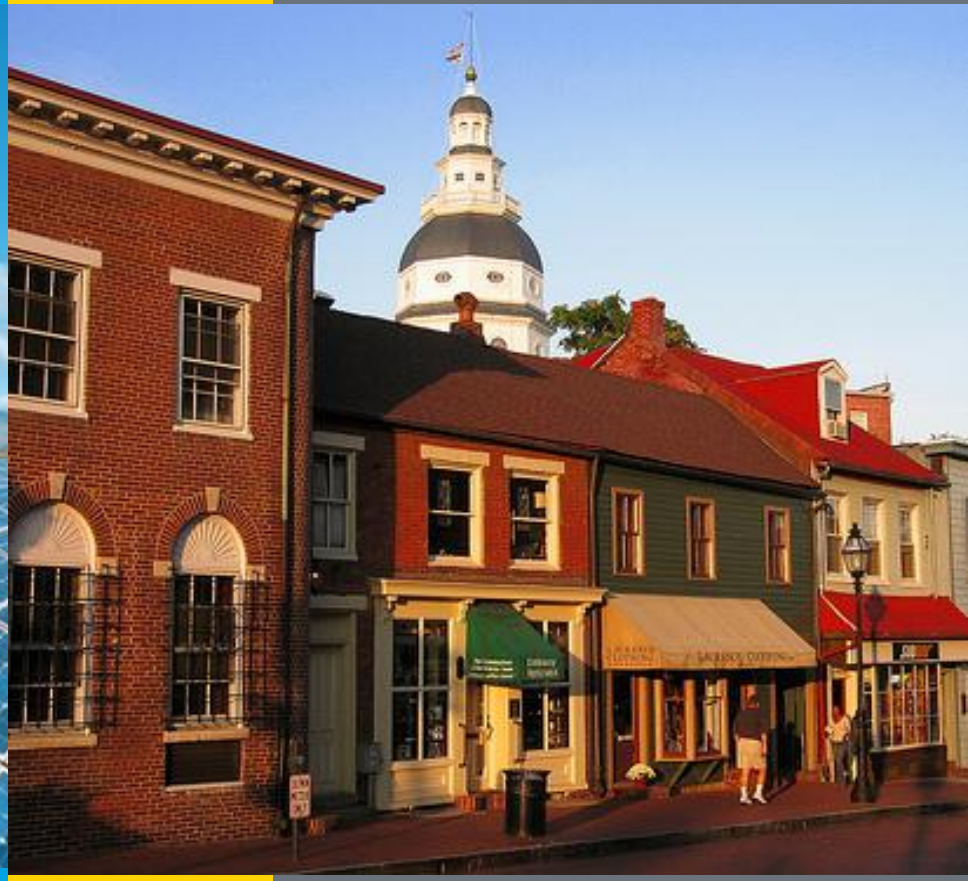
DOE Technical Assistance Program

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy



SEE Action Series:

High Performance Leasing Strategies for State and Local Governments

February 26, 2013

What is the Technical Assistance Program?

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

- DOE's Technical Assistance Program (TAP) provides state, local, and tribal officials with resources to advance successful, high-impact, and long-lasting clean energy policies, programs, and projects
- TAP supports one of EERE's key missions – taking clean energy to scale through high impact efforts
- TAP has been around for over a decade and handled thousands of inquiries – most recently TAP had been focused on supporting Recovery Act grantees
  - One-on-one assistance
  - Online resource library & webinars
  - Facilitation of peer exchange

New TAP Approach

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Priority Areas

- Strategic Energy Planning
- Program & Policy Design and Implementation
- Financing Mechanisms
- Data and EM&V
- EE & RE Technologies

Resources

- General Education (e.g., fact sheets, 101s)
- Case Studies
- Tools for Decision-Making
- Protocols (e.g., how-to guides, model documents)

Peer Exchange & Trainings

- Regional Calls
- Webinars
- Conferences
- Better Buildings Alliances

One-on-One

- Level of effort will vary
- In-depth efforts will be focused on:
  - *High impact efforts*
  - *Opportunities for replicability*
  - *Filling gaps in the technical assistance marketplace*

How to Tap into TAP?

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

- Visit the ***Solution Center***
  http://www1.eere.energy.gov/wip/solutioncenter/

- Contact Local or State ***Regional Coordinator***
  http://www1.eere.energy.gov/wip/solutioncenter/pdfs/rcmapsep2012.pdf

- Submit an ***application*** for assistance
  http://www1.eere.energy.gov/wip/solutioncenter/technical_assistance.html

- Sign up for ***TAP Alerts***, the TAP mailing list, for updates on our latest and greatest

  TechnicalAssistanceProgram@ee.doe.gov

SEE Action

STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

SEE Action Existing Commercial Buildings Working Group

High Performance Leasing Strategies for State and Local Governments

Adam Sledd, Institute for Market Transformation
Brad Molotsky, Brandywine Realty Trust
Elizabeth Vasatka, Boulder, Colorado
Christopher Gizzi, State of Washington

February 26, 2013

This information was developed as a product of the State and Local Energy Efficiency Action Network (SEE Action), facilitated by the U.S. Department of Energy/U.S. Environmental Protection Agency. Content does not imply an endorsement by individuals or organizations that are part of SEE Action working groups, or reflect the views, policies, or otherwise of the federal government.

Agenda

- SEE Action Overview
- Introduction to High Performance Leasing
- Private Sector: Brandywine Realty Trust
- Questions and Answers
- Local Government: Boulder, CO
- State Government: State of Washington
- Questions and Answers
- Related DOE and EPA Initiatives

About SEE Action

- Network of 200+ leaders and professionals, led by state and local policymakers, bringing energy efficiency to scale
- Support on energy efficiency policy and program decision making for:
  - Utility regulators, utilities and consumer advocates
  - Legislators, governors, mayors, county officials
  - Air and energy office directors, and others
- Facilitated by DOE and EPA; successor to the National Action Plan for Energy Efficiency

The SEE Action Network is active in the largest areas of challenge and opportunity to advance energy efficiency

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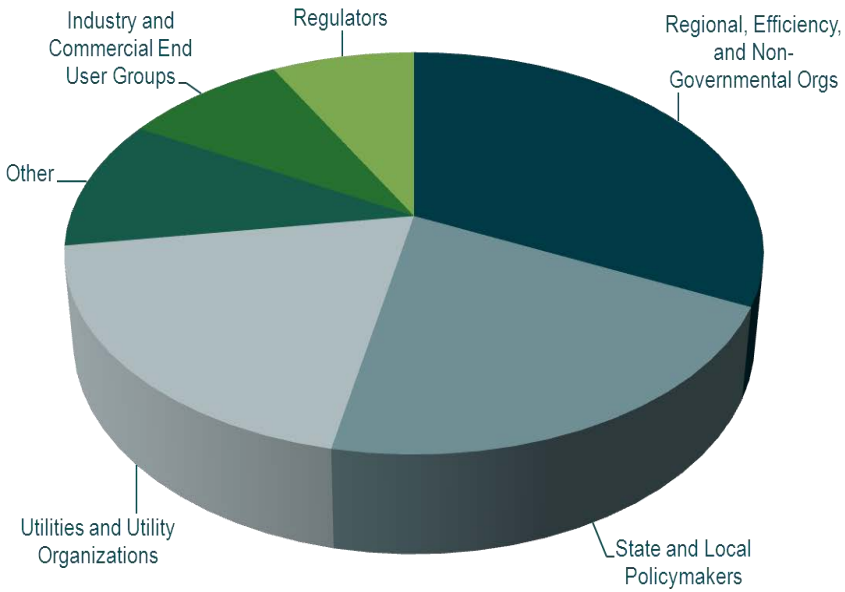
STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

Network Membership and Structure

Over 200 professionals representing over 130 organizations



Executive Group

- Provides visionary leadership, strategic direction, and drive to meet goals

Working Group Co-Chairs

- Oversee development and dissemination of information resources for state/local leaders

Working Group Members

- Provide technical expertise to ensure quality; help shape Working Group goals & activities

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Existing Commercial Buildings Working Group: Resources

- Fact sheets: benchmarking, rating, and disclosure; retro-commissioning; high-performance leasing; strategic energy management programs

- Model policy design guides: benchmarking, rating, and disclosure; energy audit and retro-commissioning (under development); data access for commercial building energy performance benchmarking (under development)

- Expert / peer support: guidance on adopting and enhancing policy and program solutions

***www.seaction.energy.gov*.**

How Can State & Local Governments Get Involved?

Download and share SEE Action resources.

Visit: www.seeaction.energy.gov

Stay updated.

Receive the newsletter and announcements of upcoming events and new publications from the SEE Action Network

Tell us your story.

Let us know what you're doing to promote energy efficiency in existing commercial buildings.

Share your data.

Participate in the SEED platform or asset rating pilots.

Request assistance.

Let us know which policy/program you are interested in learning more about.

E-mail Amy Jiron, amy.jiron@go.doe.gov.

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Introduction to High Performance Leasing

Adam Sledd

Institute for Market Transformation

What is High Performance Leasing?

- High-performance leasing encompasses leasing documents and practices designed to reduce the environmental impact of leased buildings in several areas:
  - Energy use
  - Water use
  - Purchasing
  - Waste disposal
- High-performance leasing is designed to incorporate benefit- and cost-sharing practices into lease terms that are acceptable to both owners and tenants.

Why is High Performance Leasing Important?

- **Using Existing Office Space**
  - The majority of office space that will be used over the next 10 years has already been built.
  - Developing high-performance leases can play a critical role in transforming this market into a more sustainable system.
- **Overcoming Split Incentives**
  - When the tenant pays the utility bills, leaving the owner with no incentive to reduce operating costs by undertaking capital improvement projects.
  - High-performance leases allow tenants and owners to negotiate lease terms that split the cost of efficiency upgrades.

State and Local Governments Leading by Example

- State and local governments can model the use of high-performance leases in publicly leased buildings and promote their use in the private sector.

- State and local governments can adopt policies and develop tools to promote high performance leasing in the private sector.

Key Stakeholders

High-performance leasing can involve **key stakeholders**, including:

- **Building owners** and **managers** willing to negotiate high-performance leases.
- **Interest groups** that represent property managers or real estate professionals.
- **Tenants** from the public or private sector.
- **Energy service providers**, who can help educate landlords and tenants.
- **Utility companies** can provide technical assistance and incentives for identified energy efficiency projects enabled by high-performance leases.

Complimentary Policies and Practices

High-performance leasing can be packaged with other energy efficiency policies and practices to achieve greater savings:

- Benchmarking
- Rating and disclosure efforts
- Retro-commissioning
- Broader energy management policies and programs

Green Lease Library

- **<u>Green Lease Library</u> - a centralized resource for commercial green leasing resources**

  http://www.greenleaselibrary.com

- This website is the result of a collaboration among several stakeholders in the green leasing community, and is maintained by the Institute for Market Transformation.

- The website's purpose is to consolidate green leasing resources to provide a one-stop-shop for all audience types-- from building owners and tenants to lawyers and building raters.

BrandywineRealtyTrust

Engaging Tenants on Energy Efficiency

Brad A. Molotsky
Brandywine Realty Trust
February 26, 2013

ISSUES

- **Emperor's New Clothes (Internal/Tenants)- What do you mean we don't understand?**
- **Don't Tell Me What To Do You (How can a lawyer understand this)?**
- **Don't Know What I Don't Know- Why do we need to measure, tenant's don't care?**
- **Why Have Someone Else Do It When We Can Do It (need for 3rd party verification/assistance)?**
- **Who's Job Is It To Measure And Monitor Anyway (tenant's pay so why such a big deal)?**
- **Who Really Cares ($3/psf for energy for 5,000 ft so whaaat)?**
- **Occupants- what role do they play?**
- **Leasing's BIG RED HERRING**

RECYCLING

2010- We engaged vendors to start collecting data and report on it

2011- We deployed Recycling Pilot Studies and started receiving and refining reports

Region	2011 Regional YTD
NJ	91.55%
PA Philadelphia	89.90%
NO CA	78.02%
SO CA	77.77%
DE	51.42%
DC METRO	53.10%
Texas	64.64%
PA	37.61%
Richmond	30.43%
YTD	75.05%

Report Period: May-12

Working together to recycle,

Brandywine Realty Trust and Waste Management are reaching some amazing milestones.

Monthly, we are saving*:

2,449,915 kW-hrs of electricity
Enough to power 204 homes for a full year

52,968 gallons of oil
Enough energy to heat and cool 262 homes for a full year

12,491 gallons of gasoline
Enough gasoline to drive 349,744 miles

7,862 mature trees
Enough to produce 97,411,974 sheets of newspaper

3,643,164 gallons of water
Enough to meet the fresh water needs of 194,408 people for a month

2,063 cubic yards of landfill airspace
Enough airspace to meet the disposal needs of a community of 31,807 pe

Created on October 3, 2012
The recycling and waste data used in this report is based on actual customer data, historic WM studies, and EPA averages. For a more detailed analysis of your waste stream, talk to your WM rep about conducting a waste stream audit.

WM WASTE MANAGEMENT

THINK GREEN.

2012- We achieved consistent Reporting with higher diversion rates (74%) and became a vendor success story.

-We engaged with Tenants and expanded to batteries and electronic waste.

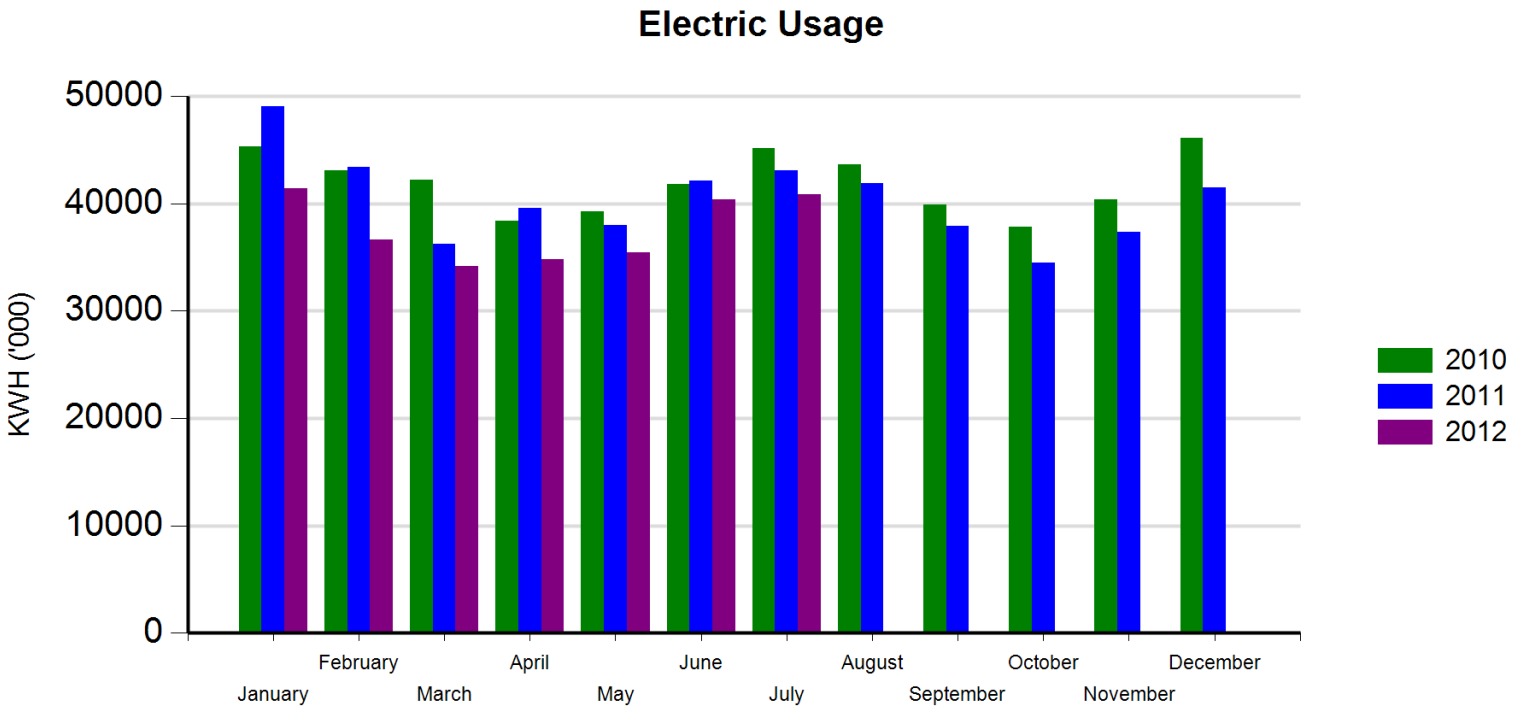
ENERGY STAR

New 2009 labels	10	Total for 2009= 13
Relabel 2009	3	
New 2010 labels	18	Total for 2010= 30
Relabel 2010	12	
New 2011 labels	22	Total for 2011= 38
Relabel 2011	16	
New 2012 labels	23	Total for 2012 = 34
Relabel 2012	11	

Grand Total: 82 Buildings 13.4 Million Sq. Ft.

Tenant Engagement

1) Property Managers/ Building Operation Engineers
   - Avid/UBAR- automated reporting
   - Monthly Reports – automated downloading
   - Building Reports – creating of energy plans



Tenant Engagement

2) Tenants
   - Tenant Pieces

Energy Star - National Building Competition Update- Plug Load Management

BATTLE OF THE BUILDINGS
EPA's NATIONAL BUILDING COMPETITION

Modlet-As you are now aware, 500 North Gulph Road has been competing in this year's Energy Star National Building Competition! We continue to implement various no-cost to low-cost improvements to the building to seek to reduce energy consumption. This week's newsletter highlights our Plug Load Managment Initiative.

Energy Waste at the Plug

Unlike water, which is fully controlled through a faucet, electricity flows directly to plugged-in electronic devices and appliances and is available whenever the devices need power. In many cases, electronics are continually consuming power all the time, even though we may only be using the devices a few hours a day.

What is 'standby power' or 'sleep mode'?

Standby power refers to the base level of power consumed by some electronic appliances when they are just standing by and ready to be used. It is one of the ways in which energy is wasted at the plug. Some other types of electronic devices are always "on" while they are plugged in, which is the other significant way energy may be wasted. Lastly, some electronic devices draw power even when they are turned off. This is commonly referred to as vampire power, and also represents a source of wasted energy.

How does this energy waste affect me personally?

Most directly, it appears on our electricity bill. The more energy we use, the more we pay, even though electricity use is essentially invisible to us. With electricity rates continuing to rise each year and with more plugged-in devices being used in our workspace and in our homes, we continue to pay more money each year on electronics. More indirectly, energy waste results in higher-than-necessary grid demands as well as environmental pollution in running our generators that serve the grid.

ENERGY SUPPLY

1) Procurement: Focus on supply side procurement

2) Electricity Savings

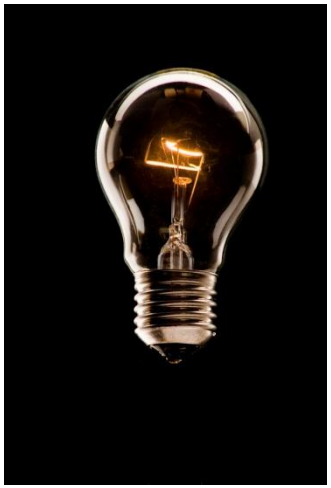


Table X. Total electricity* spend and savings for 2010 and 2011.

State	2010	2011	Savings ($)
PA	23.54M	21.21M	2.33M
NJ	8.28M	7.42M	860K
DE	3.57M	3.54M	30K
MD	3.73M	3.44M	300K

3) Gas- 2012

4) Water- 2011- for $27,750 reduced water consumption by 22,000,000 gallons.

ENERGY DEMAND

1) **Inventory-** completed 2010

2) **AVID/UBAR**- Feed to Property Manager- 2010 late

3) **Meters-** Net Metering- late 2011, 2012- 30 buildings

4) **Lighting-** Parking lots, Elevators, Lobbies- 2011/2012

5) **Dashboarding-** Global Carbon Systems, Steve Ashkin's Sustainability Dashboard

6) **3RD Party Help-** Trane, Sky Foundry, DVL Automation

7) **Demand Load Shed-** Viridity and Enernoc

8) **Incentives-**

2012 Cash received	(212,634.52)
2011 Accruals	16,568.10
3rd Party Cash	5,380.00
9/12 GL Total	**(190,686.42)**

How large a role do the occupants play in implementing green building initiatives?

- In my experience they can be very BIG if they are willing to step up and ask or demand certain sustainable services – to date, the tenants have not been vocal and thus reinforce the notion that no one really cares – this will and is changing but incrementally. When tenants and brokers start to demand and ask the questions, behavior will change much faster.

LEASING RED HERRING

In a multi-tenant building, are the owners restricted by the "split incentive" of improvements paid by the owner, but tenants benefitting from lower energy costs? How does the owner win in this situation?

- This is a classic RED (or with this font Blue) herring – yes tenant benefits by cheaper cost in a more efficient building where we reduce the supply cost and/or reduce consumption – SO WHAT – most office landlords are smart enough to include in our leases the ability to amortize (in English – CHARGE) for capital items required by law or which increase efficiency – thus, as LL's we can charge back over time the cost of the improvement – yes, we need to be cognizant about base years and their impact and about the time value of money and the ability of tenants to pay us back but the split incentive many whine about is not as real as folks make it out to be as he/she who spends their money should be paid back out of savings first and then the building, the owner and the tenant are ahead of the curve

QUESTIONS?

High-Performance Leasing Strategies for State and Local Governments

February 26, 2013

City of Boulder, Colorado
Elizabeth Vasatka
vasatkae@bouldercolorado.gov
303-441-1964

Discussion Points

- City of Boulder's experience and approach to high-performance leasing
- City of Boulder's timeline of experience
- Private and public sector programs
- Engaging stakeholders
- High-performance leasing barriers
- Next Steps

City of Boulder's Climate Action Initiatives

2001 – Signed onto Kyoto Protocol

2006 - Adopted first Climate Action Plan

- Voter approved tax on energy use (Climate Action Plan Tax)

2009 - Developed Community Guide to Climate Action

- City launched an energy performance service contract

2010 - City/Boulder County awarded $25 million ARRA Grant

2011 – Voter approved Utility Occupation Tax – to explore municipalization

2012 – Voter approved renewal of the CAP tax

City of Boulder's Experience and Approach to High-Performance Leasing

City's Climate Action Initiatives

- Identified commercial sector barriers to implementing energy efficiency
- Developed voluntary programs and resources
- Focused on tenant education
- Developed a "high-performance" lease template for building owners
- City of Boulder's energy performance contracting : one-on-one basis

City of Boulder

City of Boulder's Timeline of Experience

- 2007 - Providing resources to private sector
- 2010 - City of Boulder's efforts with tenants

Private Sector Programs

10 FOR CHANGE

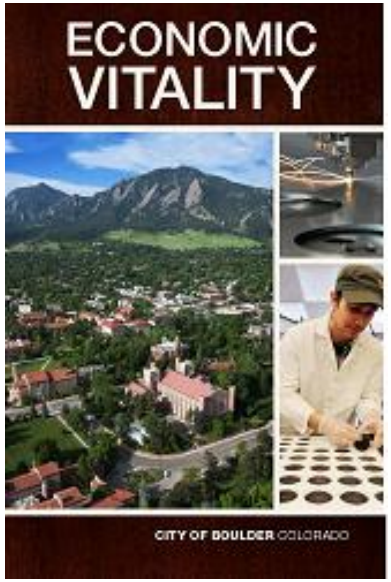
A new climate for business

GO BOULDER
CITY OF BOULDER

PACE
PARTNERS FOR A CLEAN ENVIRONMENT

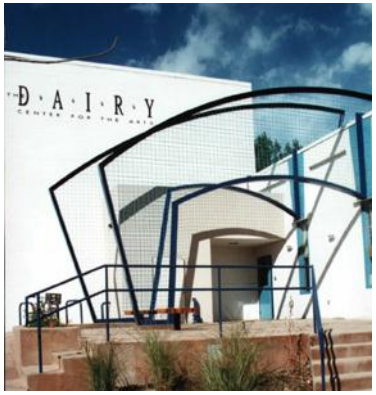
reduce, reuse, recycle & compost more
Zero Waste

energySMART
Your Efficiency Solutions



City of Boulder Enters into an Energy Performance Contract

- Two non-profit and one for-profit tenant
- Substantial upgrades to leased buildings by non-profits
- Financed the upgrades with a 4-8 yr. payback
- Calculated payments for entire period for budgeting
- One-on-one conversations with boards
- Letter of intent for upgrades
- Once upgrades are completed and costs are finalized – city will require lease addendums for payments



Stakeholder Engagement

- 2007 – worked with private sector companies to develop ***10 for Change*** program
- 2008 – formed community technical teams
- 2009 – identified gaps in energy efficiency markets, designed and piloted programs
- 2011 – hosted a **large commercial property energy efficiency charrette**
- launched a full service DSM program supported by the city and county
- 2012 – defined a commercial energy efficiency strategy and developed a rating and reporting pilot program
- 2013 – delivering more education, services and incentives

Photos: Allen Krughoff, HardcastlePhotography.com 2011

Commercial property owners energy efficiency charrette outcomes - the common and not so common barriers to implementing energy efficiency

Solution 1 – Optimize EnergySmart for Large Commercial Properties

Solution 2 – “Customer Relationship Management” (CRM) for Buildings

Solution 3 – New Financing Approach

Solution 4 – Energy Efficiency Menu: EZ Energy Resource

Solution 5 – Commercial Real Estate Broker (and Tenant) Education and Engagement Program

Solution 6 – Energy Efficiency Code Variance Process

High-Performance Leasing Barriers

What's needed -

- Education to specific commercial industry stakeholders
- Resources and templates
- Understanding of the differences between standard and high performance leases
- Early adopters that are respected in the commercial real estate market
- Financial models and case studies
- Easier access to energy use data

Next Steps

- Host our first (March 14) private sector commercial broker education program

- Collaborate with business groups to provide outreach & education on high performance leasing

- Showcase our private sector property owners that use “green” or high performance leasing

- Work with and support the city facilities integration of high performance leasing (including sustainable practices)

City of Boulder

City of Boulder, Colorado
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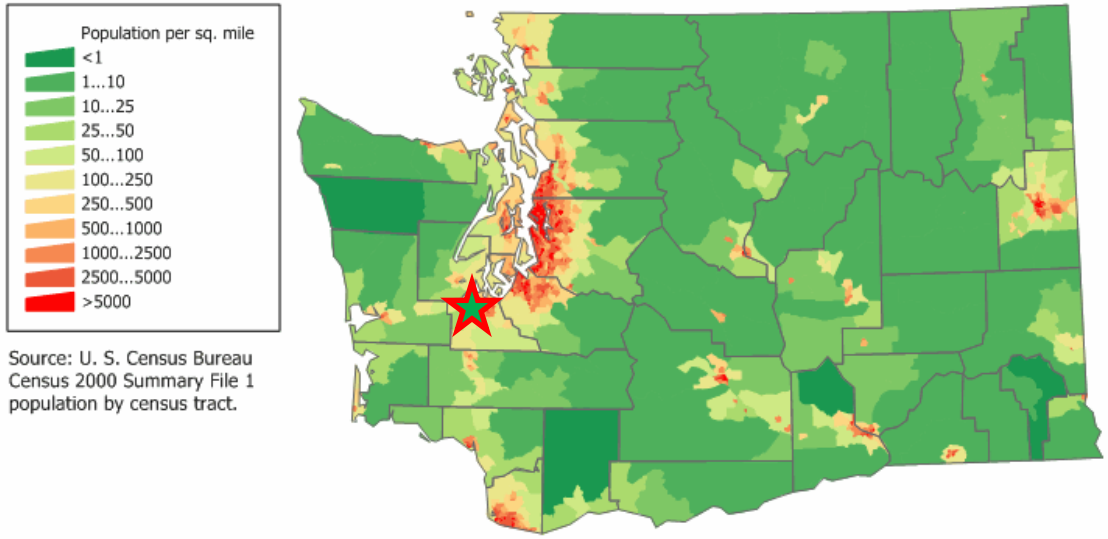
Real Estate Services Lease Inventory

685 Leased Spaces (End of year 2012)
10 Million Square feet
57% less than 5,000 sq ft.
10% greater than 55,000 sq ft.



Source: U. S. Census Bureau
Census 2000 Summary File 1
population by census tract.

Early Progress with LEED™ 2000-2007

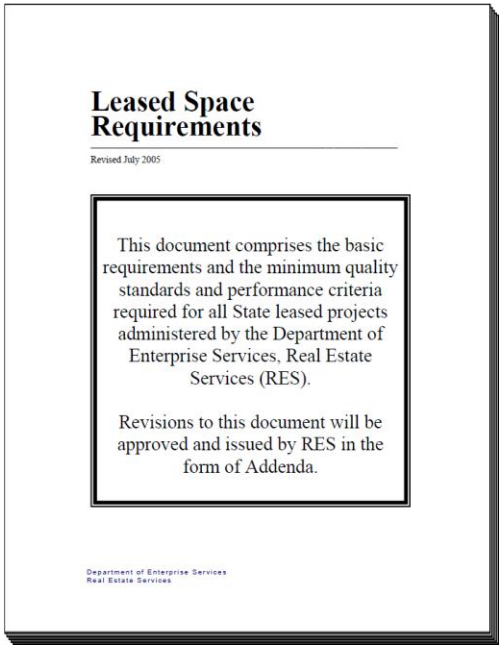
Leases with LEED requirements	Cost	Annual Savings	Payback Years	Energy Star Score
Dept of Health, Town Center II, Tumwater, 130,733 SF, LEED Certified	$393,000	$65,000	6	88
Dept of Health, Town Center III, Tumwater, 48,000 SF, LEED Silver (when completed)	$145,000	$28,000	5.2	93
Attorney General Tumwater, 131,000 SF, LEED Silver	$516,000	$70,000	7.4	89
DSHS, Cherry Street, Olympia, 161,000 SF, PSE Energy Conservation Grant	$346,900	$58,000	6	72
DOT – DOC, Edna Goodrich Building, 212,472 SF, LEED Gold	$795,000	$66,250	12	?

Washington State Department of
Enterprise Services

Real Estate Services

Early Progress with LEED Initiatives

Performance Specifications



Leased Space Requirements

Revised July 2005

This document comprises the basic requirements and the minimum quality standards and performance criteria required for all State leased projects administered by the Department of Enterprise Services, Real Estate Services (RES).

Revisions to this document will be approved and issued by RES in the form of Addenda.

Department of Enterprise Services
Real Estate Services

LEASE SPACE REQUIREMENTS 2005

Part A Basic Requirements

- Establishes allowances
  - Walls, Doors, Finishes…
- Requires Energy Surveys

Part C Specifications

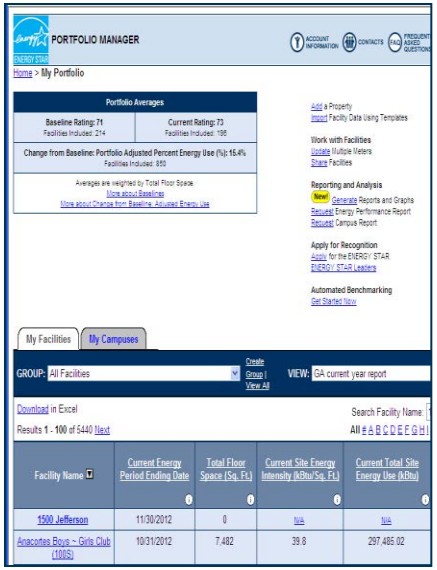
- Envelope Requirements (Windows, Insulation etc…)
- HVAC System Specifications (Programmable Controls, Variable Frequency Drives, Zoning Requirements, Ventilation etc.)
- Electronic Ballasted Lighting, Daylight zone controls, Occupancy Sensors.

Energy Performance Requirements

RCW 19.27A.190 (2009)

Applies to:

- Leases for conditioned spaces
- Greater than 10,000 sq ft.
- State Tenants that Pay Utilities Directly



Requirements:

- State Tenant enter facilities in Energy Star
- Audits required if Energy Star score less than 75
- Owner must agree to cost effective upgrades

* State may issue Waiver if no cost effective solutions identified

Green Requirements for Leases

RCW 19.27A (2009)

May Apply to Less than 180 Leases

Reporting:

92 Reported in Energy Star

Results:

59 Facilities (64%) score 75 or greater

85 Facilities (92%) score 50 or greater

Green Requirements for Leases

RCW 19.27A (2009)

- May Apply to Less than 180 Leases
- Co-Locations are often Pro-Rated

Reporting:

- 92 Reported in Energy Star
- May Represent most of the applicable leases

Results:

- 59 Facilities (64%) score 75 or greater
- 85 Facilities (92%) score 50 or greater
- Results need to be verified

Funding?

Audits Process

Initial Challenges:

- Establishing Clear Expectations
  - Definition of Cost Effective
- Owner Buy-in
  - What is in it for them?
- Agency Cooperation
  - "But I like my space heater"
- Timing
  - Audit Completion ~ Lease Expiration
- Owner Follow Through
- Culture Change
  - Limited Resources

Executive Order 12-06

Issued in 2012

Renewed Emphasis on Energy Performance

Data Collection - Owner Responsibility

Definition for Cost Effective

No Funding Loophole

Contact information

Christopher Gizzi,
Architect, LEED AP
christopher.gizzi@des.wa.gov

Related DOE and EPA Initiatives

Better Buildings Alliance (BBA)

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

EERE Home | Programs & Offices | Consumer Information

Better Buildings Alliance

Better Buildings

SEARCH

Search Help

Installation of night curtains

Whole Foods Market, a BBA member, installed night curtains to cover the refrigerated produce cases when stores are closed. This strategy lowers the cooling load on the refrigeration case by about 40% during unoccupied periods.

BETTER BUILDINGS ALLIANCE SIGN-UP FORM

Building owners and operators can join the Better Buildings Alliance (BBA) by completing the sign-up form.

SIGN-UP FORM

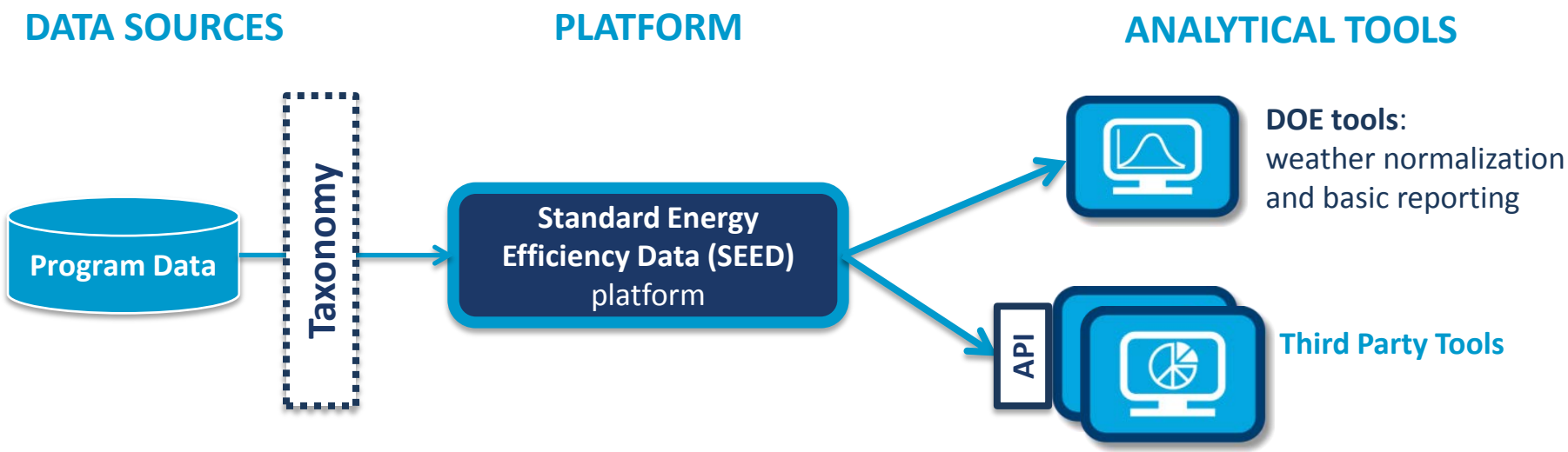
Join the Better Buildings Alliance

http://www1.eere.energy.gov/buildings/betterbuildings/bba/bba-index.html

Through the Better Buildings Alliance, members in different market sectors identify specific barriers and work with the U.S. Department of Energy's (DOE) exceptional network of research and technical experts to develop and deploy innovative, cost-effective, energy-saving solutions that lead to better technologies, more profitable businesses, and better buildings in which we work, shop, eat, stay, and learn.

Standard Energy Efficiency Data (SEED) platform

- The SEED platform is a blank database structure. Each user can create their own "instance" of the platform.
- SEED enables users to import data from multiple sources about the same group of buildings, and conduct analysis and reporting of the information.
- The SEED platform utilizes a standard format.
- The owner of each SEED instance can choose which external parties can access the information, and what fields to share.
- An API will enable third-parties to develop additional tools that can be used by many SEED users.



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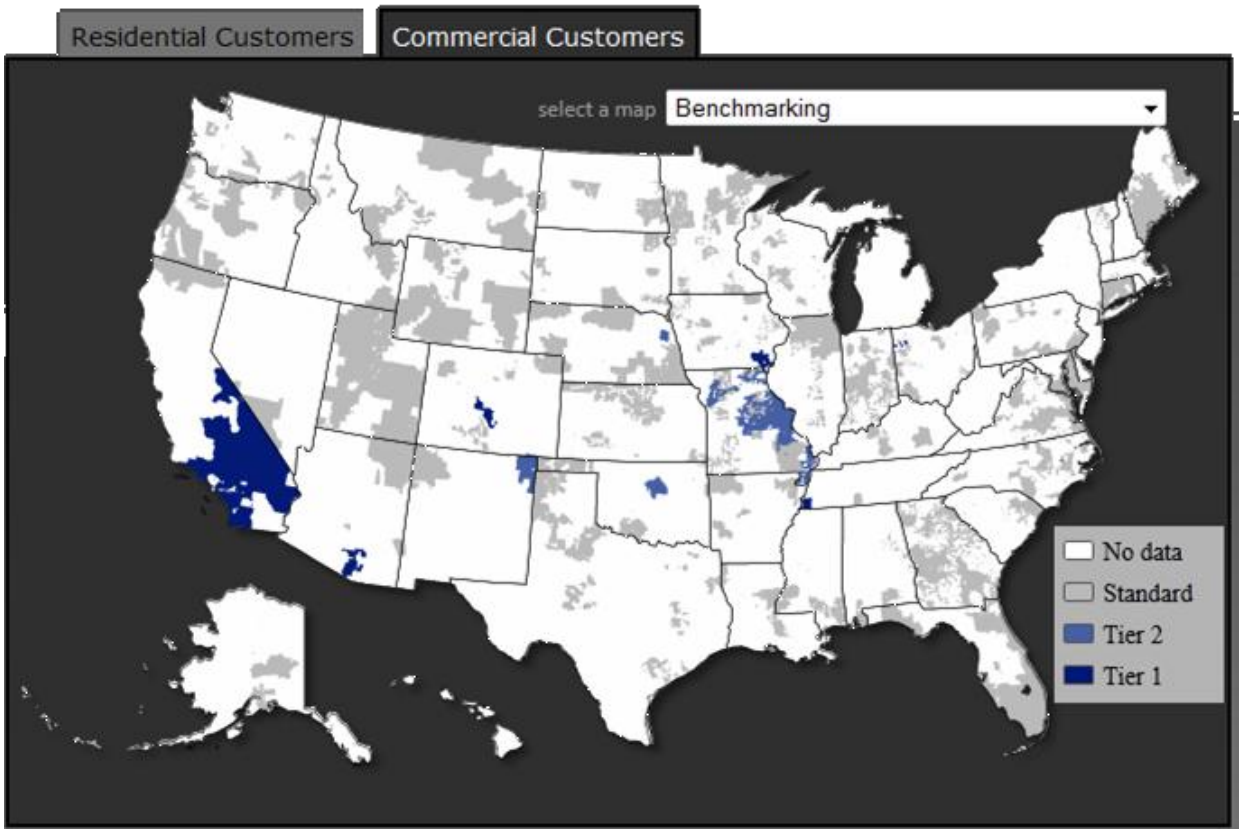
Access to Utility Data



Green Button

~25% of utilities have completed the questionnaire

http://en.openei.org/wiki/Utility_Access_Map

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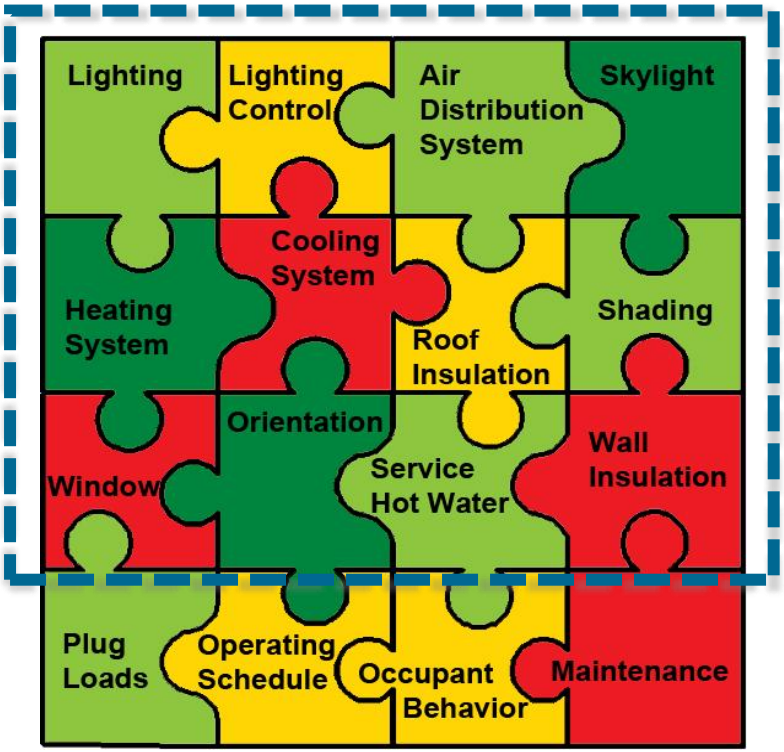
www.seeaction.energy.gov

Commercial Building Asset Rating Program

- Complements Portfolio Manager providing a common platform for:
  - Evaluating the inherent energy performance of buildings' physical characteristics while controlling for building operation and tenant behavior
  - Identifying energy efficiency improvements
- Looking for pilot participants to test tool for select building types (office, school unrefrigerated warehouse, public assembly)

Energy Asset Rating



Building energy use is affected by many factors

For more information, visit:

http://www.commercialbuildings.energy.gov/assetrating.html

Buildings Performance Database (BPD)

- The BPD contains *actual data* on tens of thousands of existing buildings - not modeled data or anecdotal evidence.
- The BPD enables statistical analysis without revealing information about individual buildings.
- The BPD cleanses and validates data from many sources and translates it into the standard format.
- In addition to the BPD's analysis tools, an API will enable third parties to create applications using the database.

SEE Action

STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

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www.seeaction.energy.gov/existing_commercial.html