



21CR Project 610-30040

## **Methods for Automated and Continuous Commissioning of Buildings Systems**

Updated 17 April 2002

### **Objective:**

Develop methods for improving the commissioning of building space conditioning and environmental control systems (including heating, cooling, ventilation, and lighting) through expanded implementation of self-commissioning, sub-system integration and automation.

### **Information/items expected to result from this project:**

This project focuses on providing key enabling components essential for the development of tools that automate significant parts of building system commissioning. It will also provide modified commissioning procedures that take advantage of automated tools. Prototype tools and procedures will then be demonstrated in bench tests. The primary deliverables from this project are diagnostic algorithms, data and process handling infrastructure that take advantage of these automated capabilities.

### **How results are likely to be applied:**

The information developed from the research will potentially become embedded in commercial tools such as:

1. HVAC product manufacturers can sell value added products along with the equipment to improve system performance and reliability,
2. building controls and automation companies can sell value added products along with building controls,
3. building operators and managers to improve building performance, improve the indoor environment, and lower maintenance costs, while improving maintenance,
4. energy service companies to offer a new value-added, performance contracting, or shared-savings service,
5. electric load aggregators to improve the performance of groups of buildings and increase the profitability of serving their loads,
6. installers and service providers of building equipment to offer remote diagnostics and predictive maintenance services,
7. building commissioning providers and energy consultants to increase their productivity and cost-effectiveness.

### **Research subcontractor:**

Portland Energy Conservation, Inc., Portland, OR (Principal Investigator: William Miller)

### **Status:**

Project was concluded in the second quarter of 2003 and a final report approved for release. The final report is available to down load at no cost from the ARTI website.

**Responsible 21CR Subcommittee:** System Integration