

# Questionnaire for the welfare evaluation of Projects of Energy Community Interest (PECIs) based on the implementation of Regulation 347/2013 EU for the Energy Community

## Smart Grid projects<sup>1</sup>

### 1 PROJECT IDENTIFICATION

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#### 1.1 NAME OF THE PROJECT

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#### 1.2 WAS THE PROJECT INCLUDED IN ANY OF THE FOLLOWING LIST OF PCIS?

- 2013 PCI Code, name: \_\_\_\_\_, \_\_\_\_\_
- 2015 PCI Code, name: \_\_\_\_\_, \_\_\_\_\_
- None of the above

#### 1.3 NAME OF THE PROJECT PROMOTER

Please submit the full legal name of the project promoter

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<sup>1</sup> REGULATION (EU) 347/2013 on guidelines for trans-European energy infrastructure incorporated and adapted by Ministerial Council Decision 2015/09/MC-EnC of 16 October 2015 Annex I, Smart grids deployment: adoption of 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.

**1.4 NAME OF THE SHAREHOLDERS OF THE UNDERTAKING IMPLEMENTING THE INVESTMENT PROJECT**

Please submit the full legal name of each undertaking, the percentage of its shareholding in the project and information on their main activities. In case one of the shareholders is an investment holding, please also provide information on the ultimate owner(s) of the investment holding.

| Full legal name of shareholder | Shareholding (in %) | Main activities of shareholder | Ultimate owner of investment holding (if applicable) |
|--------------------------------|---------------------|--------------------------------|--|
|                                |                     |                                |  |
|                                |                     |                                |  |
|                                |                     |                                |  |
|                                |                     |                                |  |
|                                |                     |                                |  |

**1.5 PROJECT WEBSITE ACCORDING TO ARTICLE 9(7) OF THE ADOPTED REGULATION**

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**1.6 CODE OF THE PROJECT IN THE EU TYNDP (IF APPLICABLE)**

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**1.7 HOSTING ENERGY COMMUNITY CONTRACTING PARTIES (WHERE THE PROJECT IS LOCATED, PLEASE SPECIFY ALL THAT APPLY)**

- Albania
- Bosnia and Herzegovina
- FYR Macedonia
- Georgia
- Kosovo\*
- Moldova
- Montenegro
- Serbia
- Ukraine

*\* This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence.*

**1.8 HOSTING EU MEMBER STATES (WHERE THE PROJECT IS LOCATED, PLEASE SPECIFY ALL THAT APPLY)**

- |                                    |   |                                   |   |
|------------------------------------|---|-----------------------------------|---|
| <input type="checkbox"/> Austria   | <input type="checkbox"/> Belgium        | <input type="checkbox"/> Bulgaria | <input type="checkbox"/> Croatia        |
| <input type="checkbox"/> Cyprus    | <input type="checkbox"/> Czech Republic | <input type="checkbox"/> Denmark  | <input type="checkbox"/> Estonia        |
| <input type="checkbox"/> Finland   | <input type="checkbox"/> France         | <input type="checkbox"/> Germany  | <input type="checkbox"/> Greece         |
| <input type="checkbox"/> Hungary   | <input type="checkbox"/> Ireland        | <input type="checkbox"/> Italy    | <input type="checkbox"/> Latvia         |
| <input type="checkbox"/> Lithuania | <input type="checkbox"/> Luxembourg     | <input type="checkbox"/> Malta    | <input type="checkbox"/> Netherlands    |
| <input type="checkbox"/> Poland    | <input type="checkbox"/> Portugal       | <input type="checkbox"/> Romania  | <input type="checkbox"/> Slovakia       |
| <input type="checkbox"/> Slovenia  | <input type="checkbox"/> Spain          | <input type="checkbox"/> Sweden   | <input type="checkbox"/> United Kingdom |

**1.9 OTHER HOSTING COUNTRIES (WHERE THE PROJECT IS LOCATED)**

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**1.10 IMPACTED ENERGY COMMUNITY CONTRACTING PARTIES**

A country is considered impacted where the project is not located but where project’s effects are significant (please specify all that apply)

- Albania, expected impact \_\_\_\_\_
- Bosnia and Herzegovina, expected impact \_\_\_\_\_
- FYR Macedonia, expected impact \_\_\_\_\_
- Georgia, expected impact \_\_\_\_\_
- Kosovo\*, expected impact \_\_\_\_\_
- Moldova, expected impact \_\_\_\_\_
- Montenegro, expected impact \_\_\_\_\_
- Serbia, expected impact \_\_\_\_\_
- Ukraine, expected impact \_\_\_\_\_

**1.11 IMPACTED EU MEMBER STATES (PLEASE SPECIFY AND EXPLAIN FOR ALL THAT APPLY)**

A country is considered impacted where the project is not located but where project’s effects are significant

- |  |   |
|--|---|
| <input type="checkbox"/> Austria, expected impact<br>_____ | <input type="checkbox"/> Bulgaria, expected impact<br>_____       |
| <input type="checkbox"/> Croatia, expected impact<br>_____ | <input type="checkbox"/> Czech Republic, expected impact<br>_____ |
| <input type="checkbox"/> Germany, expected impact<br>_____ | <input type="checkbox"/> Greece, expected impact<br>_____         |
| <input type="checkbox"/> Hungary, expected impact<br>_____ | <input type="checkbox"/> Italy, expected impact<br>_____          |
| <input type="checkbox"/> Poland, expected impact<br>_____  | <input type="checkbox"/> Romania, expected impact<br>_____        |

Slovakia, expected impact

\_\_\_\_\_

Other,  
please specify the country

\_\_\_\_\_

expected impact

\_\_\_\_\_

Slovenia, expected impact

\_\_\_\_\_

Other,  
please specify the country

\_\_\_\_\_

expected impact

\_\_\_\_\_

### 1.12 OTHER IMPACTED COUNTRIES

A country is considered impacted where the project is not located but where project's effects are significant

\_\_\_\_\_

### 1.13 THE PECCI IN THE NATIONAL NETWORK DEVELOPMENT PLAN

|   | Contracting Party | Project code in NNDP | Project name | Year of publication in the NNDP | HTML link to NNDP |
|---|-------------------|----------------------|--------------|---------------------------------|-------------------|
| 1 |                   |                      |              |                                 |                   |
| 2 |                   |                      |              |                                 |                   |
| 3 |                   |                      |              |                                 |                   |
| 4 |                   |                      |              |                                 |                   |
| 5 |                   |                      |              |                                 |                   |

### 1.14 THE PROJECT IN THE NATIONAL NETWORK DEVELOPMENT PLAN (NNDP)

If the project is in any national energy strategy document, please provide the link and give a short summary (max 500 words) with reference to the document in English

\_\_\_\_\_

### 1.15 ARE THERE OTHER NATIONAL OR CROSS-BORDER PROJECTS DEPENDING ON THE REALISATION OF THE PROJECT?

Yes, please indicate which project (refer to NNDP or TYNDP code if applicable):

\_\_\_\_\_

No

**1.16 DOES YOUR PROJECT DEPEND ON THE REALISATION OF ANY OTHER NATIONAL OR CROSS-BORDER PROJECT?**

Yes, please indicate which project (refer to NNDP or TYNDP code if applicable):

\_\_\_\_\_

No

**2 EVALUATION CRITERIA AND PERFORMANCE INDICATORS**

**A – SUSTAINABILITY**

**2.1 TO WHAT EXTENT DOES THE PROJECT CONTRIBUTE TO THE REDUCTION OF GREENHOUSE GAS EMISSIONS, AND THE ENVIRONMENTAL IMPACT OF ELECTRICITY GRID INFRASTRUCTURE?**

\_\_\_\_\_

**B- CAPACITY OF TRANSMISSION AND DISTRIBUTION GRIDS TO CONNECT AND BRING ELECTRICITY FROM AND TO USERS**

**2.2 INSTALLED CAPACITY OF DISTRIBUTED ENERGY RESOURCES (ANY GENERATION LOCATED AT THE POINT OF CONSUMPTION) IN DISTRIBUTION NETWORKS IN EACH HOSTING COUNTRY IN 2017 OR 2016 (PLEASE INDICATE YEAR OF DATA)**

\_\_\_\_\_ MW

**2.3 WHAT IS THE MAXIMUM POWER GENERATION THAT COULD BE FEED-IN WITHOUT CONGESTION RISKS IN BOTH THE DISTRIBUTION AND THE TRANSMISSION NETWORK ASSUMING NO ADDITIONAL INVESTMENT TO THE NETWORK IN EACH HOSTING COUNTRY IN 2017 OR 2016 (PLEASE INDICATE YEAR OF DATA)?**

Transmission networks: \_\_\_\_\_ MW

Distribution networks: \_\_\_\_\_ MW

**2.4 TO WHAT EXTENT DOES THE PROJECT INCREASE MAXIMUM POWER GENERATION THAT COULD BE FEED-IN WITHOUT CONGESTION RISKS?**

Transmission networks: \_\_\_\_\_ MW

Distribution networks: \_\_\_\_\_ MW

**2.5 WHAT IS THE AMOUNT OF ENERGY NOT WITHDRAWN FROM RENEWABLE SOURCES DUE TO CONGESTION OR SECURITY RISKS IN EACH HOSTING COUNTRY IN 2017 OR 2016 (PLEASE INDICATE YEAR OF DATA)?**

\_\_\_\_\_ in GWh/year

**2.6 TO WHAT EXTENT DOES THE PROJECT REDUCE THE AMOUNT OF ENERGY NOT WITHDRAWN FROM RENEWABLE SOURCES DUE TO CONGESTION OR SECURITY RISKS?**

\_\_\_\_\_ in GWh/year

**2.7 WHAT MEASURES ARE ALREADY FORESEEN IN EACH HOSTING COUNTRY TO PREVENT CONGESTION OF THE NETWORK? (REFER TO NNDP OR TYNDP CODE IF APPLICABLE)**

\_\_\_\_\_

**C – NETWORK CONNECTIVITY AND ACCESS TO ALL CATEGORIES OF NETWORK USERS**

**2.8 WHAT ARE THE FEATURES OF THE INVESTMENT PROJECT IN REGARDS TO THE OPERATIONAL FLEXIBILITY FOR DYNAMIC BALANCING OF ELECTRICITY IN THE NETWORK E.G DEMAND SIDE MANAGEMENT/DEMAND RESPONSE?**

\_\_\_\_\_

**2.9 WHAT ARE THE METHODS ADOPTED TO CALCULATE NETWORK CHARGES AND TARIFFS, AS WELL AS THEIR STRUCTURE IN EACH HOSTING COUNTRY, FOR BOTH GENERATORS (IF APPLICABLE) AND CONSUMERS AND TO WHAT EXTENT DO THESE SET INCENTIVES FOR DYNAMIC BALANCING OF ELECTRICITY IN THE NETWORK?**

\_\_\_\_\_

**2.10 SMART GRIDS MAY HAVE A POSITIVE EFFECT ON “TIME TO GRID”. HOW LONG, ON AVERAGE, DOES IT TAKE IN EACH HOSTING COUNTRY TO CONNECT A NEW CONSUMER AND HOW IS IT EXPECTED TO CHANGE AFTER THE REALIZATION OF THE INVESTMENT PROJECT (PLEASE PROVIDE INFORMATION FOR THE CONNECTION OF GENERATION AND OF LOAD)?**

\_\_\_\_\_

## **D – SECURITY AND QUALITY OF SUPPLY**

### **2.11 WHAT IS THE RATIO OF RELIABLY AVAILABLE GENERATION CAPACITY AND PEAK DEMAND IN EACH HOSTING COUNTRY?**

Reliably available capacity (MW): \_\_\_\_\_  
Peak demand (MW): \_\_\_\_\_

### **2.12 WHAT IS THE SHARE OF ELECTRICITY GENERATED FROM RENEWABLE SOURCES IN EACH HOSTING COUNTRY WHEN COMPARED TO YEARLY DEMAND AND YEARLY TOTAL GENERATION CONNECTED? PLEASE INDICATE THE LAST AVAILABLE THREE YEARS' DATA (PLEASE SPECIFY ALSO FOR WHICH YEARS DATA IS PROVIDED).**

Share of renewable generation compared to yearly demand (%): \_\_\_\_\_,  
Share of renewable generation compared to yearly total generation (%): \_\_\_\_\_

### **2.13 WHAT ARE THE MAIN FEATURES IN RELATION TO THE STABILITY OF THE ELECTRICITY SYSTEM AND VOLTAGE QUALITY EXPECTED FROM THE IMPLEMENTATION OF THE INVESTMENT PROJECT IN EACH HOSTING COUNTRY?**

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### **2.14 WHAT ARE THE EXPECTED DURATION AND FREQUENCY OF INTERRUPTIONS PER CUSTOMER, INCLUDING WEATHER RELATED DISRUPTIONS IN EACH HOSTING COUNTRY?**

Duration of interruptions per customer without project: \_\_\_\_\_ hour/customer/year  
Duration of interruptions per customer expected with project: \_\_\_\_\_ hour/customer/year  
Frequency of interruptions per customer without project: \_\_\_\_\_  
interruptions/customer/year  
Frequency of interruptions per customer expected with project:  
\_\_\_\_\_ interruptions/customer/year

## **E – EFFICIENCY AND SERVICE QUALITY IN ELECTRICITY SUPPLY AND GRID**

### **2.15 WHAT ARE THE EXPECTED LEVELS OF NETWORK LOSSES IN TRANSMISSION AND IN DISTRIBUTION NETWORKS IN EACH HOSTING COUNTRY IN 2017 OR 2016 (PLEASE INDICATE YEAR OF DATA)?**

Transmission networks (GWh): \_\_\_\_\_  
Distribution networks (GWh): \_\_\_\_\_

**2.16 THE DEMAND FOR ELECTRICITY VARIES THROUGHOUT THE DAY AND ACROSS SEASONS; SMART GRIDS CAN REDUCE THESE PEAKS AND OPTIMISE SYSTEM OPERATION. WHAT IS THE RATIO BETWEEN MINIMUM AND MAXIMUM ELECTRICITY DEMAND WITHIN A DEFINED TIME PERIOD?**

| Average day in: | Minimum demand | Maximum demand | Expected minimum with investment | Expected maximum with investment |
|-----------------|----------------|----------------|----------------------------------|----------------------------------|
| Unit            | MW             | MW             | MW                               | MW                               |
| January         |                |                |                                  |                                  |
| April           |                |                |                                  |                                  |
| July            |                |                |                                  |                                  |
| October         |                |                |                                  |                                  |

**2.17 WHAT ARE THE MAIN FEATURES OF THE INVESTMENT PROJECT IN RELATION TO DEMAND SIDE PARTICIPATION IN ELECTRICITY MARKETS AND IN ENERGY EFFICIENCY MEASURES?**

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**F – CONTRIBUTION TO CROSS-BORDER ELECTRICITY MARKETS BY INCREASE INTERCONNECTION CAPACITIES**

**2.18 PLEASE DESCRIBE THE IMPACT OF THE INVESTMENT PROJECT ON CROSS-BORDER FLOWS AND THE INTERCONNECTION CAPACITIES AND PROVIDE AN ESTIMATE OF THE PORTION OF THE TRANSMISSION GRID IMPACTED BY THE INVESTMENT PROJECT**

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### **3 TECHNICAL INFORMATION ON THE PROJECT**

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**3.1 PLEASE DEMONSTRATE CLEARLY THE "SMART GRID DIMENSION" OF THE PROPOSED PROJECT (I.E. CLARIFYING WHY THE PROPOSED PROJECT CAN BE CONSIDERED A SMART GRID PROJECT) AND PROVIDE DETAILS OF THE SMART GRID FEATURES THAT WILL BE IMPLEMENTED BASED ON ARTICLE 4 OF THE IMPLEMENTED REGULATION 347/2013.**

|  | How does the project qualify in the following dimensions? |
|--|---|
| integration and involvement of network users with new technical requirements with regard to their electricity supply and demand; |   |
| efficiency and interoperability of electricity transmission and distribution in day-to-day network operation;                    |   |
| network security, system control and quality of supply   |   |
| optimised planning of future cost-efficient network investments;   |   |
| market functioning and customer services;  |   |
| involvement of users in the management of their energy usage;  |   |

**3.2 PLEASE PROVIDE A SUMMARY OF THE PROJECT COMPLIANCE WITH THE TECHNICAL REQUIREMENTS SPECIFIED IN THE REGULATION**

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**3.3 FOR EACH OF THE TECHNICAL REQUIREMENTS REPORTED BELOW, PLEASE PROVIDE THE CORRESPONDING PROJECT VALUE AND DISCUSS IN DETAIL PROJECT COMPLIANCE**

| <b>Criteria</b>   | <b>Required value</b>    | <b>Analysis of project compliance</b> | <b>Project value in Euro (synthetic outcome of analysis of project compliance)</b> |
|---|--------------------------|---------------------------------------|--|
| Voltage level(s) (kV):  | >10kV                    |                                       |  |
| Number of users involved (producers, consumers and prosumers):                  | >50,000                  |                                       |  |
| Consumption level in the project area (GWh/year):                               | 300 GWh/year             |                                       |  |
| % of energy supplied by non-Dispatchable resources (in terms of capacity)       | >20%                     |                                       |  |
| Projects involving transmission and distribution operators from at least two MS | at least 2 Member States |                                       |  |

**3.4 BRIEF PROJECT DESCRIPTION (MAIN GOAL AND EXPECTED BENEFITS OF THE PROJECT)**

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**3.5 EXPECTED DATE OF COMMISSIONING (YEAR)**

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## 5 STATUS AND PROGRESS

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### 5.1 PLEASE INDICATE THE CURRENT STATUS OF THE PROPOSED PROJECT

Please tick all boxes for the project phases that have already been completed by all parts of the project (i.e. ticking planning approval would indicate that planning approval has been granted for all sections/parts of the project)

- Consideration phase
- Preparatory studies / pre-feasibility studies
- Technical feasibility study
- Environmental impact assessment
- Economic feasibility study / cost-benefit analysis
- Market survey / open season / capacity auction
- Detailed design study (FEED/Main Design)
- Financing secured
- Planning approval / permitting
- Approval by regulatory authority
- Final investment decision
- Tendering
- Construction

### 5.2 PLEASE GIVE AN INDICATIVE IMPLEMENTATION SCHEDULE AS OF NOVEMBER 2017

If the project phase has already been fully completed, it is sufficient to provide only the end date. Please leave the respective cell empty if date for a specific implementation phase is not yet known

|  | Start date (month, year) | End date (month, year) |
|--|--------------------------|------------------------|
| Consideration phase                                |                          |                        |
| Preparatory studies / pre-feasibility studies      |                          |                        |
| Technical feasibility study                        |                          |                        |
| Environmental impact assessment                    |                          |                        |
| Economic feasibility study / cost-benefit analysis |                          |                        |
| Market survey / open season / capacity auction     |                          |                        |
| Detailed design study (FEED/Main Design)           |                          |                        |
| Financing secured                                  |                          |                        |
| Planning approval / permitting                     |                          |                        |
| Approval by regulatory authority                   |                          |                        |
| Final investment decision                          |                          |                        |
| Planning approval / permitting                     |                          |                        |
| Approval by regulatory authority                   |                          |                        |
| Final investment decision                          |                          |                        |
| Tendering  |                          |                        |
| Construction                                       |                          |                        |

**5.3 HAVE YOU ALREADY APPLIED FOR FINANCING (SUCH AS THE NEIGHBOURHOOD INVESTMENT FACILITY (NIF), WESTERN BALKAN INVESTMENT FRAMEWORK (WBIF) OR OTHER PUBLIC OR PRIVATE FUNDING)?**

- No
- Yes, application for funding has been submitted
- Yes, financial support has already been granted, the level of support in million EUR is:

\_\_\_\_\_

Financial support has been granted in year: \_\_\_\_\_

Financial support already been granted has been / will be used for:

\_\_\_\_\_

**5.4 PLEASE LIST THE MAJOR RISKS/BARRIERS AFFECTING THE IMPLEMENTATION OF THE PROJECT**

\_\_\_\_\_

What mitigation measures have you foreseen to address these risks?

\_\_\_\_\_

**6 CONTACT DETAILS**

Please designate two contact persons who can be requested for clarifications and additional information if necessary.

|                        | Primary contact | Secondary contact |
|------------------------|-----------------|-------------------|
| Name of contact person | _____           | _____             |
| Organisation           | _____           | _____             |
| Position               | _____           | _____             |
| Email address          | _____           | _____             |
| Phone number*          | _____           | _____             |

\* including country dialling code