





Realizing the Value of LEED

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Agenda

- You all know what LEED is, right?
- What LEED is not!
- My facility is not LEED certified, what next?
- Getting there
- What we have learned
- Energy companies are the Devil!
- Your Carbon Footprint







LEED



GREEN BUILDING RATING SYSTEM

Leadership in Energy & Environmental Design®

A system for designing, constructing, operating and certifying the world's greenest buildings




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You all know what LEED is, right?

- Many think they know
- It has been touted as the solution to Green issues
- It has been said it is the answer to Lean Energy
- It is known as being environmentally conscious
- LEED will help cut global warming
- It will lower emissions
- It will help manage costs

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What LEED is not!



- In truth, it is none of those things.....
- LEED certification will not;
 - Make your building or facility “Green”
 - Solve your energy issues
 - Make your facility environmentally conscious
 - Have a dramatic effect on “Global Warming”
 - Lower your emissions
 - Manage your energy costs

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Environmental Impacts of Buildings



- 65.2% of total U.S. **electricity consumption**
- >36% of total U.S. primary **energy use**

- 30% of total U.S. greenhouse gas emissions
- 136 million tons of **construction and demolition waste** in the U.S. (approx. 2.8 lbs/person/day)

- 12% of **potable water** in the U.S.

- 40% (3 billion tons annually) of **raw materials** use globally

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What is a Green Building?



Green building is the practice of reducing building **impacts** on **human health** and the **environment** through better site planning, design, construction, operation, maintenance, and removal—
the complete building life cycle

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What LEED actually is



- LEED is a simple unit of measurement
- Set against a Global standard
- Facilitates (LEED-NC) rating at four different levels
 - Certified Level 26-32 points
 - Silver Level 33-38 points
 - Gold Level 39-51 points
 - Platinum Level 52-69 points

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What LEED actually is



- Refers to the design of a new, or retrofit of existing building such that it is rated for:
 - Site selection and planning
 - Water efficiency
 - Energy efficiency and renewable energy
 - Conservation of materials and resources
 - Indoor environmental quality
 - Innovation in Design

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Why should my building be LEED Certified?



- A LEED Certified Building May:
 - Enhance the companies corporate image
 - Make your facility more marketable
 - Provide branding opportunities
 - Create a positive impact on employees and visitors
 - Improve indoor environmental quality
 - Provide a reduction on operation costs
 - Increase productivity of the building occupants

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Commitment to LEED Certification



- Senior Management – Why Buy-in during these economic times?
 - Life Cycle Costing
 - A more engaged workforce
 - A positive concept Win – Win – Win
 - Life-Science buildings are well on the way
 - Better product outcomes
 - Help is available:
 - Energy providers
 - Cities & towns
 - Industry organizations

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My facility is not LEED certified, what next?



- Consultation will provide you information in respect of what you can do with your facility to embark on the Green Machine.
- Your chosen GC will be responsible for estimating the cost of the endeavor
- Consultation will tell you what you might be able to realize in incentives and rebates in order to offset the cost. Also will be likely to demonstrate an ROI
- Determine how much green (\$) you want to invest to obtain the level of Green required for LEED

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How do you get there?



LEED- Certification process

- ❑ Step 1: Project registration
 - LEED letter templates, CIR access, and on-line project listing
- ❑ Step 2: Technical support
 - Reference package
 - Credit inquiries and rulings (CIR)
- ❑ Step 3: Building certification
 - Upon documentation submittal and USGBC review

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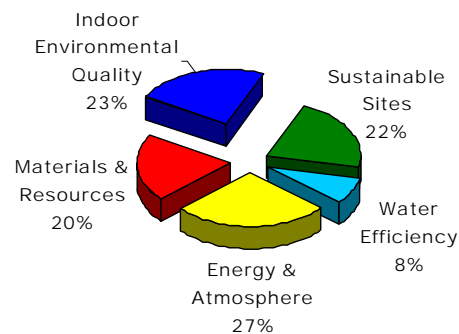
LEED-NC Rating System Design



69 points total:

- ❑ **Sustainable Sites:**
8 credits, 14 points
- ❑ **Water Efficiency:**
3 credits, 5 points
- ❑ **Energy & Atmosphere:**
6 credits, 17 points
- ❑ **Materials & Resources:**
7 credits, 13 points
- ❑ **Indoor Environ. Quality:**
8 credits, 15 points
- ❑ **Innovation:**
4 points
- ❑ **LEED Accredited Professional:** 1 point

Five LEED credit categories



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LEED-EB Minimum Program Requirements



- Full Occupancy for 12 consecutive months
- Applies to the entire building
- Federal, state and local regulatory compliance

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LEED-EB Credit Categories



- 12 POINTS** Sustainable Sites (SS)
- 10 POINTS** Water Efficiency (WE)
- 30 POINTS** Energy and Atmosphere (EA)
- 14 POINTS** Materials and Resources (MR)
- 19 POINTS** Indoor Environmental Quality (EQ)
- 7 POINTS** Innovation in Design (ID)

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Role of the Construction Industry



- Provide **realistic and life-cycle cost estimates** of alternative designs and systems
- Locate **building materials or products** with desirable green attributes
- Waste minimization and recycling** in the jobsite
- Indoor air quality management** during construction
- Commissioning and performance verification** of advanced building systems

Design

- Provide accurate estimates

Preconstruction

- Provide value engineering suggestions
- Develop and maintain LEED tracking documentation
- Offer to re-design over complicated lighting controls to maintain intent but lower first cost

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Energy Companies are the Devil!



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Energy Efficiency Programs



Funds Available through All Massachusetts Investor Owned Electric and Gas Utilities

- National Grid
- NSTAR
- Western Mass Electric
- Unitil
- Cape Light Compact
- Keyspan, Baystate Gas, Berkshire Gas, ComGas

Programs approved through 2012!!

All C&I customers pay in \$.0025 per kWh! (Systems Benefit Charge)

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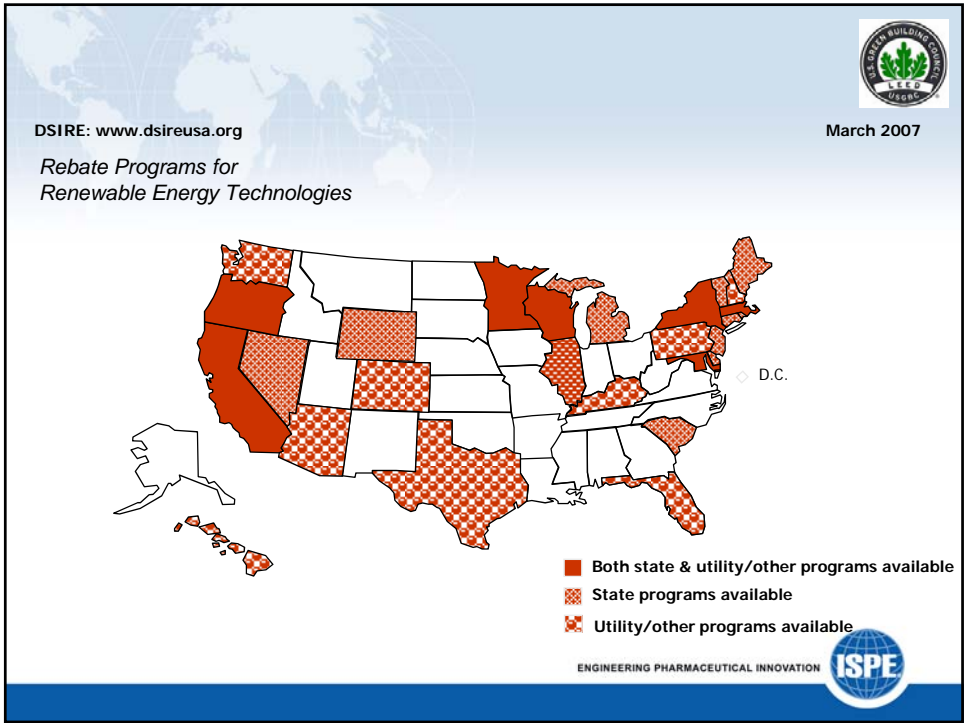
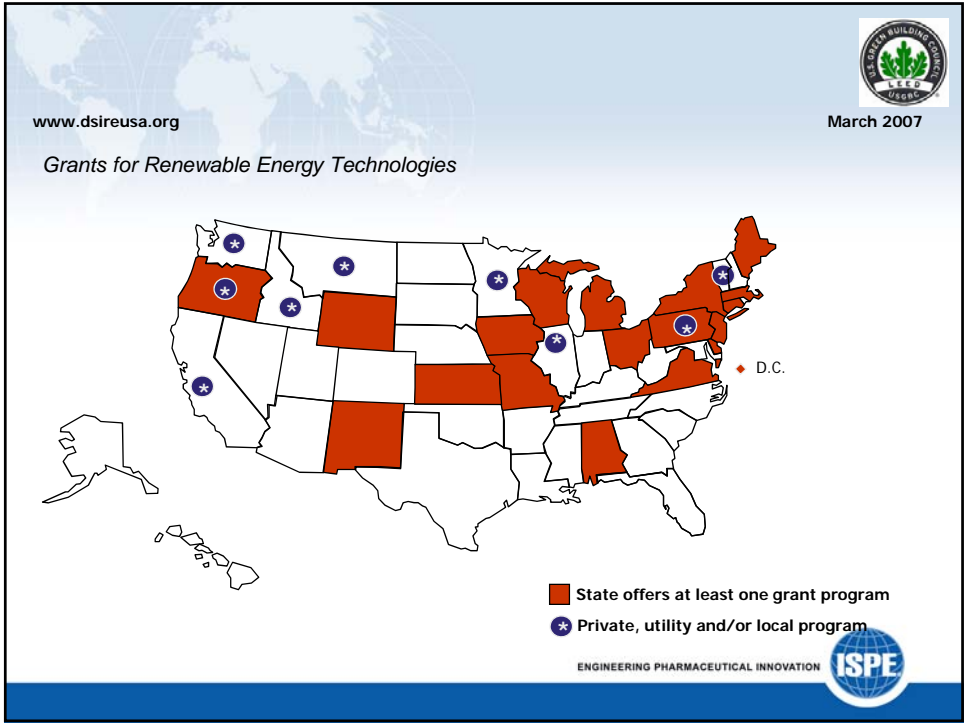
Objectives of the Programs

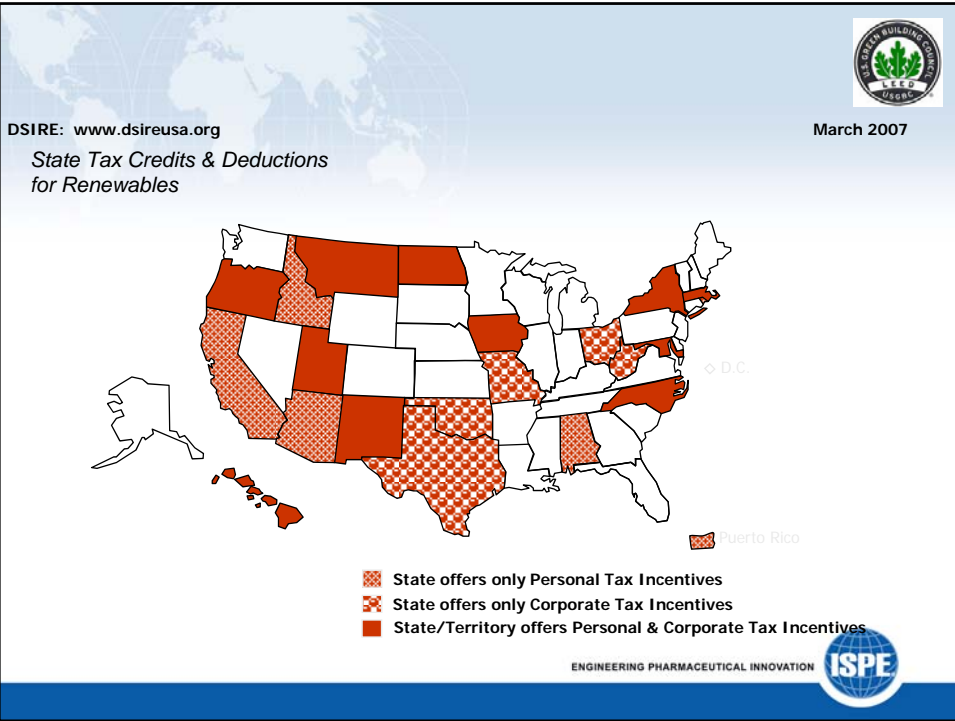


- Utilities have annual goals for achieving kW and kWh savings by
 - Purchase the **Least Costly** kW and kWh
 - Providing **Incentives** to customers to improve the efficiency of their equipment and their facilities
 - Providing **Technical Assistance** to customers to identify and evaluate energy efficiency opportunities

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What have we learned?

- We have learned what LEED is and what it isn't
- LEED can help us realize what we need to do to become environmentally responsible
- Aiming for a green building provides ongoing value in the future.
- The investment need not be all of your own
- Energy companies are not the Devil

But that is not the whole story!

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Your “Carbon Footprint”



- Term assigned to the value of carbon emission associated with everything
 - Industrial/Commercial real estate
 - Manufacturing operations
 - Emissions
 - Cars, White Goods, Homes, Commodities
- The US is catching on as a result of World Trade.
- Your Carbon Footprint will have an economic impact on your business eventually

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Regional Greenhouse Gas Initiative (RGGI)



10 Participating States:

Maine
New Hampshire
Vermont
Massachusetts
Rhode Island
Connecticut
New York
New Jersey
Delaware
Maryland

Observer States & Province's

Pennsylvania
Ontario
Quebec
New Brunswick
Nova Scotia



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Future Impact



- RGGI - Carbon Trading
- Carbon Taxation could be \$7.00/Ton of CO² (~0.5 cents/kWh 3.5% cost increase)
- Mandated efficiency laws for new equipment and buildings
- EPACT 2005 (Extended to 2012)
- More Stringent building Codes:
 - Green Communities Act
 - Boston/Cambridge – LEED Certification Required
 - Title 24, CA

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In Summary



- The value of LEED is the process you will go through to attain certification
- You will realize a greener building with less environmental impact
- Your building will cost less to operate
- You can gain financial assistance in the process
- You will not be impacted as much by your Carbon Footprint.

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Resource



- USGBC: www.usgbc.org
- Greenbuild: www.greenbuildexpo.org
- Energy Star: <http://www.energystar.gov/>
- White papers on costs of Green buildings:
<http://www.cap-e.com/publications/default.cfm>
- Carbon Trading: www.carbontrading.com

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Thank you



- Questions ???

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