Deregulation of the energy market has fundamentally changed the energy situation in recent years. It requires considerable effort to operate and market the growing number of small distributed power generators, energy storage units and consumers. And yet this is precisely what is also creating tremendous opportunities for energy aggregators such as yourself. But how can you tap new fields of business and achieve the flexibility you need to ensure efficient operation over the long term?

The answer lies in a solution based on innovative software that bundles and controls all components across supply and distribution network infrastructures. Intelligent networking allows you to respond flexibly and rapidly to changing conditions in power generation and consumption – and to market the energy profitably.

Intelligent energy networks with DEMS
Small, distributed energy generators significantly boost their market potential when they are combined into a virtual power plant. The total output achieved by aggregation allows them to participate in the energy and regulation market, something that would not be possible with the low power yield of individual, autonomous plants. This approach also makes it possible to offer renewables directly on the energy exchange. DEMS® (Decentralized Energy Management System) from Siemens establishes the best possible basis for this – by providing, for example, a reliable prognosis based on parameters such as plant type, weather forecasts or energy prices.

Tailored to your specific needs, DEMS helps you establish easy-to-coordinate energy networks and maximize flexibility in controlling generation and loads. That creates the basis for boosting your earnings from power trading over the long term.
Benefits of a fully integrated DEMS solution
- Intelligent forecasting and planning
- Easy real-time optimization
- Inclusion of all distributed power generators, storage systems and loads
- Modular structure
- Adaptable to all the needs of energy aggregators, power brokers and other players
- Flexible and scalable
- Windows-based software
- Simple modeling and setting of parameters with the DEMS Designer
Preparations for the transition to a new energy mix have long since been in full gear – sometimes with a dramatic impact on the energy market. As a power broker, you will find it well worth your while to adapt your portfolio to the new conditions at an early stage. Considering different distributed energy sources offers enormous potential for lastingly improving your portfolio and flexibility.

You will need a customized solution based on innovative software that will help you effectively organize your existing product portfolio and add attractive new products and services. Projections, forecasts and easy adjustment of buying and selling quotas for optimizing the accounting grid are powerful tools for avoiding losses and holding your own against growing competition. To build long-term loyalty among existing customers and quickly acquire new ones, you need to offer ideal conditions and the largest possible range of products.

Generation and consumption are never more than a mouse click away
DEMS® (Decentralized Energy Management System) from Siemens makes it easier than ever to develop strategies and offerings. The advanced forecasting functionalities, which incorporate many relevant parameters – such as energy price, plant type and weather forecast – facilitate reliable projections and thus, in particular, planning security. DEMS also enables you to develop new products under attractive conditions with just a few clicks of the mouse.

Tailored to your specific needs, the energy management system provides you with the tools you need to optimize your energy trading portfolio and to lastingly expand it.
Managing distributed energy producers intelligently – with DEMS

Virtual power plants are the ideal solution for optimum control of fluctuating power generation. But since each grid imposes special requirements on operators and infrastructure, a communication solution must be as individual as the energy scenario. DEMS®, the decentralized energy management system from Siemens, takes this into account with its modular structure and individual scalability. In this way, we ensure that you always receive the software support that meets your specific situation and needs exactly.

The latest version of DEMS is more intelligent, versatile and user-friendly than ever. Extensive forecasting, planning and real-time optimization tools let you monitor and control both generation and consumption as well as the purchase and sale of energy – flexibly, promptly and with a view to the future.

DEMS Designer

The intuitively operated DEMS Designer is one of the major new features in DEMS. All it takes is a few clicks of the mouse to map even the most complex energy infrastructures. This saves time and minimizes the potential for errors, thanks to numerous automated support functions.

Benefits of a fully integrated DEMS solution

- Intelligent forecasting and planning
- Easy real-time optimization
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- Modular structure
- Can be customized to all the needs of grid operators, energy aggregators, power brokers and other players
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The liberalization of the energy market means new opportunities and challenges for operators of commercial and industrial power supply grids. By integrating renewable energy sources and storage systems into the supply grids of harbors, hospitals, industrial complexes, military facilities or residential properties, operators can reduce their own energy costs and offer surplus energy to the energy market. However, the fluctuations in power generation require optimum load and generation forecasts as well as intelligent control.

Operators can go even further and separate their own systems from the higher-level grid to avoid disturbances in their own energy supply. In this case, the “electricity island” itself must ensure the balance between consumption and generation, which is particularly challenging with fluctuating power generation. Siemens offers you solutions based on the innovative DEMS® (Decentralized Energy Management System) for managing these microgrids.

Management, planning and monitoring – everything under one roof
DEMS monitors and controls both small and large distributed power generators, storage systems and consumers. The software creates schedules, automatically monitors their compliance and adjusts them by means of real-time optimization. This is supported by prognoses based on a wide range of continuously updated parameters – such as weather forecasts, plant types and energy prices. DEMS also helps you efficiently integrate cogeneration plants, for example, and set a course early on for minimizing fossil fuels.

Intelligent networking of your energy infrastructure with DEMS not only increases the value added of your power supply system, but ensures that it will work as well tomorrow as it does today.

The Microgrid Energy Management extension combines DEMS with extensive functions for control, monitoring, and visualization (SCADA). This enables the most effective technical and economical use of microgrids.
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