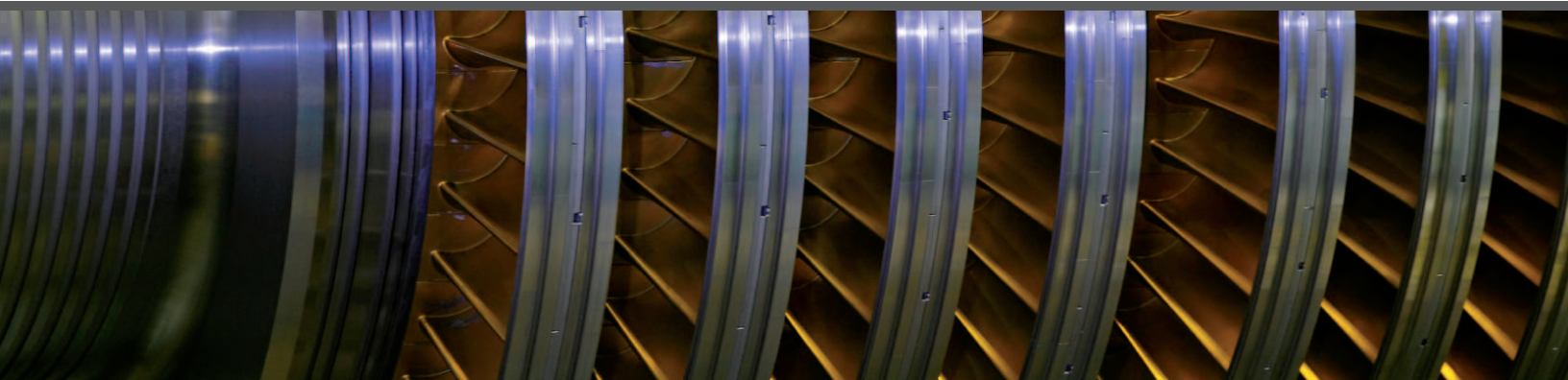


Product Overview

Generation Operations



A short term resource optimization application for unit commitment and economic dispatch

Generation Operations optimizes a portfolio's operation by modeling detailed unit operating constraints and market conditions to provide a generation schedule for energy and ancillary services, fuel nominations, support the evaluation and pricing of potential short-term transactions, and facilitate the analysis and simulation of deterministic scenarios.

Portfolio Optimization on GenCo assets is heavily dependant on timely and accurate operational decisions. Unit commitment and dispatch schedules, fuel consumption forecast, options implementation, commodity arbitrage and bidding decisions, are just an example of the operational decisions to minimize cost or maximize profits that GenCos need to perform under uncertain and always changing variables.

Improved unit commitment and dispatch significantly increase profitability. Generation Operations utilizes the latest advances in mathematical programming techniques (Mixed Integer Linear Programming) combined with Ventyx's domain expertise to deliver the market leading application for Operations Management.

Portfolio Optimization

MILP provides modeling richness to truly optimize the most complex problems e.g. CCGT, CHP, pumped storage, and the simultaneous optimization of hydro and thermal. The solution architecture easily accommodates the set of ever changing modeling requirements.

Decision Support for Physical Trading

Reduced costs, improved profitability and the ability to manage risk are all integral components of operations management software. Generation Operations allows users to price standard trades.

Fuel Management and Pipeline Modeling

Reducing fuel costs through enhanced portfolio optimization to determine the best use of scarce fuel is a key operational requirement. Generation Operations produces hourly and aggregated fuel nominations by Electric or Gas Day.

Fuel blending capabilities optimize the mix of available fuels considering commodity cost, emission costs and limits.

Modeling complex pipeline networks with multi volumetric constraints and costs is necessary to achieve maximum profitability.

ISO bidding support

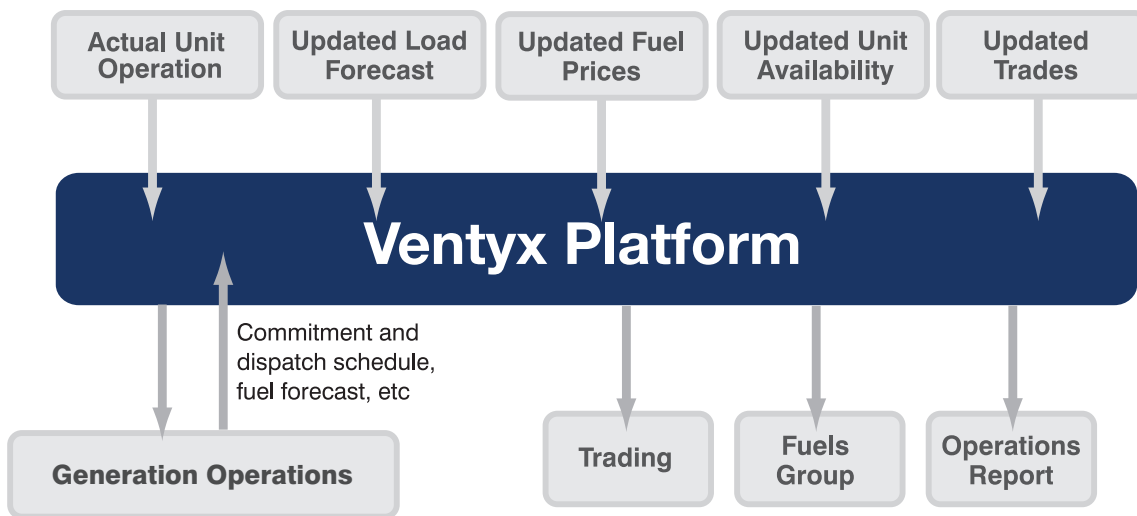
When integrated with ISO Bid Management, alternate bid strategies may be evaluated in light of potential LMP price forecasts.

Simulation scenarios

“What if?” analysis allows GenCos to improve operational decisions and manage the risks associated with unexpected events. Generation Operations utilizes an easy-to-use interface to analyze and compare sensitivity studies.

Post analysis for improved operations

The ability to import and simulate, using actual data, and compare this data with forecasted scenarios enables feedback into the operational processes to improve efficiency.



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Ventyx, an ABB company, is the world’s leading supplier of enterprise software and services for essential industries such as energy, mining, public infrastructure and transportation. Ventyx solutions bridge the gap between information technologies (IT) and operational technologies (OT), enabling clients to make faster, better-informed decisions in both daily operations and long-term planning strategies.

Some of the world’s largest private and public enterprises rely on Ventyx solutions to minimize risk, enhance operational and financial performance, and execute the right strategies for the future.

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