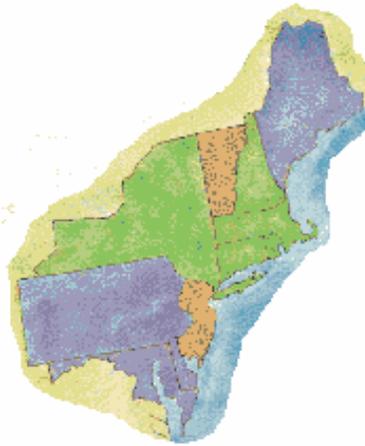


**Efficiency is  
the Bottom Line:**

**Resource-Efficient  
Building Operations  
& Maintenance**



**Presented by Jim O'Reilly  
Northeast Energy Efficiency Partnerships  
August 30, 2005**

Northeast Energy Efficiency Partnerships, Inc.

1



## **Northeast Energy Efficiency Partnerships (NEEP)**

---

A non-profit organization, founded in 1996, based in  
Lexington, Mass.

Our mission: To promote **energy efficiency** in  
homes, buildings and industry in the Northeast  
U.S. through regionally **coordinated programs  
and policies** that increase the use of **energy  
efficient products, services and practices**, and  
that help achieve a **cleaner environment** and a  
**more reliable and affordable  
energy system.**

Northeast Energy Efficiency Partnerships, Inc.

2



## Energy Efficiency: What Do We Mean

---

Energy efficiency: using technologies, measures or practices that produce the **same amount** of light, heat, transportation, cooling, process heat, cooking fires, etc. **using less energy**. Economic production and comfort levels are enhanced or, at the least, unchanged, but energy inputs are reduced. **By contrast**, energy conservation means doing with less or doing without.

3

Northeast Energy Efficiency Partnerships, Inc.



## Why Energy Efficiency?

---

### *The three E's:*

- **Energy system:** Questions of resource adequacy and transmission/distribution constraints
- **Environment:** Required reductions in power plant emissions, especially CO<sub>2</sub>, to meet state/regional climate change action goals
- **Economics:** Rising natural gas costs and related electricity costs

4

Northeast Energy Efficiency Partnerships, Inc.



## Energy Efficiency in Massachusetts

---

With electric restructuring came a new approach to addressing energy efficiency: public benefits funds (PBFs) or systems/societal benefits charges (SBCs) programs administered by utility companies and the Cape Light Compact.

Voluntary SBC programs benefit all, whether you participate or not:

- Lower wholesale electricity clearing prices
- System stability
- Cleaner air

5

Northeast Energy Efficiency Partnerships, Inc.



## Resource-Efficient Building Operations and Maintenance

---



What's wrong with this picture?

Northeast Energy Efficiency Partnerships, Inc.



## Building Operator Certification (BOC)

---

A nationally recognized training program designed to educate facilities personnel in the energy and resource efficient operation and maintenance of building systems:

- ✓ Building Systems Overview
- ✓ Energy Conservation Techniques
- ✓ HVAC Systems and Controls
- ✓ Efficient Lighting Fundamentals
- ✓ Environmental Health and Safety Regulations
- ✓ Indoor Air Quality
- ✓ Facility Electrical Systems

Northeast Energy Efficiency Partnerships, Inc.



## Building Operator Certification (BOC)

---

Building operators/facility managers earn certification by:

- ✓ Attending eight days of training over three months
- ✓ Completing five project assignments in their facilities
- ✓ Passing class exams

Benefits include:

- **Increased** energy efficiency, property values, facility safety, comfort and indoor air quality.
- **Reduced** facility energy and water bills, and unscheduled maintenance.
- Increased opportunities for **employment advancement**.
- **Networking** with other professionals.
- And...

Northeast Energy Efficiency Partnerships, Inc.



## Building Operator Certification (BOC)

---

### Savings!

A recent independent analysis of the BOC program showed that on average facilities managed by students certified through the BOC saved annually:

- \$ .40 kWh of electricity per enrollee per square foot
- \$ .43 MBtu of oil/gas per enrollee per square foot
- \$ .23 gallons of water per enrollee per square foot

### Which translates to...

- \$ Approximately \$20,000 per facility.

Northeast Energy Efficiency Partnerships, Inc.

9



## Building Operator Certification (BOC)

---

- Over 1,500 students certified since 2000
- Study also showed that savings persist: at least five years
- Students respond that BOC teaches them how to look at facilities and their systems as a whole
- Advanced course (200 Level) also available
- Utilities are offering BOC as part of their energy efficiency programs and underwriting tuition

Northeast Energy Efficiency Partnerships, Inc.

10



## Northeast Energy Efficiency Partnerships, Inc.



Jim O'Reilly, Director of Policy, Outreach and Communications  
781-860-9177, ext. 18; [joreilly@neep.org](mailto:joreilly@neep.org)

Ed Londergan, BOC Program Manager  
781-860-9177, ext. 29; [elondergan@neep.org](mailto:elondergan@neep.org)

Keith Guernsey, Marketing and Sales Associate  
781-860-9177, ext. 40; [kguernsey@neep.org](mailto:kguernsey@neep.org)

[www.neep.org/boc](http://www.neep.org/boc)