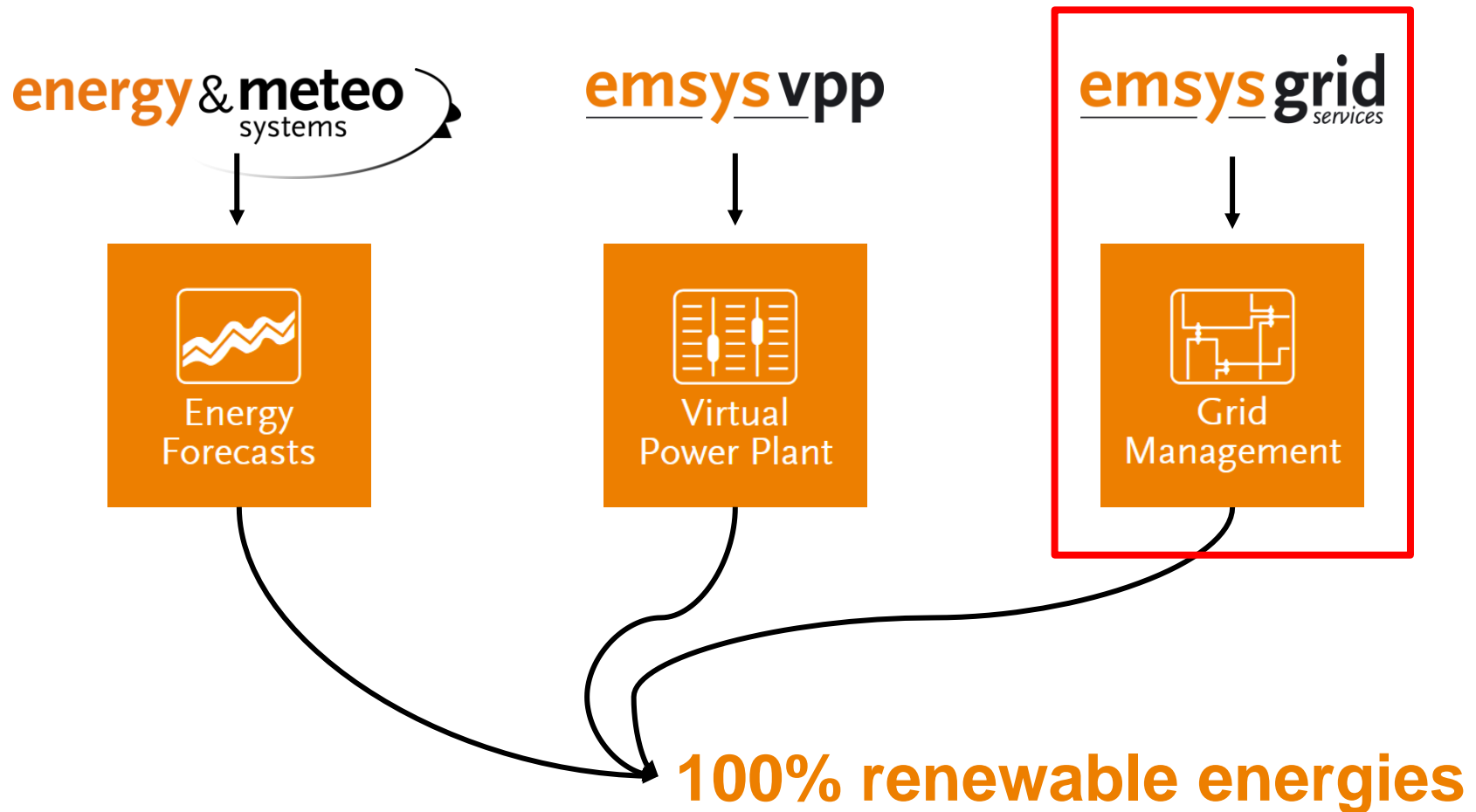energy & meteo
systems

Forecasting for Renewable Energy and Grid Analysis for Congestion Management
Redispatch 2.0 in Germany

Lars Rohwer
Senior Meteorologist
ESIG Denver, 06/13/2023

energymeteo.de

The New Redispatch Process In Germany

Redispatch 2.0 in Germany

- published in the Network Expansion Acceleration Act in May 2019

- for the first time integrates renewable energies and distributed producers from 100 kW into the Redispatch process

- creates grid analyses based on forecasts and identifies bottlenecks at an early stage (no longer reacts in real time to grid congestions)

  - specifications had to be implemented by grid operators by October 1, 2021

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The New Redispatch Process In Germany

Redispatch 2.0 Steps

| A high resolute grid network analysis and forecast based on individual plant forecast, schedules, grid states and consumption. | → | The prediction of load flows and congestion in different variations. |

The New Redispatch Process In Germany

Grid Analysis and Forecasting

- starting point is the determination of a vertical load forecast at grid nodes and the calculation of load flow forecasts

- based on the forecast of the vertical grid load, a predictive load flow calculation can be performed

- in addition to the basic case (n-0), a failure variant calculation (n-1) is used

- emsys grid services calculates various scenarios to determine congestion

The New Redispatch Process In Germany

Dynamic Line Rating

- dynamic line rating enables grid operators to further exploit the effects of weather-dependent grid capacity to increase the static grid operating limits

- the maximum current carrying capacity in conductor ropes depends on the weather situation, especially wind speeds

- it is calculated based on numerical weather predictions as well as on further standing data

The New Redispatch Process In Germany

Redispatch 2.0 Steps

| A high resolute grid network analysis and forecast based on individual plant forecast, schedules, grid states and consumption. | → | The prediction of load flows and congestion in different variations. | → | An optimized Redispatch dimensioning and the subsequent implementation of a plant scheduling. |

The market communication between different players as well as balancing and accounting

The New Redispatch Process In Germany

Redispatch 2.0 Lessons Learned

- too complicated processes for too many stakeholders (approx. 900 Distribution Network Operators alone)
- 2,5 years from act to implementation is not enough time
- extremely large data volumes require a very expensive IT-Infrastructure

Map of Germany with approx. 900 Distribution Network Operators
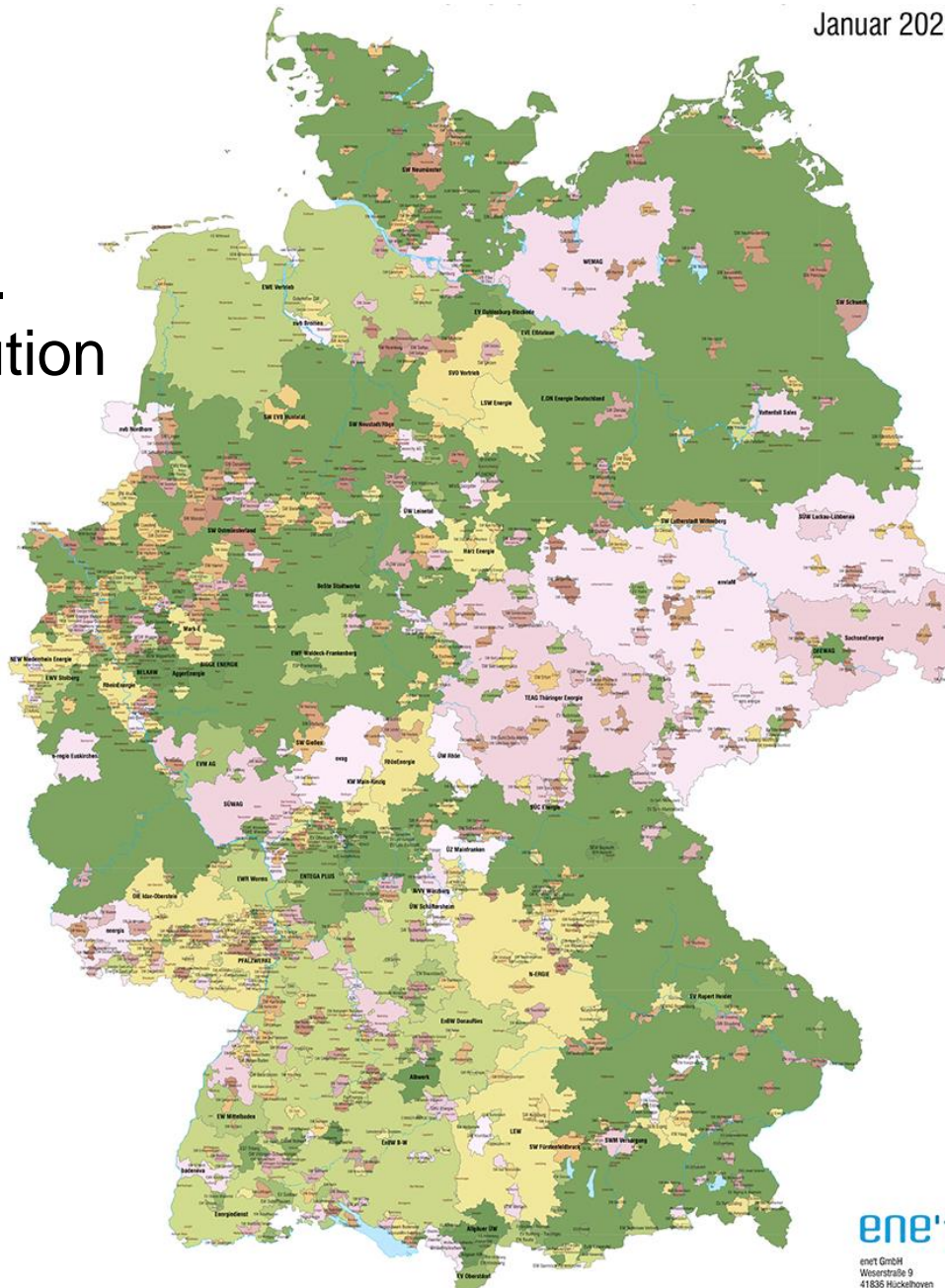
Januar 2023

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Source: https://www.enet.eu/ portfolio/karten

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The New Redispatch Process In Germany

Redispatch 2.0 Lessons Learned

- too complicated processes for too many stakeholders (approx. 900 Distribution Network Operators alone)
- 2,5 years from act to implementation is not enough time
- extremely large data volumes require a very expensive IT-Infrastructure

the idea behind RD 2.0 is good, the implementation should be simplified

Thanks for your attention!

Lars Rohwer
lars.rohwer@energymeteo.de

energymeteo.de