Energy Community

24th ECDSO-E CG Meeting

Adoption of the new TEN-E Regulation in the EnC and opportunities for DSOs in developing candidate projects of Energy Community interest

Vienna, 30 November 2023

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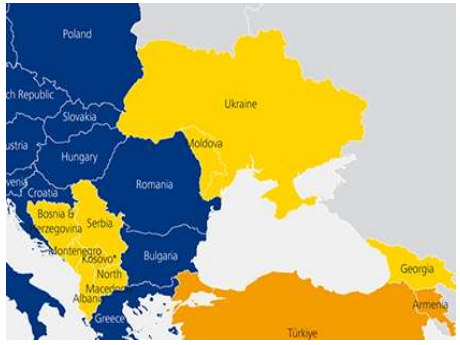
The revised TEN-E Regulation in the Energy Community

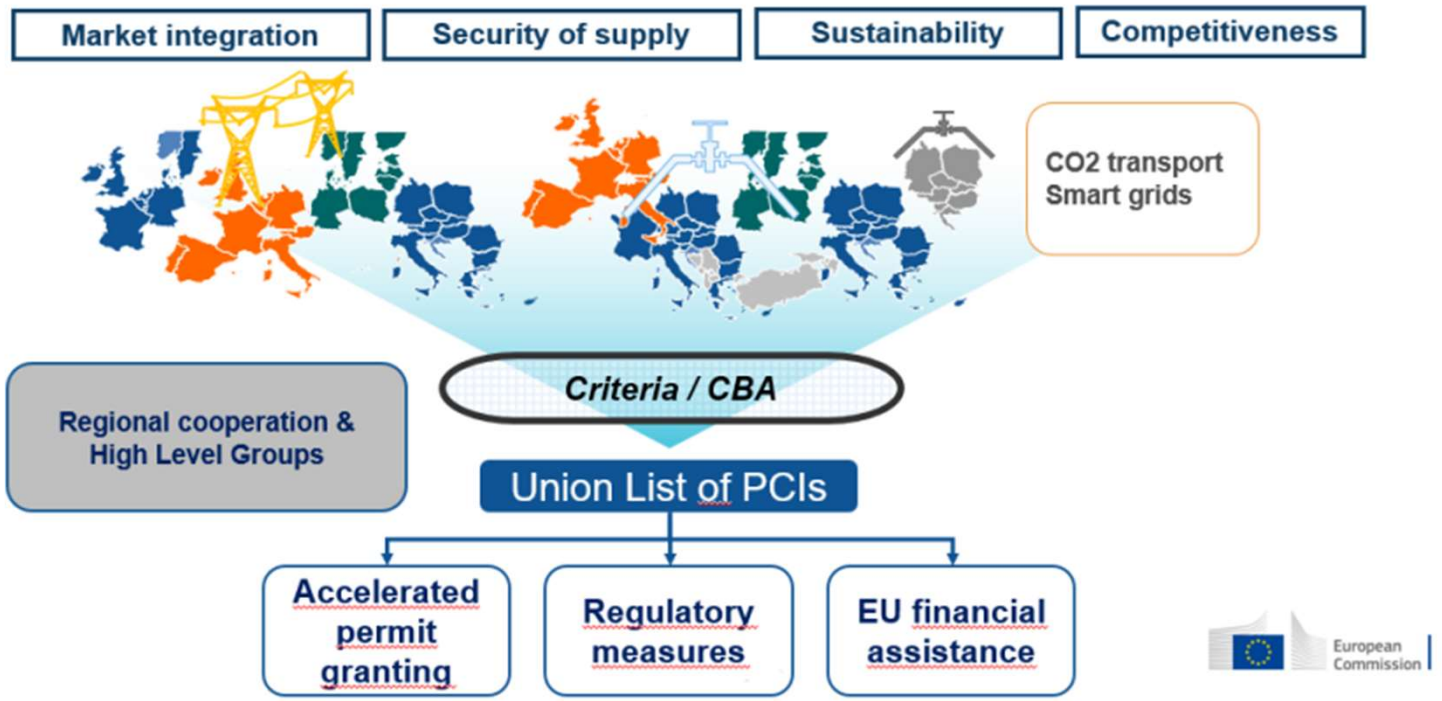
“Old” TEN-E REGULATION (347/2013)

REGULATION (EU) No 347/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009

DECISION OF THE MINISTERIAL COUNCIL OF THE ENERGY COMMUNITY D/2015/09/MC-EnC: On the implementation of Regulation (EU) No 347/2013 of the European Parliament and of the Council on guidelines for trans-European energy infrastructure



The trans-European energy networks policy

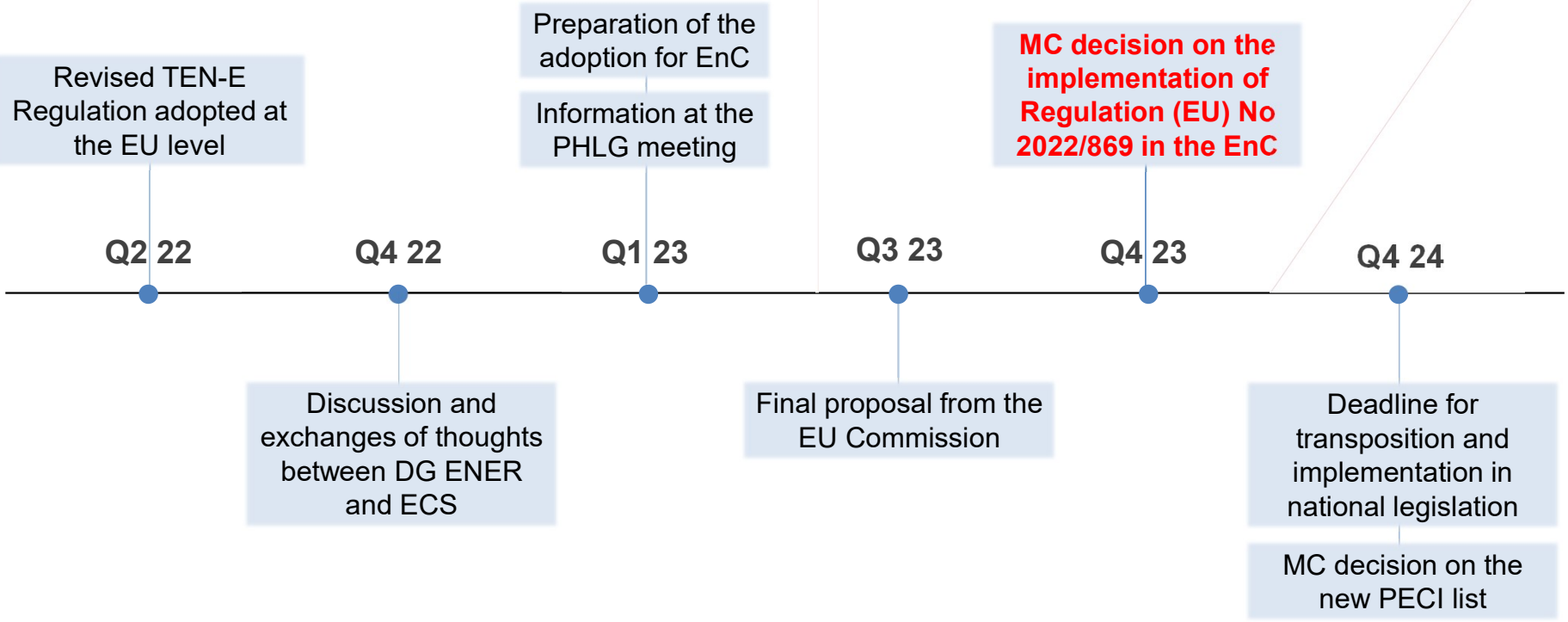


Source: European Commission - Webinar: The revised TEN-E Regulation, 10 May 2022

Predicted timeline for TEN-E adoption in the EnC

Discussion with EnC Stakeholders
Public/Stakeholders workshop
Coordination with and within the Commission

New PECI selection process



Financial support

Old TEN-E

Revised TEN-E

Eligibility of projects for Union financial assistance

- Electricity, gas and CO2 projects with PCI label were eligible for Union financial assistance for studies
- Electricity and gas projects (except PSHPP) were eligible for Union financial support for works under specific conditions:
  - CBA positive (evidence of significant positive externalities, such as security of supply, solidarity or innovation)
  - CBCA decision
  - Commercially not viable

Adoption for the EnC:

- Pre-Accession Assistance (IPA);
- Neighbourhood Development and International Cooperation Instrument (NDICI);
- Ukraine facility;

- All projects with PCI label are eligible for Union financial assistance for studies
- PCIs (except electrolysers but with PSHPP) eligible for Union financial support for works under specific conditions:
  - CBA positive (evidence of significant positive externalities, such as security of supply, flexibility, solidarity or innovation)
  - CBCA decision
  - Commercially not viable

Eligibility of PMI projects to approach CEF: yes under specific conditions

- To comply with certain provision of the CEF Regulation (2021/1153)
- To have positive CBA, CBCA, commercially not viable
- To contribute significantly to Union's overall energy and climate policy objectives

Opportunities for DSOs

TEN-E – eligible electricity infrastructural categories

- high and extra-high voltage overhead transmission lines, crossing a border or within a Contracting Party territory including the exclusive economic zone, if they have been designed for a voltage of 220 kV or more, and underground and submarine transmission cables, if they have been designed for a voltage of 150 kV or more;
- energy infrastructure for offshore renewable electricity;
- energy storage facilities, provided they are directly connected to high-voltage transmission lines and distribution lines designed for a voltage of 110 kV or more;
- any equipment or installation essential for the previous categories to operate safely, securely and efficiently, including protection, monitoring and control systems at all voltage levels and substations;
- smart electricity grids involving at least two Contracting Parties;
- any equipment or installation essential for the high and extra-high voltage overhead transmission lines having dual functionality: interconnection and offshore grid connection system from the offshore renewable generation sites to two or more Contracting Parties;

TEN-E: eligible electricity infrastructural categories

SMART ELECTRICITY GRIDS

- **smart electricity grids**: any equipment or installation, digital systems and components integrating information and communication technologies (ICT), through operational digital platforms, control systems and sensor technologies both at transmission and medium and high voltage distribution level, aiming to ensure a more efficient and intelligent electricity transmission and distribution network, increased capacity to integrate new forms of generation, energy storage and consumption and facilitating new business models and market structures,…, to support innovative and other solutions involving at least two Contracting Parties with a significant positive impact on the Energy Community 2030 targets for energy and climate and the 2050 climate neutrality objective, to contribute significantly to the sustainability of the Energy Community.

Smart electricity grids - definition

(8) ‘smart electricity grid’ means an electricity network

that enables cost-efficient integration and active control of the behaviour and actions of all users connected to it, including generators, consumers and prosumers,

in order to ensure an economically efficient and sustainable power system with low losses and a high level of integration of renewable sources, of security of supply and of safety, and

in which the grid operator can digitally monitor the actions of the users connected to it,

and information and communication technologies for communicating with related grid operators, generators, energy storage facilities, and consumers or prosumers,

with a view to transmitting and distributing electricity in a sustainable, cost-efficient and secure way;

Criteria for the assessment of projects - general

PECI project shall meet the following general criteria:

(a) the project should be eligible according to TEN-E (smart grid electricity is eligible)

(b) the potential overall benefits of the project outweigh its costs

(c) the project meets any of the following criteria:

(i) it involves at least two Contracting Parties by directly or indirectly, via interconnection with a third country, crossing the border of two or more Contracting Parties;

(ii) it is located on the territory of one Contracting Party, either inland or offshore, including islands, and has a significant cross-border impact.

Criteria for the assessment of projects - specific

for smart electricity grid projects,… the project contributes significantly to sustainability through the integration of renewable energy into the grid, and contributes to **at least two** of the following specific criteria:

(i) security of supply, including through efficiency and interoperability of electricity transmission and distribution in day-to-day network operation, avoidance of congestion, and integration and involvement of network users;

(ii) market integration, including through efficient system operation and use of interconnectors;

(iii) network security, flexibility and quality of supply, including through higher uptake of innovation in balancing, flexibility markets, cybersecurity, monitoring, system control and error correction;

(iv) smart sector integration, either in the energy system through linking various energy carriers and sectors, or in a wider way, favouring synergies and coordination between the energy, transport and telecommunication sectors;

As regards smart electricity grid projects ranking shall be carried out for those projects that affect the same two Contracting Parties, and due consideration shall also be given to the number of users affected by the project, the annual energy consumption and the share of generation from non-dispatchable resources in the area covered by those users.

Criteria for the assessment of projects - additional

the project is designed for equipment and installations at high-voltage and medium- voltage level,

involves TSOs, TSOs and DSOs, or DSOs

from at least two **Contracting Parties**

The project shall satisfy at least two of the following criteria:

- it involves 50 000 users, generators, consumers or prosumers of electricity,
- it captures a consumption area of at least 300 GW hours/year,
- at least 20 % of the electricity consumption linked to the project originates from variable renewable resources.

The project does not need to involve a physical common border;

EU smart electricity grid projects

10.4 ACON (CZ, SK) (Again COnnected Networks) fosters the integration of the Czech and the Slovak electricity markets by improving the efficiency of distribution networks while increasing cross-border capacity at the DSO level.

10.7 Danube InGrid (HU, SK) enhances cross-border coordination of electricity network management, with a focus on smartening data collection and exchange

10.10 CARMEN (HU, RO) improves distribution network operation efficiency and service quality and enables secure electricity flows from new renewable generation.

10.11 Gabreta (CZ, DE) enhances system optimization by retrieving and exchanging information in Real-time, improving metering and monitoring of the grid and more flexibility and hosting capacity for renewable generation.

10.12 Green Switch (AT, HR, SI) optimizes the utilization of existing infrastructure and efficiently integrates new technologies to increase hosting capacity, efficient integration of new loads, and improve quality and security of supply.

Example – GreenSwitch project

WP1	WP1 - Project management and coordination
WP2	WP2 - Increasing operational efficiency and transmission grid controllability in HR and SI
	A2.1 Power control systems in HR and SI A2.2 The HTLS conductors in HV overhead line (OHL) in Croatia, A2.3 The upgrade of DTR systems at transmission level in Slovenia, A2.4 The upgrade of transmission system applications in Croatia
WP3	WP3 - Sector coupling integration (power, heat, mobility) in SI
	A3.1 The grid connections for heavy-duty and fast-charging stations in Slovenia A3.2 Implementation of waste heat extraction systems from power transformers in SI
WP4	WP4 - Increasing distribution grid efficiency, security of supply, cross-border and RES hosting capacity in AT, HR and SI
	A4.1 Automation of seven HV/MV primary substations in Austria, Slovenia and Croatia A4.2 Automation of approx. 390 MV/LV secondary substations in Austria and Slovenia A4.3 Upgrade of Advanced Distribution Management Systems (ADMS) in Austria and Slovenia A4.4 The HTLS conductors on MV OHL in Croatia A4.5 Modernization of ICT networks in the distribution grids in Austria and Slovenia A4.6 Closing of MV loops in Austria and Slovenia A4.7 The cross-border MV emergency power connections enhancement between Austria and Slovenia A4.8 Four MV shunt reactors in Croatia

THANK YOU
FOR YOUR ATTENTION

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