



# The revised TEN-E Regulation

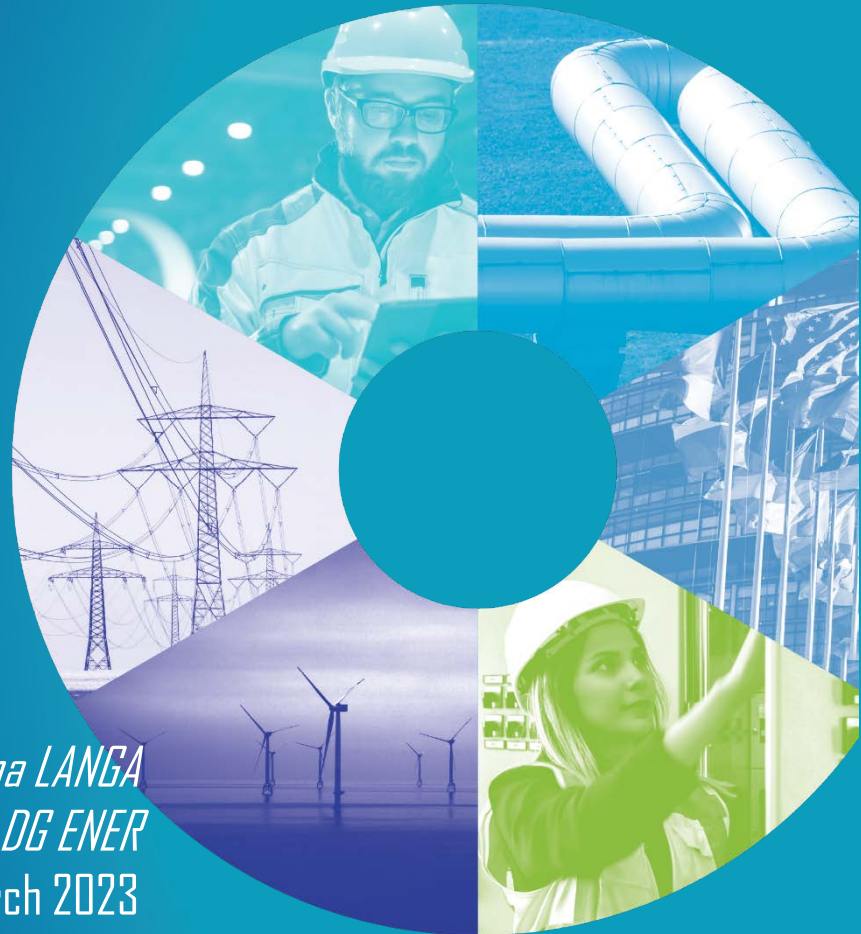
#TENERegulation

#EUGreenDeal

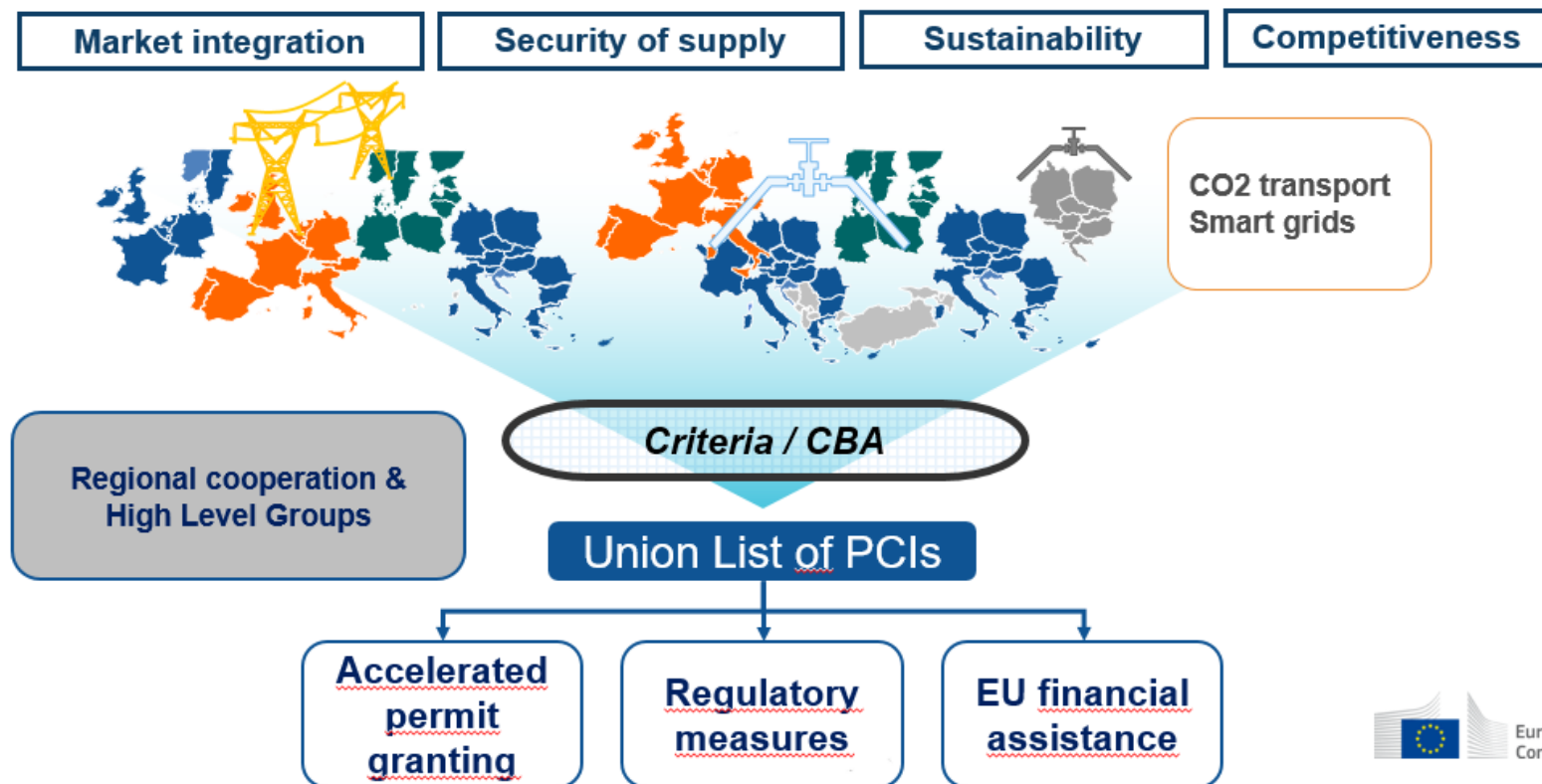
*Dana LANGA*

*Policy Officer, Infrastructure and Regional Cooperation, DG ENER*

22 March 2023



# The trans-European energy networks policy



# The TEN-E Regulation

... Increased interconnections and effectively improved the integration of Member States' networks, which in turn made the EU energy market more integrated and competitive than it was before the application of the TEN-E Regulation;

... is essential for EU's energy security by

- boosting further electrification
- transitioning to renewable gases

and thus accelerating the European Green Deal.

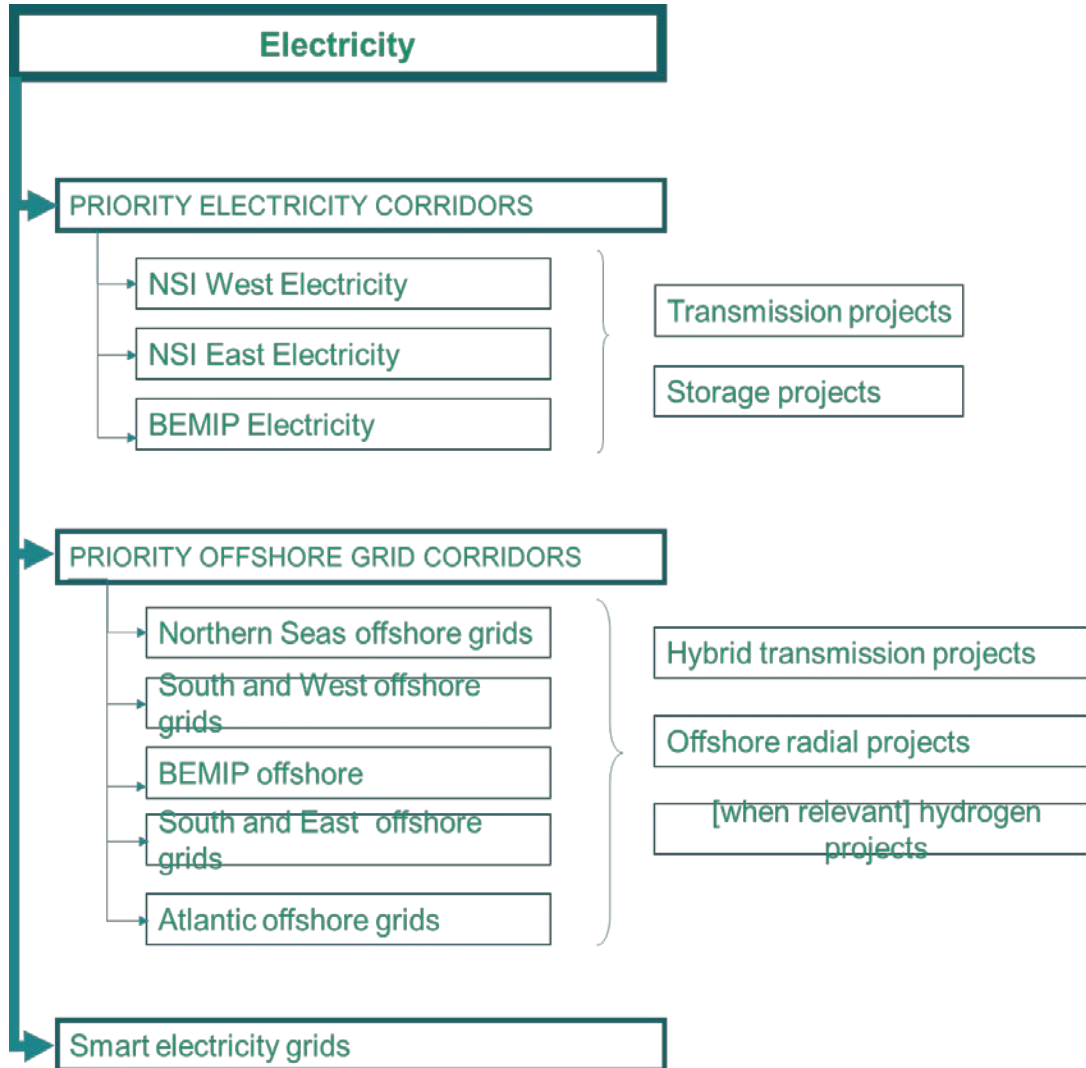
# Revised EU cross-border planning rules

Co-legislators reached a political agreement on a revised TEN-E Regulation on 15 December 2021 covering:

- New and updated infrastructure categories and a reconfiguration of priority corridors and areas;
- Dedicated offshore planning provisions;
- No natural gas under TEN-E\*, but support for hydrogen, electrolysers and local low-carbon and renewable gases;
- Enhanced regulatory and permitting provisions to accelerate PCI implementation;
- Strengthened cross-sectoral energy infrastructure planning;
- Projects of Mutual Interest with third countries

**Entered into force in June 2022.**

# Increased focus on electricity infrastructure



# Electricity transmission

- No substantial changes for “traditional” electricity transmission projects;
- Eligible projects:
  - high and extra-high voltage overhead transmission lines with a voltage of 220 kV or more (crossing the border or in a MS with cross-border impact)
  - underground and submarine transmission cables, if they have been designed for a voltage of 150 kV or more.

The existing CBA methodology continues to be used with some modifications and improvements possible.

# Electricity storage

No substantial changes to the scope of storage projects nor the cross-border impacts:

***energy storage facilities**, in individual or aggregated form, used for storing energy on a permanent or temporary basis in above-ground or underground infrastructure or geological sites, provided they are directly connected to high-voltage transmission lines and distribution lines designed for a voltage of 110 kV or more. For Member States and small isolated systems with a lower voltage overall transmission system, those voltage thresholds are equal to the highest voltage level in their respective electricity systems.*

***for electricity storage**, the project provides at least 225 MW installed capacity and has a storage capacity that allows a net annual electricity generation of 250 GW-hours/year.*

# Support for offshore renewable grid development



- The TEN-E operationalizes the ambitions in the EU Strategy for Offshore RES by including:
  - New infrastructure categories for hybrid offshore grid projects and offshore radial lines to implement five offshore priority corridors across the EU; where appropriate, hydrogen projects can also be included;
  - Offshore grid planning provisions;
  - Enhanced regulatory tools;
  - Permitting provisions to accelerate implementation to facilitate scale-up of offshore grids to the target 300 GW in 2050;



# Hybrid offshore grid projects and offshore radial lines under its scope

*any equipment or installation falling under category referred to in point (a) enabling transmission of offshore renewable electricity from the offshore generation sites, (**energy infrastructure for offshore renewable electricity**);*

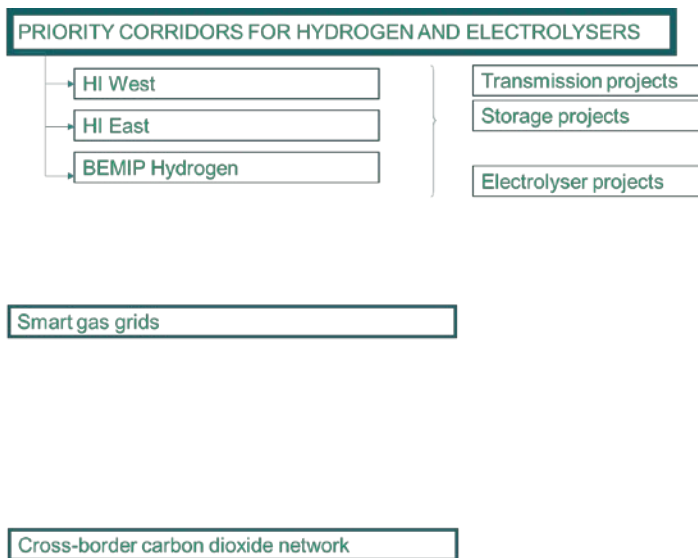
*any equipment or installation falling under category referred to in point (a) having dual functionality: interconnection and offshore grid connection system from the offshore renewable generation sites to two or more Member States and third countries participating in projects of common interest and projects of mutual interest, including the onshore prolongation of this equipment up to the first substation in the onshore transmission system as well as any offshore adjacent equipment or installation essential to operate safely, securely and efficiently, including protection, monitoring and control systems, and necessary substations if they also ensure technology interoperability inter alia interface compatibility between different technologies, (**offshore grids for renewable energy**).*

# Smart electricity grids

Updated provisions in the revised TEN-E aiming at supporting scale-up of smart electricity grids through:

- Simplified selection criteria to reflect technological development, digitalisation and cybersecurity in transmission and distribution network;
- Streamlined cross-border impact;
- Clarification of the categories of eligible promoters:
  - TSOs from two or more Member States
  - TSOs and DSOs from two or more Member States
  - DSOs from two or more Member State, as long as interoperability is ensured.

# New gases under the TEN-E Regulation



- Exclusion of natural gas infrastructure\* and oil pipelines;
- Support for new and repurposed dedicated hydrogen networks and electrolysers above 50 MW;
- Tapping into locally produced renewable and low-carbon gases (biogas, biomethane) through IT-focused smart gas grids installations allowing for reverse flows.

*\*with the exception of i) a transitional period allowing for blending in dedicated hydrogen assets converted from natural gas assets and ii) a derogation for Malta and Cyprus limited in scope and time*

# Hydrogen and electrolyzers

## Eligible types of H2 infrastructure:

- dedicated H2 pipelines, as well as repurposed natural gas infrastructure assets;
- Storage;
- Reception, storage and regasification or decompression for liquefied hydrogen;
- Installations allowing for H2 or H2-derived fuels use in transport.

## Eligible types of electrolyzers:

- Capacity of 50MW met by a single or a set of coordinated projects;
- Life cycle GHG emissions savings of 70%;
- Network related function.

# Transitional provisions for blending

Until 31 December 2029 (eligibility under CEF ending on 31 December 2027): blending of hydrogen with natural gas or biomethane **only for dedicated hydrogen assets (transport or storage) converted from natural gas assets** if:

- Project promoter demonstrates, including through commercial contracts, that before the end of the transitional period assets become dedicated H2 assets;
- Proof of increased H2 enabled, including an assessment of the supply and demand of renewable and low-carbon h2 and GHG reduction;
- Interoperability with neighbouring networks is ensured.

ACER to verify the timely transition of projects to becoming dedicated H2 assets.

# Smart gas grids

- New infrastructure category under the revised TEN-E Regulation: IT-focused equipment aiming at integrating renewable and low-carbon gases such as ICT, control systems, sensor technologies;
- Equipment to enable reverse flows, which may include physical upgrades if indispensable to integration of such gases.

***smart gas grids:** any of the following equipment or installation aiming to enable and facilitate the integration of a plurality of low-carbon and particularly renewable gases, including biomethane or hydrogen, into the gas network: digital systems and components integrating ICT, control systems and sensor technologies to enable the interactive and intelligent monitoring, metering, quality control and management of gas production, transmission, distribution, storage and consumption within a gas network. Furthermore, such projects may also include equipment to enable reverse flows from the distribution to the transmission level, including the related physical upgrades if indispensable to the functioning of the equipment and installations for integration of low-carbon and particularly renewable gases;*

# CO2 infrastructure

- Achieving climate neutrality by 2050, CO2 from industrial processes to be considered as unavoidable, when its production cannot be avoided despite optimisation
- Development of infrastructure for transport and storage of CO2 from industrial installations for the main purpose of permanent geological storage
- Rules for cross-border impact: *“For carbon dioxide projects, the project is used to transport and, where applicable, store anthropogenic carbon dioxide originating from at least two Member States”*

# Project of Mutual Interest (PMIs) with third countries

On the basis of:

- High level of convergence of the third country's policy framework with that of the EU
  - Provision presumed for Energy Community Contracting Parties or EEA;
- Contribution to the Union's and the third countries' overall energy and climate objectives in terms of security of supply and decarbonisation;
- Significant net socio-economic benefits at Union level.

Eligibility: electricity transmission, offshore grids, hydrogen transmission and CO<sub>2</sub> transmission and storage.



# Rules for eligibility under CEF for PCIs (1/2)

- As a general rule, all PCIs are eligible in the form of grants for studies and financial instruments;
- PCIs are eligible for grants for works only if:
  - Project CBA shows evidence of positive externalities (security of supply, system flexibility, solidarity or innovation);
  - The project received a cross-border cost allocation decision;
  - The project cannot be financed by the market or through the regulatory framework;

# Rules for eligibility under CEF for PCIs (2/2)

- Non-eligible for financing under CEF for works: electrolyzers;
- **New:** hydro-pumped storage;
- Equal treatment for PMIs as regards eligibility under CEF as for PCI, under the conditions set out in Article 5(2) of CEF Regulation (EU) 2011/1153.

# The PCI process under the revised TEN-E

Key provisions:

- PCIs and PMIs will be assessed within the same process in line with criteria set in Article 4;
- Sustainability is a mandatory criteria applied to all infrastructure categories under the TEN-E;
- Member States keep their veto rights for the projects on their territory;

# Strengthened cross-sectoral infrastructure planning and selection of PCIs

- Optimised and coordinated cross-sectoral infrastructure planning through the application of the efficiency first principle in all TYNDP and account of the latest Commission scenarios;
- Strengthened consultations with Member States and stakeholders and the Advisory Board during the preparation of scenarios, infrastructure gaps and methodologies for cost-benefit analysis;
- Consistency between ENTSOs developed CBA methodologies and methodologies “outside” TYNDP such as electricity storage, hydrogen, electrolysers, smart gas grids and CO2 networks;
- Commission approval of scenarios and CBA methodology; ACER opinion on scenarios and CBA.

# Regulatory provisions enabling cross-border investments

Cross-border  
cost-  
allocation  
(Article 16)

- Agree on cost sharing among Member States according to received benefits

Incentives  
(Article 17)

- Ensure a suitable set-up to incentivise innovative investments

## Project Implementation



# Enhanced permitting provisions

The revised TEN-E:

- Clarifies permitting regimes allowing for flexibility depending on type of infrastructure;
- Introduces the possibility for accelerated court proceedings where existing in Member States;
- Creates offshore *unique points of contact per PCI* to facilitate exchange of information pertaining to the permitting process, issuing of decisions and act as a repository of studies related to the project.

Whilst increasing transparency and monitoring of compliance with EU public participation and environmental acquis.

# Consultation of stakeholders and transparency

Public participation and transparency in PCI implementation: cornerstones of the TEN-E policy;

- Member states and NCAs publish a manual of procedures;
- Project promoters have to:
  - **conduct at least one public consultation** to inform stakeholders and help identify the most suitable location or routing for the project;
  - **establish and regularly update a website** with information on consultations timeline, progress, and outcomes and how it was taken them into account;
- Open access to information such as the economic and social benefits, costs or environmental impact of projects and early consultation of those affected was sought to address concerns and increase acceptance of PCIs.

# Webinars on the revised TEN-E Regulation

Ahead of its formal entry into force in June 2022, the Commission organised a series of dedicated webinars to present its key provisions:

[Series of webinars on the revised TEN-E Regulation | European Commission \(europa.eu\)](#)

- A General webinar:** The revised TEN-E Regulation
- A webinar dedicated to** Infrastructure categories and selection process
- A webinar dedicated to** Accelerating PCI implementation under the revised TEN-E Regulation
- A webinar dedicated to** Regulatory aspects under the revised TEN-E



# For further inquiries:

e-mail: [ener-c4-projects@ec.europa.eu](mailto:ener-c4-projects@ec.europa.eu)

webpage: [Infrastructure \(europa.eu\)](http://Infrastructure.europa.eu)