

# Japan Power Reference Case

## Insightful market intelligence and forecasting



Market participants, financial institutions and regulators need an integrated forecast model to help them value assets, evaluate market opportunities and increase confidence in investments.

Whether building a new generation asset, providing financing for new generation, considering entry into the Japan market, or any other major capital decision, the need for comprehensive market intelligence and accurate forecasts is critical. The data gathering, forecasting and analysis required to make strategic investment and operational decisions requires an enormous amount of resources and expertise. Often, this analysis needs to be independent and unbiased.

Once a year, Hitachi ABB Power Grids produces a fundamental analysis of the electricity market in Japan. This analysis, known as the Japan Power Reference Case, offers a market-based, fundamental model of Japan's power, gas, oil and coal markets. It accounts for the interdependency of these markets and provides forecasts based on consistent economic assumptions.

The Japan Power Reference Case considers current and projected new resources; transmission limits and losses; operations and seam issues in neighboring markets; 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.

The Japan Power Reference Case consists of four scenarios (Base Case, Full Nuclear Restart, High Fuel Price, and 22 Percentage Renewable Generation by 2030) and includes:

- 25-year hourly market clearing prices for 10 pricing zones
- 25-year fuel price forecasts
- Projected 25-year resource build-outs and retirements
- Projected 25-year energy mixture

The Japan Power Reference Case is developed using the PROMOD® electric market simulation tool, Velocity Suite data, our proprietary Integrated Model, and Capacity Expansion, which is a cost-based, optimal long-term resource planning tool that considers resource additions, retirement, refurbishment and changes in operations.

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