

FAMOS Suite of Products

**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.

**Digital Twin**

PEPSE is a Windows-based, drag-and-drop, steady-state energy balance software package that is sophisticated, yet easy to learn and apply. It allows the user to simulate a modular representation of a plant's thermal processes including component hardware and piping systems. Plant performance is then calculated through the user-created schematics that mimic your plant's thermal operation and configuration.

When engineers have the ability to readily and accurately analyze and optimize a system's efficiency, the operation derives a number of direct and important benefits.

PEPSE is the key to:

- Accurately analyzing plant performance and identifying ways to increase generation and reduce your fuel cost
- Eliminating causes of inefficiency and conserving every possible kilowatt and BTU
- Reducing plant emissions and carbon footprint
- Lowering your operating costs through higher efficiency, fewer repairs, less downtime and lower fuel costs
- Granular modeling provides confidence in the accuracy of plant assessments of proactive decisions

PEPSE has a number of different modes, allowing its use as a tool for conducting a range of studies:

- Compare actual data to expected values
- Evaluate the system affects of changes in operating arrangements, in performance indicators, or in individual component modifications
- Analyze test data as specified in ASME® performance test codes

PEPSE provides engineers with integrated performance data and the means to construct detailed system models for evaluating heat rates and plant performance.

The functioning of controllable parameters in a plant – equipment condition, system interaction, steam operation, gas and other fluid systems – all contribute to its overall efficiency.

PEPSE has been installed in over 700 generating units over the past 40 years and is the industry standard in thermal performance monitoring.

# PEPSE

## Plant Modeling and Simulation Software

### PEPSE is the advanced computational tool for easy and accurate analysis

In addition to evaluating overall plant performance, PEPSE will let the user perform a host of other important tasks. Additional ways to employ PEPSE include:

- Isolate individual component performance – pinpoint specific hardware malfunctions before they escalate and create costly systemic problems
- Evaluate potential design modifications – before new systems or equipment investments are made
- Determine desirable cycle heat rates for new nuclear, fossil, or combined cycle units or for changing fuel sources
- Audit NSSS, boiler, heat exchanger, feedwater heater, condenser, HRSG, or turbine vendor (steam or gas) claims during a proposal evaluation
- Perform “What-If” analyses to determine effects of operational changes and conducting plant degradation studies, plant data reductions, and incremental heat rate calculations.

PEPSE can be readily employed to test any part of your plant system: hydraulic parameters, equipment hardware, cycle piping arrangements, component characteristics, and ambient conditions. With this ability to monitor a full range of operating variables and conduct a comprehensive assessment, the power to affect overall plant efficiency increases.

PEPSE may be used as both a standalone program or in a network environment. It also allows interaction and data transfer and results between other software programs such as PEPSE-RT™, Excel® and Visual Basic®.

PEPSE has all of the component and process definitions and calculations necessary to most efficiently and accurately model thermal components and systems.

PEPSE software is further enhanced through the outstanding annual maintenance support services and user group meetings available to all users. Ease of use contributes to minimal ramp-up time, while technical assistance contributes to minimal downtime if problems or questions should arise.

### Cost-savings reported in an independent study of PEPSE users

\$3,500,000 saved on a planned boiler modification upgrade
\$12,000,000 saved on a turbine replacement
\$250,000 average operating cost savings per year

### The power of integrated support



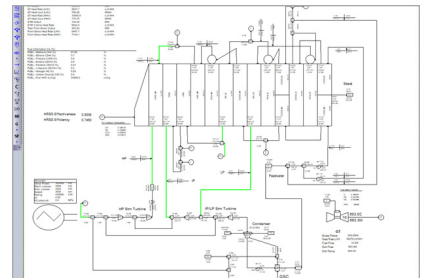
For more information about PEPSE including technical papers, please visit our website at <https://www.cw-connect.com/>.



PEPSE provides integrated performance data and the means to construct detailed system models



Easily and accurately analyze your entire plant, a portion of the facility, or individual components



View of schematic inside PEPSE

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