DOE Technical Assistance Program

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

SEE Action Series:
Strategic Energy Management

November 7, 2012

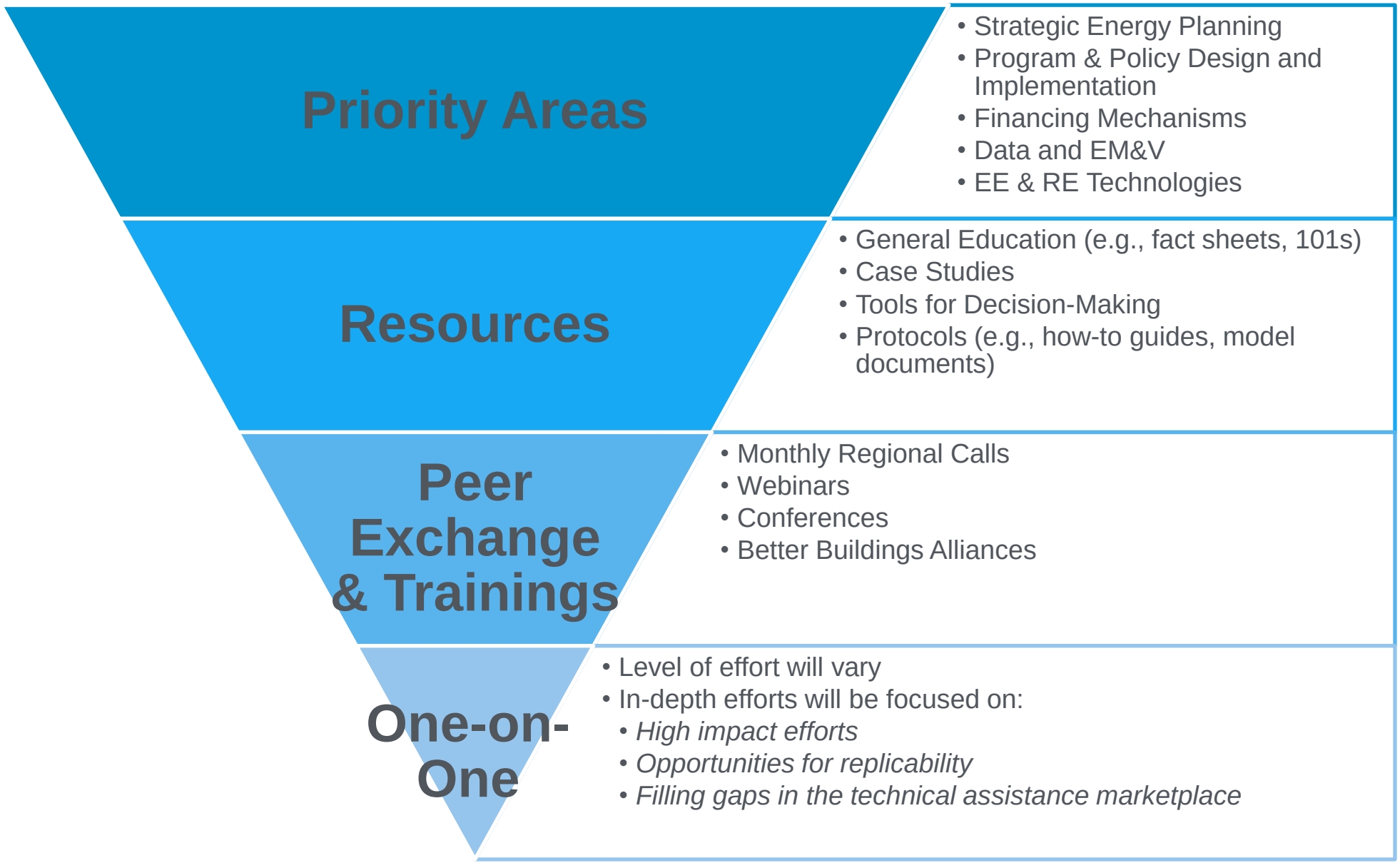
What is the Technical Assistance Program?

- 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 does this by:
  - Catalyzing and assisting state and local leadership
  - Promoting standardized approaches
  - Addressing specific market barriers

TAP is Evolving

- Just like state and local governments, TAP has a post-ARRA transition to contend with
- Rather than reverting back to our pre-ARRA framework, TAP is evolving
  - TAP's mission will continue to be supporting states, locals, and tribes take clean energy to scale
  - But now, more than ever, we want to get the biggest bang for our more limited buck – and help you do this as well
- Moving forward we will be focused on:
  - Key ***priority areas*** to address specific market barriers
  - ***Resources*** to disseminate standardized approaches and best practices
  - Facilitating communication and learning among ***peers***
  - Targeted ***one-on-one assistance***

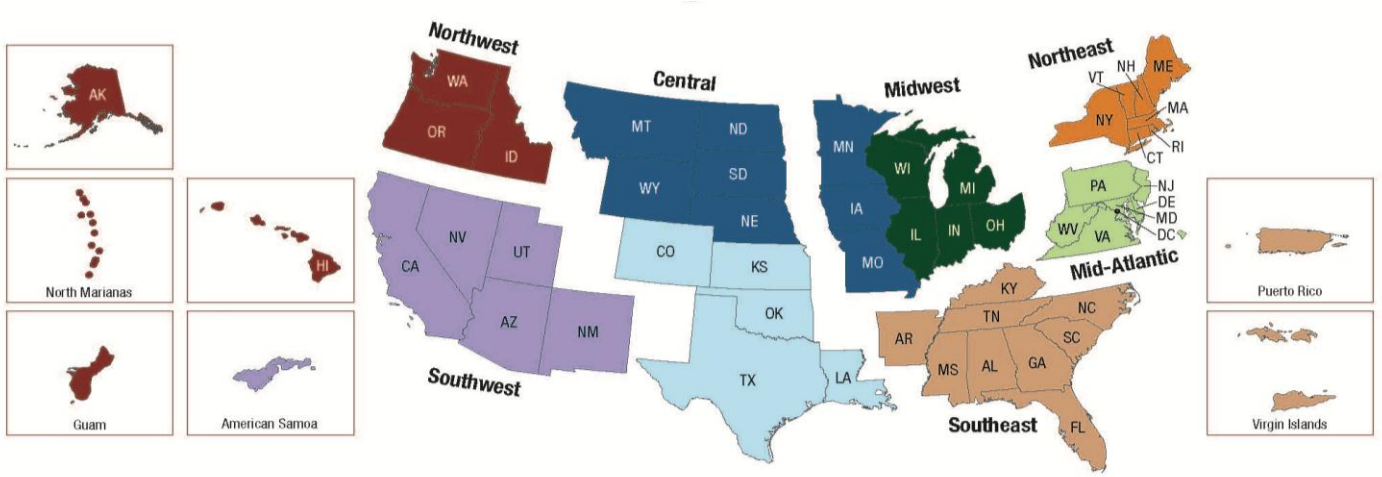
New TAP Approach



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 your Regional Coordinator
  http://www1.eere.energy.gov/wip/solutioncenter/pdfs/rcmapsep2012.pdf



State Regional Coordinators

Northeast	Chuck Guinn, straguinn@aol.com 518-478-0748
Mid-Atlantic	Chuck Clinton, cclinton@naseo.org 703-299-8800 x19
Southeast	Brian Henderson, bhenderson@naseo.org 518-469-7497
Midwest	Jeff Pillon, jpillon@naseo.org 517-580-7626
Central	Jim Ploger, jploger@naseo.org 785-383-2557
Northwest	Bill Nesmith, wnesmith@naseo.org 503-580-4499
Southwest	Jim Arwood, jarwood@naseo.org 602-468-1702

Local Regional Coordinators

Northeast	Joseph Hughes, joseph.hughes@ee.doe.gov 202-287-1891
Mid-Atlantic	Amy Jiron, amy.jiron@go.doe.gov 720-356-1639
Southeast	Kelsie Hammond, kelsie.hammond@go.doe.gov 720-356-1643
Midwest	Luke Gomes, luke.gomes@go.doe.gov 720-356-1624
North Central	Jon Krieger, jon.krieger@go.doe.gov 720-356-1626
South Central	Todd Allen, todd.allen@go.doe.gov 720-356-1634

Team Coordinator

Christie Rewey, christie.rewey@go.doe.gov 720-356-1646

Northwest	Tertia Speiser, tertia.speiser@go.doe.gov 720-356-1637
Southwest	Johanna Sevier, johanna.sevier@go.doe.gov 720-356-1616

How to Tap into TAP?

- 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

Stay tuned for upcoming announcements:

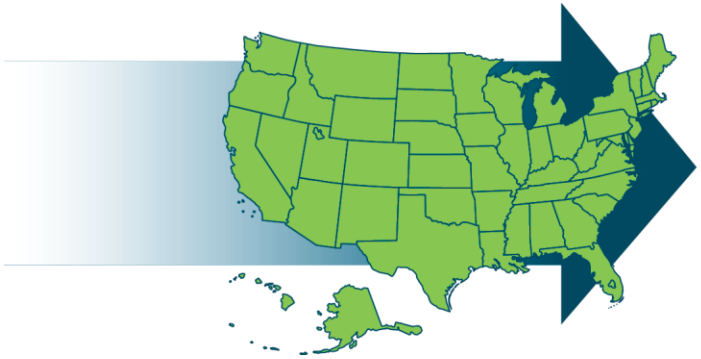
- ***Better Buildings Alliances***
- ***Solution Center facelift, including peer exchange and training calendar and new searchable resource database***

Next Steps

- Email announcement to public, 11/02
- Webinar for the public, 11/8
  - 3:00 – 4:00 pm EST

If you have any questions, concerns, or suggestions regarding the TA effort please email us at

TechnicalAssistanceProgram@ee.doe.gov



SEE Action

STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

SEE Action Existing Commercial Buildings Working Group

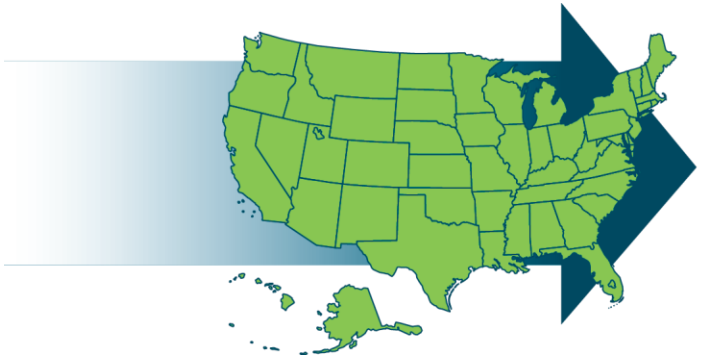
Strategic Energy Management

Alex Dews, Philadelphia, Pennsylvania
Sarah O'Connell and Jeannine Altavilla, Arlington County, Virginia
Renee Hutcheson and Len Hoey, State of North Carolina

November 7, 2012

Agenda

- SEE Action Overview
- Introduction to Strategic Energy Management Programs
- Local Government Example: Philadelphia, PA
- Local Government Example: Arlington County, VA
  - Questions
- State Government Example: North Carolina
- Related DOE and EPA Initiatives
- Discussion and Questions



SEE Action

STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

SEE Action Overview

What is SEE Action?

A state and local effort facilitated by the federal government that helps states, utilities, and other local stakeholders take energy efficiency to scale and achieve all cost-effective energy efficiency by 2020.

For more information, visit:
www.seeaction.energy.gov

SEE Action
STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

SEE Action Leadership

- **Executive Group** of more than 30 stakeholders including state and local governments, associations, business leaders, non-governmental organizations, and others.
- **Eight Working Groups** help SEE Action achieve its goal of capturing all cost-effective energy efficiency by 2020.

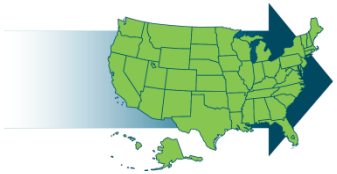
SEE Action
STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

Existing Commercial Buildings Working Group: Motivation

- The majority of office space that will be used in next decade has been built.
- Commercial buildings use:
  - ~50% of U.S. building energy use.
  - ~20% of total U.S. energy use and GHG emissions.
- Public buildings are ~25% more energy-intensive than private buildings.
- Commercial building owners/managers spend more than $2 per sq. ft. on energy.
- ~5 to 15 jobs created per $1M invested in energy efficiency.
- Energy-efficient buildings have higher occupancy levels, lease rates, and sales prices.

Existing Commercial Buildings Working Group: Priority Policies and Program Solutions

- Drive Demand for Energy Efficiency
  - **Benchmarking, Rating, and Disclosure**
  - **Retro-commissioning**
  - Ratepayer-funded Programs
  - Public-Private Partnerships (Energy Challenges)
- Enable Efficiency Operations and Investment
  - **Strategic Energy Management**
  - **High-Performance Leasing**
  - Financing Innovation
- Build the Workforce
  - Education & Training
  - Materials
  - Certification
- Move the Market
  - High-Performance Procurement
  - Emerging Technology Demonstration



SEE Action
STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

www.seeaction.energy.gov

Existing Commercial Buildings Working Group: Resources

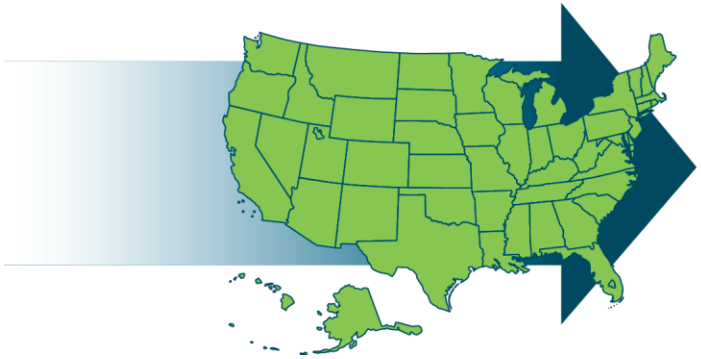
- Fact sheets: benchmarking, rating, and disclosure; retro-commissioning; high-performance leasing; strategic energy management programs
- Model policy design guides: benchmarking, rating, and disclosure; retro-commissioning (under development); data access for commercial building energy performance benchmarking (under development)
- Expert / peer support: guidance on adopting and enhancing policy and program solutions

Have other ideas?
Please let us know.

SEE Action
STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

How Can State & Local Governments Get Involved?

- Download and share SEE Action resources.
  - Visit http://www1.eere.energy.gov/seeaction/existing_commercial.html .
- Tell us your story.
  - E-mail adam.guzzo@ee.doe.gov and let us know what you're doing to promote energy efficiency in existing commercial buildings.
- Share your data.
  - E-mail adam.guzzo@ee.doe.gov to participate in the SEED platform or asset rating pilots.
- Request assistance.
  - E-mail adam.guzzo@ee.doe.gov and let us know which policy/program you are interested in learning more about.



SEE Action

STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

Introduction to Strategic Energy Management Programs

Alex Dews

Philadelphia, Pennsylvania

What is Strategic Energy Management?

- A long-term approach that drives increased energy savings and greater savings persistence as compared to the conventional single-measure retrofit approach
- Focus on continuous improvement across whole buildings, not just short-term savings from single technologies
  - Sets energy savings goals
  - Looks across building systems
  - Extends from single buildings to portfolios
  - Uses tracking and reporting systems to measure progress towards goals
  - Institutionalizes best practices to sustain savings over time

Incorporating Strategic Energy Management into State and Local Policy

- Public agencies implementing strategic energy management programs for their own operations can lead by example and encourage private organizations to adopt best practices
- Governments also can reach private markets through public-private partnerships that promote organization-wide energy management (such as energy challenges), and by adopting policies that complement strategic energy management plans
- Successful strategic energy management programs build long-term relationships with energy users and can improve the persistence of energy savings and the property value of buildings

SEE Action
STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

Implementing Strategic Energy Management for Public Buildings

- Start at the top
- Build the program
- Develop baseline data
- Design a data collection / reporting system
- Establish goals
- Launch the program
- Monitor performance
- Adjust and adapt
- Publicize success
- Review and re-assess goals

SEE Action
STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

Influencing the Private Sector to Adopt Strategic Energy Management

- Share successes and lessons learned from an internal energy management program
- Host or sponsor voluntary energy, green business, or greenhouse-gas reduction challenges
- Host energy management working groups
- Adopt policies that complement strategic energy management (e.g., benchmarking, retrocommissioning)
- Tie development policies to energy management programs.

Influencing the Private Sector to Adopt Strategic Energy Management

- Share successes and lessons learned from internal energy management program
- Host or sponsor voluntary energy, green business, or greenhouse-gas reduction challenges
- Host energy management working groups
- Adopt policies that complement strategic energy management (e.g., benchmarking, retrocommissioning)
- Tie development policies to energy management programs.

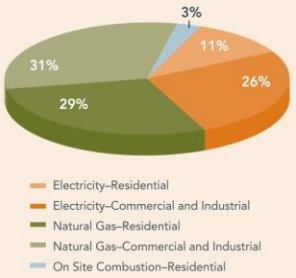
ENERGY

GOAL: PHILADELPHIA REDUCES ITS VULNERABILITY TO RISING ENERGY PRICES

BASELINE	BASELINE YEAR	CURRENT	2015 GOAL
TARGET 1 Lower City Government Energy Consumption by 30 Percent			
3.77 Trillion BTUs	2008	3.58 Trillion BTUs	2.64 Trillion BTUs
TARGET 2 Reduce Citywide Building Energy Consumption by 10 Percent			
111.82 Trillion BTUs	2006	126.79 Trillion BTUs	100.64 Trillion BTUs
TARGET 3 Retrofit 15 Percent of Housing Stock with Insulation, Air Sealing, and Cool Roofs			
3,500 Homes Retrofitted	2008	7,877 Homes Retrofitted	84,400 Homes Retrofitted
TARGET 4 Purchase and Generate 20 Percent of Electricity Used in Philadelphia from Alternative Energy Sources			
2.3% Alternative Energy	2008	12.2% Alternative Energy	20% Alternative Energy

Energy Use by Source

2010



Electricity Generated At Southeast Wastewater Treatment Plant

SINCE COMPLETION



The City has 1300 facilities with a diverse set of energy needs:

- Top 10 energy users* make up 44% of overall energy use; 50% of cost
- Top 40 energy users* make up 70% of overall energy use; 63% of cost





Education and Outreach

energy

Technical Support

Energy and Sustainability
Focused Consultant

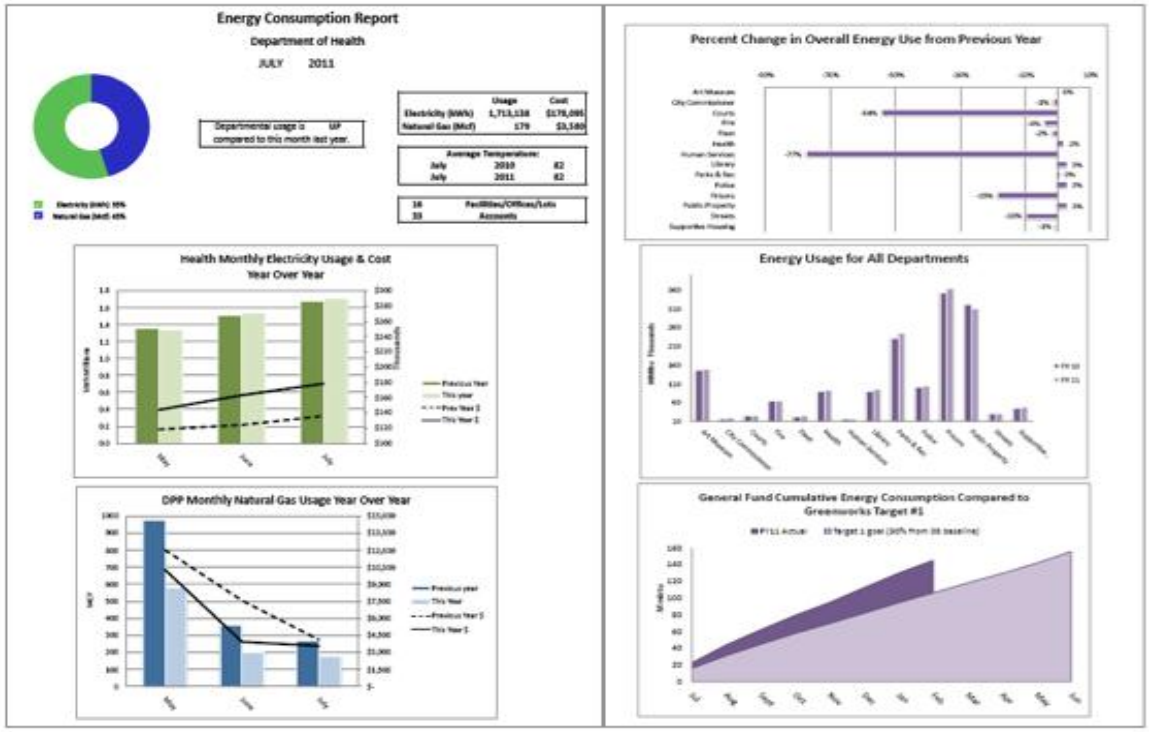
Training

Capital Program Division
Operations and Maintenance

Behavior Change Program

Energy and Water Conservation
Recycling and Waste Reduction
Commuting and Transportation
General Environmental
Awareness

Tracking and Reporting



SEE Action
STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

Strategic Energy Management

Arlington County, Virginia

Presented by:

Jeannine Altavilla & Sarah O'Connell

November 7, 2012

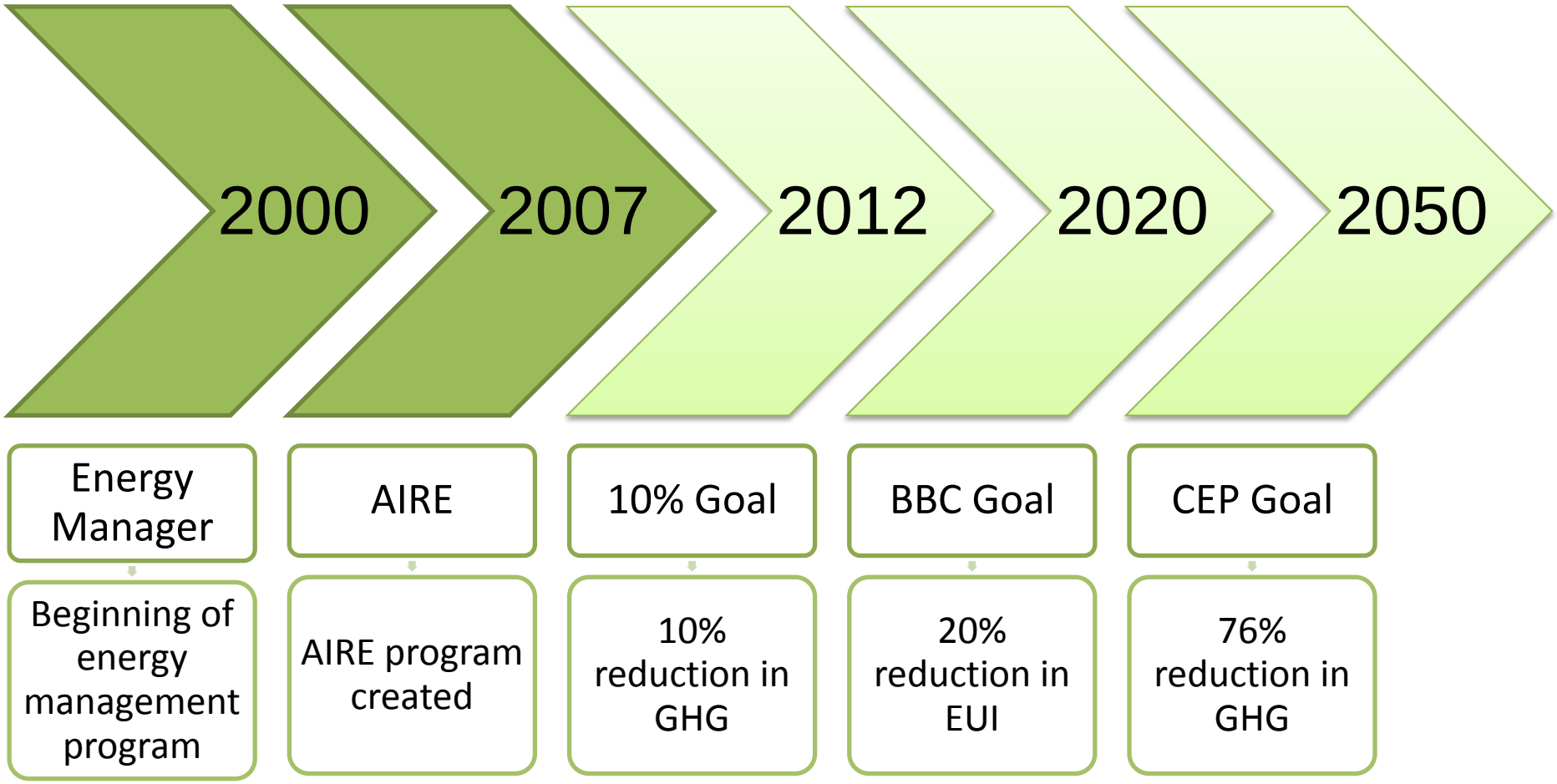
Webcast held by:

US Department of Energy's State and Local Energy Efficiency Action Network & Technical Assistance Program

Agenda

- County Government Commitment
- County Activities Today
- Community Engagement
- Questions?

County Energy Management Timeline



Today

- Tracking Energy Use
  - Utility online accounts
  - Portfolio Manager
  - EnergyCAP
- Interdepartmental partnerships to address issues
- Facilities Maintenance partnership

Transparency

AIRE
ARLINGTON INITIATIVE TO REDUCE EMISSIONS

Learn Green
Live Green

Residents | Businesses | County Operations | Programs | Events | About Us

enter search terms

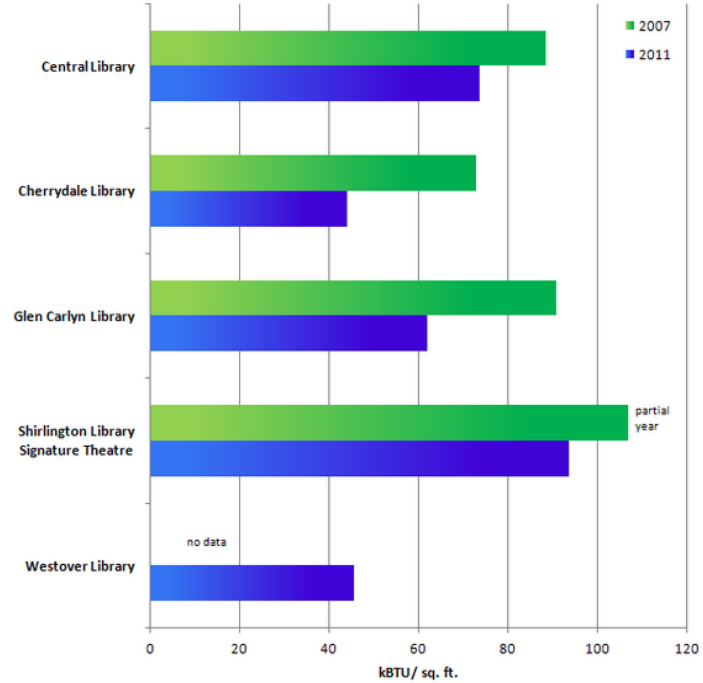
Libraries

Arlington County's libraries offer more than books, including public Internet access, art exhibits, special events and lecture series, and meeting rooms. Note Columbia Pike Library is not included because that branch is part of the Career Center facility managed by Arlington Public Schools, and that branch has no separate utility meters. Similarly, the Aurora Hills Library is included in the Aurora Hills Community Center, which is shown under Community Centers on a separate page. *Select a Library listed on the right for more information.*

Select a Building

- Central Library
- Cherrydale Library
- Glen Carlyn Library
- Shirlington Library/Signature Theatre
- Westover Library

Libraries: Site Energy Use Intensity, 2007 and 2011



http://freshaireva.us/2012/04/building-energy-report-cards/

Walter Reed Community Center

The Walter Reed Community Center houses numerous programs throughout the day and evening, and serves as an Adult Day Health Care Center. The center used more energy than anticipated or desired when it opened in May 2006. In 2008 AIRE funded a forensic engineering study of this building's performance, and in 2009-2011 we have made improvements to cut energy use nearly in half since 2007.

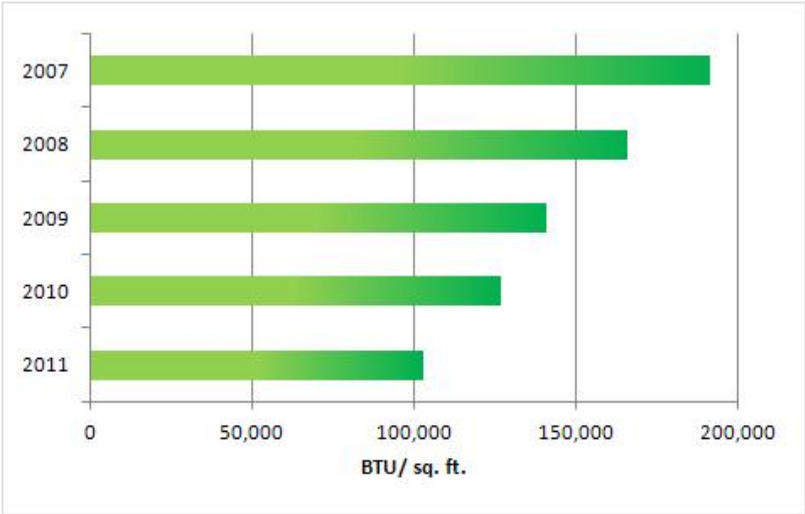
See the data and information below for more on the energy use and savings associated with this building.

2011 Energy Performance Label

Energy Use by Month (2007-2012)

Learn more about the Walter Reed Community Center with this 2010 Building Case Study.

Annual Energy Use Intensity*

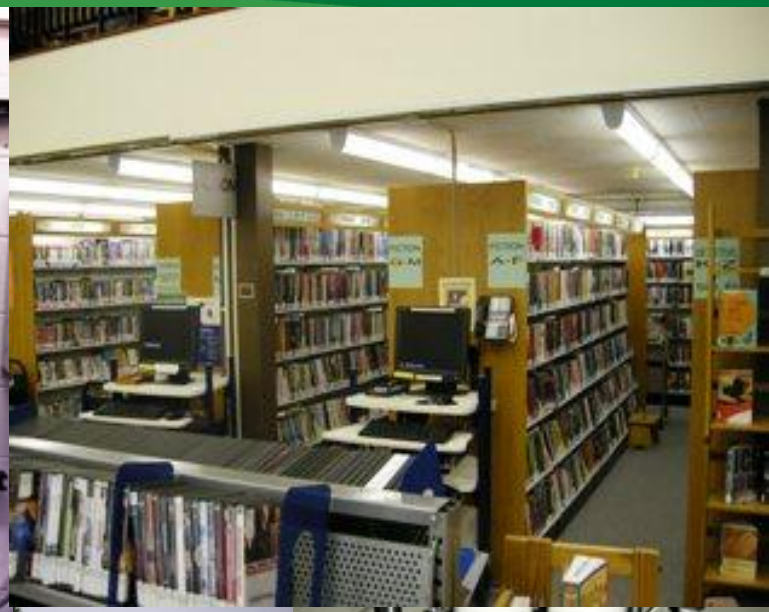


Cool Roof Coating

Weatherization Work

Achieving Energy Savings

- Extensive lighting retrofits
- Upgrading heating and cooling systems
- Building automation systems
- Retrocommissioning buildings
- Street light replacement



Old Boiler

New energy efficient boiler

Case Studies

AIRE
ARLINGTON INITIATIVE TO REDUCE EMISSIONS

AIRE ENERGY SPOTLIGHT
DREWRY CENTER

FAST FACT
ARLINGTON COUNTY REDUCED EMISSIONS IN DREWRY CENTER BY 25% BETWEEN 2007 AND 2010.

ABOUT AIRE

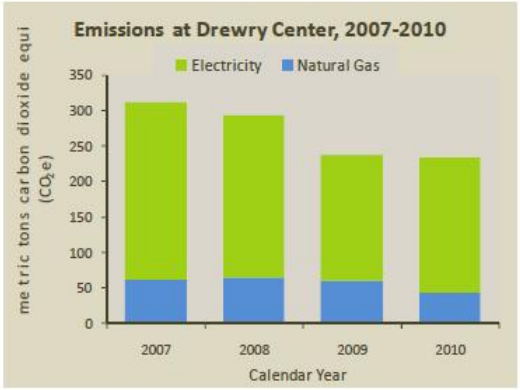
Climate disruption is one of the most serious challenges facing our world today. To protect the health and economic well-being of current and future generations, we must reduce our emissions of heat-trapping gases by using the technology and practical solutions already at our disposal. The Fresh AIRE program—Arlington Initiative to Reduce Emissions—began in 2007 with the goal of reducing greenhouse gas emissions (primarily carbon dioxide (CO_2)) across the County.

Arlington is committed to cutting greenhouse gas emissions from government operations to 10% below 2000 levels by 2012. We will achieve this by improving energy efficiency in our buildings, vehicles, and infrastructure; using alternative fuels and green power; increasing recycling; conserving and protecting water; and maintaining and enhancing the tree canopy in Arlington.

AIRE is supporting and encouraging the community to join us by committing to actions that will make Arlington a more sustainable place to live, work, and play.

www.arlingtonva.us/aire
www.arlingtonclimateblog.com
climate@arlingtonva.us

Built in 1920, the 26,000 square foot Drewry Mental Health and Substance Abuse Center is a heavily used outpatient office facility which presents energy management challenges. This building has multiple HVAC systems due to building additions over time. These systems include a combination of two-pipe fan-coil units, hydronic baseboard heating, a central chiller and boiler, and rooftop air conditioning units. The County has been making steady improvements to the facility since 2008 to reduce both electricity and natural gas use.



OUR IMPROVEMENTS

Since 2008, we retrofitted lighting from T12s to T8s throughout the building, which yielding a 20% reduction in total building electricity use in just a year. We also upgraded the building automation system in this facility to better schedule heating and cooling equipment. In the summer of 2009, AIRE funds replaced the aging central boiler. In 2010, we fine-tuned the HVAC distribution system with both mechanical changes and building automation work.

EVERYDAY TIPS

Get an Energy Audit. No matter what type, size, or style building you occupy, understanding how energy is being used enables you to make better decisions about proper efficiency investments that yield the most financial return.

Reduce, Reuse, then Recycle. When possible, purchase goods made from durable, recycled, toxin-free materials with minimal packaging. Reuse, repurpose, donate, or sell unwanted items. Recycle packaging. You'll minimize materials processing and prevent toxic materials from getting back into our environment.

Travel Smart. Getting around Arlington is easy with the extensive network of bike/walk paths, bus routes, Metro stations, and car-sharing options. Think twice about how you get around town, go to work, and get out and play.

Consider Green Power. Homeowners, businesses, and organizations can choose to buy power from wind, solar, or other renewable sources. Buying green power reduces your carbon footprint and stimulates the market for renewable energy.

www.arlingtonva.us/aire
www.arlingtonclimateblog.com
climate@arlingtonva.us

VALUE TO THE COUNTY

Comparing the energy use of 2007 to 2010 (electricity and natural gas combined) the County is saving over $13,000 in annual energy costs and preventing over 120 metric tons of CO_2e from being released into the atmosphere each year. Overall, Drewry Center has reduced its emissions by 25% since 2007. These emissions reductions are equivalent to removing 85 cars from our roads or planting nearly 3,000 trees.

Compared to winter 2008-2009 (end of October thru the end of February), winter 2010-2011's natural gas use was down 33%, which saved the County over $4,000 in natural gas costs.

HOW DO WE RATE?

When we compare this building against a nationwide sample of medical offices/facilities, we found that in 2010 the Drewry Center was 41% more energy-efficient than its peers. In the spring of 2011, the Drewry Center was awarded the County's second ENERGY STAR label. We expect to keep seeing reductions in the coming year!

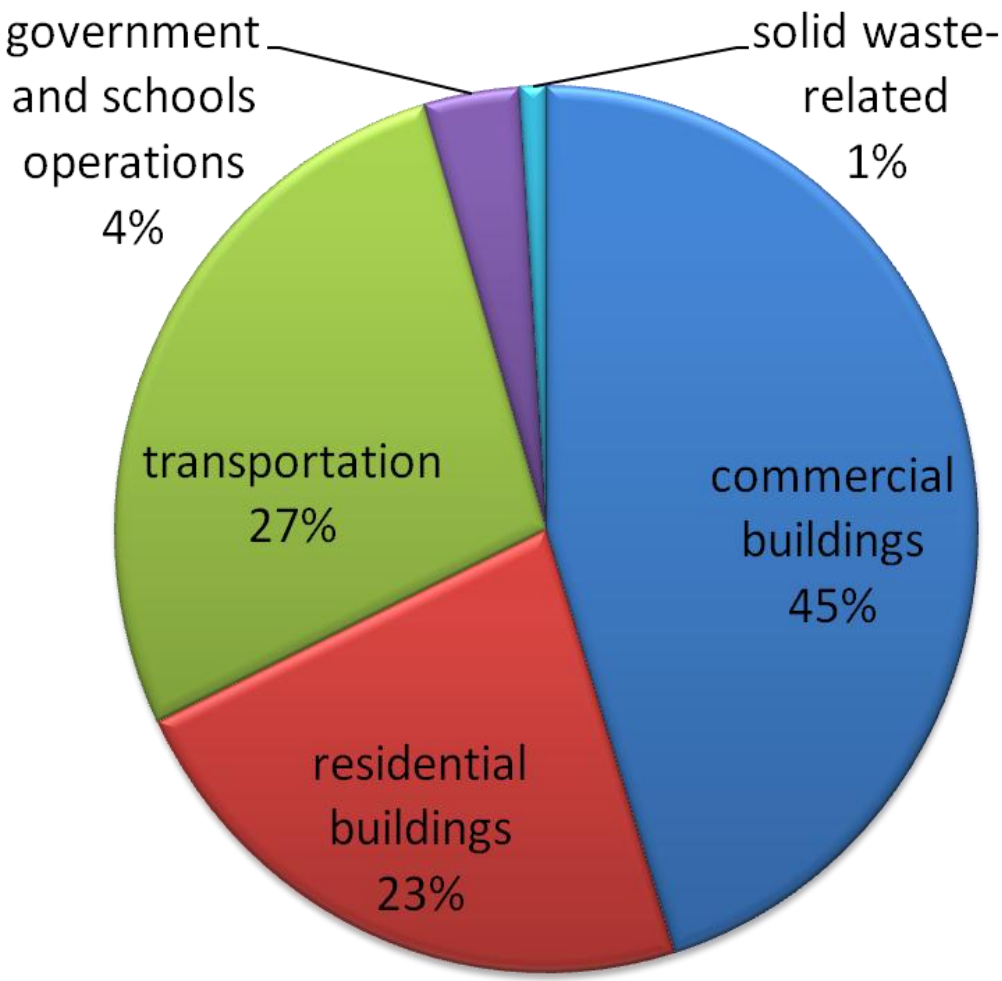
FOLLOW OUR LEAD

Many businesses and commercial properties in Arlington still have older lighting like the T12 lamps we retrofitted. Lighting retrofits and upgrades can pay for themselves quickly, and state and federal incentives are also emerging to help pay for such energy improvements. Check the AIRE website for more information.

Learn about the energy consumption of our entire portfolio by visiting our Building Energy Report Cards on the AIRE website, www.arlingtonva.us/aire.

Community Engagement

- AIRE's success has allowed us to expand programming
- County operations account for only 4% of the entire County emissions
- Arlington County has **nearly 44 million square feet of commercial office space** - more than downtown *Los Angeles*, *Denver* or *Dallas*.



Arlington Green Games

- Inaugural Season held in 2011 for the commercial office sector
- Retail and Restaurant sectors open now
- A friendly year-long competition for businesses to reduce costs while reducing their emissions
- Interactive program incorporating trainings, best practices, and technical assistance

Inaugural Season

- Over **100 competitors**, collectively managing nearly **15 million square feet** of buildings (1/3 of the commercial office space)
- Held 66 trainings (including 1 tour)
- Trained over 345 people

Property Managers/Buildings

Participation by **PROPERTY MANAGERS** tracked primarily through online tools (Portfolio Manager). Measured in four categories *(on the right)*

Master account in Portfolio Manager (energy and water); waste reports and rate info from waste hauler (waste); and participating tenants (tenant engagement)

STRETCH GOALS	BASE GOALS
30% Energy Reduction*	10% Energy Reduction*
20% Water Reduction*	10% Water Reduction*
50% Waste Diversion	30% Waste Diversion
50% Tenant Engagement	25% Tenant Engagement

GOLD AWARD
Achieve 2 (or more) Stretch Goals

SILVER AWARD
Achieve 1 Stretch Goal or 2 (or more) Base Goals

BRONZE AWARD
Achieve 1 Base Goal

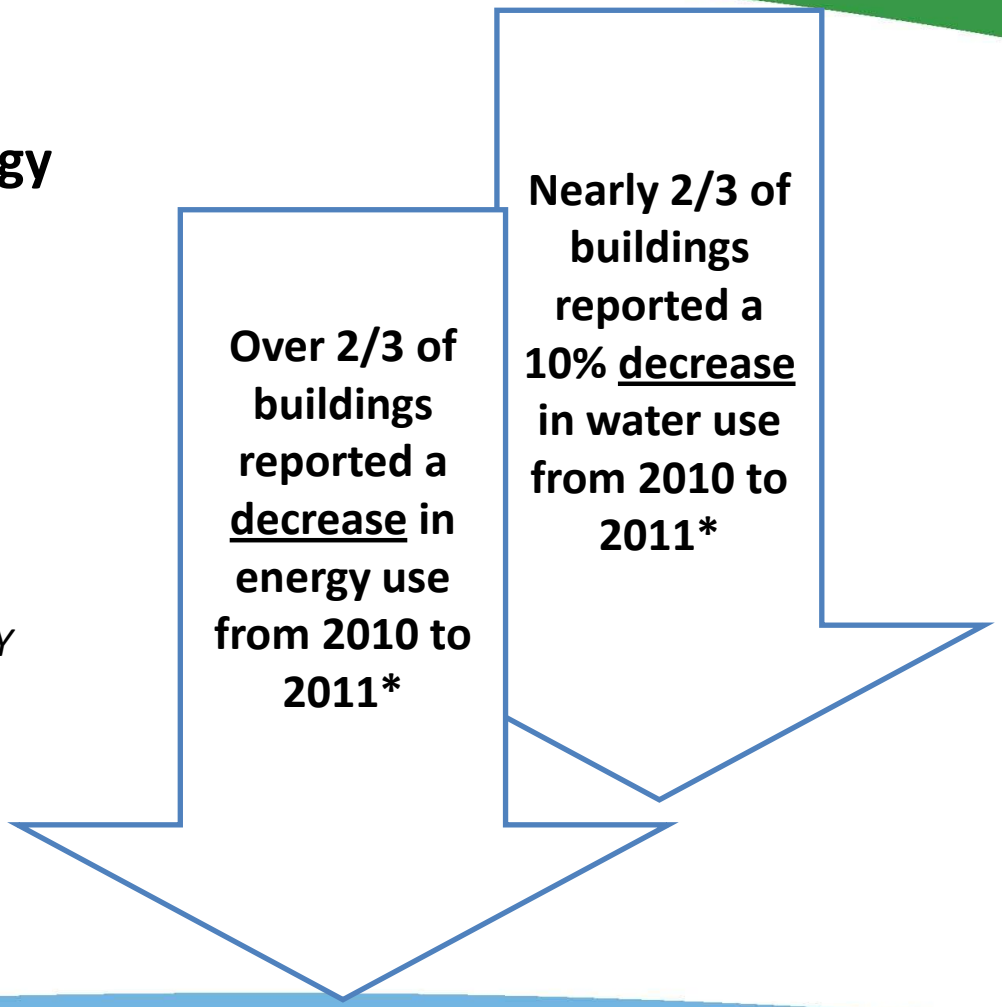
* Comparing data from 2010 to data from 2011

Building Results

Nearly 20% of building competitors reported **at least a 10% decrease in energy and water use***

Reported energy and water savings combined represent **over $2 million in avoided costs***

**Based on competitor data submitted through ENERGY STAR's Portfolio Manager tool*



Average building energy performance rating increased from 73 to 76 from 2010 to 2011!

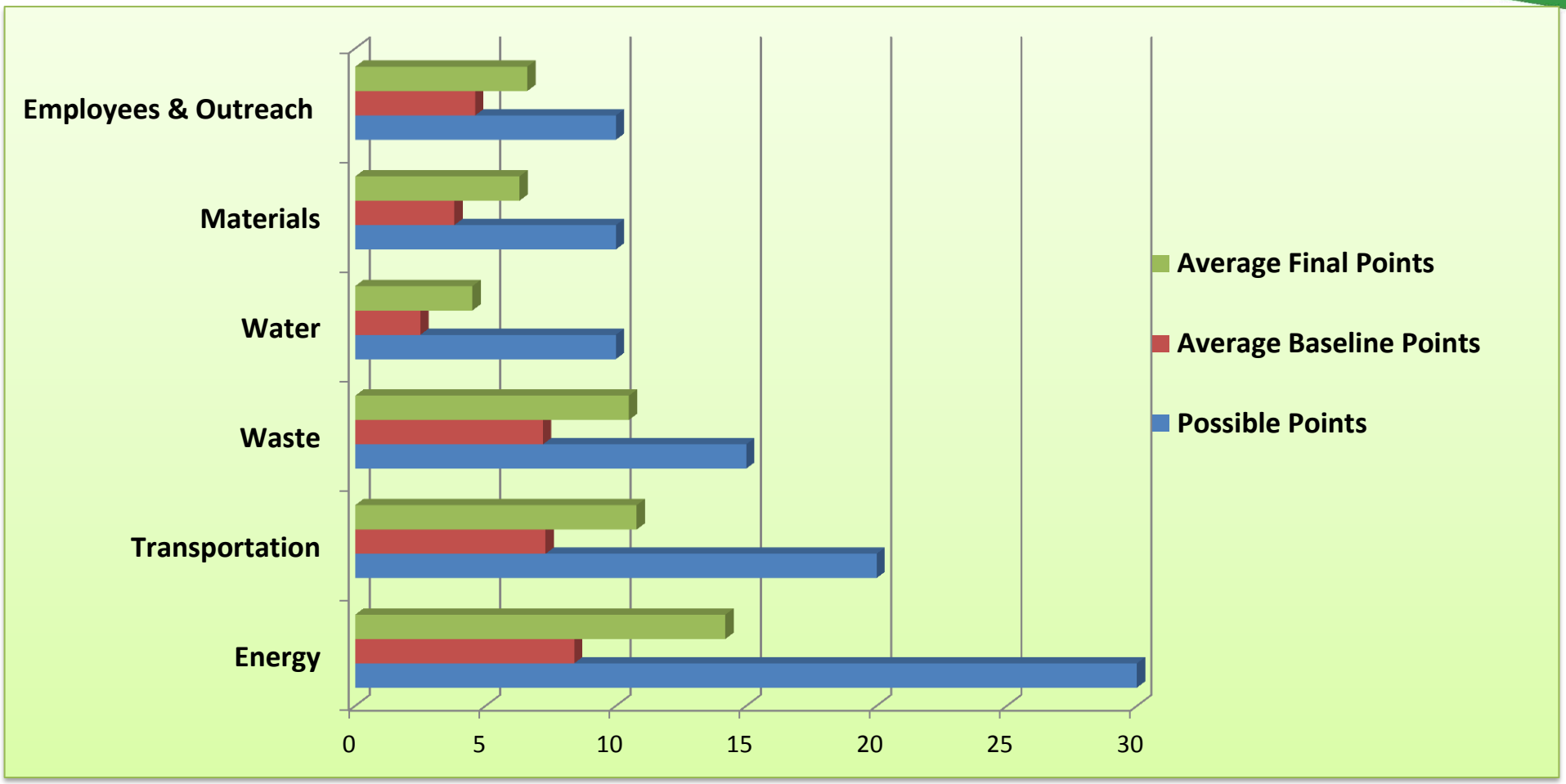
Office Tenants

OFFICE TENANTS completed online green action scorecard

Six categories + innovation; 30 actions

- Energy: 30 points
- Transportation: 20 points
- Waste: 15 points
- Water: 10 points
- Materials: 10 points
- Employees & Outreach: 10 points
- Innovation: 5 points

Office Tenants Results



Office tenants increased their points by 55% over the year

More Results

- **19 Gold Awards**
- **53 Silver Awards**
- **26 Bronze Awards**
- **3 Recognition Awards**

Why Did it Work?

- Studies show competitions are motivating factor
- County recognition/awards
- One-on-one face-time and assistance; regular communication
- Pre-set schedule of monthly trainings and events
- Support of property managers
- Baseline reporting

Lessons Learned

- Database of contacts – reaching target audiences
  - Partnerships are key
  - Peer pressure is key
- 12 months is a long time to stay motivated
  - Keep it fun
  - One-on-one attention and face time
  - Reminders about $avings and award recognition
- Staff turnover
  - Prevalent especially in property management world
  - Need for re-educating about the program

Lessons Learned

- Turning potential competitors away due to the annual cycle
  - Will they still be interested next year?
  - Invite to events – give them something to do/stay engaged in the meantime
- Websites are hard
  - Customization and data collection long and pricey
  - Private log-ins complicated by multi-user responsibilities
- Many federal agencies and contractors
  - High security
  - Need for privacy/anonymous participation

Going on Now…

for **Retail &**

for **Restaurants**

Questions?

Jeannine Altavilla
Jaltavilla@arlingtonva.us

Sarah O'Connell
seoconnell@arlingtonva.us

www.freshaireva.us
www.arlingtongreengames.com

Utility Savings Initiative

State of North Carolina

Presented by:

Len Hoey & Renee Hutcheson

November 7, 2012

Webcast held by:

US Department of Energy's State and Local Energy Efficiency Action Network & Technical Assistance Program

btu/sf
Utility Savings Initiative

North Carolina Energy Office energync.net
ENERGY

Utility Savings Initiative

- North Carolina's Public Building Program
- Created in 2002
  - Served all state agencies and UNC institutions
- Session Law 2007-546
  - Ratified August 2007
  - Existing buildings
    - 30% reduction in Btu/sf/year by 2015 from 2002-03 baseline
    - All agencies, UNC Institutions and community colleges report consumption and cost annually

Utility Savings Initiative

- Program Purpose:
  - Assist all public sectors in managing utility consumption and costs
- Program Now Serves:
  - 13 State Agencies
  - 21 UNC Institutions
  - 58 Community Colleges
  - 114 K-12 Public School systems
  - 100 Counties
  - 548 Municipalities

Utility Savings Initiative

- Program Services:
  - Communication and Training
    - Site visits and meetings
    - Energy audits
    - Speaking at functions
    - Focus Groups
    - Energy Management Diploma course

Utility Savings Initiative

- Program Services con't:
  - Performance Contracting
    - Education
    - Guide through the process
    - Administer and track the program

Utility Savings Initiative

- Program Services con't:
  - Data collection and reporting
    - The annual spreadsheet
    - Portfolio Manager
    - *Assist with preparing Strategic Energy Plan*

Strategic Energy Plans : The Roadmap to Achieving 30% Reduction

- Each participant prepares their unique SEP each year and submits it to SEO
- Each participant reports previous year's Key Performance Indicators to SEO
- SEO collects, assimilates, and analyzes all submitted SEP's and data
- SEO prepares statewide SEP and annual report to Gov Ops

Develop the Plan

- S.M.A.R.T Goals in a S.M.A.R.T Plan
  - **S**pecific
  - **M**easureable
  - **A**ction-Oriented
  - **R**ealistic
  - **T**ime-Dependent

Utility Savings Initiative

- Key Focus Areas of the State's SEP:
  - Communication and Training
  - Initiative Implementation
  - Performance Contracting

Utility Savings Initiative

Focus A: Supply Side	
Strategy 1.	
Strategy 2.	
Strategy 3.	

Past Year Activities (2008-2009)	Measurement Expected	Measurement Actual	Savings Expected	Savings Actual	Cost	Jobs	Accountability	Funding Source

2009-2010 Activities	Measurement Expected	Measurement Actual	Savings Expected	Savings Actual	Cost	Jobs	Assigned to	Funding Source

Utility Savings Initiative Results

	energy evaluation state agencies and UNC institutions					
	energy $ avoided	energy $/gsf	$/mmbtu	$/mmbtu %change	btu/sf	btu/sf %change
2002-03		$2.06	$12.57		164,179	
2003-04	$26,613,757	$1.88	$13.14	5%	143,397	-13%
2004-05	$28,324,251	$2.00	$13.85	10%	144,110	-12%
2005-06	$39,949,574	$2.26	$16.04	28%	141,151	-14%
2006-07	$43,838,425	$2.18	$15.70	25%	139,029	-15%
2007-08	$60,202,096	$2.33	$17.35	38%	134,366	-18%
2008-09	$55,818,468	$2.43	$17.63	40%	137,648	-16%
2009-10	$62,183,189	$2.38	$17.63	40%	135,185	-18%
2010-11	$77,773,019	$2.32	$17.89	42%	129,427	-21%
2011-12	$105,587,784	$2.21	$18.43	47%	119,862	-27%
2012-13	$0	$0.00	$0.00	0%	0	0%
2013-14	$0	$0.00	$0.00	0%	0	0%
2014-15	$0	$0.00	$0.00	0%	0	0%
2015-16	$0	$0.00	$0.00	0%	0	0%
2016-14	$0	$0.00	$0.00	0%	0	0%
2017-18	$0	$0.00	$0.00	0%	0	0%
2018-19	$0	$0.00	$0.00	0%	0	0%
2019-20	$0	$0.00	$0.00	0%	0	0%
	$500,290,563					

btu/sf
Utility Savings Initiative

North Carolina Energy Office energync.net
ENERGY

Utility Savings Initiative Results

	GHG evaluation state agencies and UNC institutions				
	Metric Tons Avoided	metric tons/ thousand sf	%change	CO2e Metric Tons	% change
2002-03		14.85	0%	1,057,007	
2003-04	132,507	13.49	-9%	1,314,998	24%
2004-05	137,447	13.50	-9%	1,376,223	30%
2005-06	148,220	13.48	-9%	1,457,732	38%
2006-07	186,876	13.17	-11%	1,461,894	38%
2007-08	225,329	12.92	-13%	1,503,222	42%
2008-09	219,142	13.02	-12%	1,553,246	47%
2009-10	237,564	12.90	-13%	1,568,874	48%
2010-11	293,915	12.50	-16%	1,564,039	48%
2011-12	388,312	11.85	-20%	1,531,360	45%
2012-13	0	0.00	0%	0	0%
2013-14	0	0.00	0%	0	0%
2014-15	0	0.00	0%	0	0%

1,969,312Total Metric Tons CO2e Avoided

btu/sf
Utility Savings Initiative

North Carolina Energy Office energync.net
ENERGY

USI Contacts

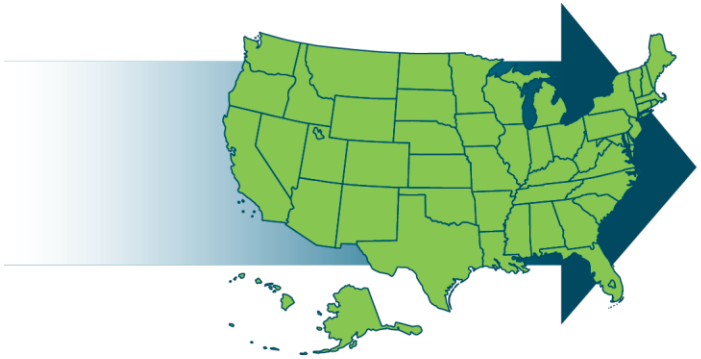
Len Hoey 919-733-1891
lhoey@nccommerce.com

Reid Conway 828-670-3389
rconway@nccommerce.com

Lyn Martin 919-208-0328
lmartin@nccommerce.com

Renee Hutcheson 919-715-1158
rhutcheson@nccommerce.com

www.nccommerce.com/energy



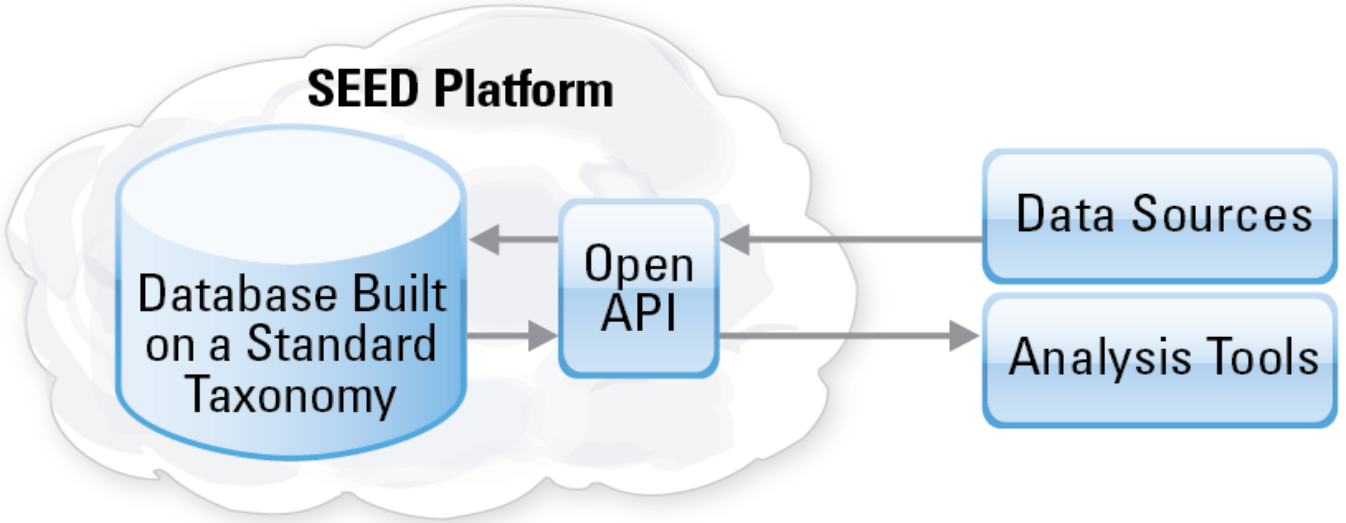
SEE Action

STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

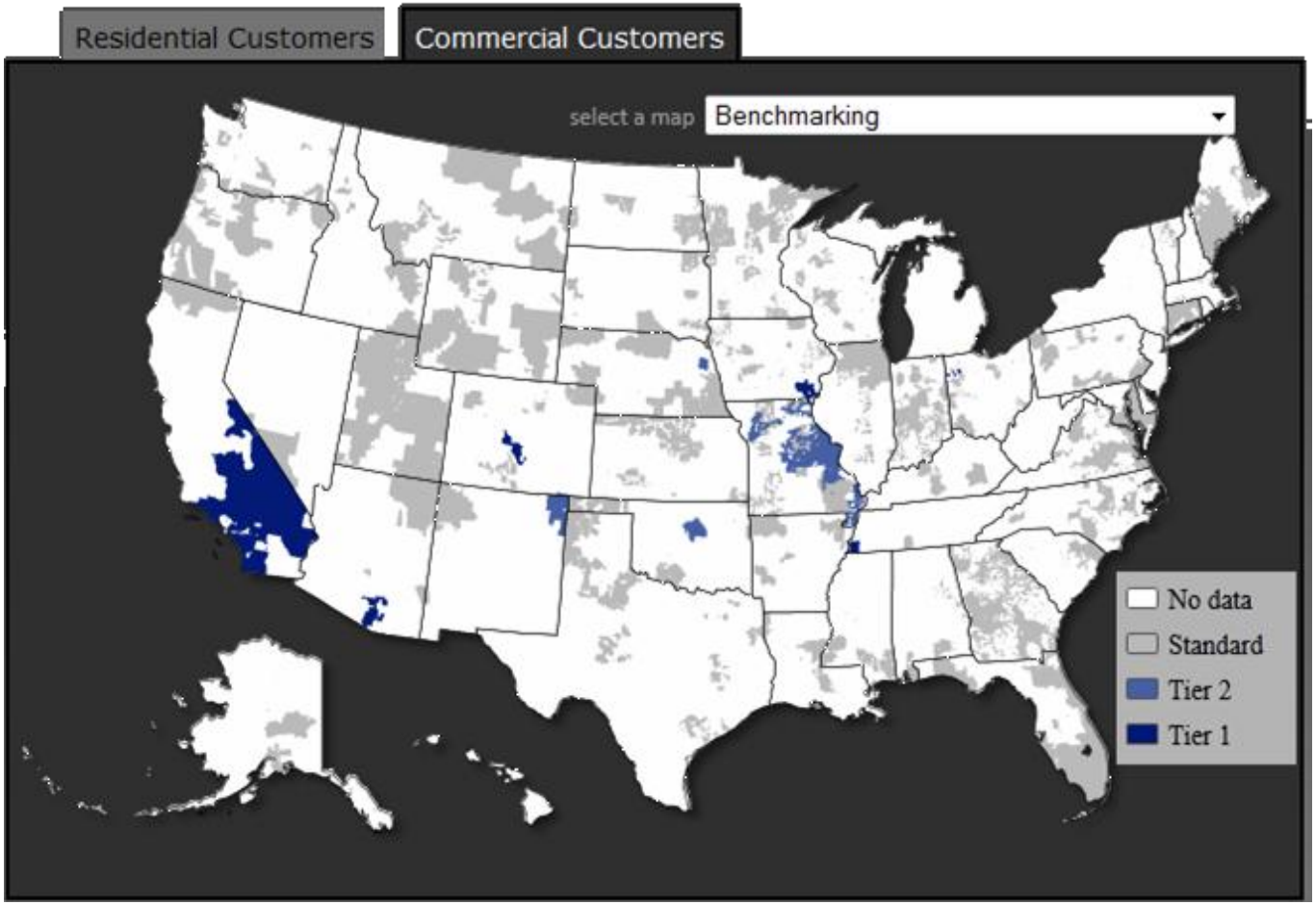
Related DOE and EPA Initiatives

Standard Energy Efficiency Data (SEED) Platform

The Standard Energy Efficiency Data Platform (SEED) is a software tool that allows state and local governments to quickly and easily create their own database using a standard building energy performance taxonomy, and easily share selected data with other parties as needed.



Access to Utility Data



Green Button

~25% of utilities have completed the questionnaire

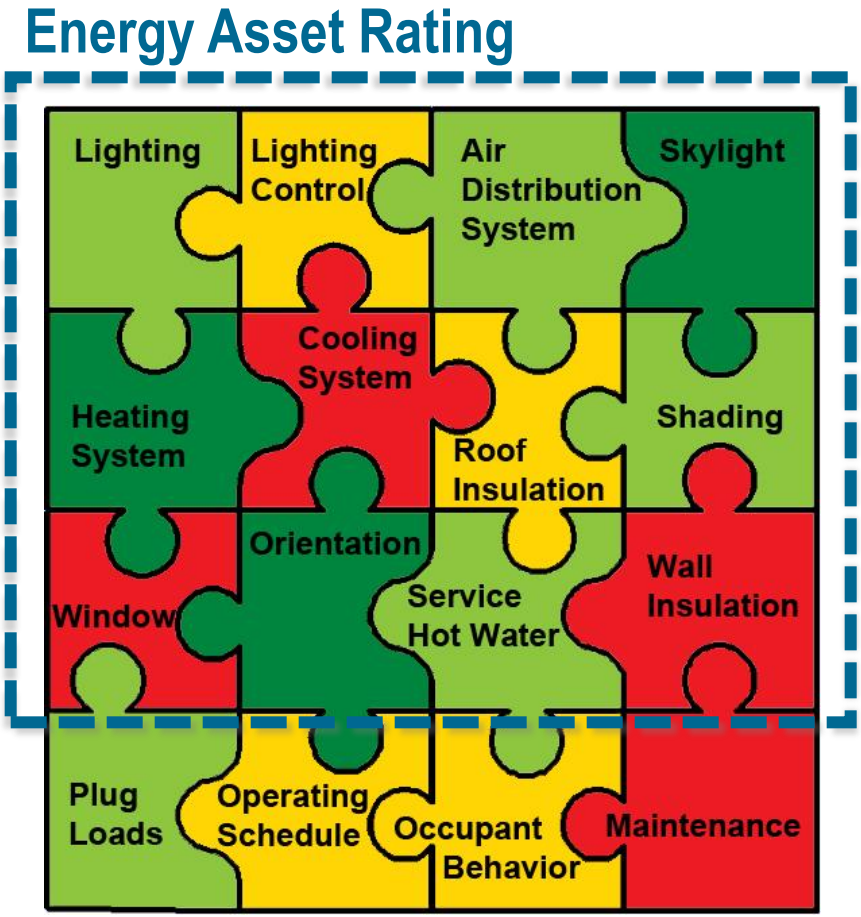
http://en.openei.org/wiki/Utility_Access_Map

SEE Action
STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

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)



Building energy use is affected by many factors.

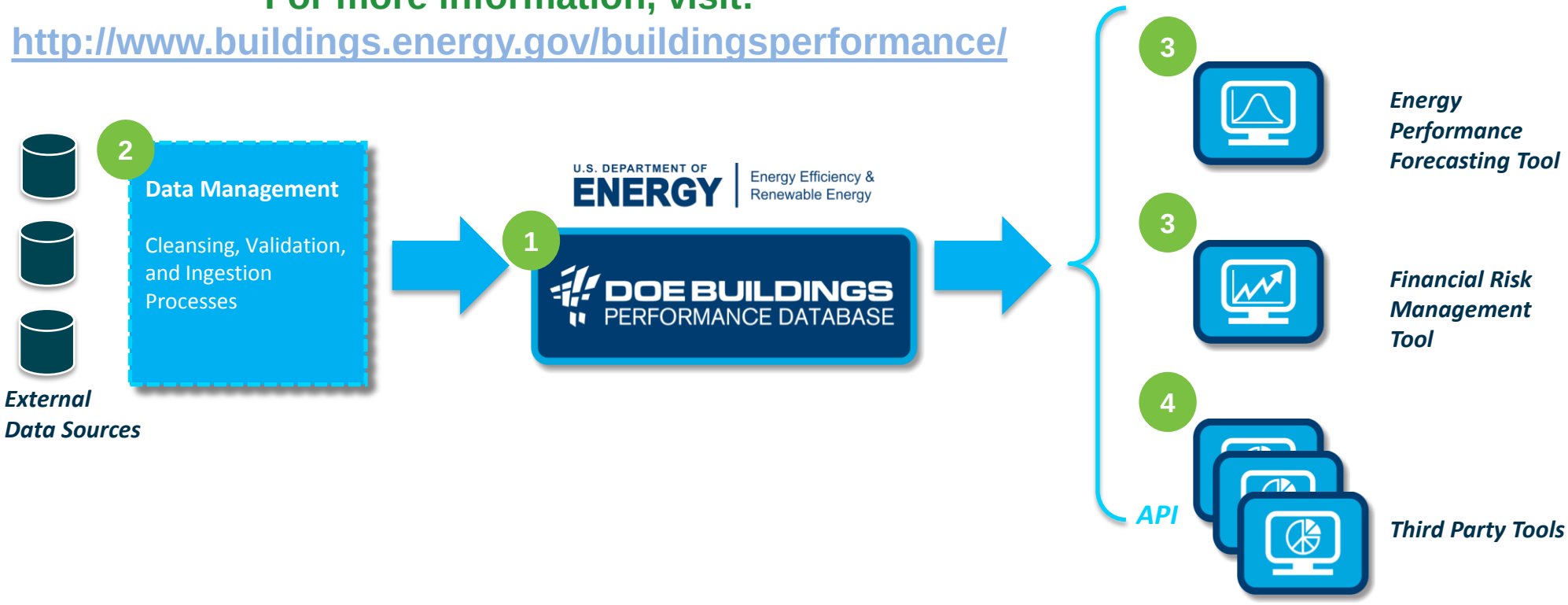
For more information, visit:

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

SEE Action
STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

Buildings Performance Database

For more information, visit:
http://www.buildings.energy.gov/buildingsperformance/



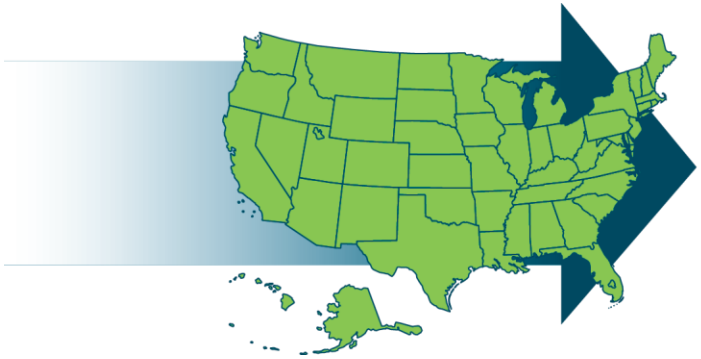
1. Common taxonomy: a standardized "data model" to organize energy use and building characteristic data
2. Data management: processes and tools to support the on-boarding and validation of data from multiple sources
3. Applications: web-enabled tools to forecast energy savings and related cash flows.
4. 3rd party tool support: API allows 3rd parties to create new applications to use the data in the database

Join Us For Additional SEE Action Webcasts This Fall/Winter

Topics to be covered include:

- High Performance Leasing Strategies

Early December 2012…..Exact dates and times TBD…stay tuned!



SEE Action

STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

Questions?

Alex Dews
Alex.dews@phila.gov

Adam Guzzo
Adam.Guzzo@ee.doe.gov

Jeannine Altavilla
Jaltavilla@arlingtonva.us

Sarah E. O'Connell
Seoconnell@arlingtonva.us

Renee Hutcheson
Rhutcheson@nccommerce.com

Len Hoey
Lhoey@nccommerce.com

www.seeaction.energy.gov/existing_commercial.html