SHAPING THE ENERGY SYSTEM OF THE FUTURE
The platform for the digital energy world

Operating a power plant without owning any assets

- Aggregation of decentralized renewable energy assets through a central virtual platform
- More than 5,100 assets with more than 4,000 MW capacity
- Intelligent steering of all networked assets with automatic M2M-communication
- Grid stability: ensuring that production and consumption are harmonized
- Offering access to various markets (i.e., spot exchange, ancillary services, etc.)
The control system – heart of the VPP

- Intelligent M2M-communication between the control system, individual assets, the TSO and the power exchange
- Algorithmic calculation of each individual asset’s schedule of operation
- Automatic steering of assets
- Redundant server structure for maximum security

What does a VPP offer?

- Power exchange forecasts
- Weather forecasts
- Control reserve set-points of the TSOs
- Live data from each asset
- Optimized schedules
- Current prices at the power exchange
- Historical data (i.e. measured & metered data)
- Changes by the customers through online-platform
- Assets in the pool
Who is taking part in a VPP?

Asset types in a Virtual Power Plant

- Biogas
- Solar
- Wind
- Hydro power
- CHP
- Renewable power plants
- Power-to-X
- Power consumers
- Utilities / aggregators
- Batteries
- Emergency power generators

Interfaces / technologies

- Next Box
- Protocol interfaces
- APIs
Our products: flexible power rates

How power consumers can benefit from fluctuations on the power exchange

Overview

› Consume power when the demand at the power exchange is low and power costs less
› Price forecasts in different time intervals available:
  Variable power rate ”Best of 96” (with a granularity of up to 15 minutes)
  or time zone based ”Take your Time”

Benefits

› Harmonizing power supply and demand for the entire system
› Saving up to 30% on energy costs

Matthias Reimers, Managing Director of Deich- und Hauptsiekerband Dithmarschen, shifts the power consumption of his pumps to times with lower power prices