

- A reliable **Wind Turbine** with an integrated **Battery System**
- Combined with the highest efficient **Photovoltaic Power Plant**
- Compatible with different **tower types** related to wind and transport conditions
- Certifications for **worldwide** installations with the QREON support for the national business cooperations or licensees
- **Support** service for partner purchase, financing, assembly and maintenance
- Integrated energy storage system with 0.2 up to **5 MWh** also for **Island solutions**
- **Smart** energetic support for the higher independency from the grid operator
- **Additional** power producers, e.g. Diesel generators to be integrated
- **Reliable** mechanical and electrical components with a simple and common technical maintenance with several **Gigawatt** of operational experience
- Modular design, **constant power supply** for any site conditions and requirements
- **Made in Germany**

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QREON®



Quality Renewable Energy solutiON
Turnkey Hybrid Power Plants
for every location

ENERGY STORAGE

- **Lithium-ion** battery technology with cells from the industry leader
- Battery Management System and turnkey **Solution** designed and produced in Germany
- 200 kWh up to **5 MWh** each System, with the highest energy density on the market
- Modular technology, **maintenance free**
- Fastest system **respond time**
- **Warranty** >8000 cycles
- **Grid supporting** features
- Island grid operation and Uninterruptible Power Supply UPS functions
- Different operation modes with intelligent **Energy Management**: Industry electricity bill saving, self-consumption, emergency power back-up, peak-shifting, frequency regulation, renewable integration, etc.
- **Integrated** in the bottom of the tower or in a separated operation building
- Alternative Energy Storage Solutions e.g. **Redox-flow-battery**
- **Proven** technology, >2 GWh installed

Long-term Operation

SOLAR ENERGY

- **Highest efficiency**, active single / double axis, intelligent tracking system
- Enables the **optimal utilization** of all the irradiation energy
- **Yield increases** of approx. 30 % compared to standard applications
- **Robust** durable technology
- Monitoring and real tracking with **maximum light detection** technology
- Snow sensor for **cleaning**
- Storm sensors for horizontal **security** position
- Lowest service expenditure and **maintenance free** rotary drive
- Hot-dip galvanized steel / alloy substructure, **20 years warranty** against corrosion
- **Global references**
- Complex Condition Monitoring and **SCADA** System
- **Power Control** Unit
- Photovoltaic modules glass-glass monocrystalline with 30 years linear power warranty (87 % of peak power)
- **Made in Germany**

Highest Efficiency

WIND TURBINE

Tabular steel tower 60m | 80m | 101m
Lattice tower 130m

Pitch system

- integrated power supply
- adaptive charging supercaps
- high dynamic single blade pitch control

Generator

- synchronous generator
- electrical excitation, auxiliary field generated

Rotor blades

- 40m
- hybrid build GRP (CRP)

Gear

- planetary- and spur gearing
- gear ratio: approx. 1:96

Converter

- only one converter for the complete turbine and the battery system
- rated apparent power:
Sn=2,300kVA
- active power range: 0.88 inductive–0.88 capacitive

Easy Transport