

MMG-S

Modular Mobile Micro-Grid Services

Modular Mobile Micro-Grid Services (MMG-S)

MMG-S provides software and hardware to evaluate, design, configure, run and optimize green micro-grid energy solutions. Using the tools implemented in MMG-S, environmentally friendly, sustainable, and cost efficient energy supplies independent from the energy grid can be easily conceptualized and implemented. This opens new markets for energy consultants and energy providers.

Electric energy is needed for most human activities today. However, in many areas and under many circumstances, a reliable power supply is not easy to obtain: The energy grid may be unreliable (developing world) or even unavailable (e.g. remote rural areas, Islands). Or energy is needed for singular and temporary events far away from the next power outlet (e.g. for music festivals, but also refugee camps and in disaster relief).

Wherever off-grid electric energy is needed, customers today have only one option: the massive deployment of diesel generators. These are costly and not environmentally friendly. They consume large amounts of diesel fuel, thus pollute the environment and contribute to global warming through CO² output.

On the other hand, renewable energy such as PV and wind power is abundant in many regions where off-grid solutions are needed.

This is the reason for a growing interest worldwide in **green energy micro-grids** that include renewables, storage, and flexible loads to provide a cheaper and more environmentally friendly energy mix.

To cope with the inherent complexity of green micro-grids, tools are needed to evaluate the feasibility of a micro-grid for a specific situation, to get customers involved, to plan and configure a micro-grid project, and to support temporary micro-grid installations with moveable hardware for storage and renewable energy production.

The MMG-S project addresses these needs with the development of three software- and hardware tools:

- A web-based customer engagement tool to convince customers of the general feasibility of a green micro-grid for their specific project. The target customers for this tool are organizers of large festivals in Europe and worldwide.
- A complex micro-grid simulation and optimization tool to support micro-grid developers in the planning and design process. Through MMG-S, this Micro-Grid Creator will be made available as a cloud-based software service, accessible to customers worldwide.
- An improved moveable PV and storage unit, the SolarTransformer. This device with the size of a standard container can be used to add renewable energy supply and storage to temporary micro-grid installations. The primary target markets are large events and festivals, but also refugee camps, disaster relief, and remote communities in developing countries.

Together with a number of sub-granted Business Champions already active in the target markets (ENEL Green Power, Easy Smart Grid, Watt Now, Spectral Enterprises), the MMG-S beneficiaries use these technical tools to improve existing products and services, and to establish new services related to green micro-grid solutions in the market.

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Partners:



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