



First eNeuron Webinar Contributing to the energy transition March 22nd, 2023

Full report

Stakeholders, gathered in a webinar to present and discuss the project's plans to optimize business models, planning and optimization of infrastructures to facilitate the path towards a decarbonized society.

This energy transition is driven by the **need to reduce greenhouse gas emissions** and mitigate the impacts of climate change. The burning of fossil fuels, such as coal, oil, and gas, are the largest sources of greenhouse gas emissions, which contribute to global warming and climate change.

Smart grids play a significant role in the energy transition by enabling the integration of renewable energy sources, improving energy efficiency, and supporting a more stable and reliable electricity grid.

The webinar was an excellent opportunity to share issues relating to smart grids and their impacts on the energy transition, as the possibility to integrate renewable energy sources, like solar and wind power, into the electricity system by providing real-time monitoring and control of the system and, therefore, supporting the balance of supply and demand of electricity, which is essential for the reliable and efficient integration of intermittent renewable energy sources.

The relators underlined how grids can help reduce energy consumption and improve energy efficiency by providing consumers with real-time information on their energy usage, helping consumers to make more informed decisions about how they use and conserve energy and, ultimately, encouraging the adoption of energy-efficient appliances and equipment.

Smart grids are a critical component of the energy transition, as they enable the integration of renewable energy sources, improve energy efficiency, and support a more stable and reliable electricity grid but, for being operational and play a **significant role in the development and operation of local energy communities**, smart grids have to take advantage of particularly advanced technologies to enable the optimal deployment of the supply and include different energy stakeholders such as operators, households, businesses, and public institutions, that cooperate to share and manage energy resources locally.

The webinar precisely aimed to evaluate the interaction between smart grid and local energy communities within their different aspects and criticalities and to confront the audience about the significant critical issues and how to solve them in the short term.

From the many topics discussed, the audience had the possibility to express its opinion collected in

the form of a poll submitted at the end of each presentation and, from the **results of the poll** and the fervent discussion that followed between speakers and audience, the following points of interest emerged.

The development and operation of local energy communities face various challenges and obstacles that can impact their success and viability.

Here are some of the main obstacles which seem to represent the main issues to confront within the coming future:

The technical infrastructure required to support the operation of local energy communities may need to be more readily available or may require significant investments. This can create **technical limitations** that may affect the scalability and sustainability of local energy communities.

The upfront **costs of setting up** and operating local energy communities can be high, and financing options may be limited. This can create financial barriers that may prevent the development of new communities or hinder the growth of existing ones.

Local energy communities may need to interact and coordinate with other stakeholders in the electricity system, such as grid operators and electricity retailers. **Ensuring interoperability and seamless communication between different stakeholders** can be a challenge, especially in cases where different stakeholders use different technologies or standards, and the reluctance from some energy suppliers, afraid to face the reduction in sales, do not help improve the growth of local energy communities.

The **legal and regulatory framework** in many countries may need to be adequately designed to support the development and operation of local energy communities. This can create barriers to entry for new players and hinder the growth and expansion of existing communities.

But overall, one of **the most essential aspects to overcome is community engagement** which is a critical factor in creating and implementing local energy communities, as it can significantly impact the success and sustainability of such initiatives.

The ways **eNeuron strives to face this issue and contribute to realizing a different trend** are different:

First of all, **identifying community needs**. Community engagement can help identify the specific needs and priorities of the community and tailor local energy initiatives to address them. By engaging with community members in the Pilots involved in the project, stakeholders can gain insights into local energy consumption patterns, energy efficiency opportunities, and renewable energy potential, among other factors.

Engagement is a way to build trust. In eNeuron, effective community engagement can help build trust and support among community members, which is essential for the success and sustainability of local energy communities. By involving community members in planning and implementing local energy initiatives and addressing their concerns and priorities, stakeholders can build trust and support for the project.

Community engagement and further **adoption of the infrastructure** can help address technical and social barriers that may hinder the adoption of local energy initiatives, such as regulations, different levels of technologies, cultural fences, and social norms. By engaging with community members and understanding their specific needs and concerns, stakeholders can tailor local energy initiatives to address these barriers and ensure they are inclusive and accessible to all community members.

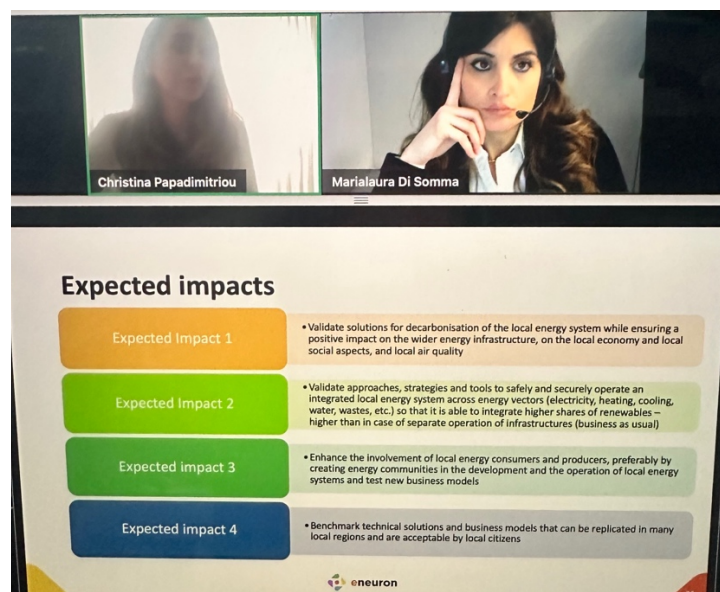
Community engagement is critical for the **long-term sustainability of local energy communities**. By involving community members in planning and implementing local energy initiatives, stakeholders can ensure that the project meets the needs and priorities of the community and that it is integrated into the social and economic fabric of the community. Long-term sustainability also depends on the technology used. To ensure the long-term sustainability of local energy initiatives, stakeholders should focus on technologies that are reliable, scalable, and compatible with existing infrastructure. Technologies should be chosen based on their ability to meet the specific needs and priorities of the community, and this is precisely the aim of eNeuron when it comes to developing and applying pioneering software and hardware solutions, putting them to the test in real energy communities, and introducing new governance models.

Overall, community engagement is a critical factor in the creation and implementation of local energy communities. **Effective community engagement can help build trust, identify community needs, encourage adoption, address social barriers, and ensure the long-term sustainability of local energy initiatives.**

To support the engagement, **eNeuron has already planned a series of webinars** to promote information on smart grids in local energy communities and to discuss how to contribute together to the energy transition in an effective and shared way.

Stay tuned for the next meeting.

We are excited to meet you online and are eager to get your inputs.



Snapshot of eNeuron webinar: Maria Laura Di Somma and Christina Papadimitriou, Coordinators