MiPSO

Power Scheduling Optimization

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What is MiPSO[™]?

MiPower[™] Scheduling & Optimisation presents an integrated approach for the advanced load forecasting, Long/medium-term Capacity Expansion Planning with resource optimization, Procurement optimization and short term operational planning of the power system.



MiPSO™ incorporates forecasting, load generation planning (resource optimization along Hydro-thermal Coordination) with and procurement optimization modules. It enables the dispatcher to define and review interchange (contracts) interchange agreements and transaction schedules (ITS) with partners in the energy market and supervise the transactions. It also allows the operator to evaluate the economic operational feasibility of and anticipated interchange transactions (planned purchase or sale transactions) with another utility while accordingly re-scheduling the own resources.

- Faster analysis despite larger datasets
- Provides advanced analysis and risk assessments
- Intuitive and user-friendly Interface
- Accurate load forecast for different horizons with Econometric models
- Self-learning and self-calibrating algorithms for accurate load forecasting (ANN)
- Various advanced algorithms and methods to deal with the uncertainties
- Model uncertainties using probabilistic methods like Monte-Carlo simulation
- Multi-source optimization by integrating multiple models



• RE maximization to meet the growing demand

• Investment decision analysis & make better

power purchase decisions.

• Flexible scenarios generation

Product Highlights

All the utilities are mandated by government and regulators to replace the fossil fuel-based power generation of the yesteryears with renewables of the neo-generation to foster greener grids. The challenges and limitations are growing with the increased RE integration which is handled by MiPSO[™] using the following functionalities:



100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 Confidence (%

Capturing of Renewable **Generation** Variability and Uncertainty at Hourly Intervals to Increase the RE Integration



Provide Medium / Long-Term Generation Planning with **Optimal Mix**



Configuration

A Robust Methodology



EXECUTION

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Procurement Generation Demand: System Config User 🎧 👗 🏦 🚯

for Making Better Power

Procurement Decisions. User-

friendly Scenario Building

Feature to Solve Various

Optimization Problems

SCENARIO SETTINGS	
Severale files Enter Semann Name	
Manage Demand Forecast Data	+
Manage Resource Mapping Data	+
Manage Power Procurement Data	+



Yes, MiPSO[™] allows the user to configure various impacting drivers and other factors that addresses the variability and uncertainties associated with the load demand.



You can arrive at different optimization results using the Procurement Optimization (PO) module of MiPSO such as:

- RE Maximization to meet the Renewable Purchase Obligation (RPO) targets
- Emission minimization to comply with statutory limits prescribed by the state electricity regulatory commissions
 Cost minimization for generation

and procurement

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