

Forecasting and Market Participation for VPPs

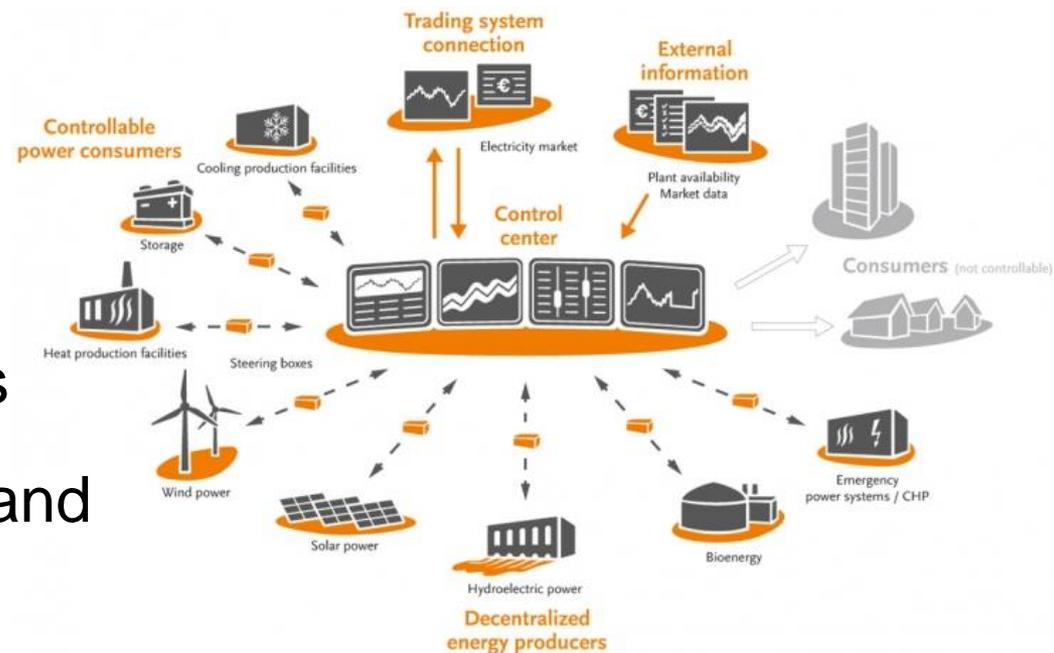
Overview and Insights into Solar Power Forecasts

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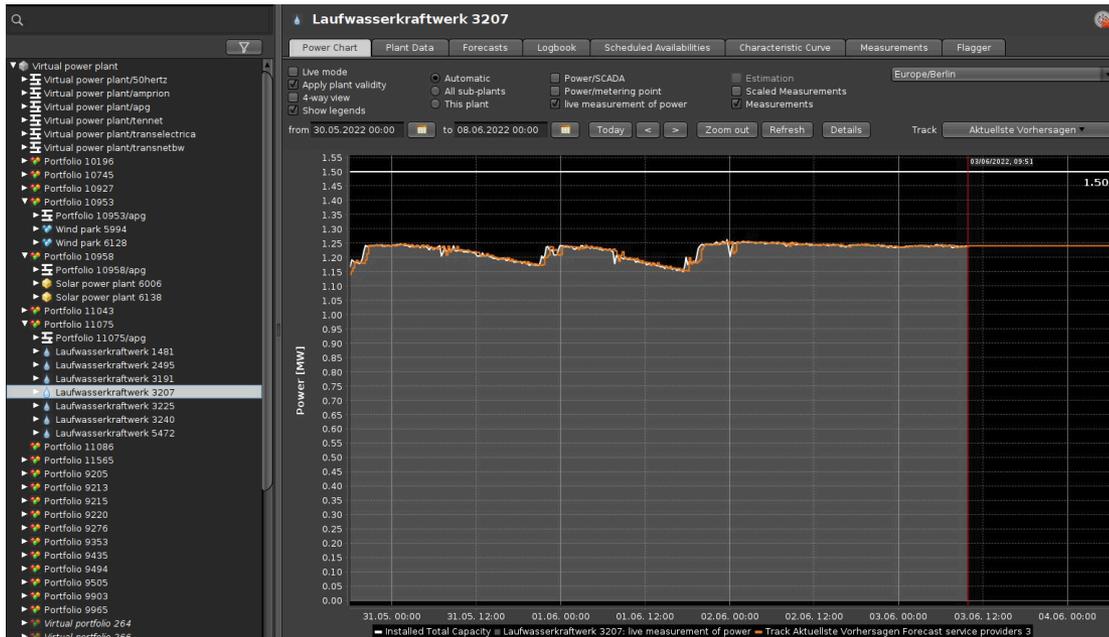
Denver, 06/07/2022

The Virtual Power Plant

- Up to now, VPPs have been used mainly by traders
- But: VPPs become more and more important for system operators
- Regular control rooms aren't designed for communication with many small plants
- VPPs can fill this gap and act like a stand by control room



The Virtual Power Plant - Data



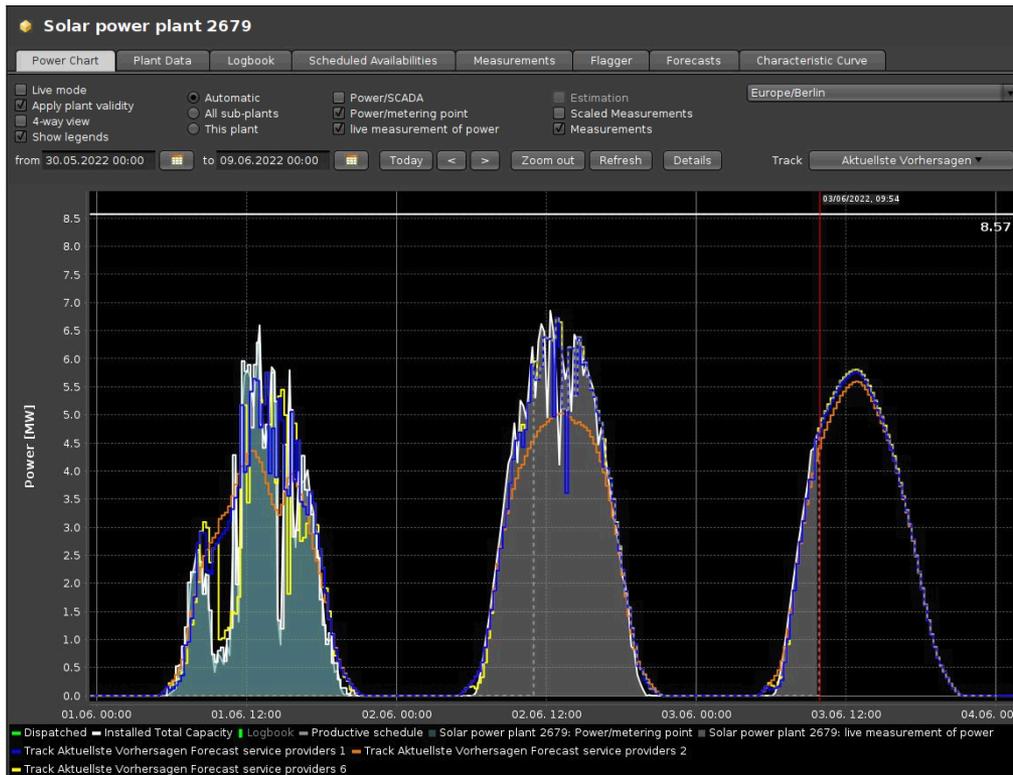
- Connecting different kinds of generators, storage systems and load

- Measurements: live, metering point and/or SCADA

- Real-time plausibility check

- Availability information center

The Virtual Power Plant - Forecasts



- Direct marketing of renewable energies
- Remote controlling of installations

- Different forecasts can be displayed:
 - With adaption to online measurements
 - Combinations of different providers
 - Meteorological power forecasts

Solar Power Forecasts

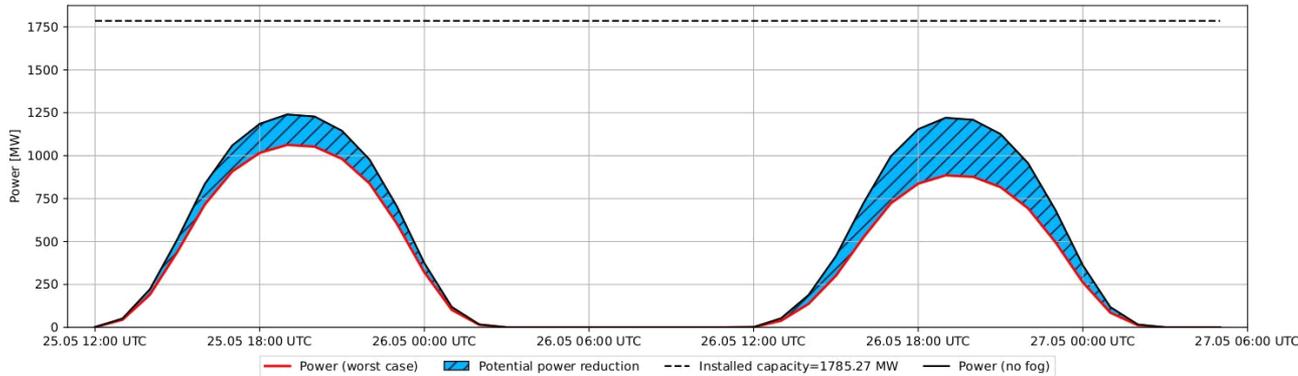
Individual plants

- Measurements of the plant
- Forecast for an individual plant (location)
- Specific master data

Behind-the-meter

- Estimates of power production (cooperation with companys for photovoltaic inverters)
- Forecast for x plants in a region
- Installed capacity based on estimates

Solar Power Forecasts – new Features



- Potential power reduction due to fog in the ID and DA

- Snow/snow-free adaption (meteorological data, measurements, ...)
- Integration of solar facility with integrated battery
→ Battery only charges from solar

Thanks for your attention!

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