

## Product Overview

# Planning and Risk



## Solution for portfolio analytics and risk assessment

Planning and Risk is the portfolio management solution to analyze, report, and actively manage your assets including power plants, customer loads, fuels, and contracts.

Planning and Risk is the single solution that allows electric utilities, generation companies, retailers, and trading organizations to consistently analyze and review all of their existing and potential assets within one tool. By combining generation asset evaluation, contract evaluation (both physical and financial), and customer loads in one module, you dramatically improve the efficiency and consistency of budgeting, planning, and reporting analysis.

### Planning and Risk Provides:

- Fast base case, scenarios, stress tests, and market leading probabilistic evaluation of both the financial and physical implications of decisions
- Single plant or contract evaluations to companywide portfolio analysis spanning multiple market areas and multiple years
- An intuitive and easy to use interface and range of output options including standard and customizable output reports and integration with other software

### Budgeting and Planning

Planning and Risk provides a consistent foundation for budgeting across your resource portfolio allowing consistent modeling of generation assets, fuels, retail loads, tariffs, contracts, and complex structured deals in one system. It provides consistent estimates of generation, fuel burn, emissions, cost, and revenue estimates.

Planning and Risk is used in financial forecasts and volume estimates for individual departments for consistency across the entire enterprise. Power plant and contract optimization used in the budgeting process can be directly utilized in actual dispatch and contract execution through the Generation Operations product, providing a complete enterprise-wide solution.

### Resource and Investment Analysis

Planning and Risk continues to set the standard for asset and contractual investment decisions for both regulated and competitive market environments across the globe. It has been applied to produce utility Integrated Resource Plans that consider plant construction or purchase options, renewable obligations, and contracting decisions while allowing for market and load growth uncertainties.

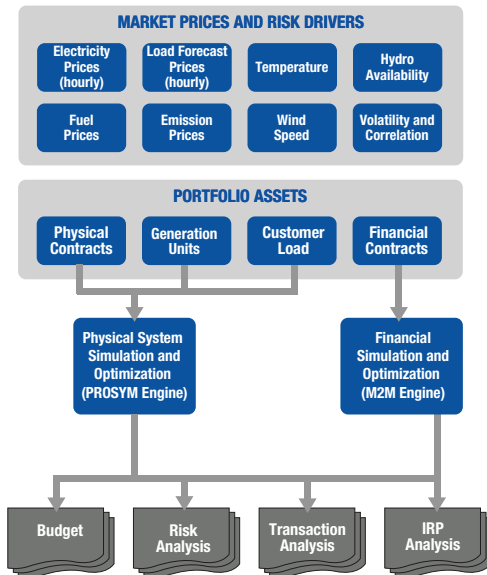
Planning and Risk is widely accepted by both financial markets and regulatory commissions for major investment and rate case analysis. It is used extensively to provide generation plant valuations for financings, accounting treatment of assets, and investment decisions under uncertainty.

Utilities regularly use Planning and Risk in conjunction with System Optimizer to efficiently choose among many alternative plant improvement decisions for capacity increases, environmental analysis, and life extension and heat rate improvements.

Planning and Risk in conjunction with System Optimizer can evaluate environmental limitations by asset and/or portfolio across weekly, monthly, and annual limits. SO<sub>2</sub>, NO<sub>x</sub>, CO<sub>2</sub>, and Hg limits can be set to evaluate the impact of the latest environmental legislation, emissions trading, and investment implications.

### Transaction Evaluation

Planning and Risk is used extensively by leading industry participants for the structuring and valuation of contracts including complex tolling and load-following contracts. Utilities and energy service companies also use it to help structure retail customer contract rates, as well as evaluate alternative options within a structured auction process. It can model the uncertainty of load for multiple customer types and their associated energy and demand charges together with fixed or indexed rates.



Planning and Risk models a wide array of potential contract structures. Contract choices for electric energy and fuels include physical and financial, fixed and index-priced, forwards and swaps, and options and swing contracts. Complex power contracts are also accurately modeled, including tolling deals, financial transmission rights (FTRs), and backup generation and load management options. It has several advanced techniques for comparing alternative portfolios and optimizing the risk versus reward tradeoff of fuel or power hedging decisions.

### Risk Assessment

Planning and Risk allows you to undertake a comprehensive risk assessment using scenarios, stress testing, and stochastic approaches. It provides a Gross Margin at Risk based around the uncertainty facing a particular asset or portfolio.

### Stochastic Estimation

The Planning and Risk solution has the capability to perform stochastic evaluations, where the distribution parameters include price (electricity, fuel, emissions, etc.) as well as volume (hydro availability, load, energy limited contracts). User-defined risk drivers are also allowed. Therefore, Planning and Risk allows clients to assess both price and volume risk. The distributions that can be used are normal, lognormal, or either with Markov Regime Switching. The interdependencies of

these variables are expressed in correlation matrices and used in the stochastic analysis.

### Summary

Planning and Risk is the most comprehensive portfolio planning solution available as demonstrated below.

- The leading chronological optimization model (PROSYM)
- Updated Interface using the latest technologies
- Configurable Gross Margin reporting with graphs
- Secure client/server database system with audit trails
- Backed by the leading provider of planning and optimization solutions for the electric markets in the world



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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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