



Parity: General Expert (english version)

1. General Expert

About our project

The main objective of PARITY Project is to develop tools, which take advantage of the ability of electricity users to modify the way they consume or generate energy, in order to improve the operation of the electricity system.

In the electricity system of the future there will be many distributed generation sources (solar photovoltaic panels or windmills) and storage systems (batteries) spread along the grid. For proper grid operation generation, storage and energy consumption must be coordinated. To reach this, generation, storage and energy consumption must be monitored and controlled by smart systems.

The tools to be developed in PARITY will allow for monitoring of the grid (finding problems) and monitoring of generators and consumers (finding solutions from the demand side):

- * Electricity consumers involved in this project will be monitored to learn consumption patterns and comfort preferences, in order to calculate possible modifications of its consumption to support the grid operation. For example, increasing the temperature set-point of an air conditioning system (from 21°C to 23°C) when there is excess of electricity consumption. This is called “Demand Response”.

- * Renewable electricity generators will be monitored and urged to increase their consumption, or store the surplus in batteries, when there is excess renewable energy.

As compensation for supporting electricity companies in the operation of their grids, consumers and generators will be paid for their flexibility and the quantity will be traded in new “flexibility markets”.

A new actor in the flexibility markets will be the “aggregator”, an entity that will represent a high number of small customers in these markets. As a result, small consumers could participate in these markets without any special knowledge.

The PARITY solutions will be tested in buildings belonging to four pilot sites around the European Union (Spain, Greece, Switzerland and Sweden) to

validate the effectiveness across climatic, cultural and techno-regulatory conditions.

Information we need

To develop the PARITY project tools and properly adapt them to all the electric system actors (from system operators and regulators to small consumers) different surveys and interviews have to need to be carried out.

This survey will be used to gather information among energy experts to better design PARITY tools and to know the possibilities of Demand Management (DM) and Local Flexibility Markets (LFM) supporting electric grid operation and experts expectations of the impact of flexibility of small consumers (residential and tertiary buildings) in the electric system.

Estimated time to complete the questionnaire: 8 minutes

Personal data protection:

According to the in force regulation, you are informed that due to the monitoring and control obligations to which Fundación CIRCE – Centro de Investigación de Recursos y Consumos Energéticos (hereinafter, “CIRCE” or the “Foundation”) is subject in the Project H2020 PARITY Project: Pro-sumer AwaRe, Transactive Markets for Valorization of Distributed flexibility enabled by Smart Energy Contracts (Nº864319) (hereinafter, the “Project”), in their condition of collaborator of the mentioned Project together with the rest of consortium partners, are obliged to keep records of the activities carried out, including meetings, training and/or dissemination of Project activities, interviews, among others, in the frame of the Project, aiming at performing the actions required by the control bodies and any other competent authorities of the Project.

With this consent, you are informed that your personal data can be sent to control bodies and any other competent authorities of the Project and to the rest of the consortium partners in order to comply with the control requirements under CIRCE ´s obligations in the frame of the Project, and will be kept until the end of the Project and for the limited periods of the responsibilities that may result enforceable.

* 1. Additionally, CIRCE will process the personal data you provide us in this form to, in the framework of the Project, send you different surveys for completion, with the objectives of identifying the specifications of the tools developed in the framework of the reference project, based on the preferences of potential users, under their consent and / or the relationship maintained with Fundación CIRCE. In this sense, if you expressly authorize it by checking the corresponding boxes at the bottom of this form, your data may be processed by Fundación CIRCE for the purposes indicated above. You have the right, among others, to oppose the processing of your data, revoke your consent at any time, access, limit, rectify and / or delete your data by contacting the Data Protection Officer of CIRCE via email at protecciondatos@fcirce.es. You are also entitled to lodge a complaint with the Spanish Data Protection Agency. You will find more detailed information about your rights and other privacy conditions in our Privacy Policy: <http://www.fcirce.es/politica-de-privacidad-y-cookies>

- I have been informed about the treatment of my data by CIRCE and I authorize their use.
- I authorize the use of the data resulting from the completion of the surveys that, where appropriate, are sent to me by Fundación CIRCE.

Want to know more? Please visit <https://www.parity-h2020.eu/> for more information about the PARITY Project.



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2. What of the following demand response management tools functionalities do you think are a “must”, are “useful” or are “not needed” at all from your point of view?

	Must	Useful	No need	Don't know
Demand and generation forecasting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Automatic flexibility provision (calculation, offer to grid operators, purchases reception and set-points application)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Aggregation of flexibility of different providers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DER data registry (power, number, schedule, type)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Must	Useful	No need	Don't know
Contractual data repository (Marketplace participation registry and other information)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local and global demand manager (Automatic interaction with the DER systems).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interface and user portal (for consumers, buildings/facility managers, generators and aggregators providing flexibility services and for DSO purchasing flexibility)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provide to the final customers complete data about their facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integration of economic exchanges using blockchain technologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Others:

Possibilities of demand management/flexibility.

Answer the next questions about possibilities of demand management and flexibility and its impact in the electric grid

For every possible type of building energy user please mark and comment about how important their potential demand flexibility would be to contribute to the Grid Management and to the Local Flexibility Markets (1, not important - 5 very important):

3. Residential consumers with manageable demands, and no generation or storage:

	1	2	3	4	5
()	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

4. Residential prosumers with generation, storage and manageable demand:

	1	2	3	4	5
()	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

5. Tertiary building users in buildings with manageable demand but no generation or storage:

	1	2	3	4	5
()	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

6. Tertiary building users in buildings with manageable demand, generation and storage:

	1	2	3	4	5
()	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

7. Consumers and prosumers, both at residential and tertiary buildings aggregated in large quantities by a third party aggregator:

	1	2	3	4	5
()	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

8. Consumers and prosumers, both at residential and tertiary buildings operating in these LMF directly without aggregators?:

	1	2	3	4	5
()	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

9. Interest of DSOs in purchasing flexibility from building users (residential or tertiary):

	1	2	3	4	5
()	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

Demand management/flexibility operation.

Answer the next general questions about demand management and flexibility according to your opinion or experience.

10. Please, mark and comment the controllability level that consumers/prosumers (residential or tertiary) would allow over their facilities (consumption, generation and/or storage): from 1 low to 5 high:

	1	2	3	4	5
()	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

11. Please, mark and comment the willingness of consumers and prosumers (residential or tertiary) to share their information (consumption, generation and/or storage): from 1 low to 5 high:

	1	2	3	4	5
()	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

12. In your opinion, what would be the main demand flexibility sources from residential consumers or prosumers, in order of importance?

1.
2.
3.
4.

Comments:

13. In your opinion, what would be the main demand flexibility sources from tertiary building consumers or prosumers in order of importance?

1.
2.
3.
4.

Comments:

Barriers and incentives identified for demand response management and local flexibility markets.

14. Incentives. State the importance of those aspects that can incentive the development of Demand Management schemas and flexibility markets (from 1, not important, to 5 very important). Examples:

	1	2	3	4	5
Fair remuneration for all the stakeholders:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contribute to DSOs grid balancing mechanisms.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participate in newly open demand-response marketplaces, generating new incomes for consumers and prosumers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improve control and management over own energy consumption and DER operation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contribute to the sustainability of the electricity system by reducing environmental impacts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other incentives. Please state:

15. Barriers. State the importance of those aspects that can limit/slow the development of Demand Management schemas and flexibility markets (from 1, not important, to 5 very important). Examples:

	1	2	3	4	5
Initial investment on IT systems and learning curve	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Possible economic penalties in case of failure to deliver the committed demand flexibility.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial remuneration low	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Possible new technology failure or malfunctioning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of transparency and regulation about market rules.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of previous aggregation experience in a new business market.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Difficulty of managing the integration between all the components.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Possible conflicts with demand flexibility services already existing in some of European countries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	1	2	3	4	5
Possible misuse of customers' personal data.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack or not settled legislation regarding flexibility markets in most EU countries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non established financial regulation regarding Blockchain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of available funding to implement the changes needed for the adoption of a flexibility market.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other incentives. Please state: