Intelligent Marketing of Electricity from Distributed Generation

European Research Project Coordinated by Fraunhofer ISE Finalized

Distributed energy generation (DG) from renewable and environmentally friendly energy sources will increasingly play a major role for electricity provision in Europe. Renewable energy systems (RES) and distributed power units with combined generation of heat and electricity (CHP) are going to take over a significant part of the electricity supply in Germany. Today their success still depends on subsidies and feed-in tariffs. But even now technical and economic concepts can be found allowing successful market participation of an intelligent mix of such generation technologies. An European team of researchers, utilities and service providers developed such concepts as part of “Market Access for Smaller Size Intelligent Electricity Generation (MASSIG)”.

Small Generators on Big Markets

Within the research project “MASSIG” funded by the European Union researchers of Fraunhofer ISE together with project partners identified promising solutions for selling electricity from DG/RES on the liberalized electricity markets according to market needs. The key question was: How to enable small and medium size generators (up to some MW) entering big markets? The project team investigated this for a number of exemplary countries: Denmark, Germany, Poland and UK. The national market chances were analyzed by gain-loss evaluations considering the legal, regulatory and technical framework conditions in these countries. As key results measures and procedures for successful market participation were developed.
“Especially aggregations of generators distributed in certain regions can offer intelligent electricity products to the markets making them competitive to conventional big market players”, explains Dr. Thomas Erge, project coordinator at the Fraunhofer ISE. A key for success is to combine the delivery of electrical power with the offering of additional services, which e.g. might contribute to grid stabilization like the provision of balancing power. Also alternative power generators are able to contribute to such services and profit from them if intelligent operation management is realized.

The Showcase badenova WÄRMEPLUS

badenova WÄRMEPLUS, which is a subsidiary of the regional utility badenova, is one of the seven European project partners in MASSIG. They operate a number of medium-size CHP and deliver heat and cooling to tenth of thousands of customers in South-West Germany. Together with this industrial partner the MASSIG team developed a concept allowing profitable operation of existing older CHP even after them running out of the period where they receive feed-in tariff according to the German CHP law. The concrete realization of this concept means, that badenova WÄRMEPLUS will sell the electricity from the CHP on the power markets and, in addition, will start to act on the balancing markets offering balancing power that can be used by the transmission grid operators to keep their grids stable. “The work in the MASSIG project made us aware off promising solutions for our company. It became clear, that with an implementation of intelligent marketing strategies like those shown by MASSIG, electricity generation from combined heat and power generation units can still pay off even under more difficult framework conditions”, so Klaus Preiser, CEO of badenova WÄRMEPLUS.

More information about the showcases and the Final Report are available for download at the project website http://www.iee-massig.eu.
The project MASSIG was supported by the European Union – Programme “Intelligent Energy – Europe”.

Graphic: The EU project “MASSIG” (Market Access for Smaller Size Intelligent Electricity Generation) investigates technical and economic concepts for market access of distributed energy generators. ©Fraunhofer ISE

Photo: Inside view of the CHP Friesenheim. This installation of the badenova WÄRMEPLUS is one of the showcases elaborated within the project “MASSIG”. ©badenova
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