

Smart systems and customers' support

1. Terms of reference

1.1 Objectives of the project

First objective of this project is to analyse the status and options for implementation of smart meter roll-out policy and implementation strategy based on the most effective use of the smart meters for optimizing the grid and facilitate transition to grid automation.

Second objective is to analyse the customer relation and customer support associated with automation and smart systems.

Both objectives are intended to empower consumers in the Energy Community Contracting Parties, as well as to present the good practices of the EU DSOs concerning smart meters, grid and consumer support automation.

1.2 Expected outputs

This project shall deliver the *Study on smart systems to empower customers* that needs to give more information on the implementation of Directive 32019/944 concerning the smart systems and customer empowerment, as elaborated in Section 2.1 of this document – *Specific work and schedule* (Task 1 and Task 2). Additionally, two workshops shall be organized to present the Draft report on Task 1 and the Draft report on Task 2.

1.3 Geographic area to be covered

This Project shall cover all Energy Community Contracting Parties.

1.4 Beneficiaries

Beneficiary are the Energy Community Contracting Parties, and specifically distribution system operators as this project should provide deeper understanding of the smart system functioning and benefits for system operators and customers from its implementation.

The study is initiated by the ECDSO-E Coordination Group who will actively participate throughout project implementation and provide necessary inputs through designated contacts.

Participation is further to be sought from Regulatory authorities in charge of energy, and any other relevant market participants and stakeholders.

2. Scope of work

2.1 Specific work and schedule

In line with the Objectives and expected outputs defined above, the Consultant shall prepare the Study on smart systems to empower customers, and organise two workshops to present the Study to the DSO of the Energy Community Contracting Parties.

In order to deliver the above mentioned the Consultant should perform the following tasks:

▪ Task 1

Based on the Directive 2019/944 adopted by Decision 2021/13/MC-EnC of Energy Community Ministerial Council (hereinafter: adopted Directive 2019/944) and taking note of the *Report on establishing the technical requirements for smart meters according to best practices in EU including the Roadmap for the overall technological transition*¹, *Study on Flexibility Options to Support Decarbonisation in the Energy Community*², *Smart grid opportunities in the Energy Community*³, *Technical Assistance for the Connection Network Codes Implementation in the Energy Community*⁴, *Quality of Supply Position Paper*⁵, *Draft Methodology for economic assessment of smart meters implementation (smart meter roll-out) in Moldova* and *Gap analysis on the identified legislative and regulatory needed improvements and amendments necessary for implementation of smart meters (smart meter roll-out) in Moldova*, the Consultant shall:

- 1.1. evaluate the current status of smart meters roll-out in the Energy Community Contracting Parties compared to the conventional meters, especially the technology (generation) of the installed smart meters, the level of exploitation of their functionalities and the interoperability of the systems associated to the smart meters (possible gaps in communication, data acquisition or control systems); and compare the functionalities of the installed metering systems to the requirements prescribed in adopted Directive 2019/944,
- 1.2. analyse the current use of the data received from the smart metering systems by distribution system operators and availability of metering data to final customers,
- 1.3. evaluate the targeted coverage of smart meters defined by the implementation strategies and policies in force,
- 1.4. identify the minimum technical requirements for smart metering systems in line with adopted Directive 2019/944,
- 1.5. identify the advantages of integration of the smart meters for DSOs (performing better analytics, improving network stability, early identification of problems, preventive maintenance, facilitating the provision of the flexibility services),

¹ Document will be made available to the Consultant

²https://www.energy-community.org/dam/jcr:2db406e5-294f-4285-9209-ec90349ce5cb/Flexibility_EnCreport_0722.pdf

³https://www.energy-community.org/dam/jcr:c0c0049b-6cd1-4689-9bea-67e6e8c0b1ec/ECS_smartgrid_052020.pdf

⁴ <https://www.energy-community.org/documents/studies.html#x892md-accordion>

⁵ https://www.energy-community.org/dam/jcr:9833dda9-a72e-488a-9480-a0b82c919671/ECDSO-E_PP_QoS_062020.pdf

- 1.6. identify the advantages of integration of the smart meters for consumers connected to the distribution system, with the emphasis on the availability of the metering data on the actual time of use and consumer empowerment in line with adopted Directive 2019/944 (dynamic price contracts, aggregation, active participation in the energy market).
- 1.7. recommend an optimal set of solutions, including technologies, methods, policy, and regulatory measures to enable:
 - 1.7.1. efficient utilisation of the existing smart meters and
 - 1.7.2. optimum smart meters coverage to exploit benefits of smart meters roll-out.

▪ **Task 2**

Based on present situation in selected EU countries, the Consultant shall:

- 2.1. give the overview on the experience and lesson learned in the selected list of European DSOs in the advanced stage of automation with the information on the:
 - 2.1.1. grid automation, including the applied technologies, the target level, stages of automation and economic efficiency of investments, and
 - 2.1.2. consumer support automation, including the automation service features and indicators (e.g., interactive voice response features, self-service area on websites, mobile apps, chatbots); the human service support options (e.g., call centers, social media support) and core business operation and features (e.g., terms and options for new connection, quality of service).

Report on establishing the technical requirements for smart meters according to best practices in EU including the Roadmap for the overall technological transition, Draft Methodology for economic assessment of smart meters implementation (smart meter roll-out) in Moldova and Gap analysis on the identified legislative and regulatory needed improvements and amendments necessary for implementation of smart meters (smart meter roll-out) in Moldova will be provided to the Consultant, while the other above mentioned documents are available on the Energy Community website (<https://www.energy-community.org/>).

2.2 Deliverables and timeline

The activity flow and reporting is envisaged as follows:

Activities	Description	Time schedule (from contract signature)
Draft report on Task 1	Evaluation of the current status of smart meters roll-out in Energy Community Contracting Parties compared; analysis of the current use of the data received from the smart metering systems by distribution system operators; evaluation of the targeted coverage of smart meters defined by the implementation strategies and policies in force; identification of the minimum technical requirements for smart metering systems in line with adopted Directive 944/2019, identification of the advantages of integration of the smart meters for DSOs, identification of the advantages of integration of the smart meters for consumers connected to the distribution system and recommendation on the optimal set of solutions.	3 months
I. Workshop		3 months
Draft report on Task 2	Recommendation on the optimal set of solutions to enable efficient utilisation of the existing smart meters and optimum smart meters coverage to exploit benefits of smart meters roll-out, and giving the overview of the experience and lesson learned in the selected list of European DSOs in the advanced stage of grid automation.	5 months
II. Workshop		5 months
III. Final Report		6 months

2.3 Budget

The allocated budget for the study is set at a maximum of EUR 110.000.