

# **RESEARCH PLAN**

## **TECHNICAL COMMITTEE 1.8**

## **TECHNICAL COMMITTEE 9.9**

### **PROJECT TITLE**

Diagnostic Tools for Maintenance and Operating Cost Optimization

### **OBJECTIVES**

1. Compile a list of existing needs of building operators and managers so that the building operation and economics can be evaluated.
2. Identify the needs which can rely on existing controls to answer the cost saving questions.
3. Create a list of diagnostic systems which need to be developed.
4. Develop guidelines for diagnostic systems to be useful for day-to-day cost saving. Include economic cost and the cost benefit functions of system commissioning.

### **BENEFITS**

Many commercial and institutional buildings are operated below their potential of energy efficiency, below the acceptable level of Indoor Air Quality (IAQ) or comfort control, and below acceptable levels of readiness for life support functions. This project will evaluate these items and provide to operators and building managers the data needed to keep the building in tune with design expectations. Protocol to alert the operators to poor comfort conditions and to alert managers when operating costs or system efficiencies are beyond acceptable norms is needed.

### **ESTIMATED COST**

\$70,000

### **ESTIMATED DURATION**

2 years

### **METHOD OF PUBLISHING RESULTS**

The project will result in a final report which will be summarized as a symposium paper, poster session, or journal article. Further, the information in this report will be useful for the generation of future editions of ASHRAE guidelines, standards and handbooks.

### **POTENTIAL CO-SPONSORS**

TC 1.7 Operations and Maintenance Management, TC 1.8 Owning and Operating Costs

**Research Plan Authors**

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