the press conference presenting the EU Recovery Package ‘the use of natural gas will probably be necessary to shift away from coal to sustainable energy’. In the short term, switching from coal to natural gas in power generation would significantly reduce up to 60% CO2 emissions (in the power sector) . This will be key to guarantee security of supply based on diversification of routes, sources and suppliers while at the same time achieving climate targets objectives.

Moreover, by facilitating the development of a CO2 managing infrastructure and enabling a clean hydrogen infrastructure, a revised TEN-E will contribute to scale up technologies such as CCS (Carbon Capture Storage) which will be key to decarbonize both the energy market and industrial activity to achieve the Paris Agreement objectives.

*** Which factors do you think have contributed to the achievement of the objectives? On the contrary, which factors have hindered the achievement of the objectives?**

TEN-E guidelines strengthen the security of energy supply by creating operational link between energy national markets and reinforcing relations with third countries in the energy sector. This is key for the functioning of the internal energy market included of the gas market.

However there some limitations which should be taken into account in the upcoming revision. So far the fact that transport of CO2 was only allowed by pipelines instead of encompassing maritime, road, railway and other transport may have hindered the scale-up of CCS in Europe, crucial to achieving emission reductions. We believe that the reviewed TEN-E guidelines should ensure a technology neutral approach. Until now the energy transition has mainly focused on supporting renewables and improving the distribution of electricity, whereas the opportunities and benefits for the energy system at large of low carbon gases to be interconnected as well as CO2 transport and CCS infrastructure have been overlooked.

To what extent do you agree with the following statements concerning the financing of energy infrastructure projects?

The Regulation helped to finance energy infrastructure projects by...

	Completely agree	Agree	Neither agree nor disagree	Disagree	Completely disagree	Do not know
* Making financing instruments available to finance PCIs.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increasing financing capacities of TSOs (ability to raise debt at a reasonable cost, ability to	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

attract new institutional investors).						
* Providing targeted EU financing under the Connecting Europe Facility.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Other (please describe)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Please explain your answer:

Section 2: Permit granting processes

Over time and since 2013, do you agree that the TEN-E Regulation has had a positive impact on shortening the duration of the permit granting procedure for PCIs?

- Completely agree
- Agree
- Neither agree nor disagree
- Disagree
- Completely disagree
- Do not know

Please explain your answer:

To what extent do you agree that the permit granting in ‘one-stop shops’ has...

	Completely agree	Agree	Neither agree nor disagree	Disagree	Completely disagree	Do not know
* Reduced complexity of the permit granting process?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Increased efficiency in time and costs of the permit granting process?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Increased transparency of the permit granting process?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Enhanced cooperation between Member States?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

* Would allow addressing challenges related to the permitting of infrastructure for offshore renewable energy projects?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
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Please present your views with regards to possible changes which will help improve the process:

Section 3: Public consultation

To what extent do you agree with the following statements about the role of at least one public consultation introduced for PCIs?

The additional public consultation introduced for PCIs has...

	Completely agree	Agree	Neither agree nor disagree	Disagree	Completely disagree	Do not know
* Increased/improved public participation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Increased awareness of PCI projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Increased trust among participants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Increased public acceptance of PCI projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Led to improvements in the design of the projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Please explain your answers, possibly comparing to other non-PCI projects:

*** To what extent would you agree that the input from the public consultation introduced by the TEN-E Regulation is/was used to guide the further development of projects?**

- Completely agree
- Agree
- Neither agree nor disagree
- Disagree
- Completely disagree
- Do not know

Please explain your answers, possibly comparing to other non-PCI projects:

*** To what extent do you agree that the requirement for at least one public consultation is enough for increasing transparency and participation in the design and planning of the projects?**

- Completely agree
- Agree
- Neither agree nor disagree
- Disagree
- Completely disagree
- Do not know

* Please explain your answers, possibly comparing to other non-PCI projects:

We believe that public consultation increases transparency on the PCI selection process but does not have an increasing value in design and planning of the projects. The latter is better realised within the national and local EIA processes within the regulations.

Section 4: PCI selection process

To what extent do you agree with the following statements concerning the PCI selection process?

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	Completely agree	Agree	Neither agree nor disagree	Disagree	Completely disagree	Do not know
* PCIs selected are the most relevant projects to the fulfilment of the TEN-E objectives.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Cost-benefit assessments for the selection of PCIs are using an appropriate methodology.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answers:

The process of PCI selection is based on infrastructure planning in the TYNDP process as well as on identified needs of the concerned Member States, which need to be involved if the project is to become a PCI. This allows to select projects that fulfill the goals of security of supplies, interconnectivity and competition and does not allow to support projects that would not be able to provide toward these goals. Within CO2 transport networks thematic group, the TEN-E regulation is still tailored towards streamlined energy projects (such as pipelines or power lines) and towards the “previous generation” of CCS projects, where there was one source of emissions and one pipeline to transport the CO2 to the storage. With the new generation of CCS projects being developed, all of which are network-based projects with numerous emission sources, the additional flexibility in the transport chain should be included in the regulation and rewarded.

Developing network flexibility for CO2 and for hydrogen transport should be taken into account in the cost-benefit analysis.

Furthermore, projects considered at the completion phase should see their status of PCI confirmed for the initial period to make sure that they can become operational quickly, avoiding any problem for the obtention of permits and/or amendments of existing permits. This would be key not only for the operational phase but also for the expansion one.

To what extent do you agree that the role of the different actors listed below is adequate in the selection procedure?

	The role is adequate	The role should be weakened	The role should be strengthened	Do not know
* European Network of Transmission Systems Operators for Electricity and Gas (ENTSO-E /ENTSO-G)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Agency for the Cooperation of Energy Regulators (ACER)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* European Commission	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Regional Groups	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* National Regulatory Authorities (NRA)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
National Competent Authorities (NCA)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Transmission systems operators (TSO)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Distribution system operators (DSO)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Other stakeholders (NGOs, energy industry, telecom companies, trade associations, finance community, etc.)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answers and, if applicable, elaborate on how the role of actors should change.

To what extent do you agree with the following statements concerning the gas and electricity EU-wide Ten-Year Network Development Plans (TYNDPs)?

	Completely agree	Agree	Neither agree nor disagree	Disagree	Completely disagree	Do not know
* The current framework is fit for purpose.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* The electricity and gas market and network models are sufficiently interlinked (e.g. scenarios and cost-benefit assessment).	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* The current framework does sufficiently match the need for system integration, i.e. the consideration of sectors other than gas and electricity.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* The TYNDPs do reflect enough coordination with distribution level networks.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* The relevant actors are involved in the TYNDP processes and their respective roles are adequate.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* The TYNDPs do reflect sufficiently energy efficiency aspects.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answers:

IOGP supports the ongoing work by the European Network of Transmission System Operators for Electricity (ENTSOE) and for Gas (ENTSOG) to continuously improve the coordinated network development planning through the Ten-Year Network Development Plan to better integrate gas and power systems and to drive cost-effective emissions reductions.

This better leverage the flexibility of gas storage; capacity of existing European facilities is 1,440 TWh, which is equivalent to about 20 billion Tesla 75D batteries, and LNG supply is flexible and accounts for another 260 TWh of floating worldwide storage.

The TYNDP must be better utilized for long-term pan-European network planning, in particular to build up CO2 transport and hydrogen networks. PCIs under these thematic areas should be better integrated in the TYNDPs and ENTSO-E/ENTSO-G modelling exercises. In addition, the TYNDPs must be aligned with NECPs that member states prepare, which also implies that hydrogen and CO2 transport PCIs should be listed in the NECPs to improve national and EU policy coordination and communication.

Power-to-gas applications as well as CCS-enabled clean hydrogen may be potential long-term solutions to deal with excess renewable electricity while utilising the existing gas infrastructure. In the near term, flexible use of gas-fired power generation can provide cross-sectoral flexibility triggered either by (negative) price signals in the electricity market or by a capacity market for power generation. The same costs should apply to parties in the electricity sector that wish to use the gas system to store electricity via power-to-gas applications.

To what extent do you agree with the following statements on the selection criteria for projects of common interest?

	Completely agree	Agree	Neither agree nor disagree	Disagree	Completely disagree	Do not know
* The general selection criteria are appropriate.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* The specific selection criteria for electricity transmission projects are appropriate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* The specific selection criteria for gas projects are appropriate.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* The specific selection criteria for electricity smart grid projects are appropriate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* The specific selection criteria for carbon dioxide transport projects are appropriate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you disagree, please specify changes you consider necessary:

With regard of CO2 transport projects, all kind of transport modalities, i.e. maritime, road, rail, should be eligible. This would facilitate the development of CO2 (and in the future of hydrogen), cross border connections. The volume to transport will gradually be increasing hence requiring modes of transport that are a) limited in unit size to allow for first movers to enter, b) scalable to allow a stepwise development and c) flexible to overcome geographical distances between first movers. Maritime, road and rail fulfil these criteria much better than transmission pipelines.

Moreover, considering that the new generation of CCS projects are network projects, the selection criteria should be tailored to allow for different emitters with a range of maturity to be part of the same PCI.

To what extent do you agree that projects of mutual interest with third countries should be included in the revised TEN-E framework?

	Completely agree	Agree	Neither agree nor disagree	Disagree	Completely disagree	Do not know
* Projects of mutual interest, i.e. projects with third country that benefit only one Member State, should remain outside the TEN-E framework.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Projects of mutual interest should be included in the TEN-E framework...	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* ...subject to specific eligibility and selection criteria,	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* ...subject to a specific selection process	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* ...subject to specific conditions for regulatory measures and access to financial assistance would apply.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please specify your answer:

Revised TEN-E should facilitate obtaining a PCI status for the joint projects between EU Member States and third countries with EU-acquis based regulations, i.e. EEA states, UK, Energy Community, as well as for those providing new sources of gas, i.a. East Mediterranean, Caspian Sea Region.

In this context, gas PCIs play a particularly important role to enhance security of gas supply and to improve the gas market functioning in some areas. The projects should be subject to the same criteria as PCIs.

For the development for CO2 management infrastructure to the benefit of the EU single market,

decarbonization of the energy market and the industrial activity, untapping the storage potential available across the EU is key. For example, the North Sea has some of the best geological formations in Europe, especially on the Norwegian Continental Shelf (NCS) and UK Continental Shelf (UKCS). Furthermore, the availability of depleted fields in the Mediterranean (e.g. in the Adriatic Sea) is also to be leveraged, leading to a wider geographical application of CCUS in Europe. In addition, in many Member States there is currently no public acceptance for onshore storage. Both the NCS and the UKCS are developing storage at this moment which will support the decarbonization of the energy and industrial sectors. The estimated storage capacities in their jurisdictions exceeds the projected national requirements. It will have a negative effect to the competitiveness of the EU energy and EU industrial sectors if these storages cannot connect to the EU under the TEN-E regulations.

Section 5 Governance and the roles of different actors

To what extent do you agree with the following statements concerning the effectiveness of the PCI monitoring and implementation planning procedures?

	Completely agree	Agree	Neither agree nor disagree	Disagree	Completely disagree	Do not know
* Current reporting and monitoring procedures on the PCI progress [popup box: i.e. Activity Status Reports, ACER monitoring reports, Transparency Platform etc.] are sufficient to ensure transparency on PCI development.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* PCIs implementation plans and the regular updates ensure timely project implementation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer:

We believe that regional group should have a more targeted and better oriented conversation in the process. Furthermore, there is no EU coordination among different regional groups.

Section 6: Cross-border cost allocation

*** To what extent would you agree that CBCA decision processes and outcomes enable effective investment decisions?**

- Completely agree
- Agree
- Neither agree nor disagree
- Disagree
- Completely disagree
- Do not know

* Please explain your answer, possibly comparing with other means of taking CBCA decisions:

As IOGP we don't have a position on this issue.

Section 7: Investment incentives

According to Article 13 of the TEN-E Regulation, incentives can be provided for PCIs which are exposed to higher risks than normally incurred by a similar infrastructure project, and for which a net positive impact is confirmed by the CBA.

*** To what extent would you agree that investment incentives enable effective investments in PCIs?**

- Completely agree
- Agree
- Neither agree nor disagree
- Disagree
- Completely disagree
- Do not know

Please explain your answer:

PCIs serve the purposes of providing security of supplies, market integration and competition. They also are necessary to implement priority corridors, which is of EU and EU MS interest. Therefore, additional funding

is on a case by case basis required as a leverage to complete projects and corridors. The requirement that MS concerned are in agreement with the project allows for directing EU funds towards projects that fulfil the necessary criteria.

Please specify your answer:

Section 8: Efficiency of the Regulation

The evaluation of the efficiency of the Regulation considers the extent to which the resources used to implement the Regulation and achieve its objectives are used as efficiently as possible (with lowest possible resources /costs). In the case of the TEN-E Regulation, this mainly relates to the costs and benefits for NRAs and project promoters with regards to the implementation of the Regulation.

*** To what extent do you agree that the benefits of the provisions in the TEN-E Regulation outweigh the costs?**

- Completely agree
- Agree
- Neither agree nor disagree
- Disagree
- Completely disagree
- Do not know

Please explain your answer:

Can you identify any opportunities to simplify the legislation or reduce unnecessary costs without undermining the intended objectives of the Regulation?

The benefits of the TEN-E Regulation are to be measured in terms of increase trade among Member States as well as market convergence, which according to ACER reports is increasing. Moreover, the result of the TEN-E Regulation is the new infrastructure that allows for increased security of supplies and crisis resilience. The increased crisis resilience has been proved by the stress tests of the EU gas resilience, which were initiated in 2014. Still, those stress test as well as following analysis from ENTSOG proved that, even though the resilience has increased due to increased interconnectivity and diversification, in CEE still further efforts are required.

*** To what extent do you agree that the current reporting and monitoring procedures on the PCI progress can be simplified and still fulfill their purpose?**

- Completely agree
- Agree
- Neither agree nor disagree
- Disagree
- Completely disagree
- Do not know

Please explain your answer:

Section 9: Relevance of the Regulation

The evaluation of the relevance of the TEN-E Regulation assesses the extent to which the TEN-E Regulation and its objectives appropriately respond to the changes in energy infrastructure needs and in the policy context (such as the climate neutrality objective under the European Green Deal).

To what extent do you agree that the following issues are currently well addressed by the Regulation?

	Completely agree	Agree	Neither agree nor disagree	Disagree	Completely disagree	Do not know
* Integration of renewable energy sources into the electricity network	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Integration of renewable energy sources into the gas network	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Support of electrification of transport through appropriate grid infrastructure	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Smart sector integration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Energy transition for fossil fuel regions	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Climate change mitigation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Climate resilience of energy infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Improving energy efficiency of the energy system	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you ticked 'Completely disagree' or 'Disagree': How do you think the Regulation should change to better address these issues?

Integration of RES into the gas network: This should not be mandatory criteria for all projects. The goal is to reduce the emissions of the energy sector; this can be accomplished in many different ways. The TEN-E regulation assumes RES is the only solution, but it should have a more technology neutral approach. For example CO2 transport networks do not always support the integration of RES sources but they will allow for substantial reduction in emissions, similar to hydrogen.

Smart sector integration: The EU should enhance its position on the smart sector integration. This seems to be more adequate to deal with issues such as climate change mitigation which were in in the original objectives on TEN-E.

Hydrogen infrastructure and CCS are not well integrated under current legislation. Furthermore, sector integration is mainly focused on energy itself, but it should also include industry more and more, following the example of the recently published Smart System Integration Strategy.

Climate change mitigation/climate resilience of energy infrastructure: There should be more focus on the opportunity to re-use the pipeline infrastructure for low-carbon gasses and CO2. Only an electrical grid will be very inefficient, expensive and vulnerable. Hydrogen is a flexible energy carrier that can contribute to reducing the emissions of the natural gas system, to power system stability and integrity and enable industrial activities in a low carbon environment. The recently published Smart System Integration Strategy affirms that dedicated infrastructure for large-scale storage and transportation of pure hydrogen will be needed; the revised TEN-E rules should introduce a new thematic area for clean hydrogen networks. Both new infrastructure projects as well as hydrogen transport (including pipelines, maritime, road and other) solutions, intermediate storage and associated infrastructure projects should be encompassed in the framework of TEN-E. The hydrogen thematic area should encompass other clean fuel forms, such as ammonia or liquid organic hydrogen carriers.

To what extent would you agree that the TEN-E Regulation has been relevant in supporting the development of the following infrastructure categories?

	Completely agree	Agree	Neither agree nor disagree	Disagree	Completely disagree	Do not know
* High-voltage overhead transmission lines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Electricity storage facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Safety and efficiency installations for electricity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Smart grids	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Transmission pipelines for natural gas and biogas	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Underground gas storage facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

* reception, storage and regasification or decompression of liquefied natural gas (LNG) or compressed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
natural gas (CNG)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Safety and efficiency installations for gas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Pipelines for crude oil	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Oil pumping and storage facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Safety and efficiency installations for oil	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Dedicated carbon dioxide pipelines	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Facilities for liquefaction of carbon dioxide and buffer storage	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Safety and efficiency installations for carbon dioxide	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*** Which of the challenges would you say are most important to address in the field of energy infrastructure today, compared to the situation in 2013? Please select up to 3 most important challenges.**

at most 3 choice(s)

- Digitalisation
- Security of supply
- Greenhouse gas emission reductions / climate neutrality
- Other (please specify)
- Cross-border/regional cooperation
- Energy infrastructure investments
- Public opposition to projects
- Energy system integration
- Commercial viability of projects
- Integration of renewable energy sources
- Energy efficiency first principle
- Market fragmentation / market integration
- Regulatory cross-border challenges
- Competitiveness of the EU energy market
- Energy financing capacity of TSOs
- Permit-granting procedures

Environmental due diligence in the preparation, permitting and implementation of project

*** Which of the challenges would you say are least important to address in the field of energy infrastructure today, compared to the situation in 2013? Please select up to 3 least important challenges.**

at most 3 choice(s)

- Other (please specify)
- Competitiveness of the EU energy market
- Greenhouse gas emission reductions / climate neutrality
- Security of supply
- Energy efficiency first principle
- Energy infrastructure investments
- Energy financing capacity of TSOs
- Public opposition to projects
- Cross-border/regional cooperation
- Market fragmentation / market integration
- Regulatory cross-border challenges
- Integration of renewable energy sources
- Energy system integration
- Environmental due diligence in the preparation, permitting and implementation of project
- Commercial viability of projects
- Permit-granting procedures
- Digitalisation

Which features do you consider the most important for a project of common interest (PCI) as part of trans-European energy network?

	Important	Important to a large extent	Important to a small extent	Not important	Do not know
* Integration of renewable energy sources into the grid	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Contribution to greenhouse gas emissions reduction / fully consistent with climate neutrality 2050	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Security of supply	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Market integration (e.g. to reduce infrastructural deficits and increase system flexibility)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increase competition on the market	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Innovation	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* Environmental due diligence in the preparation, permitting and implementation of project	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Generation of direct benefits to the local communities	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Which of the following infrastructure categories do you consider relevant for the regulatory framework on trans-European energy networks?

	Relevant	Relevant to a large extent	Relevant to a small extent	Not relevant	Do not know
Electricity infrastructure (transmission lines and storage)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grids for offshore renewable energy	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smart electricity grids	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smart gas grids	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Natural gas infrastructure (pipelines and storage)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Liquefied Natural Gas (LNG) terminals	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dedicated hydrogen (H2) networks	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Infrastructure for the integration of renewable and carbon neutral gases	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Power-to-gas installations	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
CO2 networks (for transporting CO2)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Geological storage of CO2	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The TEN-E Regulation presents nine Priority corridors: North Seas offshore grid (NSOG), North-south electricity interconnections in western Europe (NSI West Electricity), North-south electricity interconnections in central eastern and south eastern Europe (NSI East Electricity), Baltic Energy Market Interconnection Plan in electricity (BEMIP Electricity), North-south gas interconnections in Western Europe (NSI West Gas), North-south gas interconnections in central eastern and south eastern Europe (NSI East Gas), Southern Gas Corridor (SGC), Baltic Energy Market Interconnection Plan in gas (BEMIP Gas), Oil supply connections in central eastern Europe (OSC).

The TEN-E Regulation also presents three Priority thematic areas: Smart grids deployment, Electricity highways, and Cross-border carbon dioxide network.

For more information, see: https://ec.europa.eu/energy/topics/infrastructure/trans-european-networks-energy_en?redir=1

To what extent do you agree with the following statements concerning priority corridors and thematic areas?

	Completely agree	Agree	Neither agree nor disagree	Disagree	Completely disagree	Do not know
* Priority Corridors reflect the current infrastructure needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Priority Corridors are fit for purpose for future challenges to the energy infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Priority Thematic Areas reflect the current infrastructure needs	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Priority Thematic Areas are fit for purpose for future challenges to the energy infrastructure	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer:

The new TEN-E rules should introduce a new thematic area for clean hydrogen networks. Both new infrastructure projects as well as hydrogen transport (including pipelines, maritime, road and other) solutions, intermediate storage and associated infrastructure projects should be encompassed in the framework of TEN-E. Infrastructure to support low carbon energy –including hydrogen –will not be developed at the same pace across Europe due to regional differences. The TEN-E Regulation should in particular facilitate the adaptation of existing natural gas infrastructure to transport blends or in the future hydrogen and where necessary allow for a multispeed transition to low carbon energy infrastructure in different regions of the EU. The new TEN-E rules should facilitate dedicated hydrogen infrastructure workstreams. These cooperative workstreams should cluster hydrogen-ready member states; promote the development of clean hydrogen infrastructure projects; and address standardisation and safety issues in a timely manner.

Section 10: Coherence of the Regulation

Coherence is about the extent to which the objectives and the implementation of the activities related to the Regulation are non-contradictory (internal coherence), and do not contradict other activities with similar objectives (external coherence). Questions relate to whether there are any internal inconsistencies in the Regulation itself, as well as the degree to which it is coherent with other (EU) initiatives with similar objectives and its situation in the wider EU energy policy field.

*

Can you identify any overlaps, inconsistencies within the TEN-E Regulation (including in its measures and objectives)?

- Yes, there are overlaps, inconsistencies or incoherencies
- No, the Regulation is coherent overall
- Do not know

*** Please specify your answer, if possible, mentioning specific overlaps or inconsistent /incoherent measures of the Regulation:**

Criteria for PCIs – The sustainability dimension should be incorporated on the basis of GHG emissions reduction potential applied in a non-discriminate manner to all technologies and network development plans, as is the case for decarbonisation projects under the Innovation Fund. Emission performance-based evaluation in the context of TEN-E Regulation would ensure its consistency with the EU’s climate & energy legislation as well as help avoid counterproductive outcomes in terms of energy and resource use.

Definition of sustainable gas - the sustainability dimension of gas as defined in the TEN-E Regulation should not be limited to gas produced from renewable sources only. Non-renewable low-carbon gases should be added to the scope to recognise their potential for the gas sector decarbonisation.

The future development of an EU Taxonomy through delegated acts should incorporate CO2 capture and transport as sustainable activities.

Please state your opinion on the following statements regarding the consistency between the TEN-E Regulation and other policies/ initiatives at EU, international, and national level:

	Inconsistencies, or conflicts with the Regulation	Consistent with the regulation	Do not know
* The Clean Energy Package / the Energy Union	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* The European Green Deal / Long Term Strategy for Decarbonisation	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Trans-European transport networks (TEN-T)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* EU environmental acquis (habitats, water, etc.)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* EU Digital Strategy	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* EU Industrial Strategy	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Paris Agreement	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* UN Sustainable Development Goals	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
*			

Commission communication on a stronger and renewed strategic partnership with the EU's outermost regions (COM(2017)623 final)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* EU neighborhood policy	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

*** Please specify your answer, if possible, mentioning specific measures of the Regulation:**

The revision of the Trans-European Network for Energy regulation (TEN-E) should be in line with the European Green Deal, the Innovation Fund and the upcoming Strategy for Integrating Energy Systems encompassing the principle of climate neutrality by 2050. As an example, the final TEG Report on Sustainable Finance has included the retrofit of gas pipelines for low-carbon gas transportation; the transport of CO2 by rail, ship and pipeline; permanent sequestration of captured CO2; and storage of hydrogen as sustainable activities that contribute to climate change mitigation and adaptation. Still, also natural gas projects, if they fulfill the criteria of increasing security of supply, competition, interconnectivity and sustainability should be considered eligible for PCI status.

Furthermore, PCI projects in all thematic areas – including CO2 transport and potentially hydrogen – should be included in the long-term network planning tools. The TEN-E Regulation should guarantee that all PCI projects are included in the TYNDP of ENTSO-G and ENTSO-E as well as the NECPs of national member states. This would improve project and policy coordination and visibility within member states and on the level of EU.

The TEN-E revision is a good opportunity to ensure a clear allocation of projects between TEN-E and TEN-T with regard to hydrogen and to clarify which clean hydrogen projects should relate to which regulation /networks.

With regard to the Industrial Strategy: the goal of the Strategy is to help EU industry become greener, more circular and more digital while staying in Europe and remaining competitive on the global stage. CCS will be necessary to decarbonise certain energy-intensive industries while maintaining their productivity and avoid carbon leakage, both through the capturing of CO2 emitted by industries and through the manufacturing of clean hydrogen for transport, heat and power.

Flexible transport solutions of CO2 such as ship, train and rail need to be eligible under the TEN-E Regulation, as they allow to reach multiple industrial carbon emission points across Europe. The TEN-E Regulation should also encompass industrial clean hydrogen networks to facilitate the large-scale hydrogen infrastructure development.

Another aspect of significance would be to develop funding opportunities for retrofitting the existing gas infrastructure to make it hydrogen ready but also fund studies and/or works on fitting the existing gas grids to be able to transport decarbonised gases and to blend hydrogen in the future.

Section 11: EU added value of the Regulation

EU added value concerns the extent to which changes can reasonably be argued to be a result of the EU intervention, over and above what could reasonably have been expected from national actions. Thus, it considers whether and to the extent to which it is justified in terms of the results it brought about compared to what could have been achieved by Member States themselves; and the extent to which the issues addressed by the TEN-E Regulation still require EU intervention (or, in other words, what the consequence of stopping the EU intervention would be).

*** What do you think has been the EU added value of the TEN-E Regulation, compared to what could have been achieved if legislation on energy infrastructure networks only existed at national or regional level?**

- Regional cooperation
- Cooperation gains
- Improved regulatory certainty
- Increased transparency
- Increased acceptance of energy infrastructure projects
- Enhanced compliance with environmental requirements
- Greater speed and/or effectiveness of delivery of projects
- Certain projects could not have been implemented otherwise
- Access to financing (e.g. Connecting Europe Facility)
- Other, please specify

Please specify your answer:

Would the same results have been achieved legislating at national and/or regional level?

	Completely agree	Agree	Neither agree nor disagree	Disagree	Completely disagree	Do not know
* The TEN-E Regulation has achieved more results than what could have been achieved legislating at national and/or regional level.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* The issues addressed by the TEN-E Regulation continue to require action at EU level.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer:

The TEN-E Regulation has achieved more results than what could have been achieved legislating at national and/or regional level especially in terms of cross borders connections which provide energy supply safety in different regions especially in CEE countries. However this process needs to be continued in order to increase security of supplies, interconnectivity and to ensure alignment with the objective to reach climate neutrality by 2050.

Section 12: Final questions

Would you be willing to take part in a follow-up interview to provide further feedback for the evaluation?

- Yes
 No

Please note that while we will do our best to contact everyone who wishes to participate in the interviews, we retain discretion on selection in order to achieve proportional representation.

*** Do you agree with the use of your email address to reach out for follow-up interviews?**

- Yes
 No

If you did not do so in the beginning, could you please include your email for us to contact you to schedule a follow-up interview:

Do you have any comments, remarks or information regarding this survey that you would like to share?

Please share any relevant documents and data that would be useful for the purposes of our evaluation.

We kindly ask if you could please reflect all inputs, including those that are in your position papers, in the responses to the survey questions.

The maximum file size is 1 MB

Thank you very much for taking the time to answer this survey. Once you click "submit" below, your answers will be saved and sent. You will still be able to make changes if you reopen the survey link invitation sent to your email address.

Your answers will be treated fully confidentially and not be shared with anyone else.

If you have any questions about this survey, please contact TEN-E@ramboll.com.

Contact

ener-b1-projects@ec.europa.eu