Energy Community

Workshop on on smart electricity grid projects

Smart electricity grid projects in the new TEN-E Regulation

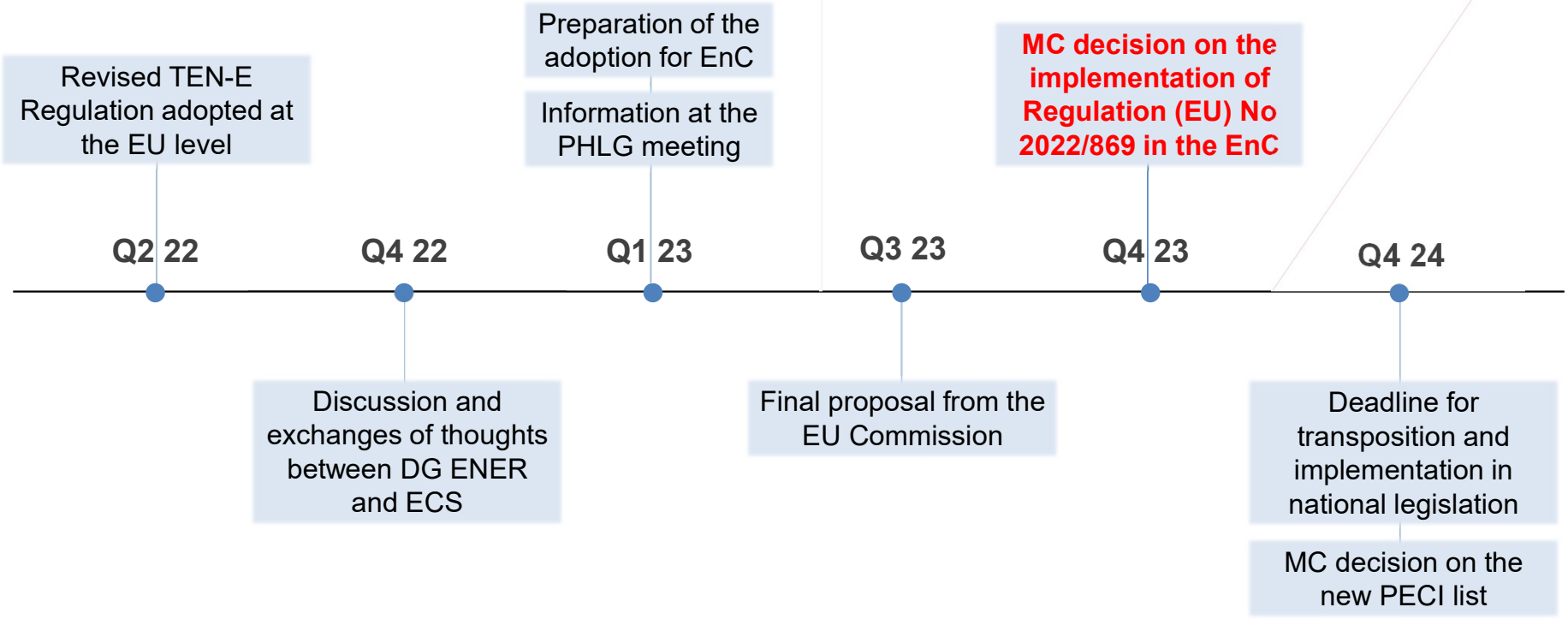
Online event, 09 October 2023

Davor Bajs
Energy Community Secretariat

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



ECS activities

When?	Activity
Q3-Q4/2022	Analysis of the new regulation, internal discussions
Q1/2023	EC-EnC discussions on implementation and timing
Q2-Q3/2023	Coordination with EC, organisation of workshop, discussions with the contracting parties
Q4/2023	• Ministerial Council adoption of the adapted Regulation TEN-E 2022/869 • Preparation of the PECI selection process in 2024
Q1-Q2/2024	The new PECI selection process, coordination of the groups, proposal of the list of Projects of Energy Community Interest
Q4/2024	Support for the Ministerial Council to adopt the list
Q1/2025 and afterwards	• Monitoring of the implementation, • Support to CPs, • Organisation of the process, coordination of the groups and preparation of proposals for the EnC list (every two years)

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;

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;

Smart electricity grids as one priority thematic area

Smart electricity grids deployment:

adopting smart grid technologies across the Energy Community to efficiently integrate the behaviour and actions of all users connected to the electricity network, in particular the generation of large amounts of electricity from renewable or distributed energy sources and demand response by consumers, energy storage, electric vehicles and other flexibility sources and, … supporting 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, and

contributing significantly to the sustainability of the Energy Community energy system.

Smart electricity grids as eligible infrastructure category

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, including investments in islands and island systems to decrease energy isolation, 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;

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;

THANK YOU
FOR YOUR ATTENTION

davor.bajs@energy-community.org

GET IN TOUCH

- www.energy-community.org
- Ener_Community
- /company/energy-community
- /Ener.Community
- /EnergyCommunityTV