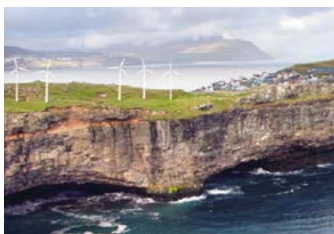


Efficient microgrid management for remote locations

by optimizing operational, environmental and economic aspects

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



Stable power supply for weak grids

For the operation of power grids in remote locations, the advances in renewable energy sources offer both opportunities and challenges: by incorporating renewables and storage facilities in the supply systems, operators can cut their power costs dramatically – while increasing grid availability even in poorly supplied areas. Wherever the transportation of fossil fuels over long distances is costly and unreliable, the use of wind or solar plants can make a lasting improvement in terms of both independence and economic efficiency.



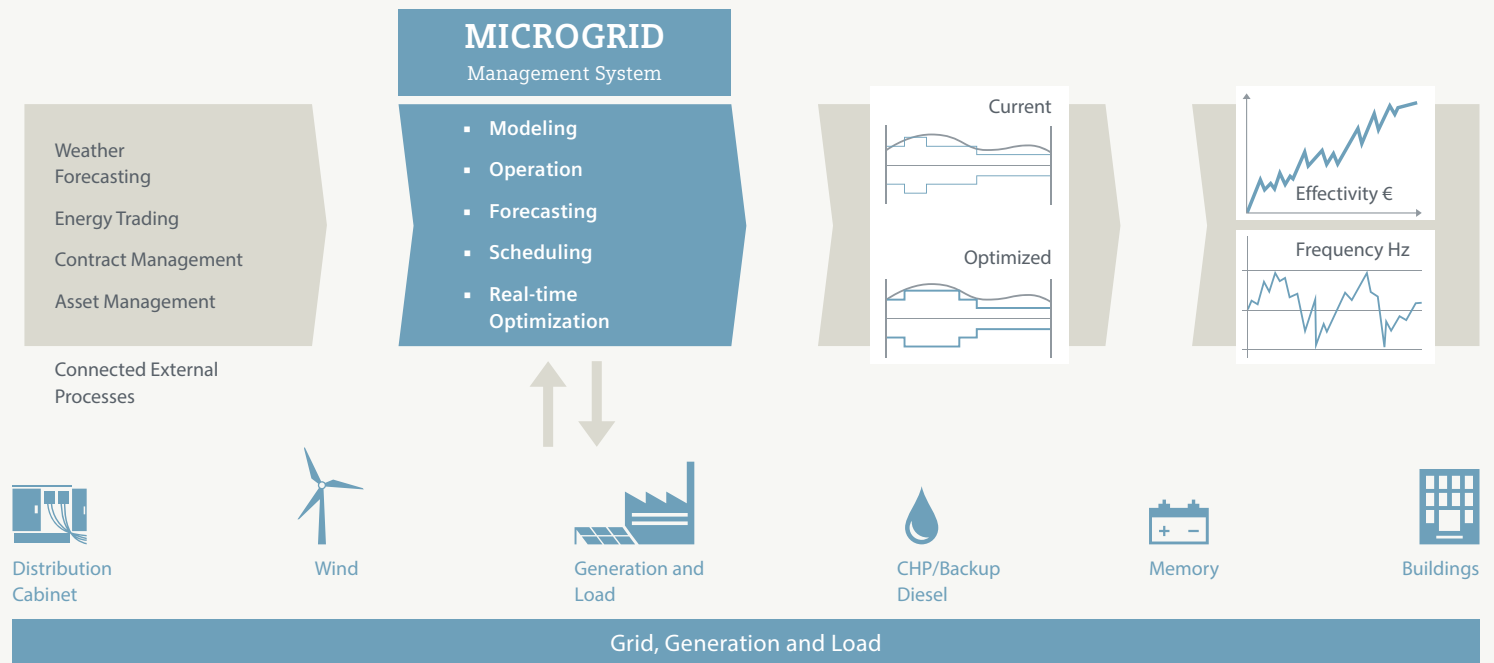
Fluctuations of electricity generation in a microgrid demand intelligent control mechanisms and reliable load and generation forecasts. It is essential to maintain a balance between energy generated and energy consumed. To control these microgrids, Siemens supplies scalable Microgrid Management Systems as well as solutions based on automation devices in the SICAM series and solutions based on Spectrum Power™.



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 userfriendly tools for a wide range of applications. Endtoend SCADA and numerous functions for forecasting, planning and realtime optimization support you in:

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

It's flexible, direct and progressive.

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, realtime optimization
- Incorporation of distributed generators, storage units and loads
- No 24/7 operator required

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