

PARITY

Newsletter #4

September 2021

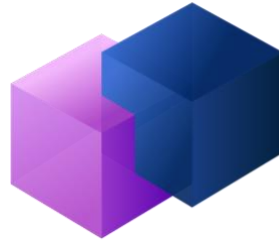
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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 864319

Call identifier: LC-SC3-2019-ES-SCC



P A R I T Y

Latest News

Publications accepted in the [6th International Conference on Smart and Sustainable Technologies \(SpliTech\)](#)

After the millennium's shift, academic study has systematically researched the Local Energy Market (LEM) and Local Flexibility Market (LFM) principle to promote Europe's energy transformation. However, the use of LEMs in real-world programs did not begin until 2016. Towards this direction, the PARITY European project is actively researching and developing a hybrid market model, attempting to merge these two concepts. In this attempt, a paper with the title: **Local Electricity and Flexibility Markets: SWOT Analysis and Recommendations** developed by UNICOSIA (a PARITY Partner), offers a market participant-oriented SWOT study, investigating what the strengths and weaknesses of traditional energy models are, as well as identifying what opportunities and threats such hybrid model could phase. Following a number of responses from market participants across Europe, the authors identified also a number of potential conflicts of interest among the market players. The authors aimed to contribute to the scientific community by offering a number of recommendations and ideas that could potentially address the perceived conflicts of interest and serve as the foundation for further research and experimental assessment within the research, academic, and business communities. The publication was presented in September 2021 during the [6th International Conference on Smart and Sustainable Technologies \(SpliTech\)](#) and can be accessed through the following link:

<https://ieeexplore.ieee.org/document/9566362/metrics#metrics>

Publications published in Journal: [Control and Optimization of Renewable Energy Systems](#)

PARITY partners CIRCE, CUERVA, E.ON, HEDNO, AEM, CERTH have contributed to the publications of the article with the title **Optimal D-STATCOM Placement Tool for Low Voltage Grids in June 2021.**



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Abstract: In low-voltage grids with a wide spread of domestic and/or small commercial consumers, mostly single-phase, problems can appear due to unbalanced power consumption between the different phases. These problems are mainly caused due to voltage unbalances between phases and the increase in distribution losses. This phenomenon occurs more frequently at the end of highly radial grids and can be stressed by the installation of renewable generators next to the consumers. Amongst the various techniques that have been proposed to solve this problem, this article explores the use of a D-STATCOM, presenting and testing a new method for the optimal location of this type of D-FACT. The developed method starts from a detailed analysis of the existing voltage unbalances in a distribution network and identifies the optimal location of the D-STATCOM (i.e., the one that reduces these unbalances while reducing energy losses). The developed method has been successfully tested for one year at four real European locations with different characteristics and different kinds of users. The complete article is available in the following link: <https://www.mdpi.com/1996-1073/14/14/4212>.

Parity H2020 Market Transformation Survey

During the last months, PARITY partners have extensively surveyed and analysed the energy market, providing market opportunities and threats in key PARITY solutions. From the aforementioned market analysis, it became evident that there is a significant change in the energy market, resulting from a mix of evolving regulations, technologies and customer behavior. Towards this direction, PARITY created and disseminated a survey in order to explore the overall patterns that will form the energy market transformation and the consumer's perspective on this matter.

The survey aimed to evaluate participants' opinions on the concepts of LEM and LFM, to identify factors and barriers to the progress of local renewable energy development based on the participants' knowledge and what would motivate people to participate in such markets. Additionally, the goal of this survey was to analyze the current market needs, as well as investigate what is driving the energy markets transformation and where it is leading. The survey was primarily distributed to the PARITY project experts (DSO, Aggregators, Retailers etc.). Afterwards, our target group was mixed, including both the general public and energy experts. The total responses were 50 and their distribution is the following: Spain (16 responses), Greece (12 responses), Switzerland (10 responses), Cyprus (3 responses), Austria (2 responses), Germany (1 response), Sweden (1 response) and 5 responses where the country was undefined.

In the current survey most of the respondents have knowledge/experience in emerging technologies in the energy sector, such as renewable energy, microgrids, smart meters, blockchain and energy storage. Specifically, the



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majority of the respondents (51,%) has a very strong understanding in such technologies, while only 6,4% of the respondents have heard of them, but not really understand what they are or their benefits.

The detailed survey outcomes will be part of the PARITY WP10 and are going to be presented and analysed in deliverable 10.1 soon to be available on the PARITY Website.



