

MAON

Platform for Electricity System and Market Analysis

Maon is a comprehensive platform for electricity system and market analysis. The included electricity market model simulates the dispatch of all supply and demand in every European bidding zone. Browsers provide access to the simulation suite that derives electricity price and grid usage forecasts via user-friendly interfaces and time-efficient workflows.

WHAT IS MAON?

Maon is a **browser-based platform** for electricity system and market analysis.

The **optimization-based annual dispatch model** simulates the generation and consumption of every unit in Europe as well as the usage of interconnectors. It simulates thermal generation as well as renewable sources like hydro, bio, wind and solar.

Maon enables studies **without installation of software or hardware**. The user interface reduces the manual workflow to a minimum. Calibrated input data sets for frequently used scenarios are available for immediate starts.

WHAT CAN MAON DO?

Maon provides a simulation of all market results on an hourly basis: **power plant dispatch, exchanges and electricity prices**. It can be used for short-term forecasts and long-term scenario analysis.

Maon can assess the market value of plants via outputs like market revenue, CO₂ cost, fuel consumption or the number of starts. These support **power plant investment** decisions.

Maon equally suits economic and technical assessments of transmission lines like ENTSO-E **Cost Benefit Analysis** or European analysis like the **Bidding Zone Study**.

WHAT IS UNIQUE?

Browser: multi-user solution and instant utilization.

All-in-one: high-performance computing, storage, IBM CPLEX solver and simulation suite.

Data management: scenario tree handling and generator.

Visualizations: spot prices, unit commitment or social welfare.

Flow-Based Market Coupling: closed annual simulation.

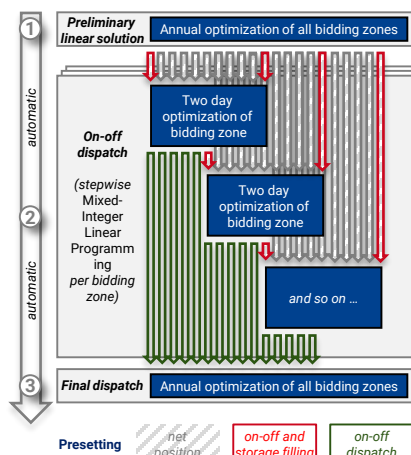
Thermal plants: minimum power, start-up cost and CHP.

Hydro plants: annual coupled simulation of hydro cascades.

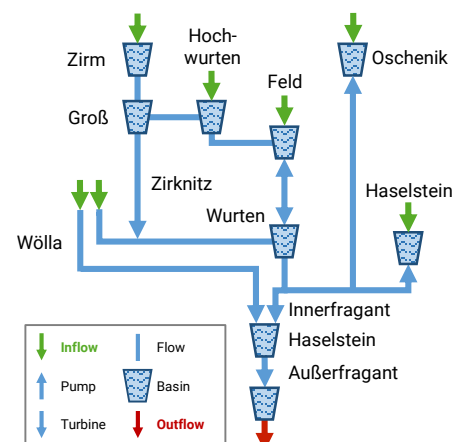
Dashboard



Simulation procedure



Hydro cascade model

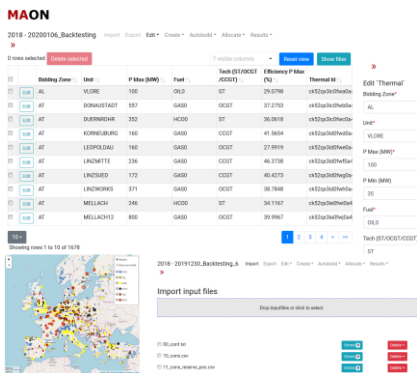


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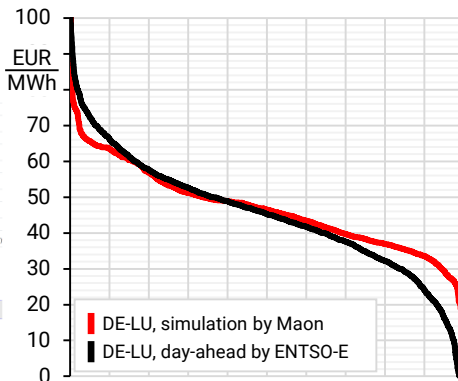
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Scenario building



Prices: simulation vs. history (2018)



WHY MAON?

Browser: immediate start, no resource provision and cross-organizational teamwork.

Performance: all simulation models usable simultaneously and fast-mode available.

Automated: high level of automation, integration and processing transparency.

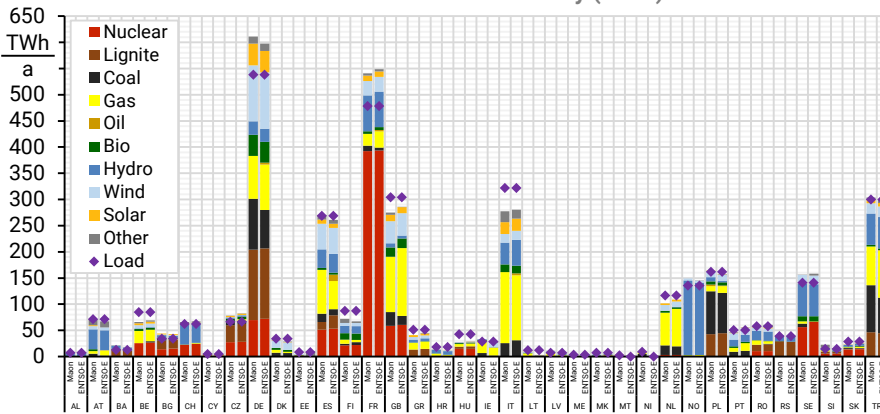
Data: ready-to-start historical data sets and future scenarios.

Trusted: close to reality backtesting results, gapless input and output data sets.

Professional: commercial, flexible, user-friendly and efficient platform.

Team: experts in automation, electricity markets, simulations, software and web applications.

Generation: simulation vs. history (2018)



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