Aggregation
for a transition to 100% renewables

REKK Energy Futures, November 11th 2020
A stable grid is a balanced grid
The energy transition requires us to do things better
Renewables and demand can be part of the solution... thanks to digitalisation...
A digital utility: The Virtual Power Plant
Digitalisation allows aggregation
Managing a growing solar portfolio

Better monitoring, hence, decision making

Possibility to steer the plant on prices or for balancing
Steering a solar plant

Unlock demand response

- Create or enhance revenue streams and support the grid
- Respect technical and economical constraints; minimal impact on business operations
Reserve power with EVs
The power of many

- More than 9000 assets connected
- Aggregated capacity of 8.5 GW
- Of which 3 GW solar
Conclusions
Thank you for your attention!

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Yes, it does make a difference!
Solar forecasting approach

PROCESS OF PV FORECASTING AT NEXT KRAFTWERKE

WEATHER MODELS
- Irradiation
- Temperature

ASSET DATA
- Orientation
- Module type
- Location

PHYSICAL MODEL
- Day ahead forecast
- Intraday forecast
- Intraday updates
- Live-infeed of assets

DAY AHEAD TRADING

INTRADAY TRADING
Energy expertise and innovative technology

- Experienced markets & trading team
- Performant and secure virtual power plant infrastructure
- Proprietary control box and control system

Diagram:
- Control reserve set-point of the TSOs
- Operational restrictions of each asset
- Power exchange forecasts
- Weather forecast
- Changes by the customers through online-plattform
- Current prices at the power exchange
- Live data from each asset
- Historical data (i.e. measured & metered data)
- Optimised schedules
- Assets in Pool
NEXT KRAFTWERKE IN A NUTSHELL

Aggregator, electricity supplier, Balancing Responsible Party (BRP) and electricity trader

NEXT KRAFTWERKE

- Founded in 2009
- BRP services and flexibility on all markets:
  - System services
  - Short term electricity markets
- Largest Virtual Power Plant (VPP) in Europe
  - > 9000 units connected
  - > 8,5 GW in our Next pool
  - ~160 employees
  - >1,5 GW R1/R2/R3
  - Traded volume (2018): 15,1 TWh
  - Sales (2018): 628 million

ACTIVE IN THE FOLLOWING COUNTRIES

- Germany (2009)
- Austria (2013)
- Belgium (2014)
- France (2015)
- Poland (2016)
- Netherlands (2016)
- Switzerland (2016)
- Italy (2017)
- UK (trading operations, 2018)