

Future-proofing the 'smart grid'

Denmark is one of the world leaders when it comes to integrating renewable energy sources into the electrical grid, while assuring stable supply. However, the demands of future electricity systems will require substantial investment in R&D, infrastructure and security – a development with opportunities for foreign technology and service providers.

The Danish electricity system is designed to integrate large amounts of wind power. Continuous development of its monitoring systems and an integration of further renewable energy sources into the grid ensure the improvement and better functioning of the energy market. For foreign

companies, this provides great opportunities to test and integrate renewable energy technology into the grid system.

Danish utility and distribution companies are installing a new generation of smart meters and the potential for new smart solutions is supported by the world's highest penetration of internet and broadband connections to households.

"It is Denmark's pioneering role in renewable energy and energy efficiency that allows it to provide particularly valuable lessons for other countries"

Jonathan Coony, International Energy Agency

FLAGSHIP COMPANY: SIEMENS DENMARK

Siemens is a major supplier of turbines, transformers, motors, monitoring systems and electronic equipment for power plants and utilities. Siemens has been an integral part of developing the Danish grid system and is continually involved with demonstration of new technology in energy efficiency, transmission and storage.

FLAGSHIP PROJECT: ECOGRID

The EcoGrid project is a consortium of research institutions, companies, authorities and electricity companies. The purpose of the project is to generate new research and demonstrate the possibility of putting even more renewable sources into the grid. The project will include full-scale demonstration, and foreign companies are already taking part in the project. www.ecogrid.dk



USEFUL RESOURCES

SYSLAB at Risø-DTU is a laboratory for intelligent distributed control, which tests renewable technology. www.syslab.dk

Energinet.dk manages and controls the backbone of the Danish energy grid. www.energinet.dk

DONG Energy is the largest Danish energy producer; the company is working with IBM to accelerate the adoption of 'smart grid' technologies and business solutions throughout the world. www.dongenergy.com

SEAS-NVE is Denmark's largest consumer-owned energy company and is involved in several demonstration projects; it is in the forefront of implementation of new grid technology. www.seas-nve.dk