

The research project **Hybrid-VPP4DSO** deals with (active) hybrid virtual power plants (hybrid-VPPs), which can participate in the electricity markets and can support actively (distribution-) grid operators if required.

MAIN CONTENTS OF THE PROJECT:

- Identification of **critical network sections and the demand response (DR) potential** in the distribution network
- Development and assessment of business models for hybrid-VPPs
- Experimental **development** of hybrid-VPP algorithms
- Simulation of hybrid-VPP in the distribution network
- **Technical proof-of concept** in a laboratory environment



Based on these phases, a concept for a Hybrid -Virtual Power Plant (hybrid-VPP) is created - including power generators, transmission system operators and consumers (industrial and commercial).



OBJECTIVES OF THE PROJECT:

- 1 Electricity generation from renewable sources and the consumption thereof should be better coordinated, for example by attuning the turning on or off of electric loads and the coordination of demand and supply.
- 2 The electricity system as a whole should be further optimized and stabilized.
- 3 New business and service models for hybrid virtual grids should be developed also bringing the electricity customers economic advantages.

On behalf of the project results grid operators can optimize their planning of future measures and investment and energy suppliers can offer additional services for their clients. Information concerning hybrid-VPP4DSO is also very helpful for politicians planning the expansion of renewable energies.



PROJECT INFORMATION:

Project coordination: Austrian Institute of Technology GmbH (AIT)

Project partner:
 cyberGRID GmbH
 Energetic Solutions
 Energie Steiermark Kunden GmbH
 Energienetze Steiermark GmbH
 Elektro Ljubljana D.D.
 Elektro Energija D.O.O.
 Grazer Energieagentur Ges.m.b.H
 TU Wien Institut für Energiesysteme und Elektrische Antriebe

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