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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:

Sabina Potestio

Please leave your email address:

sabina.potestio@windeurope.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:

WindEurope

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	○	◉	○	○	○	○
* Achieving an adequate security of supply level	○	◉	○	○	○	○
* Contributing to competitiveness in the EU energy market	○	○	○	○	○	◉
* Achieving the 2020 climate and energy targets	○	○	◉	○	○	○

Please explain your answer:

Since 2013 the TEN-E regulation has positively contributed to market integration. Physical cross-border electricity and gas transmission capacities have been expanding, enabling an intensification of cross-border energy flows and contributing to more competition and to converging wholesale prices on both the electricity and gas market, reflecting deeper market integration, though with contrasting trends from year to year and across the different electricity markets and gas hubs within the EU. This shows the importance of further developing cross-border interconnections (Trinomics, 2018).

Security of supply has been at the core of the TEN-E regulation since its inception. Today, under normal market conditions, existing gas infrastructure is sufficient to meet gas demand even in the event of “extreme” supply chain disruptions (Artelys, 2020).

*** 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 networks should not only reflect the energy transmission but also the distribution and energy customer solutions landscape of tomorrow, including smart grids for distributed energy resources (i.e. storage, EVs as V2G), demand side management and sector integration. TEN-E regulation should facilitate the needed investment by broadening its scope of cross-border projects to local, decentralized and participative smart grid projects and phasing out the support to project no longer aligned with the EU climate goal.The most important factor contributing to the achievement of the objectives is the access to grants both for studies and the construction works, coming from the Connecting Europe Facility.

On the other hand, the streamlining of permits for those projects in the PCI lists has had limited impact, as most projects still face long permitting granting delays, far longer than the 2.5 years suggested in the Regulation.

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.	◉	○	○	○	○	○
* Increasing financing capacities of TSOs (ability to raise debt at a	○	○	○	○	○	◉

reasonable cost, ability to attract new institutional investors).						
* Providing targeted EU financing under the Connecting Europe Facility.	○	◉	○	○	○	○
* Other (please describe)	○	○	○	○	○	◉

Please explain your answer:

The TEN-E regulation has allowed PCI projects to access different sources of financing both at Member State and Union level including funding allocated through EU Structural and Cohesion Funds, the European Investment Bank, and the Connecting Europe Facility.

The Connecting Europe Facility has provided targeted financing support to PCI projects. It has enhanced the effectiveness of EU action and enabled implementation costs to be optimised. It has accelerated investment in the field of trans-European networks and to leveraged funding from both the public and private sectors, while increasing legal certainty for cross-border infrastructure projects of EU public interest.

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:

In spite of the ‘fast-track’, permitting procedures granted to PCIs remain complex and lengthy, the average expected duration to complete PCIs is 10.5 years according to ACER, with the shortest duration of less than 3 years and the longest 19 years. In practice, the one-stop-shop solution has not yet proven successful in some Member States due to conflicting pre-existing procedures and/or their specific institutional context as well as to public opposition. In particular, the need for new power infrastructure is often poorly explained to those affected, which fuels resistance. This is why there is need for dedicated policy frameworks for electricity infrastructure deployment which would encourage timely infrastructure deployment, considering all available transmission technologies. Doing so will prevent and reduce delays across the different permitting, planning and construction phases and by involving civil society would facilitate obtaining public support and enhance public acceptance.

So far, for example, only one PCI has been completed in the North Seas, the COBRA Cable. There are 18 more PCI interconnectors in the 2019 list for the North Seas Offshore Grid, but only three considering the

connection to offshore wind farms. So, while PCIs may benefit from investment funds and some form of risk hedging provided by the EU, their long lead time would be a nonstarter for most private developers of offshore wind farms and offshore transmission assets.

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?	○	○	○	◉	○	○
* Increased efficiency in time and costs of the permit granting process?	○	○	○	◉	○	○
* Increased transparency of the permit granting process?	○	○	◉	○	○	○
* Enhanced cooperation between Member States?	○	○	○	○	○	◉
* Would allow addressing challenges related to the permitting of infrastructure for offshore renewable energy projects?	◉	○	○	○	○	○

Please present your views with regards to possible changes which will help improve the process:

Permitting timelines for PCIs have not sufficiently improved with fast-track permitting. A solution could be to further simplify procedures to decrease the administrative burden for project developers. As PCIs have to undergo the selection process every two years, for example, they risk losing their 'priority' status during implementation as well as losing further financial support. This is especially important for projects in the permitting or even construction phase, so that no additional risks come up (Trinomics, 2018). Furthermore, regulatory misalignment between different Member States (where present) still slow down the authorization process and PCI status does not overcome this obstacle, revision of TEN-E guidelines with the aim of tackling these issues is of paramount importance.

The review of the TEN-E regulation opens the opportunity to prioritise offshore grid projects. Today the legislation provides for a thematic area called the Northern Seas offshore grid. But it is framed as "integrated offshore electricity grid development and the related interconnectors". A more appropriate focus would be "Offshore grids for renewable energy projects". To fast-track permitting and support the construction of the offshore grids needed to connect future offshore wind capacity, the EU should review the criteria for Projects of Common Interest (PCIs) and prioritise critical offshore grid projects.

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	○	◉	○	○	○	○
* Increased awareness of PCI projects	○	◉	○	○	○	○
* Increased trust among participants	○	◉	○	○	○	○
* Increased public acceptance of PCI projects	○	○	◉	○	○	○
* Led to improvements in the design of the projects	○	○	○	○	○	◉

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 think that at least one public consultation is the bare minimum. However, Project promoters need to undertake many more initiatives to ensure acceptability of infrastructure projects. The wind Industry is active in this field and uses a large array of action to increase local buy-in of projects, from early consultation, local liaison offices, local procurement of workers and materials, benefits in kind through development and social programs, etc. For more information see here (community engagement paper link once it's ready).

Section 4: PCI selection process

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

	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.	○	○	◉	○	○	○
* Cost-benefit assessments for the selection of PCIs are using an appropriate methodology.	○	○	○	◉	○	○

Please explain your answers:

A revised TEN-E regulation will need to reflect the EU's energy and climate targets for 2030 and the 2050 decarbonisation goals outlined in the European Green Deal. Getting energy infrastructure regulation right is crucial to reach the energy transition objectives.Key elements of the energy transition such as the deployment of renewable energy technologies and grid infrastructures follow long investment cycles and need ambitious long-term investment signals.

The priority corridors and areas as well as the eligibility criteria set out in the TEN-E regulation were defined in 2013 with security of supply as the ultimate goal. The approach outlined in the document is no longer in line with the evolution of the energy system over the past years and with the new policy priorities. Sustainability, for example, is currently just one of the criteria which Project of Common Interest (PCI) projects need to meet. In the future, PCI status should only be given to project that score high on sustainability.

Renewables-based electrification is key and the most cost-efficient way to decarbonise Europe's energy system. If EU policymakers make a clear choice for renewables-based electrification, Europe will hold the key to a successful decarbonisation strategy while ensuring it retains its competitive edge in key climate mitigation technologies.

There is a significant lack of harmonisation between the different CBA methodologies that have been utilised. The absences of a common methodology make PCI projects incomparable. Therefore, a common CBA methodology for assessing PCIs should be viewed as a necessity rather than as an additional bureaucratic process;

Whilst grid expansion is crucial and needs to accelerate, grid optimisation and timely solutions must be addressed first. It is very important that the CBA processes in place can capture the potential system benefits from grid optimisation technologies. Such benefits include the potential deferral of new grid capacity requirements, grid OPEX savings, reduced renewables' curtailment and compensations thanks to grid optimisation.

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)	○	◉	○	○
* Agency for the Cooperation of Energy Regulators (ACER)	◉	○	○	○
* European Commission	○	○	◉	○
* Regional Groups	◉	○	○	○
* National Regulatory Authorities (NRA)	○	○	◉	○
* National Competent Authorities (NCA)	◉	○	○	○
* Transmission systems operators (TSO)	○	◉	○	○
* Distribution system operators (DSO)	○	○	◉	○
* Other stakeholders (NGOs, energy industry, telecom companies, trade associations, finance community, etc.)	○	○	◉	○

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

Energy Infrastructure needs are currently identified by infrastructure stakeholders in electricity and gas – the Transmission System Operators (TSOs). The European Commission, ACER, NRAs and Members States should ensure a close oversight of the PCI selection process. ENTSOs should proactively consult stakeholders at an early stage notably when assumptions on demand and supply are being defined. For a changing energy system, new expertise is required in infrastructure planning. The following elements should be considered:

- The role of a more active demand side, storage and the transformation of distribution systems. The European Commission should support the drafting of a dedicated Ten-Year Network Development Plan (TYNDP) for power distribution to be elaborated by the new EU DSO Entity and to complement the current TYNDP at transmission level. Such mapping process will provide a clear and precise understanding of both the infrastructure and investment needs for Europe's power distribution networks;
- The role of grid optimisation solutions;
- The further and more efficient integration of sectors and networks to harvest the benefits and synergies between sectors.

The governance of PCI selection can benefit from the following:

- An independent technical expert body which would provide an independent, evidence-based opinion and guidance on energy scenarios;
- A more flexible structure around priority corridors enabling the TEN-E regulation to respond to recent learning. Priority corridors, for example, could be updated regularly in line with recommendations by the independent technical expert body on critical investment needs across the EU;
- Improvements in terms of legitimacy and accountability with a stronger oversight of the Parliament on the final PCI list. Currently the Parliament only has a "yes-or-no" vote on the project list. The parliament

should have the possibility to reject specific projects if those fail to meet the overarching long-term goals of sustainability and climate change without jeopardising the entire process.

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.	○	○	○	◉	○	○
* The electricity and gas market and network models are sufficiently interlinked (e.g. scenarios and cost-benefit assessment).	○	○	○	◉	○	○
* The current framework does sufficiently match the need for system integration, i.e. the consideration of sectors other than gas and electricity.	○	○	○	◉	○	○
* The TYNDPs do reflect enough coordination with distribution level networks.	○	○	◉	○	○	○
* The relevant actors are involved in the TYNDP processes and their respective roles are adequate.	○	○	○	◉	○	○
* The TYNDPs do reflect sufficiently energy efficiency aspects.	○	○	○	◉	○	○

Please explain your answers:

The increasing importance of links between gas and electricity infrastructure shall be reflected in a new requirement for joint grid planning and scenarios, at both European and national levels.

The current framework does not sufficiently match the need for system integration. Given the dominant role of gaseous energy carriers, benefits of sector integration are barely explored. The scenarios show little variation, underestimate demand side alternatives and do neither cover the distribution grid level nor the potentials of district heating systems. Assumptions on renewable energy growth rates, energy efficiency and demand response are modest in all TYNDP 2020 scenarios while presupposing a high level of unabated

fossil gas demand (especially the National trend scenario).

Due to the large quantities of remaining GHG emissions in 2050, the scenarios foresee important efforts for carbon removals after 2050 based on uncertain technologies such as CCS (Carbon Capture and Storage), BECCS (Bio-Energy with Carbon Capture and Storage) and DAC (Direct Air Capture) (WindEurope, 2020).

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.	○	○	○	○	◉	○
* The specific selection criteria for electricity transmission projects are appropriate.	○	○	○	◉	○	○
* The specific selection criteria for gas projects are appropriate.	○	○	○	◉	○	○
* The specific selection criteria for electricity smart grid projects are appropriate.	○	○	○	○	◉	○
* The specific selection criteria for carbon dioxide transport projects are appropriate.	○	○	○	○	○	◉

If you disagree, please specify changes you consider necessary:

The priority corridors and areas as well as the eligibility criteria set out in the TEN-E regulation were defined in 2013 with security of supply as the ultimate goal. The approach outlined in the document is no longer in line with the evolution of the energy system over the past years and with the new policy priorities. Sustainability, for example, is currently just one of the criteria which Project of Common Interest (PCI) projects need to meet. In the future, PCI status should only be given to project that score high on sustainability.

Renewable hydrogen (hydrogen produced by 100% renewable electricity) will have a role to play to decarbonise the energy system and it will be key in those harder to abate sectors (e.g. heavy-duty vehicles, refineries and industrial processes, shipping, aviation). Some infrastructure developments could be required depending on the end use of renewable hydrogen. Renewable hydrogen used as feedstock for industry is a high value gas that is needed in its pure form. Today, most of it is compressed and transported by trucks or

produced onsite at the industrial location. Infrastructure for transporting renewable hydrogen from locations with high wind concentration (and grid congestions) to industrial clusters is needed. The conversion of existing gas infrastructure to transport and store this renewable hydrogen presents a good opportunity for the industry. However, more investments in gas infrastructure can present important drawbacks if not done carefully and if they don't follow a very clear and concrete strategy to move away from fossil fuels and to avoid any lock in of infrastructure. Demand for natural gas has been systematically overestimated in the past years. The same should not happen now for renewable hydrogen. Before we develop the infrastructure, we need to ensure there is a clear and sustained demand for carbon-free renewable hydrogen. And we must not forget that the power system is already there, ready to carry electricity for the production of renewable hydrogen at the demand location. That must be always be the default option. If the demand has been clearly defined for a particular project and the power grid has been shown not to be suitable , the conversion of certain gas pipelines to the use of 100%-hydrogen should be carefully assess by the European Commission and the national regulator, who should make sure first that these have not received a PCI-status earlier or if they have done so, the granted fund should be re-oriented towards for conversion.

Only four smart grid projects currently appear on the list of projects of common interest, and only one has been granted financial support (€40m) so far. This situation likely results from stringent eligibility criteria for smart grids project in the TEN-E guidelines. In particular, the need for a project to be cross-border, to cover networks above 10kV, in densely populated regions with a high energy consumption, and at the same time to involve users in the management of their energy usage is a clear obstacle for project developers. Moreover, the proposed criteria in Art.4(c) cannot reflect the important benefits of grid optimisation technology projects in rendering the transmission and distribution grid smarter. Such technologies (e.g. FACTS devices, advanced monitoring such as dynamic line rating, synchronous condensers…) could perfectly address criteria (ii), (iii), (iv) and significantly increase grid smartness. However, not all of these could address criteria (i) and (vi) but this should not be a barrier in their selection (European Commission, 2019).

Due to local character, decentralized storage solutions would not be eligible under the current TEN-E Regulation. An enlargement of the eligibility condition to support storage projects with local character and allowing the aggregation of resources should be considered, taking into account the indirect benefit that these storage systems give to the European network balancing which could represent a cross-border impact (in this case with projects of 50 to 100 MW size also in aggregate form). In particular, the current capacity threshold at 225 MW poses a very high entry barrier (it would be one of the largest storage projects worldwide) and it would exclude a priori any distribution connected projects. Furthermore, additional clarification on energy storage capacity criteria (250 Gigawatt-hours/year) is needed (energy throughput or energy discharged into the grid) to avoid different interpretation. The revision of TEN-E regulation should consider reducing the target size to a value that is more in line with industry standards (e.g. 50MW for Front of the Meter projects) and/or allowing aggregation of multiple projects, but keeping in mind the need for a cross-border impact.

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.	○	○	○	◉	○	○
Projects of mutual interest should be included in the TEN-E framework…	○	◉	○	○	○	○
* …subject to specific eligibility and selection criteria,	○	◉	○	○	○	○
* …subject to a specific selection process	○	◉	○	○	○	○
* …subject to specific conditions for regulatory measures and access to financial assistance would apply.	○	◉	○	○	○	○

Please specify your answer:

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.	○	○	○	○	○	◉
* PCIs implementation plans and the regular updates ensure timely project implementation.	○	○	○	○	○	◉

Please explain your answer:

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 Europe moves towards significantly higher shares of renewable energy, the European energy infrastructure layout will need to be reconfigured. This together with the overall ambitions of increased interconnectors, will lead to an increased need for electricity interconnectors. However, as connectivity improves, a higher share of new interconnectors will see asymmetrical costs/benefits – i.e. that while the overall socio-economic impact is positive, it may be negative for one of the member states seen in isolation.

As such projects will become increasingly important to the energy transition (e.g. in the form of transporting affordable renewable energy to carbon intensive regions), it is important that cost allocation measures ensures the incentive for all relevant member states / TSOs / market players to invest in such assets.

The 2018 Trinomics Evaluation of the TEN-E Regulation notes, that only 4 out of 26 decisions on cross border cost allocation (CBCA) resulted in a transfer of money across borders (Trinomics, 2018).This is likely because the CBCA applications have so far mainly been used as a lever to obtain CEF funding (Trinomics, 2018).

To ensure that infrastructure projects that are socio economic and environmentally beneficial at European level are not delayed or even rejected due to asymmetric benefits / costs, a CBCA methodology where costs are shared according to real cost / benefit ratios, should be developed. This task should be delegated to the European Commission in the Regulation.

Furthermore, cost allocation agreements are a requirement for, and thus take place before any Facility funding applications. Hence, all projects depending on Facility funding assume ex-ante that the application will be successful. However, this may not be the case, generating a finance gap, which would compromise the agreed-upon cost allocation and consequently the project.

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:

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:

The current TEN-E Regulation has served its purpose in increasing security of energy supplies. To ensure that benefits stemming from the Regulation also in the future outweigh costs a significant tightening of sustainability criteria needs to happen.

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

*** 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	○	○	○	◉	○	○
* Integration of renewable energy sources into the gas network	○	○	○	◉	○	○
* Support of electrification of transport through appropriate grid infrastructure	○	○	○	◉	○	○

* Smart sector integration	○	○	○	◉	○	○
Energy transition for fossil fuel regions	○	○	○	◉	○	○
* Climate change mitigation	○	○	○	◉	○	○
* Climate resilience of energy infrastructure	○	○	○	◉	○	○
* Improving energy efficiency of the energy system	○	○	○	◉	○	○

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

Around 54,400 kms of new high voltage (HV) and extra high voltage (EHV) power lines will be needed by 2030 to meet Europe’s energy and climate targets according to an aggregated assessment of both the draft list of projects admitted by ENTSO-E in the Ten-Year Network Development Plan (TYNDP) for 2020 and the Grid Development Plans of TSOs all across Europe. Furthermore, an estimated average of 12,000 GW-km /year of additional power lines would be needed to 2050. The overall need for grid capacity would be driven by the total increase of demand from electrification and the need to optimise system operations at regional level.

TEN-E networks should not only reflect the energy transmission but also the distribution and energy customer solutions landscape of tomorrow, including smart grids, storage, EVs, demand side management and sector integration. Furthermore, an update of TEN-E regulation would hence be needed to avoid supporting energy infrastructure investments that might not be future proof or aligned with the new policy goals. In the light of changing infrastructure and system security needs, a revised TEN-E regulation should facilitate the needed investment by broadening its scope of cross-border projects to local, decentralized and participative smart grid projects and phasing out the support to project no longer aligned with the EU climate goal.

The new TEN-E regulation should support the development of the infrastructure of the future and allow for more electricity projects to be eligible for Union funding under the Connecting Europe Facility. Annex II of the regulation on energy infrastructure categories should include a specific category for ‘hybrid offshore infrastructure’. Ideally it would be defined as offshore electricity infrastructure with dual functionality combining offshore wind energy generation and interconnectors.

There should also be stronger synergies with the Trans-European Transport Network (TEN-T). Examples include charging infrastructure solutions for electric vehicles and trucks, district heating and ports. As for ports specifically, these are growing their businesses to support offshore wind energy in increasingly sophisticated ways contributing to cost reduction and efficiency. As practices evolve, multi-port strategies mean that cooperation between ports will be stronger than ever. Electrification of port activities, powered by wind energy installed near the port facilities or offshore, and electrification of transport such as hydrogen-powered vessels are crucial.

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	○	◉	○	○	○	○
* Electricity storage facilities	○	○	○	◉	○	○
* Safety and efficiency installations for electricity	○	○	○	○	○	◉
* Smart grids	○	○	○	◉	○	○
* Transmission pipelines for natural gas and biogas	◉	○	○	○	○	○
* Underground gas storage facilities	○	○	○	○	○	◉
* reception, storage and regasification or decompression of liquefied natural gas (LNG) or compressed	○	◉	○	○	○	○
* natural gas (CNG)	◉	○	○	○	○	○
* Safety and efficiency installations for gas	○	○	○	○	○	◉
* Pipelines for crude oil	○	○	○	○	○	◉
* Oil pumping and storage facilities	○	○	○	○	○	◉
* Safety and efficiency installations for oil	○	○	○	○	○	◉
* Dedicated carbon dioxide pipelines	○	○	○	○	○	◉
* Facilities for liquefaction of carbon dioxide and buffer storage	○	○	○	○	○	◉
* Safety and efficiency installations for carbon dioxide	○	○	○	○	○	◉

*

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)

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

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

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	◉	○	○	○	○
* Contribution to greenhouse gas emissions reduction / fully consistent with climate neutrality 2050	◉	○	○	○	○
* Security of supply	○	○	◉	○	○
* Market integration (e.g. to reduce infrastructural deficits and increase system flexibility)	◉	○	○	○	○
* Increase competition on the market	○	○	◉	○	○
* Innovation	○	◉	○	○	○
* Environmental due diligence in the preparation, permitting and implementation of project	○	◉	○	○	○
* Generation of direct benefits to the local communities	○	◉	○	○	○

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)	◉	○	○	○	○
Grids for offshore renewable energy	◉	○	○	○	○
Smart electricity grids	◉	○	○	○	○
Smart gas grids	○	○	○	◉	○
Natural gas infrastructure (pipelines and storage)	○	○	○	◉	○
Liquefied Natural Gas (LNG) terminals	○	○	○	◉	○
Dedicated hydrogen (H2) networks	◉	○	○	○	○

Infrastructure for the integration of renewable and carbon neutral gases	◉	○	○	○	○
Power-to-gas installations	○	◉	○	○	○
CO2 networks (for transporting CO2)	○	○	○	◉	○
Geological storage of CO2	○	○	○	◉	○

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	○	◉	○	○	○	○
* Priority Corridors are fit for purpose for future challenges to the energy infrastructure	○	○	◉	○	○	○
* Priority Thematic Areas reflect the current infrastructure needs	○	○	○	◉	○	○
* Priority Thematic Areas are fit for purpose for future challenges to the energy infrastructure	○	○	○	◉	○	○

Please explain your answer:

Including offshore hybrid projects in the scope of a revised proposal for the TEN-E could provide crucially important impetus for the development of not only a European offshore grid, but also to the necessary investments in offshore renewables.

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:**

Please see our answers below.

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	●	○	○
* The European Green Deal / Long Term Strategy for Decarbonisation	●	○	○
* Trans-European transport networks (TEN-T)	●	○	○
* EU environmental acquis (habitats, water, etc.)	●	○	○
* EU Digital Strategy	●	○	○
* EU Industrial Strategy	○	●	○

* Paris Agreement	◉	○	○
* UN Sustainable Development Goals	◉	○	○
* Commission communication on a stronger and renewed strategic partnership with the EU's outermost regions (COM(2017)623 final)	○	○	◉
* EU neighborhood policy	○	○	◉

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

Inconsistencies are explained through our response under other points.

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:

The TEN-E regulation has promoted cross-border collaboration between countries. High-level Groups have enhanced regional cooperation by preparing a common regional political vision, drawing up regional priorities, providing strategic guidance and political support for the implementation of PCIs requiring strong

consensus. Their remit includes preparing political agreements to support the coordinated implementation of cross-border projects at regional level.

CEF Energy currently contributes to €3.2 billion in EU support to the implementation of 92 PCIs, for a total investment of €7 billion. The current CEF Energy portfolio consists of 131 actions, most of which are studies which account for 14% of the total CEF Energy funding. The largest share of funding goes to works (86%), especially those supporting the development of electricity networks (44%), including electricity infrastructure (40%) and smart grids (4%), followed by gas infrastructure (42%) (European Commission, 2019).

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.	○	◉	○	○	○	○
* The issues addressed by the TEN-E Regulation continue to require action at EU level.	◉	○	○	○	○	○

Please explain your answer:

Energy infrastructure is critical to the success of the European Green Deal. The TEN-E regulation fosters the development of cross-border energy infrastructure in the EU allowing for cooperation between Member States which might not happen without coordinated action. Energy infrastructure decisions often have a lifetime of several decades making today's decisions crucial.

Continued action at EU level will, therefore, allow for a true representation of the public interest and for the EU to deliver on its decarbonisation commitments. In order to do so, the governance mechanisms laid out in the regulation should take into account the changing needs of the energy system and support integrated planning.

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:

sabina.potestio@windeurope.org

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

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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