ABB’s 25-year electricity and fuel price forecast
Power Reference Cases, Fall 2018

ABB Energy Portfolio Management Advisors are pleased to announce the latest release of the Japan, Mexico, ERCOT, Midwest, Northeast, Southeast, WECC and European Power Reference Cases. The results files for the Fall 2018 Power Reference Cases* are now available.

Introducing the Japan Power Reference Case

ABB produces a fundamental analysis of the Japan electric market once a year, developed using the PROMOD electric market simulation tool, ABB Ability™ Velocity Suite data and ABB Ability Capacity Expansion, a cost-based, optimal long-term resource planning tool that considers resource additions, retirement, refurbishment, and changes in operations.

The Japan Power Reference Case considers current and projected new resources, fuel prices, transmission limits and losses, operations, and hourly loads. It includes a fundamental base forecast of market clearing prices, which are comprised of hourly, monthly and annual prices for the 25-year study period.

About the North American Power Reference Cases

The ABB North American Power Reference Case is a 25-year assessment of conditions and trends in North American and regional power, fuels, and environmental markets. Forecasts of future conditions in these markets are based on fundamentals of demand and supply in the respective markets. ABB examines the interaction between fuel demand and supply, electric demand and supply, which includes current resources, resource additions and resource retirements, and environmental regulation to develop a forecast for all markets. The Reference Case includes a Base Case, a “Carbon Tax” scenario, and High and Low Gas Price scenarios. ABB’s methodology for developing the High and Low Gas Price scenarios have changed based on client feedback and is described below.

High and Low Gas Price scenarios

ABB has taken a new approach to developing High and Low Gas Price scenarios for the Fall 2018 release. The scenario prices directly reflect custom assumptions for supply fundamentals and how these would impact utilization of storage and transmission

* Formerly known as the Ventyx Price Curves
and ultimately prices at gas hubs throughout North America. Both cases hold all other assumptions for natural gas and power fundamentals constant in order to isolate the substantial impact of supply expectations on natural gas prices.

In the Low Gas Price case, ABB creates a “price floor” by setting production costs equal to the short run marginal cost throughout the forecast timeframe. This assumption is intended to reflect pricing that could be sustained over the short-term. However, in the long-term, short run marginal cost pricing would not produce the returns on investment needed to meet forecast demand. Therefore, ABB does not see this trajectory as sustainable unless significant additional reductions in cost are achieved.

In the High Gas Price case, ABB increases the long run marginal cost of production for shale plays to at least the 75th percentile for the play, and reduces the overall available gas resources by about eight percent. By defining higher costs specific to each shale play, ABB can create a geographically diversified scenario for higher gas prices. The assumptions reflect a significantly less optimistic outcome for the cost of development of shale gas in North America than our Base Case analysis of supply represents.

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About the European Power Reference Cases

ABB’s Power Reference Cases for Europe consist of detailed country-by-country analysis projecting electricity market outlook for the next 25 years. These Reference Cases address key issues affecting the European energy markets both today and in the future. It is based on fundamental analysis examining the interactions between electricity demand and supply (i.e., thermal and renewable additions/retirements), fuel prices, carbon prices and cross border flows across different European markets. ABB applies our tried-and-tested market simulation methodology (for investment planning and market operation), capturing the major policy and regulatory developments affecting the European power markets.

Our European Reference Cases are produced through simultaneous modeling of the integrated topology of ENTSO-E countries. Market scenarios include provision of three future scenarios: Base Case and Low and High Gas price.

Key deliverables for the European Power Reference Cases include:

- Base, peak and off-peak electricity prices (annual and monthly averages)
- Fuel (coal, natural gas and oil) and CO₂ price projections
- Demand, capacity and generation mix projections by fuel type
- Wind and solar capture prices (annual)
- Renewables curtailment by technology
- Expected number of zero and low price periods
- Base, peak and off-peak clean spark spreads (annual and monthly averages)

More information

Click here to request a complimentary executive summary from the North American report.

Visit our website for global market insight, tools, events, blogs and presentations.

If you have questions about the reports, events or pricing, or to order a Power Reference Case, contact ABB by phone at +1-800-868-0497 or by email at info.pges@abb.com.