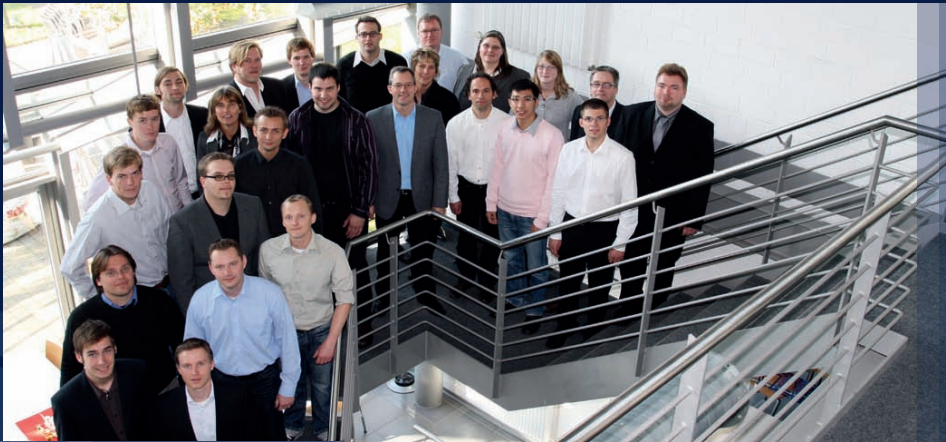


# M.O.E.

Expertise & Service in  
renewable energies and grid integration



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## ABOUT M.O.E.

M.O.E. GmbH (Moeller Operating Engineering GmbH) is a well-established, independent consulting and certification company from the German Federal State of Schleswig-Holstein engaging in the renewable energy sector.

M.O.E. is a fully qualified certification body according to EN 45011 in the renewable sector with an unprecedented project track record and is accredited by the Accreditation Body of the Federal Republic of Germany (Deutsche Akkreditierungsstelle / DAkkS). At M.O.E., we provide highly comprehensive and detailed consultations and expertise through prompt and high-quality solutions twinned with both down-to-earth and customer-oriented approach.

**Our vision** is to play an active role in achieving the goal whereby 50% of electricity generation in Europe will be provided by renewable means and operated through a safe grid by the year 2020. Therefore, we combine the drive for continuous improvement, innovation and high performance with the ever-changing demands in renewable energy implementations in realizing this purpose.

**Due to the steadily increasing share of renewable energy production** (by percentage against conventional non-renewable energy production) around the globe, tough and strict legislations in terms of grid integration requirements have been imposed. Backed with highly qualified electrical engineering experts, M.O.E. provides the needed expertise in grid integration of wind energy, photovoltaic systems and substations.

**As a household name** in the renewable energy industry, the M.O.E. coverage spans across Europe and Asia, with credit given to its values and principles upheld throughout the years. The foundations of the M.O.E. corporate culture is built based on our relentless effort accompanied by our performance mindset and focus on personal development.

**Here at M.O.E.** every one of us is committed to strive for our customer's vision and to live up to the goal we have set ourselves, day by day.

## EXPERTISE

- Wind Power
- Grid Integration
- Repowering
- Load simulation
- Power Quality assessment
- Dynamic Simulation of LVRT and all other grid code requirements
- Photovoltaic
- SDL System Service Ordinance for new turbines

M.O.E. offers a solution oriented type and project certification regarding to different grid codes, international standards in accordance to DIN EN 45011. Inspection of wind turbine, substation, grid protection in accordance to DIN EN IEC/ISO 17025.

Certifications include:

- Component certification
- Type certification for wind turbines and photovoltaic inverter
- Project certification for wind farms, solar power plants, and other generating plants

## EXPERIENCES IN 2010

- More than 1500 Inspection of Wind turbines of the latest generation with a total installed power of 3 GW
- More than 400 Inspection of wind farms and substation
- More than 70 project certification of wind farms in case of grid integration
- Dynamic Modeling and simulation of distribution or transmission grids and wind farms including LVRT
- Developing of generic models for a double feed induction wind turbine generator
- More than 70 wind farms; complete assessment grid codes compliances
- More than 20 Type and component certifications from products of solar inverter, wind turbines and converters
- More than 20 tender, type certification, Assessment of Damage, Inspection of solar farms

