

Project Fact Sheet

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Market Access for Smaller Size Intelligent Electricity Generation (MASSIG)

Programme area:	ALTENER, Electricity from renewable energy sources
Status:	finished
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Partners:	Badenova WÄRMEPLUS GmbH & Co. KG, Germany EMD, Denmark The University of Manchester, Great Britain European Renewable Energy Council, Belgium Technical University of Lodz, Poland Energy Economics Group, Vienna University of Technology, Austria
Website:	www.iee-massig.eu
Objective:	Develop and evaluate alternative marketing concepts for electricity from small and medium size Distributed Generation / RES-E
Benefits:	Guidelines, action plans and decision making tools for owners / investors of smaller DG / RES-E for entering big electricity markets
Keywords:	Distributed Generation / RES-E, marketing, virtual power plants
Duration:	10/2007 – 07/2010
Budget:	€ 955,879 (EU contribution: 50%)
Contract number:	EIE/07/164/SI2.467618



Short description

Small and medium size distributed generators (DG), especially those utilizing renewable energy resources (RES), become more important for the electricity supply in the European Community. Currently most of those technologies receive significant incentives or flat funding independently from the momentary needs of the electricity markets and grids. On a long term, however, also those technologies need to be integrated into the overall electricity market procedures and need to become more independent from subsidies. Already today there exist locally a number of approaches for marketing RES and DG in alternative ways, like integration into "Virtual Power Plants". With the MASSIG project such innovative solutions will be studied from a European perspective, taking into account national conditions. Technical as well as economic aspects for new marketing concepts are investigated; especially new features created by the combination of generators with different technologies are studied. MASSIG intends to pave the way for investors / owners of RES and DG for finding alternative marketing approaches by elaborating concepts and procedures to bring them to the markets and help them selling power and other electricity products generated by DG in the power range up to several hundred kW per single unit.

Expected and/or achieved results

Major project results:

- Identification and selection of technologies most amenable to innovative marketing approaches, detailed technical description, discussion of technical constraints for offering energy services.
- Selection of promising marketing options on a country by country basis for Denmark, Germany, Poland and the UK. Evaluation of the relevance and options of the promising market products for the selected countries.
- Collection and description of legal, regulatory and technical pre-conditions for entering the different markets (individual for the countries investigated). Development of measures to adjust to market requirements. Conclusions about how these aspects influence market options.
- Development of a universal gain-loss evaluation tool (Excel-tool). Application of this tool for a gain-loss evaluation of numerous scenarios, both for four MASSIG showcases and additional exemplary cases.
- Trend analysis assessing the relevance of the MASSIG project results for the medium term future.
- Definition and detailed investigation of four showcase scenarios in Denmark, Germany, Poland and UK. Identification and economic evaluation of most promising market options for those showcases.
- Discussion of the applicability of the successful Danish concept of full CHP market integration under the conditions in other EU countries. Development of recommendations for regulators on how to adjust framework conditions in order to duplicate the Danish success story.
- Show-Case of the project partner badenova in Germany. Procedures, methods and tools developed by MASSIG have been applied and implemented for the CHP operated by the company badenova WÄRMEPLUS.
- Analysis and description of marketing concepts for the further showcases, e.g. a wastewater treatment plant in the Polish city Lodz or the participation of CHP installations in the balancing market in Denmark.
- Development of a "How-To" procedure for plant owners and decision makers describing to them the way to go for participating in the big markets.
- Information dissemination and contact to target groups. Organisation of 7 national and international workshops.

Lessons learnt

Existing innovative marketing practices for smaller size DG/RES power producers are still at the beginning. This underlines the relevance of marketing concepts developed in the course of the MASSIG project.

Factors directly influencing the market potentials are the regulatory framework and existing alternative support mechanisms for RES and DG, like feed-in tariffs or other incentives. The situation about these aspects is quite different in the four exemplary countries investigated in MASSIG (Denmark, Germany, Poland and the UK).

The most interesting product categories are "Trade of Energy", Regulating power and Tertiary Reserve. One clue for profitable market participation is the combination of "intelligent" generation (management and pooling of generators in order to meet minimum bid-sizes) with "intelligent" market strategies (like combined offers at the spot and power reserve markets).

For most fluctuating RES technologies market participation is rather risky, unless a number of generation units of different kinds are combined with each other or if the generation units are being spread on a larger area (like it is done in Virtual Power Plants, VPP). One important lesson is that technical requirements in some European countries prohibit a flexible combination of widespread generators to form a VPP.

Controllable medium size generators, especially CHP, already today have excellent chances for competitive market operation (at least in some countries). Smaller-size and fluctuating energy generators face non-technical and technical barriers (e.g. forecast uncertainties) to do so. Both need service providers who pool small units and market them intelligently. This is a big chance for new emerging companies (especially SME), since such services are still in a very pre-mature state and only few service providers in single countries (like Germany or Denmark) exist already today.