

ENERGY MARKETS GROUP

European Power Reference Case

Comprehensive energy market intelligence
and forecasting for the next 25 years



Independent and unbiased analysis for your strategic investment & operational decisions

Energy is a complex industry, with volatile fuel, emissions and energy prices, ever-changing regulations, environmental pressures and varying demand forecasts. Therefore, comprehensive energy market intelligence and dependable forecasts are critical, whether building a new generation asset, providing financing for new generation, considering entry/exit from a market or defining your operational strategies.

Market participants, financial institutions and regulators require independent and unbiased market projections to help them value assets, evaluate market opportunities and make confident investment decisions.

Collecting reliable input data and formulating credible assumptions, comprehensive market simulation and analysis to forecast long-term electricity market prices requires significant resources and expertise. Hitachi ABB Power Grids can help.

Hitachi ABB Power Grids produces a fundamental analysis of the European electricity markets twice a year using the Capacity Expansion (investment planning) and PROMOD® (electricity market simulation) tools. This provides a market-based, fundamental view of European power, gas, coal, oil and CO₂ markets. The view accounts for the interdependency of these markets and provides electricity market projections based on consistent economic assumptions.

This market analysis and its reporting, called the European Power Reference Case, considers current and projected new generation resources; cross-border interconnection limits and losses; operations in neighbouring markets; and the demand for electricity. It includes a fundamental base forecast of wholesale electricity market clearing prices, which are comprised of hourly, monthly and annual prices for the next 25-year horizon.

European Power Reference Cases for the countries shown in the figure include:

- Three market scenarios: base case, and high and low natural gas price
- Spring and autumn long-term energy market forecast reports and detailed databases for various European countries
- Hourly, monthly and annual power price forecasts
- Natural gas, coal, oil and CO₂ price projections
- Webcasts summarising Power Reference Case methodology, inputs and key results

Power Reference Cases and market databases are also available for North America and various countries in Asia-Pacific.



Availability of European Reference Cases

- 'Off-the-shelf' energy market reports
- 'Off-the-shelf' energy price forecasts (market reports available on request)
- Available on request

European Power Reference Case provides an in-depth, comprehensive, integrated, and fundamental analysis of:

Gas prices

Considers power and non-power sector demand, production cost by basins, transportation network to liquid market centres, and tariffs to the market areas



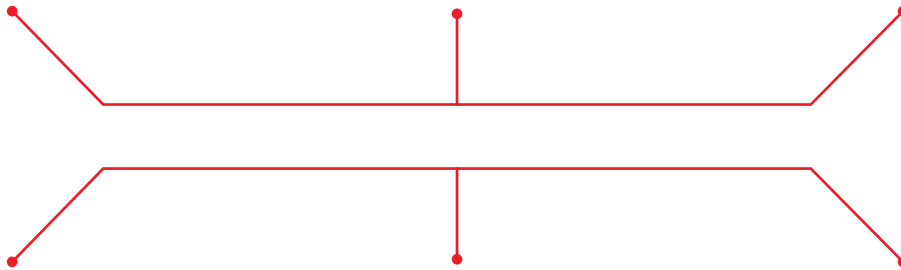
Coal prices

Considers demand, production cost curves by mine, transportation network to the plants on heat input and SO₂ content



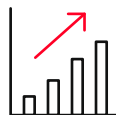
Emissions prices

Considers current regulations on CO₂, SO₂ and NO_x, existing unit emission rates and environmental controls, and options for retrofits or retirement



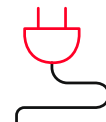
Penetration of renewable energy

Considers national and EU targets, existing renewable generation, regional potentials, deployment history and characteristics of new renewable capacity



Capacity prices

Considers cost curves for new generation, reserve margin requirements, technical-life / economic retirement options, and capacity market areas



Energy prices

Considers detailed unit characteristics incorporating all forecasts presented above, hourly dispatch of units versus demand, scarcity adders at tighter reserve margins, and electricity transmission network



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