



SIEMENS



Efficient microgrid management for industrial power grids

by optimizing operational, environmental and economic aspects

[siemens.com/microgrids](https://www.siemens.com/microgrids)



Modern energy challenges and chances

Operators of industrial power grids face two major challenges: They need to optimize their average production costs – which includes reducing CO₂ emissions – and at the same time ensure a secure and reliable power supply to assure production. The use of renewables to supply industrial facilities reduces both CO₂ emissions and the requirement for imported electricity. This lowers operating costs, especially since surplus electricity can be sold. If storage systems are used, it allows operations to take the form of an electrical island, ensuring smooth production, regardless of a public power supply that in many locations may be insufficient.

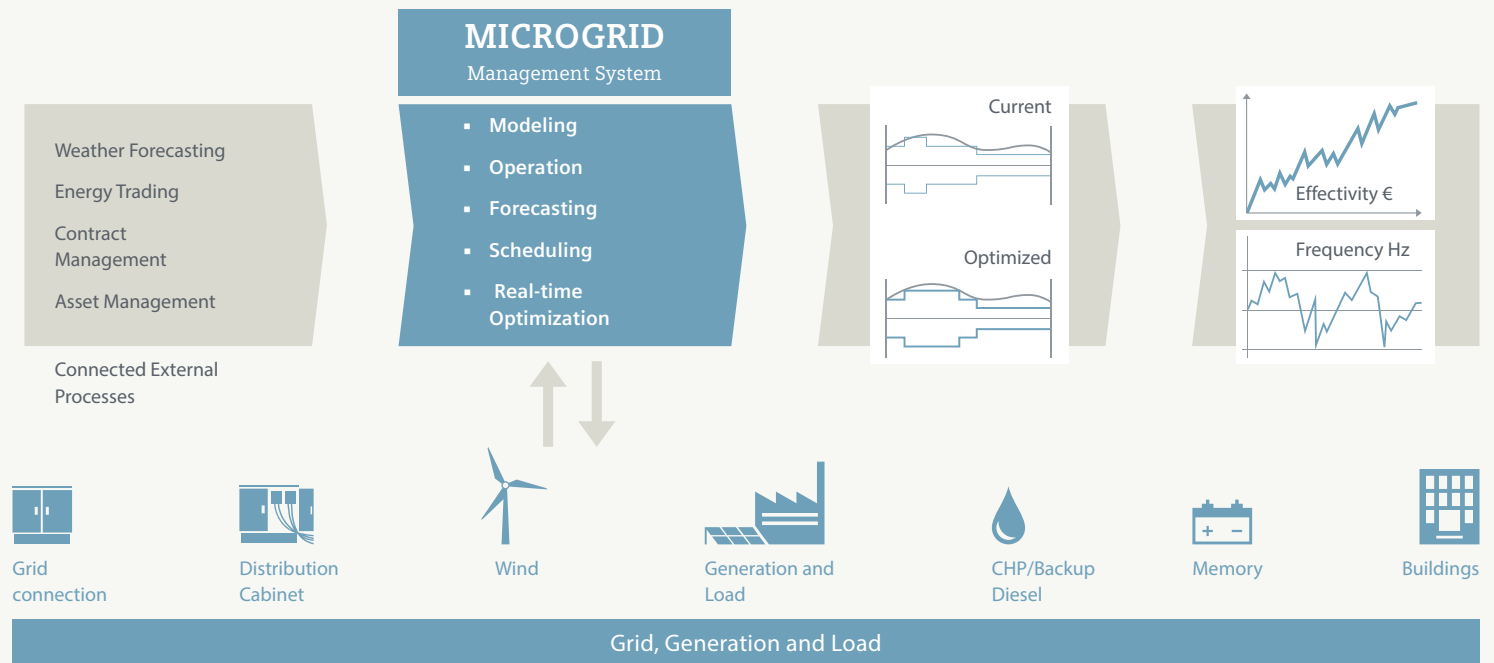


Fluctuations in electricity generation in a microgrid demand intelligent control mechanisms, reliable forecasts and – especially in island mode – a balance between available power and power consumed. To meet these needs, Siemens supplies the scalable Microgrid Management Systems.

Operation, monitoring, administration, planning – all under one roof

Siemens Microgrid Management Systems monitor and control grids with large and small distributed energy generators, renewable assets, storage and loads. Our scalable system helps to automate, display, alarm and control all elements in the grid, thus assuring the needed quality of supply at all times. It generates schedules, automatically monitors their observance and readjusts them in real time. This is enabled by automatic switching sequences based on rules or forecasts that draw on a large number of constantly updated parameters – such as weather forecasts, type of plant or power price. Siemens solutions also help you efficiently incorporate such as cogeneration plants.

Intelligent networking of your energy infrastructure using Siemens Microgrid Management Systems not only increases the added value of your power supply, but also protects its operation from outages, regardless of whether you're connected to the supply network or not. Our solutions are flexible and expandable – today and in the future.



Intelligently managing microgrids

Siemens Microgrid Management Systems are the ideal solution to ensure the most optimized control of fluctuating electricity generators within a microgrid. Our tailored solutions meet the individual challenges of each power scenario with a modular structure and flexible scalability. This means that you receive a software solution exactly tailored to your needs.

Microgrid administration comprises a range of intelligent, versatile and user-friendly tools for a wide range of applications. End-to-end SCADA and numerous functions for forecasting, planning and real-time optimization support you in:

- Monitoring and controlling the grid components
- Monitoring and controlling generation
- Monitoring and controlling consumption
- Providing ancillary services
- Buying and selling power

It's flexible, direct and predictive.

Problem-free engineering

The intuitive design tools are a core element in the Microgrid Management Systems. Even the most complicated power infrastructures can be represented digitally with just a few clicks of the mouse. This saves time and minimizes the potential for error, thanks to many automatic support functions.

Benefits of a fully integrated microgrid solution

- Modular construction, flexible and scalable
- Reliable grid operation
- Intuitive modeling and parameterization
- Intelligent forecasting and planning
- Simple, real-time optimization
- Incorporation of distributed generators, storage units and loads
- No 24/7 operator required

Published by and copyright © 2015

Siemens AG
Energy Management
Freyeslebenstr. 1
91058 Erlangen, Germany

Further information is available from our Customer Support Center.
Phone: +49 180 524-84 37
Fax: +49 180 524-24 71
(Charges vary according to your provider.)
E-mail: support.ic@siemens.com

Order No. IC1000-G220-A225-X-4A00 | Printed in Germany |
© 10.2015, Siemens AG | Dispo No. 6200
AL=N ECCN=N | GB 140037 | 05140.2