

# **RESEARCH PLAN**

## **TECHNICAL COMMITTEE 4.6**

## **TECHNICAL COMMITTEE 9.9**

### **PROJECT TITLE**

Development and Implementation of Commissioning Strategies for Optimal Control Evaluation

### **OBJECTIVES**

The objectives of this work are to identify and evaluate commissioning issues related to optimal building operations and to develop and implement commissioning strategies in response to these issues. The objective will be met by reviewing ongoing work on commissioning and optimal operating strategies

### **BENEFITS**

Optimal supervisory control of building systems involves selection of system setpoints (e.g., chilled water temperature, condenser water temperature, supply air temperature) to minimize overall system energy use. Previous ASHRAE research indicates that optimal supervisory control can save as much as 15% in system energy use. However, recent results from ASHRAE RP-823 indicate that, for the test building, pre-optimization commissioning resulted in energy savings of almost 30%. It is expected that systematic strategies for commissioning for optimal operations are a necessary first step toward optimal operations and could provide significant energy savings.

### **ESTIMATED COST**

\$90,000

### **ESTIMATED DURATION**

18 - 24 months

### **METHOD OF PUBLISHING RESULTS**

1. Detailed report
2. Technical paper

### **POTENTIAL CO-SPONSORS**

TC 4.1

## **Research Plan Authors**

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