



# **Enabling Building Operators for Widespread Implementation of Energy Efficiency and Demand Response**

Training and Educational Needs

Presented by Chris Shockman

# How Did We Get Here?

- Owners complain that proprietary systems are limiting their ability to operate their buildings properly
- Controls Vendors claim that lack of knowledge by operators is a barrier to the adoption of new technology
- Broad social needs are developing that require attention from strategic partnerships of business, researchers, and education to solve
- Original assumptions about operators are no longer valid

# Today's Situation

- Most operators get minimal training on control systems under the existing paradigm of training
- Controls have changed profoundly in the last 10-20 years
- Technology will continue to evolve
- Society's need to effectively control and use energy efficiently is increasing, not decreasing

# Vision Statement

- Operators need to be better educated to be able to use new technologies effectively

# Finding the Future

- Develop Strategic Partnerships to focus attention on educating operators
- Utilize existing educational channels to bring existing educational resources to the problem
- Respect the educational institutions role - provide input, help develop funding sources, bring attention to their needs
- Recognize that educational technology is evolving. Incorporate new methods.

# Review of some success factors researchers can provide

- The development of innovative curricula, teaching methods and instructional design to maximize the impact of the initiative in meeting the needs of employers. Use of Reference Groups.
- Information on employers interests and needs including long term projections.
- Information on Policy issues (especially in energy) that may drive needs for training and are most advantageous to the public
- Development of “marketing materials” and information to draw in candidates

# Some areas of common interest now with other community colleges

- ETUDES
  - <http://foothillglobalaccess.org/etudes/>
- Sofia Project at Foothill College
  - <http://sofia.fhda.edu/pilotpublish.htm>
- California's Virtual Campus program
  - <http://www.cvc.edu/>
- Development of Energy Consortium similar to Biotech Industry program
  - <http://www.cccbitech.org/aboutbio.html>