Workshop: "Energy Communities: Operational and functional needs"

8th May 2019

University of Cyprus, Nicosia

Concept note:

European's Commission Package entitled '*Clean Energy for All Europeans*', decabornization goals of 2050 and the need for flexible demand, set citizens as the central players into the energy markets future.

Towards these efforts, Energy communities -newly arisen concept- can drive and empower end-users to consume energy in a responsible way, promote RES energy, contribute to energy efficiency and steer the grid to become more flexible. This way many benefits can be achieved for all parties involved, including economic development, low cost energy, self-sufficiency, energy security and reliability.

Energy communities involve groups of citizens, social entrepreneurs, public authorities and community institution participating directly in the energy transition by jointly investing in, producing, selling and managing energy coming from RES and other emerging technologies.

Nevertheless, there are still issues under discussion and clarification such as the legal framework of these entities, policy dimension, definition of the network charges and remuneration for energy communities, terms of participation in the market etc.

Having said that, this workshop aims to cover most of the open issues of the energy community concept under the prism of different key players of the modern energy sector. At the end of the day, a clearer understanding of the potential opportunities of the Energy Communities that may contribute to the accomplishment of EU climate and nation-wide energy objectives will be achieved.

European Academics and Energy Sector experts participate in the first day event's agenda raising the appetite for understanding the energy community concept and missing links to be addressed to make it happen. As can be seen from the items of the agenda in the morning, the regulatory and policy framework is addressed and promises to clarify how emerging technologies can be efficient and supportive to the concept. Also, apart from technical and market issues, good practices and the way to move forward at national and European level is presented and discussed in the afternoon session.		
08.30	Transfer to FOSS premises	
09.15	**Welcome coffee**	
09.40	Introduction by FOSS- Main objective of the workshop	Venizelos Efthymiou / FOSS
09.50	Policy dimension of energy communities	George Partasides / Ministry of Energy, Commerce & Industry
10.10	Regulating the energy transition and the emergence of energy communities	Maria-Eleni Delenta / CERA

10.30	DSO perspective to energy communities and the Greek experience	Nikos Hatziargyriou (ETIP-SNET)
11:00	Coffee break	
11.20	Energy communities in Cyprus: Prospects and the role of the DSO	Tasos Gregoriou, DSO Cyprus
11:40	Energy Neighbourhood Fliegerhorst Oldenburg	Michael Kreuz / DLR
12.00	Roundtable discussion: The realities and prospects of energy communities	Coordinator: Luciano Martini, EERA JP SG/RSE
13.00	**Lunch break**	
14:00	Introduction to the afternoon session: the EERA JP on Smart Grids and selected member's contributions	Luciano Martini, EERA JP SG Coordinator
14.10	Open RD&I issues related to energy communities (technology, market, regulation) – Project results: Transferability to end users (T4.2: PEGASUS)	Christina Papadimitriou/FOSS
14.35	Energy Communities: Enabling technologies and tools and National Approach in support of this new energy paradigm	Marialaura Di Somma/ENEA
15.00	Empowered Energy Communities enabled by Flexibility Trading and Dynamic Coalition Managers	Chris Caerts/VITO
15.25	Austria: National approach on DG / RES and end user empowerment	AIT
15.50	New challenges and opportunities for the Energy Communities: electric vehicles and blockchains	Andrei Morch/SINTEF
16.15	**Coffee break**	
16.45	Roundtable discussion: Self-consumption and Energy Positive Communities: What are the realities	Coordinator: Rainer Janssen / WIP
17.40	Conclusions	Venizelos Efthymiou / FOSS
17.50	End of the day and workshop	
19.30	**Dinner - Transfer back to hotel in Larnaka (TBC)**	

Organizers

The Joint Programme on Smart Grids was officially launched at the SET Plan Conference in Madrid (3-4 June 2010). The JP, coordinated by RSE and ENEA as vice- from Italy by means of an extended cross-disciplinary cooperation involving many Research and Development (R&D) participants with different and complementary expertise and facilities, addresses in a medium- to long-term research perspective, one of the most critical areas directly relating to the effective acceleration of smart grids development and deployment. At present, 42 research organizations from 17 different European countries are participating in the JP on Smart Grids. Each JP participant has a wide experience in specific fields pertaining to smart grids, important research infrastructures and relevant ongoing research activities, funded by national or European resources.

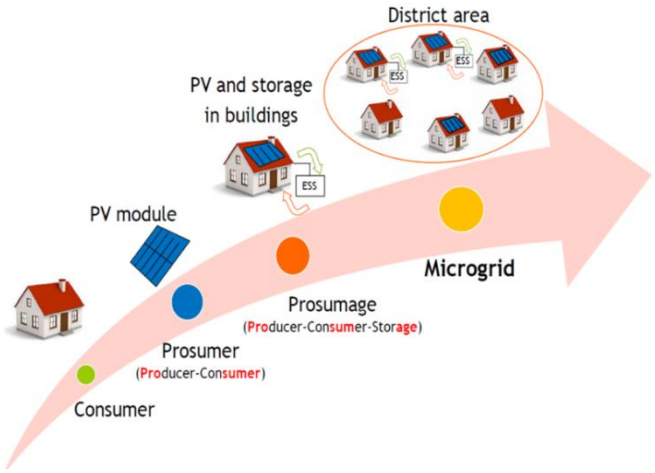
EUREC was founded in 1991 as European Economic Interest Grouping (E.E.I.G.) with the goal of improving the quality and scope of European research and development in renewable energy technologies. The purpose of the association is to promote and support the development of innovative technologies and human resources to enable a prompt transition to a sustainable energy system.

EUREC is the voice of renewable energy research in Europe, representing European Research Centres active in renewable energy.

Our members are prominent research and development (R&D) groups spread across Europe, operating in all renewable energy technologies (wind, biomass, small hydro, marine, geothermal, photovoltaics, solar thermal electricity, and solar thermal heating and cooling). Our members also conduct research into supporting technologies such as energy efficiency, storage, distribution and integration, and undertake studies to evaluate the social and economic aspects surrounding renewable energy.

The Research Centre for Sustainable Energy (FOSS) was created to play a key role in research and technological development activities in the field of sustainable energy within Cyprus and at international level with the aim of contributing to the achievement of the relevant energy and environment objectives set out by Europe. In particular, FOSS strives to become a centre of excellence in energy that will act as a structure where world-standard R&D work can be performed, in terms of measurable scientific production (including training) and/or technological innovation. In FOSS significant research expertise from the University of Cyprus as well as from industry has been assembled that spans a host of fields: Electrical, Mechanical, Civil, Environmental, Chemical engineering, ICT, Physics, Chemistry, Economics, Finance, as well as Architecture. The FOSS team aims, with the development of the necessary synergies, to create the impetus for the advancement of the field of energy. The researchers comprising the working team have extensive experience in grant proposal applications and have acquired funding for a range of research topics through the EU, the National Research Funding Agency in Cyprus as well as industry.

Projects with valuable results in the field of sustainable energy, smart grids and microgrids



Project co-financed by the European Regional Development Fund

Discover PEGASUS and 7 microgrid pilots

The project PEGASUS was successfully launched in February 2017 and it will last until the end of July 2019. The project brings together 10 project partners from 9 countries: Italy, Greece, Cyprus, Slovenia, France, Spain, Malta, Croatia and Belgium. The innovative approach of **PEGASUS - Promoting Effective Generation and Sustainable USes of electricity** is focused on experimenting a simulation of functioning of **microgrids in 7 pilot areas** jointly; solutions will be based on concrete situation with real data. The project has identified quite strongly the need for Transferability to end users and FOSS has undertaken to lead this package including T4.2 that explores ways for achieving this project objective.

InteGRIDy being a Horizon 2020 project aims to integrate cutting-edge technologies, solutions and mechanisms in a Framework of replicable tools to connect existing energy networks with diverse stakeholders, facilitating optimal and dynamic operation of the Distribution Grid (DG), fostering the stability and coordination of distributed energy resources and enabling collaborative storage schemes within an increasing share of renewables.

1. Integrate innovative smart grid technologies, enabling optimal and dynamic operation of the distribution system's assets within high grid reliability and stability standards;
2. Validate innovative Demand Response (DR) technologies and relevant business models;
3. Utilize storage technologies and their capabilities to relieve the DG and enable significant avoidance of Renewable Energy Sources (RES) curtailment, enhancing self-consumption and net metering;
4. Enable interconnection with transport and heat networks, forming Virtual Energy Network synergies ensuring energy security;
5. Provide modelling & profiling extraction for network topology representation, innovative DR mechanisms and Storage characterization, facilitating decision making in DG's operations;
6. Provide predictive, forecasting tools & scenario-based simulation, facilitating an innovative Operation Analysis Framework;
7. Develop new business and services to create value for distribution domain stakeholders and end users/prosumers in an emerging electricity market.

inteGRIDy follows a pilot-driven approach as its overall goal concentrates on the fulfilment of actual need and requirements. A set of innovative methods/mechanism integration will be targeted by inteGRIDy activities that will result to exploitable products with a high commercialization potential.