

**Underpinning your every decision is the trust that your data is accurate and well sourced. But collecting data, and ensuring its precision, to accurately model the energy ecosystem takes precious time and resources.**

Our Simulation Ready Datasets are extensively researched and meticulously sourced by our global team of experts, so that you can start modelling with confidence on PLEXOS and PLEXOS Cloud. Our datasets are designed to be easily customised, updated with the latest industry data, and incorporate information from public, regional, and government sources.

Energy Exemplar's latest PLEXOS dataset for European hydrogen use cases gives you an unprecedented ability to model and begin to understand the complex dynamics of this emerging market. This fundamental dataset provides a future view of the hydrogen market, giving your insight into:

- Hydrogen demand/supply balance
- Production and tracking of green and blue hydrogen, and interaction with piped and liquid hydrogen imports and exports
- Future hydrogen country "hub" price scenarios
- Hydrogen storage and flows across European hydrogen corridors
- Electrolyser operation, and more

This timely dataset is ready to be integrated with existing PLEXOS electricity and gas datasets and can provide peace of mind by allowing you to model the impact of the energy transition on your operations or investments.



## Designed for:

- ▶ Utilities, suppliers, investors, planners, consultants, traders, and large industrial consumers. This resource helps in analyzing hydrogen market fundamentals, with a focus on sources, levels of hydrogen supply, its demand, storage capabilities, price fluctuations, and volatility
- ▶ Understanding the intricate interplay between hydrogen, electricity, and gas markets. It includes detailed analysis of hourly power-to-X (via electrolyzers) and gas-to-hydrogen production (via steam methane reformation, SMR)
- ▶ Professionals seeking to confidently model beyond simplistic hydrogen cost-based models, aiming to build insightful scenarios of this pivotal commodity
- ▶ Examining how the emergence of hydrogen infrastructure will alter energy market fundamentals. This involves analyzing transportation bottlenecks, infrastructure development and repurposing, weather impacts, costs, and technological trends
- ▶ Hydrogen and gas asset owners, investors, and operators. They can use this resource for capacity planning and to forecast the operation of their assets, including electrolyzers, processing plants, pipelines, and storage facilities

## European Hydrogen Dataset includes:

- ▶ A fundamental view of European hydrogen market drivers – production, technology, imports, exports, storage, flows and prices.
- ▶ A detailed hourly market simulation of the future European hydrogen energy balance.
- ▶ Calibrated against the latest published ENTSOG TYNDP 2022 report.
- ▶ Out-of-the-box future scenario of potential market outcomes 2030-2050.

## Featured highlights of the European Hydrogen Dataset for PLEXOS include:

1	<b>Country level hourly demand/supply balance</b> for European hydrogen and piped and liquid hydrogen imports and exports from 2030-2050
2	<b>View to 2050</b> – future scenario included for each country, modelling market fundamentals to 2050, based on ENTSOG's 2022 TYNDP
3	<b>Includes</b> hydrogen production costs and availability, demand, imports, exports, flows, storage and hydrogen “hub” price by country
4	<b>Detailed representation of European hydrogen infrastructure, including:</b> <ul style="list-style-type: none"><li>• <b>27</b> countries modelled as individual hydrogen pricing hubs, linked by <b>78</b> cross-border pipelines, <b>13</b> import pipelines and <b>4</b> regasification terminals</li><li>• <b>60</b> Supply nodes, each representing:<ul style="list-style-type: none"><li>• “Blue hydrogen” production via steam methane reformation</li><li>• “Green hydrogen” production via an electrolysis process using low-cost electricity from renewable sources</li><li>• hydrogen pipeline imports from outside of Europe</li><li>• liquid hydrogen imports and exports delivered via liquid hydrogen regasification terminals</li></ul></li><li>• <b>25</b> hydrogen storage facilities</li></ul>

### Sources Include:

Primary sources used include ENTSOG, publicly announced or published national strategies and companies' plans, in-house Energy Exemplar analysis based on released datasets and other public domain sources.

**With our Simulation Ready Datasets you get faster start-up and decision making, accuracy and reliability, drastically lower internal costs when compared to developing your own – giving you quicker time to insight.**

### Energy Exemplar datasets are always:

- ▶ Publicly sourced
- ▶ Thoroughly documented with extensive release notes provided
- ▶ Extensively tested and calibrated
- ▶ Up-to-date annually



## Take the Next Step

Learn more or schedule a meeting at [www.energyexemplar.com/datasets](http://www.energyexemplar.com/datasets)