

Thermal Performance Services

Plant Optimization Technology

**CURTISS -
WRIGHT**

Power & Process Products and Services



About

Curtiss-Wright is a global integrated company with a long tradition of providing state-of-the-art, reliable solutions through trusted customer relationships.

The Plant Optimization Group, a business unit within Plant Information Monitoring and Control, provides a variety of products, services, and software-related solutions to the global power industry. We are leaders in thermal performance software and services; equipment reliability solutions; valve condition monitoring; and advanced data analytics. We further enhance our customer support through our Monitoring and Diagnostic Center providing remote detailed evaluation of the condition of clients' assets.

We are committed to the safe operation and improved performance and reliability of power plants worldwide.

Thermal Performance Services

Identifying and eliminating causes of inefficiency and obtaining every possible kilowatt is essential in today's nuclear power plants. Plant engineers responsible for thermal performance are very busy and often wear several hats. With limited time available to the thermal performance engineers, Curtiss-Wright's Plant Optimization Department can provide award-winning thermal performance software products and expert assistance. We "lighten your load" and provide specialized experience, some of which is unique and helpful to solving your thermal performance issues.

Training

Curtiss-Wright provides seminars specifically designed for thermal performance engineers and their backups to find missing generation and methodologies for optimizing performance on a daily basis. We also provide training on our thermal performance software, PEPSE-RT and PEPSE.

Troubleshooting Lost Generation

Sometimes hunting down an issue with lost generation can be challenging. Our consultants have years of experience troubleshooting performance issues.

Establish or Update a Program

Curtiss-Wright has extensive background in establishing or updating thermal performance programs in power plants.

Reporting

Plant thermal performance engineers generally develop, update, and provide thermal performance reports on a periodic basis. Our experts have assisted many plants in providing or updating performance reports to reduce the time required to generate reports, in addition to increasing the accuracy and reducing the uncertainty of the results to provide a more accurate accounting of lost generation.

Power Update and Equipment Replacement Studies

Many plants are planning for future power updates and equipment replacement/ retrofits. Planning efforts require extensive engineering studies. Curtiss-Wright's experts can assist in these studies and provide evaluations of studies provided by vendors and Architect Engineering firms. Detailed reports accompany all of our evaluations.

Computer Modeling

Curtiss-Wright provides the popular PEPSE software used in every nuclear plant in the US as well as numerous other plants around the world. Our engineers have many years of experience building PEPSE models and using the models for specific plant studies. PEPSE can connect to Excel and PI to provide a powerful tool set for thermal performance. Curtiss-Wright also provides PEPSE-RT and PdP software and modeling for on-line monitoring of thermal performance and for equipment predictive maintenance using advanced pattern recognition technology.

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Program Assessment

An assessment of a thermal performance program provides the plant a detailed evaluation of the current assets and areas for improvement. An assessment effort includes, but is not limited to:

- Detailed instrumentation review
- Staff interview
- Thermal performance model review
- Current thermal performance report review
- Generation improvement recommendations
- Major equipment evaluations for MSRs, turbines, condenser, feedwater heaters, etc.
- Thermal power and feedwater flow
- Cycle isolation

A detailed report provides a prioritized list of specific recommendations for program improvement.

Performance Testing

Curtiss-Wright provides assistance with developing and reviewing test procedures in addition to providing support for testing efforts. Support includes, but is not limited to:

- Pre- and post-outage testing
- PTC 6 turbine testing
- Establishing a new baseline
- Determining performance degradation
- Third party review of vendor performance test results
- Test data review and corrected generation
- Vendor correction curve evaluations

Self-Assessments

Periodically a plant thermal performance engineer may require a self-assessment. We can provide assistance with this requirement.

Additional Thermal Performance

Curtiss-Wright provides other thermal performance services including:

- Detailed thermal power calculation review
- Cycle isolation
- Custom training and on-site assistance with thermal performance needs
- Remote monitoring and diagnostics
- Advanced Excel spreadsheet enhancements for thermal performance diagnostics and reporting



Image of Monitoring and Diagnostics Center

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