Dominion Energy
Elizabeth River Power Station - Chesapeake, Virginia

Microfusion Engineering Laboratory (MEL) provided automation, optimizations, and field services for the combined-cycle power plant. In addition, MEL built a gas turbine Checkout and Training Simulator for virtual commissioning and operator training.

The simulator was developed using MEL's THINK™ simulation engine and was integrated with Emerson's control emulation on the Ovation control system for a Siemens-Westinghouse W501D5A gas turbine that includes BOP and electrical distribution network. MEL and Dominion DCS engineers were able to validate the complete control system configuration of the turbine before its commissioning.

The THINK™ Simulator was used for operator training after the control system staging was complete. The operators were able to evaluate and test alternative operating procedures for normal and abnormal operation, including startup and restart, and improve upon the existing operation.