

# OpenUC

## Unit Commitment/Transaction Evaluation

In today's environment of competitive energy markets, you need the right tool to help you decide how to schedule and run your generation resources. Whether you operate within an energy market or independently, an optimal generating resources plan is a must.

The Unit Commitment, **OpenUC™**, product determines the optimal schedule and loading pattern for generation resources. The optimal scheduling minimizes operating costs, such as hourly production cost, start-up and shut-down cost, idle cost, and maintenance cost while satisfying the projected demand and other operating constraints of the system. Operating constraints include load forecast, net interchange schedule, system losses, plant crew constraints, availability status, operating limits, minimum up and down times, as well as ramp limits.

**OpenUC** is used to evaluate interchange scheduling, maintenance scheduling, load management, and other system characteristics. **OpenUC** can also be implemented in conjunction with the Short-Term Hydro Scheduling product to determine the optimum generation schedule for a hydrothermal system.

In an Energy Market environment, **OpenUC** executes in a "Market" mode, where the objective function becomes maximizing "Profit" as opposed to minimizing operational costs. **OpenUC** can also be run in a real time mode to reevaluate and tune the daily resource plan.

**OpenUC** includes a Transaction Evaluation function that can be used to study cost/benefit of proposed transactions in future periods of up to 168 hours. The Transaction Evaluation functions supports three evaluation modes:

- **Economy A Mode:** Analysis with fixed commitment.
- **Economy B Mode:** Analysis with variable optimized commitment.
- **Block Mode:** Analysis with fixed commitment of a transaction that is divided into multiple blocks of energy.

