

Greetings

After 11 years of *ComForEn* symposia, the topic of communication technologies for energy systems (“com-for-en”) is still developing. In 2021, we put a special focus on energy management in and for energy communities.

This year, the European concept of energy communities has finally been implemented in Austrian legislation. Many players in the field have awaited this moment and are now starting with implementation projects. Flexible loads and storage systems are the screws to turn for optimal self-sufficiency and reduced energy exchange to the public grid. However, these functionalities require monitoring, control and automation systems, often resulting in very complex and expensive solutions. Furthermore, each energy community tends to be unique not only in its available energy sources and demand patterns, but also in terms of ICT architecture.

Therefore, the main topics of *ComForEn 2021* are:

1. Reduction of the complexity of ICT systems in energy community as a key for their success
2. Planning, realisation and operation of energy communities
3. ICT reference architectures to achieve straight-forward IT solutions and integration of energy infrastructures such as photovoltaic inverters, charging stations or batteries
4. ICT-enabled optimisation of supply and demand in an energy community

Meeting the climate goals cannot be done alone. Therefore, the AIT Austrian Institute of Technology, TU Wien and the OVE have invited national and international experts from research and industry to discuss the further challenges on the way to a sustainable energy system in a hybrid setting. *ComForEn* is aimed at component and system manufacturers, power grid operators, energy suppliers, and research institutions and – of course – future energy community operators.

For the first time, AIT Austrian Institute of Technology hosted a Self-Optimization Challenge to develop, deploy, and validate your own optimization module for energy communities – capable of considering various constraints (e.g., energy trading priorities, prices/tariffs, technical limitations, etc.) and aiming to reach a dedicated optimization objective. We are looking forward to honour the best optimization results with the “Self-Optimization Award”.

Many thanks to all contributors, keynote speakers, session speakers, workshop organizers and challenge participants to make the 11th *ComForEn* happen again! We hope you enjoy the symposia, whether you stay in Vienna or join from anywhere around the globe.



Friederich Kupzog

*Head of Competence Unit
Electrical Energy Systems
AIT Austrian Institute of Technology GmbH*



Stefan Wilker

*Head of Energy&IT Group Projects
Institute of Computer Technology
Technische Universität Wien*

We would like to thank the organization team!

Birgit Sykora, Karl Stanka, OVE

Carina Schöfl, TU Wien

Mark Stefan, Jawad Kazmi, AIT