

Exsys Case Study

Power Generation Scheduling

An Engineering Corporation

Scheduling for power generation systems involves evaluating economic optimization methods, maintenance schedules, reliability analyses, and those factors that influence load projections and generating unit availability. Conventional computer solutions focus on the algorithmic part of this process, without addressing the qualitative, judgmental issues.



The Unit Commitment Advisor knowledge automation system helps power system dispatchers with both the numerical and qualitative aspects of scheduling. Because every generation system is unique, each Unit Commitment Advisor was customized for each client. The system uses economic optimization routines, as well as maintenance schedules, to define the best schedule.

It also employs heuristics to combine all those factors that are important in making dispatching decisions, including take-or-pay fuel commitments, minimum station generation requirements, and availability of startup and maintenance crews. This knowledge automation system illustrates the feasibility of combining traditional numerical methods with heuristic rules to solve scheduling problems.

