Energy Exemplar

Simulation-ready European Datasets for PLEXOS and Aurora

Plug-n-Play Data for Trusted Decision-Making Insights

YOUR MODELS ARE ONLY AS GOOD AS YOUR DATA

Energy Exemplar has invested in creating simulation-ready datasets from public sources so that you can immediately start modeling with confidence.

- *Publicly sourced*
- *Thoroughly documented*
- *Extensively tested and calibrated within the market*
- *Continuously updated*

FASTER START-UP

Dozens of datasets from all corners of the world offer a fast-start for users beginning their modeling journey. Subscribing to Energy Exemplar datasets makes it easy to overlay and maintain proprietary updates.

- *Consistent annual updates*
- *Integrated zonal datasets*
- *Planning and commercial nodal datasets*
- *Visual mapping, load-building and integrated 3D output*

CUT INTERNAL COSTS

Investing in research as well as collecting and transforming data can take a team of people the majority of a year. Energy Exemplar's dedicated data team stays current with the updates of market data, current market assumptions and emerging data sources.

- *Updated when each new public data stream is published*
- *Benchmarked to historic market data to demonstrate the quality of the data*

MAKE INFORMED, RELIABLE DECISIONS

These datasets incorporate the latest industry data from ISOs/TSOs, regional entities and governmental agencies. Both nodal and zonal data is available using the latest information across all interconnects. It's the ideal tool for:

- *20+ year forecasts*
- *Analysis of all zones and regions*
- *Asset valuation*
- *Market analysis (including energy and capacity)*
- *Congestion and risk analysis*
- *Comprehensive resource and constraint modeling mapped to all interconnected zones*
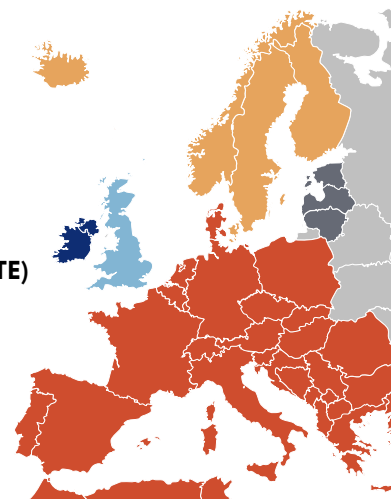
AVAILABLE FOR BOTH PLEXOS & AURORA

Europe
- *Western EU Zonal*
- *Eastern EU Zonal*
- *Southern EU Zonal*

We can provide individual or connected countries on request.

REGIONAL GROUPS

- **Continental Europe (UCTE)**
- **Nordic**
- **United Kingdom**
- **Ireland**
- **Baltic**

DATASET DETAILS – EUROPE

Inclusions:

- 30-year price forecast for 40 countries
- 57 market areas
- Projected build out/retirements through 2054
- 10,360 generators with unique characteristics
- Operating characteristics including:
    - *Heat rates for thermal units*
    - *Forced outage rates (FOR)*
    - *Maintenance outage rates (MOR)*
    - *Fixed operating and maintenance costs (FOM)*
    - *Variable operating and maintenance costs (VOM)*
    - *Start-up costs*
    - *Start-up attributes*
    - *Capacity ratings, min and max*
    - *Minimum up and minimum down time*
    - *Emission rates for NOx, SOx and CO_2*
    - *Installation dates for new and retirement dates for old*
    - *Ramp rate*

- Pumped storage and hydro modeled with its characteristics to enable optimizations with unit commitment and dispatch
- Historic and future pricing for eight natural gas hubs, fuel oil, coal and carbon
- Country-specific natural gas, fuel oil and coal pricing for demand modeling, average energy, peak energy and an hourly shape profile
- Country-specific National Renewable Energy Action Plan (NREAP) constraints for 35 countries
- Reflections of national policies such as coal and nuclear phase outs
- New resource-build options and country-specific costs for new resources
- Transfers between country corridors for the entire European system
- Country-specific wind and solar shapes based on ENTSOE generation data

SOURCES

- Demand and Generator data is from a mixture of ENTSOE, TSOs and proprietary research data
- Historical demand data is also primarily sourced from ENTSOE
- National Renewable Energy Action Plan (NREAP) for emissions constraints
- Wind and solar shapes are based on ENTSOE generation data
- Fuels are derived from reports from Eurostat and the European Commission

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