ABB is pleased to announce the release of version 18.2 of the e7 platform, offering best-in-breed energy market and portfolio modeling software capabilities.

Energy data and business process all in one place

The e7 data management platform provides a single interface for ABB’s market and portfolio solutions, creating a common environment for analysis, simulation, mid- to long-term portfolio planning and short-term portfolio operations. For example, e7 enables your market & transmission analysts to feed price forecasts and expansion plans directly into your risk assessments within a single interface; this means the end of stale data. Data is automatically available, from many sources, all in one place. e7 streamlines the business management process regardless of whether modeling a small portfolio deployed on a single machine or modeling multiple markets in the cloud on thousands of nodes.

New e7 data management features

Maintenance scheduling

The Maintenance Scheduler activity task available across the entire e7 solution set was completely revamped and will now create an automatic maintenance schedule for each selected unit by optimizing the daily capacity reserve over each transmission area affected. For each transmission area, the capacity reserve is the difference between the area’s peak load and the sum of the available capacity for all the resources in the area for a given period. The available capacity of any resource is defined as the available maximum capacity, taking into account any planned or forced outages. In determining the optimal maintenance schedule for all stations in an area, a linear program (LP) algorithm is used to optimize the overall reserve margin for each year. During the optimization process, the scheduler works to balance the impact of the change in daily capacity reserve and monthly priorities of station scheduling while ensuring sure capacity reserves do not decrease too much on any given day or month.

Embedded business intelligence (BI) dashboard reporting

From within the e7 interface, users can now access a set of interactive business intelligence reports. Analyze these simulation results to optimize business decisions and improve performance. Delivered with e7 and powered by Microsoft® technology, embedded Power BI™ dashboard reporting adds more valuable content right out of the box.

RPS method in ABB Ability™ Capacity Expansion

The Renewable Portfolio Standard (RPS) regulations in Capacity Expansion have been enhanced to add the option to define a regulation as a minimum amount of renewable energy generation as a percent of customer sales. Customer sales for the regulation are the sum of all power customer energy in transmission areas associated with the regulation. This change brings Capacity Expansion’s RPS regulations in line with the primary method that jurisdictions use to define their RPS requirements.
Efficiency from ABB Ability™ PROMOD®

Hydro & energy storage enhancements
PROMOD’s hydro scheduling logic has been improved to better handle hydro generation with the monthly energy limit. The enhancement allocates the monthly energy limit to each week or day while ensuring an exact match between the monthly energy limit and the hydro schedule.

Another enhancement to the hydro logic sends hydro stations’ schedules to hourly LP optimization to allow the engine to make economic decisions on curtailing and dumping hydro energy. New output has been created to capture the hydro curtailment.

For energy storage scheduling logic, new enhancements allow users to define a final energy storage schedule that corresponds to the most recent price. This enhancement reduces system production costs, unserved energy and dump energy.

Enhancements based on the benchmark activities
Three major ISOs (MISO, PJM, SPP) use PROMOD as a key component of their economic transmission planning processes. Benchmarking efforts made as part of their preparation for migration from legacy PROMOD to PROMOD on the e7 platform led to a number of solution enhancements, such as:

- Ability to consider company ownership share percentage in the load balance equation
- Allowing users to select enforcing minimum energy on all units or committed units
- Enhanced marginal scheduler skipping logic
- Parallel/optimize flow calculation

More information
Contact ABB to schedule a demonstration of our integrated energy market & portfolio solution, e7. Visit our website and register to receive email updates on all the latest news and developments in energy portfolio management at ABB.