Energy Community

Workshop on on smart electricity grid projects

Perspectives for the smart grid projects in the Energy Community

Online event, 09 October 2023

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Financial support

PECI projects will be eligible for Union technical and financial assistance from:

- **instrument of Pre-Accession Assistance (IPA),**
- **the Neighbourhood Development and International Cooperation Instrument (NDICI) and**
- **the Ukraine Facility**.

PMI projects may be supported by Connecting Europe Facility but smart electricity grid projects not included.

Eligibility: electricity transmission, offshore grids, hydrogen transmission and CO2 transmission and storage

The main criteria

1. To involve at least two Contracting Parties (TSO/TSO, TSO/DSO, DSO/DSO if interoperability is ensured).

2. To be innovative.

3. To be oriented to the integration of RES or support it through providing flexibility.

4. To be economically viable (benefits > costs).

5. To contribute to the security of supply or network security, flexibility and quality of supply or sector integration (energy, transport, telecommunications).

6. It involves at least 50 000 users with annual electricity consumption of at least 300 GWh, covered by at least 20% of vRES production (60 GWh/year).

Ideas

Voltage regulation, installation of SVCs/VSRs

Voltage problems are especially visible in the following regions:

- region 1 comprising south-eastern part of Serbia, North Macedonia and Kosovo;
- region 2 comprising eastern part of Montenegro, northern parts of Albania and Kosovo;
- region 3 including southern and central parts of Bosnia and Herzegovina and western part of Montenegro;
- region 4 comprising northern and eastern parts of Bosnia and Herzegovina.

A smart grid project may include four compensation facilities which would be optimised to bring maximum benefit for the countries involved.

Other activities are possible: DLR systems, battery storages, DSM …

Project promotors:

Leading: Elektroprijenos BiH, NOS BiH, CGES, MEPSO

Supporting: EMS, OST, KOSTT, interested distribution system operators like CEDIS, EVN, EPS DSO, KEDS, OSHEE, 3 DSOs in Bosnia and Herzegovina

Ideas

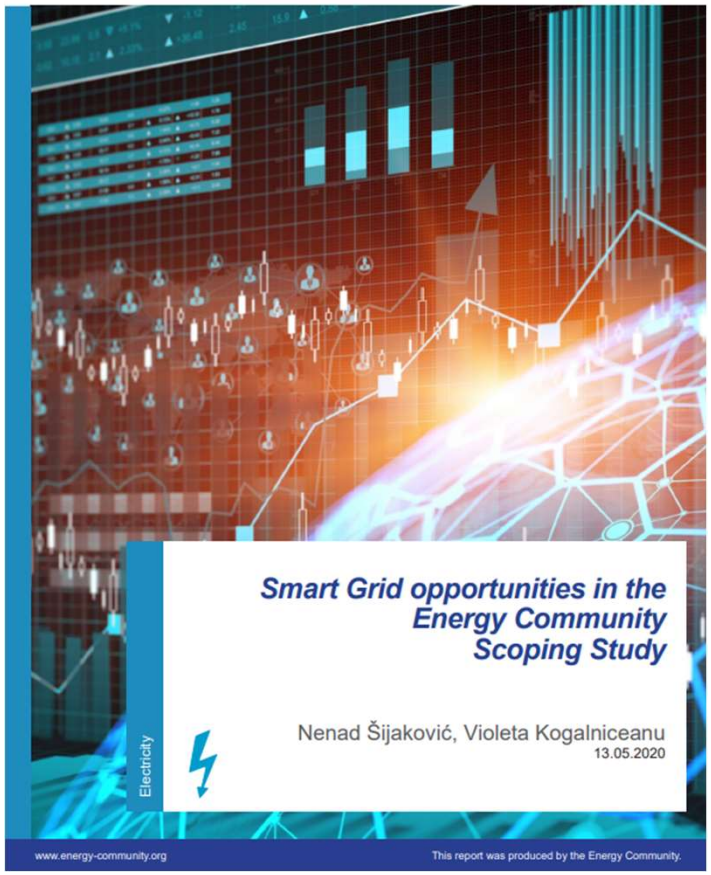
- energy storage, batteries, flexibility services
- dynamic line rating systems
- advanced demand response
- chargers for EVs and other e-mobility components
- smart applications related to safety issues
- smartening of substations (sensors, information devices, applications)
- smart metering
- communication devices (optical fibers, IT support devices)
- cybersecurity systems …

EU PCI Smart grid projects (5th list)

No.	Definition
10.4	ACON (CZ, SK) (Again COnnected Networks) fosters the integration of the Czech and the Slovak electricity markets by improving efficiency of distribution networks while increasing cross-border capacity at DSO level.
10.7	Danube InGrid (HU, SK) enhances cross-border coordination of electricity network management, with 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 optimisation 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) optimises the utilisation of existing infrastructure and efficiently integrates new technologies to increase hosting capacity, efficient integration of new loads and improve quality and security of supply.

EGI (Europe's Green and Intelligent) Grid in Poland, Czech Republic and Sweden is planned to modernise and smarten the distribution grid in the three countries to improve grid management and cross-border energy supply with regional congestion management and other solutions including a central data hub for flexibility management. Preparatory work has been under way since 2021 and commissioning is planned for December 2030.

EnCS study from 2020



https://www.energy-community.org/dam/jcr:c0c0049b-6cd1-4689-9bea-67e6e8c0b1ec/ECS_smartgrid_052020.pdf

Conclusions

Smart electricity grid projects are eligible to receive PECI status and to be eligible for Union technical and financial assistance from Instrument of Pre-Accession Assistance (IPA), the Neighbourhood Development and International Cooperation Instrument (NDICI) and the Ukraine Facility.

Smart grid project has to involve TSOs and/or DSOs from at least two Contracting Parties and to prove its economic viability, contribute to the integration of RES, security of supply, market integration, network security/flexibility/quality of supply or to sector integration.

Smart grid project may include different issues which need to be addressed by TSOs and/or DSOs, including IT solutions and cybersecurity systems, but interoperability of all included system operators has to be proved.

Examples of the EU smart grid projects, received the PCI status or supported by CEF (currently 5 of them), may serve as a good base to initiate creativity among the CPs.

Energy Community Secretariat will support CPs in the development of smart grid projects if requested by the project promotors.

THANK YOU
FOR YOUR ATTENTION

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