



Asia Pacific Reference Cases 25-year electricity and fuel market outlook report

Reference Case is an industry standard for independent, consistent and transparent analysis of how current issues will shape individual power markets over the next 25 years

Reference Case reports

Whether building a new generation asset, providing financing for new generation, considering entry into a new market, or any other major capital decision, the need for comprehensive market intelligence and accurate forecasts is critical. However, energy is a complex industry, with volatile fuel and energy prices, ever-changing regulations, environmental pressures and varying demand forecasts.

The data gathering, forecasting and analysis needed to make strategic investment and operational decisions requires an enormous amount of resources and expertise – and this analysis often needs to be independent and unbiased. Market participants, financial institutions and regulators require an integrated forecast model to help them value assets, evaluate market opportunities and increase confidence in investments.

Reference Case reports are an industry standard and are used as a source of independent, transparent and consistent analysis of changing energy market fundamentals, wholesale expected prices and how they are formed. Reference Case clients span the globe, and include utilities and energy market investors, developers and traders, and energy market participants looking for an independent, detailed, internally-consistent view of one or more liberalized power markets.

Each Reference Case report provides insight into how the issues currently impacting global energy markets will shape individual power markets over the next 25 years. ABB's modelling tools and databases are able to capture the market's complexity in full hourly, unit-level detail to predict major changes to the current resource mix over the study period as old, conventional plant needs to be replaced with modern technology.

Asia Pacific Reference Cases

Asia Pacific Reference Case analysis addresses key issues affecting national energy markets both today and in the future, such as:

- Will plant mix changes be radical enough to meet environmental targets?
- How much will gas-fired generation rise in coming years in the power generation sector?
- What's the potential impact of fuel price volatility?
- Will countries make their renewable targets?
- What's the impact of the growth in new, intermittent and low-carbon plants on incumbent conventional generation?

In addition to full details of assumptions and our tried-and-tested forecasting modelling methodology and price formation process, the Reference Case reports contain a contextual analysis of the major issues underlying some of the key power markets in the Asia Pacific region, including environmental and security of supply issues affecting the generation plant mix now and in the years to come.

Asia Pacific Reference Case reports provide country-specific assumptions and market-shaping factors employed in developing a detailed electricity market forecast for each country. Each report contains a summary of country-specific analysis and modelling results of the 25-year forecast, including:

- Market overview
- Renewables analysis
- Existing plant mix
- New entry prospects
- Key drivers and market issues
- Environmental policy and targets
- Grid improvements
- Proposed and planned unit additions and retirements
- Modelling dispatch of wind, solar, hydro and pumped storage units
- Existing and planned interconnections
- Fuel price forecasts
- Regional load projections
- Regional reserve margins
- Generation projections
- CO₂ emissions
- Market clearing electricity price forecast and capacity prices (where relevant)
- Fuel at margin
- Spark spreads
- Combined cycle gas turbine (CCGT) profitability
- Risk and uncertainty in the forecast

Reference Cases are also available for Europe and North America.

Standard Asia Pacific Reference Case market simulation datasets are currently available for the following countries:



About us

About ABB's Enterprise Software product group

We provide industry-leading software and deep domain expertise to help the world's most asset-intensive industries such as mining, energy, and utilities solve their biggest challenges, from plant level, to regional network scale, to global fleet-wide operations.

Our enterprise software portfolio offers an unparalleled range of solutions for asset performance management, operations and workforce management, network control, and energy portfolio management to help customers reach new levels of efficiency, reliability, safety and sustainability. We are constantly researching and incorporating the latest technology innovations in areas such as mobility, analytics and cloud computing.

We offer unmatched capabilities to integrate information technologies (IT) and operational technologies (OT) to provide complete solutions to our customers' business problems.

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www.abb.com/enterprise-software

info.pges@abb.com

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