



**Better
Buildings®**
U.S. DEPARTMENT OF ENERGY

Harnessing the Power of Data to Improve Building Performance

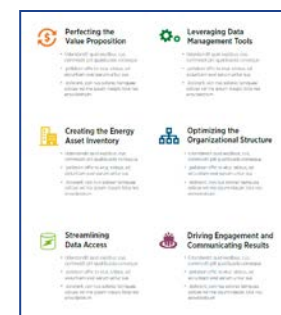
5/27/2015

Panelists

- **Emily Levin**, VEIC
- **Ron Mohr**, Los Angeles County, CA
- **Zach Wilson**, District of Columbia/New City Energy

Select DOE Resources

- **The DOE Buildings Performance Database (BPD)**
 - The nation's largest dataset of information about the actual energy-related characteristics of commercial and residential buildings
 - Explore and compare energy use and building characteristics across real estate sectors and regions, and compare buildings to a custom peer group
 - buildings.energy.gov/bpd
- **Standard Energy Efficiency Data (SEED) Platform**
 - An open source software application that helps organizations manage data on the energy performance of large groups of buildings
 - Combine data from multiple sources, clean and validate it, and share the information with others
 - buildings.energy.gov/seed
- **Best Practices in Energy Data Collection and Tracking in the Public Sector**
 - A guide on strategies that state and local governments and schools have implemented to access and utilize public sector energy consumption data
 - Establish a robust energy data collection and tracking process for buildings and other energy-using assets in a portfolio
 - Forthcoming on the State and Local Solution Center: energy.gov/eere/slsc



Emily Levin, VEIC



Vermont
Energy Investment
Corporation

Getting Home Energy Data
into the Real Estate System:
Vermont's Vision

Emily Levin
May 27, 2015

About VEIC



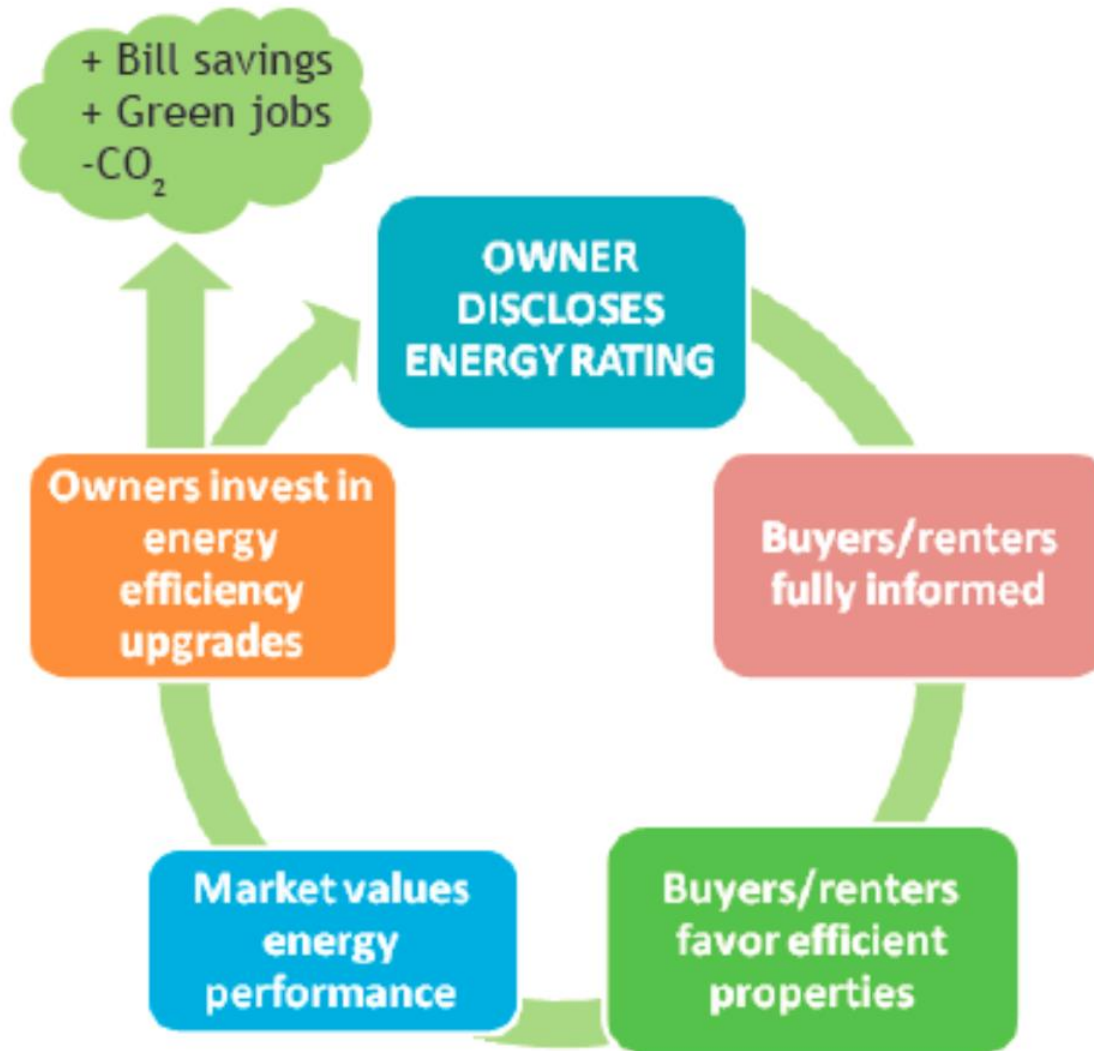
- Nonprofit founded in 1986
- Designs, delivers, and evaluates energy efficiency programs nationwide
- 300+ employees
- Locations: VT, DC, OH, NJ

www.veic.org



Home Energy Labeling: National Landscape & Vermont Activities

Why Label Homes



Source: NEEP, "Valuing Building Energy Efficiency Through Disclosure And Upgrade Policies A Roadmap For The Northeast U.S."

Labels Make Sense

Major appliances • Cars • New Homes • Commercial Properties

U.S. Government Federal law prohibits removal of this label before consumer purchase

ENERGYGUIDE

Refrigerator-Freezer
• Automatic Defrost
• Side-Mounted Freezer
• Through-the-Door Ice

XYZ Corporation
Model ABC-L
Capacity: 23 Cubic Feet

Estimated Yearly Operating Cost

\$67

Cost Range of Similar Models: \$57 to \$74

630 kWh
Estimated Yearly Electricity Use

Your cost will depend on your utility rates and use.

- Cost range based only on models of similar capacity with automatic defrost, side-mounted freezer, and through-the-door ice.
- Estimated operating cost based on a 2007 national average electricity cost of 10.65 cents per kWh.
- For more information, visit www.ftc.gov/appliances.

CHI-003192

Ford EXPLORER

STANDARD EQUIPMENT INCLUDED AT NO EXTRA CHARGE:

- 16" ALUMINUM WHEELS
- POWER WINDOWS
- POWER LOCKS
- POWER MIRRORS
- TRAILER TOWING PACKAGE
- SAFETY SECURITY
- SAFETY SECURITY
- SAFETY SECURITY

ESTIMATED ANNUAL FUEL COST: \$2,367

CITY MPG: 17 | HIGHWAY MPG: 23

Combined Fuel Economy: 23 mpg

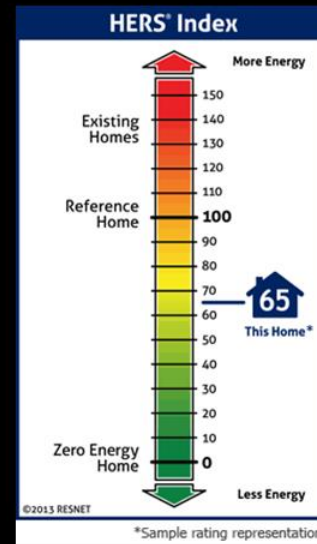
PRICE INFORMATION

STANDARD VEHICLE PRICE: \$33,190.00

REQUIRED ON THIS VEHICLE:

- SALES TAX, LICENSE, TITLE
- DELIVERY, DESTINATION, OPTIONS

TOTAL MSRP: \$35,245.00



ENERGY STAR® Statement of Energy Performance

77 Sample Property

Primary Property Function: Office
Climate Zone Area (FWS): 05A-1B
Built: 1951
For Year Ending: July 31, 2014
Date Generated: October 01, 2014

Property & Contact Information

Property Address	Property Owner	Primary Contact
123 Main St Boston, Massachusetts 02134	John Doe 123 Main St Washington, DC 20560 202-555-1234	Jane Smith 123 Main St Washington, DC 20560 202-555-1234 jane_smith@energypros.com

Energy Consumption and Energy Use Intensity (EUI)

Site EUI	Annual Energy Use Factor	National Median Comparison
75.7 kBtu/sqft	Electric: 0.08 (8%) Natural Gas: 1.272 (12%) Propane: 0.02 (0%)	National Median Office EUI (kBtu/sqft): 103.5 National Median Office EUI (kBtu/sqft): 147.6 % Diff from National Median Office EUI: -27%

Source EUI: 181.2 kBtu/sqft

Signature & Stamp of Verifying Professional

I, _____ (Name) verify that the above information is true and correct to the best of my knowledge.

Signature: _____ Date: _____

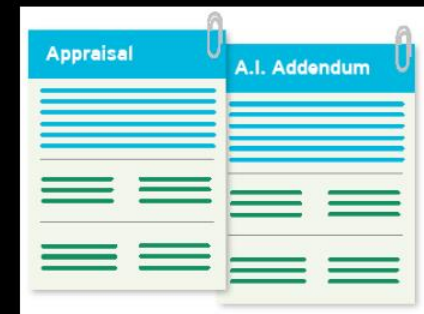
Licensed Professional

John Smith
4 Pine St
Arlington, VA 22201
703-519-1234
john_smith@energyinspectors.com

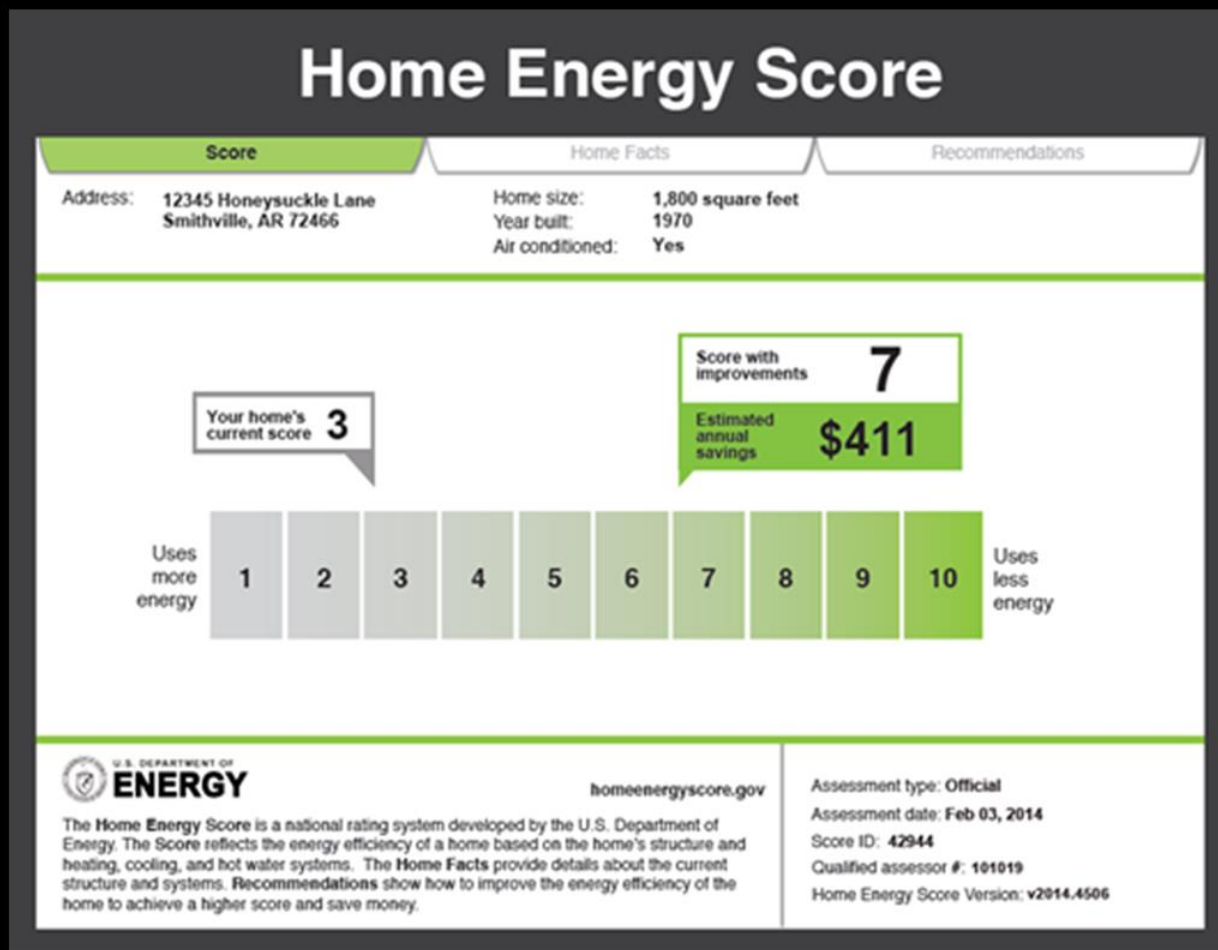
Professional Engineer Stamp (if applicable)

National Activities

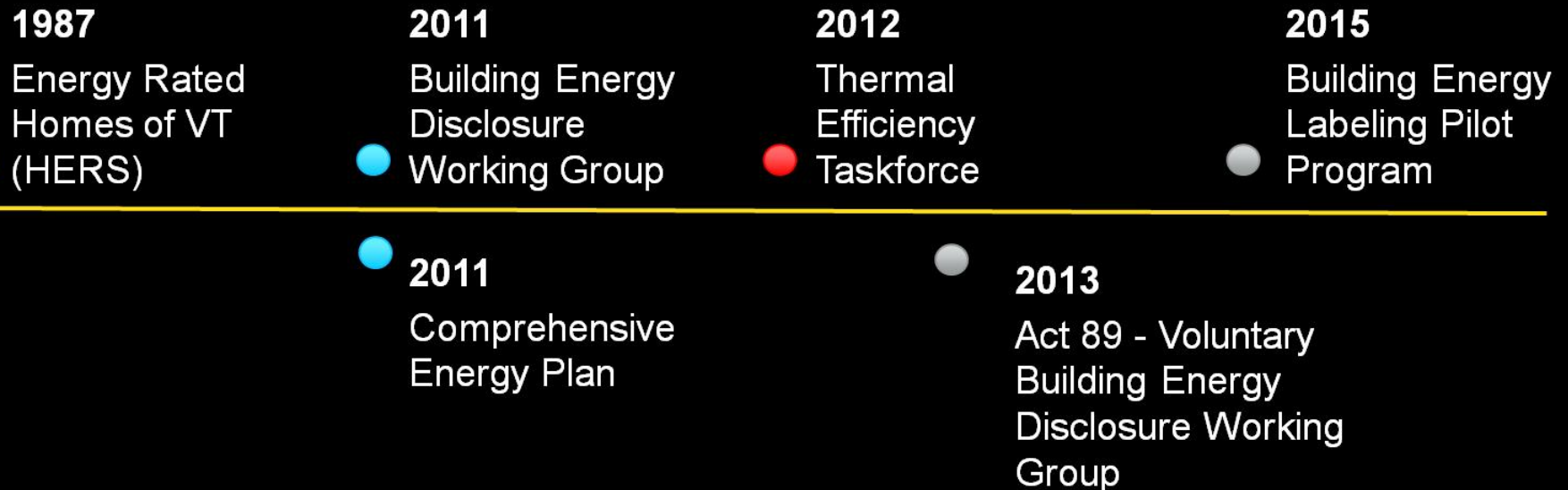
- BPI Standards
- Green MLS Implementation
- Real Estate Transaction Standard (RETS)
- Appraisal Institute Green & Energy Efficient Addendum
- Building Energy Data Exchange Specification (BEDES)
- Standard Energy Efficiency Data Platform (SEED)
- Building Performance Database (BPD)



DOE Home Energy Score



Vermont's Rating and Labeling History



Vermont Home Energy Label - DRAFT

Side A



The Vermont Home Energy Score ranks a home's total energy use based on typical occupancy and weather in Vermont. The lower the score, the more energy-efficient the home.

REPORT INFORMATION

SCORE ISSUE DATE:
6/23/13
ASSESSOR:
John Doe
ORGANIZATION:
Common Sense Energy
PHONE:
802-555-1111



HOME INFORMATION

LOCATION:
123 Main Street
Anytown, VT
05000
YEAR BUILT:
2002
SIZE (SQ. FT.):
1723
HEATING FUELS USED HOME:
oil, wood
OTHER ENERGY FEATURES:
solar hot water

THIS HOME'S SCORE
150

The lower,
The better.

This reflects the estimated total energy use over the course of a year, placed on a scale of 0 to 200+, from most efficient to least efficient.



ESTIMATED ANNUAL ENERGY COST*
\$4,000

Based on fuels used in this home.

Oil/Propane \$2,550
Electric \$1,100
Wood \$350



*Energy use and costs are estimates only. Actual usage and costs may vary and are based on many factors such as weather and occupant behavior, including use of wood stoves.

The Vermont Home Energy Score takes into account the energy-efficient features installed in the home on the date the Score was issued, assuming average occupant behavior.

Actual energy use will vary depending on how the building is operated, and costs will vary as fuel prices change over time.



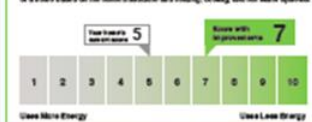
U.S. DEPARTMENT OF ENERGY
Home Energy Score



U.S. DOE HOME ENERGY SCORE
The data utilized to produce this home's Vermont Home Energy Score can also show how your home compares to others nationwide. The U.S. Department of Energy (DOE) Home Energy Score uses a 10-point scale to describe your home's efficiency - where 10 is the most efficient. For more information about this home's national score, visit <http://homeenergyscore.gov/S256788>

Home Energy Score

The Home Energy Score is a national rating system that reflects the energy efficiency of a home based on the home's structure and heating, cooling, and hot water systems.



U.S. DEPARTMENT OF ENERGY
ADDRESS:
12043 Honeycreek Lane
Washington, DC 20048
ASSESSMENT TYPE:
Official Review - Commercial
ASSESSMENT DATE:
01/12/2012
SCORE ID:
1913079
CERTIFIED ASSESSOR ID:
101294
HOME ENERGY SCORE VERSION:
2013

HOW DOES THE VERMONT HOME ENERGY SCORE WORK?

Vermont Home Energy Score is a tool to assess a home's energy consumption and average associated costs. The lower the score, the better. A low VHES identifies a home as energy efficient with a smaller carbon footprint and lower energy costs. The VHES also allows for comparisons of one home's energy use to another. The VHES calculation is based on a home's size, insulation levels, draft stops, heating and cooling systems, and hot water heating efficiency. This score is based on the building features themselves, not on how a particular occupant uses the building. Number of occupants, behavior, indoor temperature, and weather are standardized to calculate normal, average energy use based on the assets which make up the home. A home's actual energy use will vary with conditions such as occupancy, behavior, weather, and changes to the home. Assessments are completed by qualified Assessors who must meet certification requirements as designated by DOE as well as pass the Home Energy Score Building Science and Home Energy Score Training tests.

ASSUMPTIONS

Average Vermont fuel prices are used to generate the estimated annual energy costs presented in this score. Values are obtained from the Vermont Fuel Price Report. The following table shows pricing assumptions used in this report.

COMPARING THE COST OF HEATING FUELS				
REL. COST ASSUMPTIONS FROM VERMONT FUEL PRICE REPORT, JANUARY 2012				
FUEL	\$/MMBTU	MMBTU/UNIT	REL. EFFICIENCY	\$/MMBTU
Fuel Oil, Gal/ton	\$2.66	0.02826	86%	\$24.48
Propane, Gal/ton	\$4.38	0.02460	86%	\$39.25
Propane, Gal/ton	\$3.21	0.01910	86%	\$46.21
Heating Oil, Gallon	\$2.46	0.02666	86%	\$28.28
Electricity, kWh (Residential)	\$0.15	0.03413	94%	\$14.46
Electricity, kWh (Commercial/Industrial)	\$0.15	0.03413	94%	\$14.46
Wood, Cord (oven)	\$19.3	22	86%	\$24.65
Public, Ton	\$27	1.64	86%	\$28.83

*General fuel prices can be obtained from the Public Service Department website http://pubserv.vermont.gov/publications/fuel_report

VERMONT HOME ENERGY SCORE REFERENCE SCORES

LOWEST ENERGY USE - A highly efficient home that produces as much energy as it consumes is considered a Net-Zero Home. This home would have a 0 score.

AVERAGE VERMONT HOME - A home of typical size, heating system, and fuel: 1,912 square feet, oil boiler, and integrated hot water, built to Vermont's minimum energy code specifications.

HIGH PERFORMANCE HOME - Efficiency Vermont's highest performing residential new construction service tier. These homes can be up to 75% more energy efficient than a home built to code.

HIGHEST ENERGY USER - Some of the most inefficient homes in Vermont can consume over 200 MMBtu/year in total energy.

USEFUL TERMINOLOGY

MMBTU - 1 MILLION BTUS - A Btu (British Thermal Unit) is a unit of energy, specifically the amount of energy required to raise 1 lb. of water 1 degree Fahrenheit. For reference, this is approximately the amount of energy released by burning 1 wooden match. 1 MMBtu = 7 gallons of fuel oil.

ENERGY CODE - Vermont's Residential Building Energy Standards (RES) were enacted in 1990. These standards set minimum energy performance guidelines for new construction and renovation building features. For more information see: http://publicservice.vermont.gov/topics/energy_efficiency

ADDITIONAL RESOURCES

CARBON FOOTPRINT

As it relates to this label, the amount of CO2 (in lbs.) released into the atmosphere per year as a result of the energy used to operate your home. Total carbon footprint includes the products we consume as well as transportation and other activities. You can calculate your carbon footprint from the data supplied by your Vermont Home Energy Score. Learn how by visiting: <http://www.pa.gov/ClimateChange/ghg-quantification/calculation.html>

LOCATION EFFICIENCY

Curious how your neighborhood ranks in terms of total cost of home ownership and transportation? Take a look at the Center for Neighborhood Opportunity's Housing and Transportation Affordability Index at: <http://hnaindex.com/heatmap>

ENERGY EFFICIENCY PROGRAMS

The following programs can help get you on the path to improving your home's energy score:

Efficiency Vermont - 800-925-5990 - <http://www.ency Vermont.com>

Vermont Gas Systems - 802-663-4511 - <http://www.vermontgas.com>

Burlington Electric Department - 802-665-7342 - <http://www.burlingtonelectric.com>

NeighborWorks of Western Vermont - 802-433-2303 - <http://www.nwvt.org>

Vermont's Weatherization Program - <http://www.dcr.vermont.gov/bovw/wealthatlas>



Efficiency Vermont was created by the Vermont Legislature and the Vermont Public Service Board to help all Vermonters reduce energy costs, strengthen the economy and protect Vermont's environment. For more information, contact Efficiency Vermont at 800-925-5990 or visit www.ency Vermont.com.

Side B

Score & Label Elements

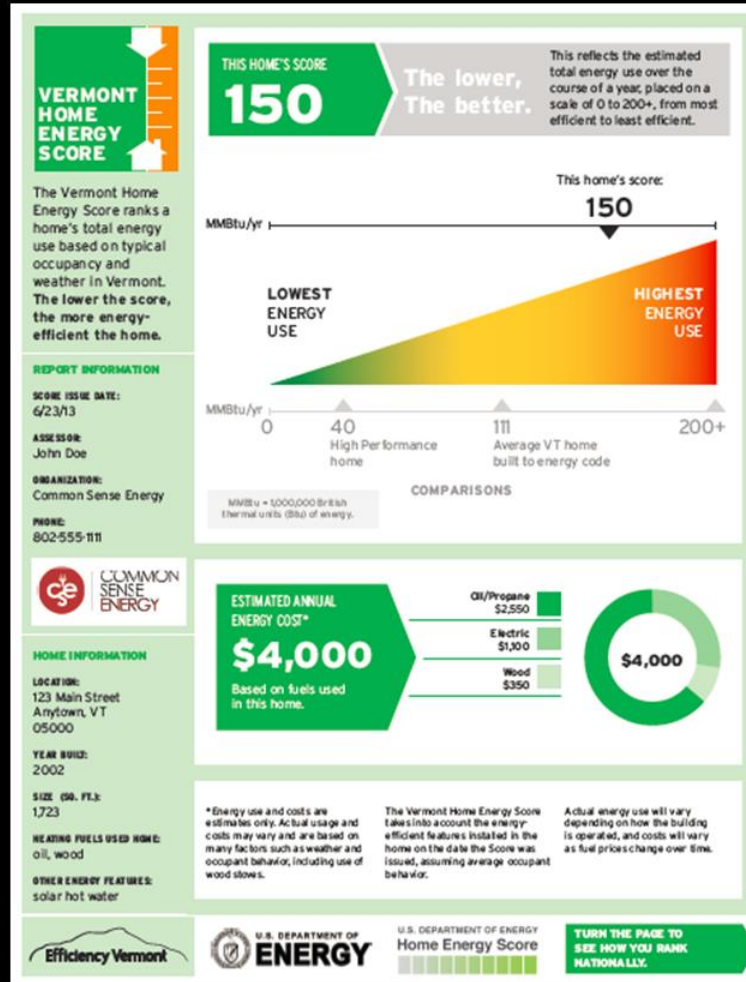
Name & Logo



Assessor Data



General Home Data



Home Score (MMBtu/yr)



Wedge graphic & reference points



Estimated annual energy costs (\$/yr)



U.S. DOE



Tool Selection

For consistency, all Vermont scores will be produced by the same energy modeling tool

✓ DOE's Home Energy Score Tool

- Most accurate
- Free & publicly available
- Supported by LBNL
- APIs to enable data transfer from other audit tools
- Credibility of DOE tool
- Good working relationship with DOE



Asset vs. Operational



← ✓ Asset

- ▶ Modeled energy performance
- ▶ Standardized for occupancy & weather
- ▶ Fixed over time

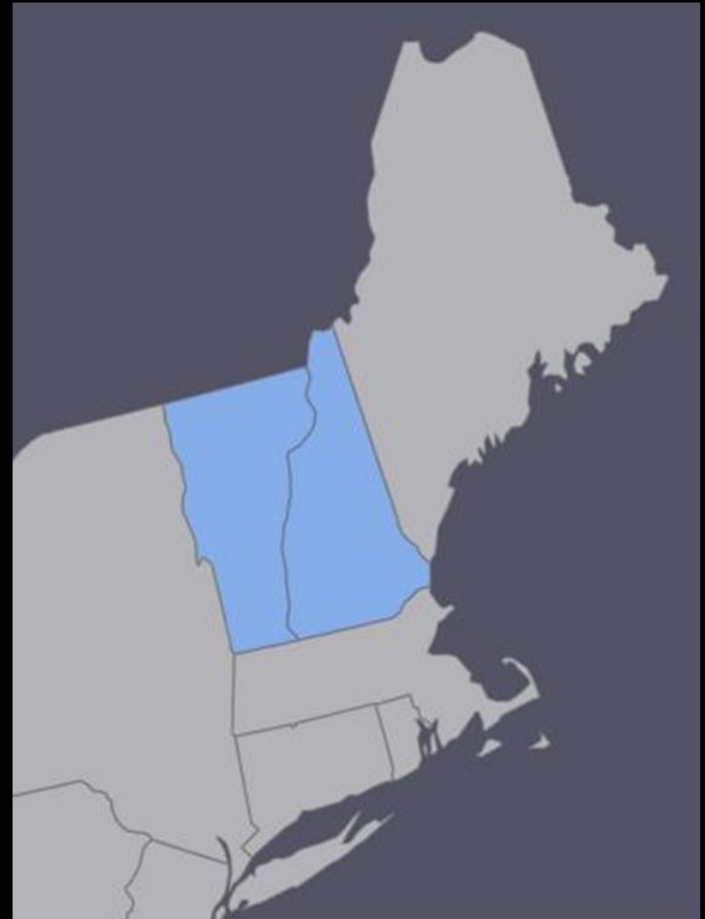
Operational →

- ▶ Actual energy usage
- ▶ Dependent on occupancy & weather
- ▶ Changes over time



Coordination and Oversight

- Efficiency Vermont will serve as statewide coordinator
- An Advisory Board will provide guidance and oversight
- Collaborating with Northeast Energy Efficiency Partnerships (NEEP) and other northeastern states on a regional approach
- Received a State Energy Program award from DOE to advance labeling and benchmarking in VT and NH





Getting Home Energy Data into the Real Estate System

Regional MLS



- Northern New England Real Estate Network operates the MLS for VT and NH
- Engaged and interested in “greening the MLS”
- Already offer green fields for new homes
- Willing to work with on enhancements:
 - Adding “coded features” to existing fields
 - Incorporating a new label and score
- Bottom-line advice: keep it simple

NNEREN - VT MLS Public View

NNEREN.com
Official Website of the Northern New England MLS

Home About Us Search Find An Agent Real Estate News Member Login Sales Stats

Detailed Search Open House Search Sold Properties Search Back To Results

Condominium

20 Thorn Bush Rd Hinesburg, Vermont 05461 \$259,900




Photo 1 of 12

MLS #: 3063781
Price: \$259,900
Total Rooms: 5
Bed Rooms: 2
Total Baths: 2
Acres: 0.00
Square Feet: 1348
Sq Ft Above GRD: 1348
Sq Ft Below GRD: 0
Taxes: \$0
Tax Year: 2009
Year Built: 2010
Condo Fees: \$175
Community:

Listing Agent
Melissa Allen
Lang McLaughry Spera
RE/ S. Burlington
550 Hinesburg Rd
South
Burlington, VT 05403
8028640541

Contact Agent

ShareThis Map it

Remarks:

Great Hinesburg "Smart Growth" neighborhood to be built by Sterling Construction in Thistle Hill. Home is Energy Star and National Green Building Standards rated. Garden homes with maintenance-free living in a village setting: lawn mowing, snow removal, trash, and landscaping handled by association. Home near 14 acres of wooded common land with walking trails. This home features 9 foot ceilings, GE appliances, and first floor master bedroom and laundry. Ground-level is awaiting your custom design touch! Other plans available.

Features:

Style: Townhouse
Color: Sand
Amenities: Garden Space, Snow Removal, Trash, Other
Full Baths: 2
3 / 4 Baths: 0
1 / 2 Baths: 0
Roads: Association, Private
Water Heater: Gas-Natural
Basement: Unfinished, Walk Out, Other
Construction: Wood Frame
Driveway: Paved
Electric: 100 Amp, Circuit Breaker(s)
Exterior: Vinyl
Foundation: Concrete
Garage / Parking: Attached, Auto Open, Off Premises
Heating / Cooling: Baseboard, Multi Zone
Heat Fuel: Gas-Natural
Lot Description: Common Acreage, Subdivision, Trail/Near Trail, Village
Roof: Shingle-Architectural

Interior Features: Cable, Eat-in Kitchen, Living Room, Living/Dining, Master BR with BA, Smoke Det-Hdwired w/Batt, Vaulted Ceiling, Walk-in Closet
Water: Public
Sewer: Public
School District:
Elementary: Hinesburg Elementary School
Junior High: Hinesburg Elementary School
High School: Champlain Valley UHSD #15
Foot Print:
Seasonal: No
Surveyed: Yes
Zoning: Res
Flood Zone: No
Book: 197
Page: 128
Map: 167B&C

Room Dimensions:
Master Bedroom: 12x14
Bedroom 2: 12x13
Kitchen: 9x10
Living Room: 16x14
Dining Room: 9x10

HERS Index: 58

BUILDING CERTIFICATIONS (max 99)

- Energy Star Cert. Home
- HERS Rated
- LEED for Homes-Platinum
- LEED for Homes-Gold
- LEED for Homes-Silver
- LEED for Homes-Certified
- Ntl Grn Bldg Stnd-Emerald
- Ntl Grn Bldg Stand-Gold
- Ntl Grn Bldg Stand-Silver
- Ntl Grn Bldg Stand-Bronze
- Passive House
- VT Blds Greener Certified
- Other

Home Energy Rated Index Score

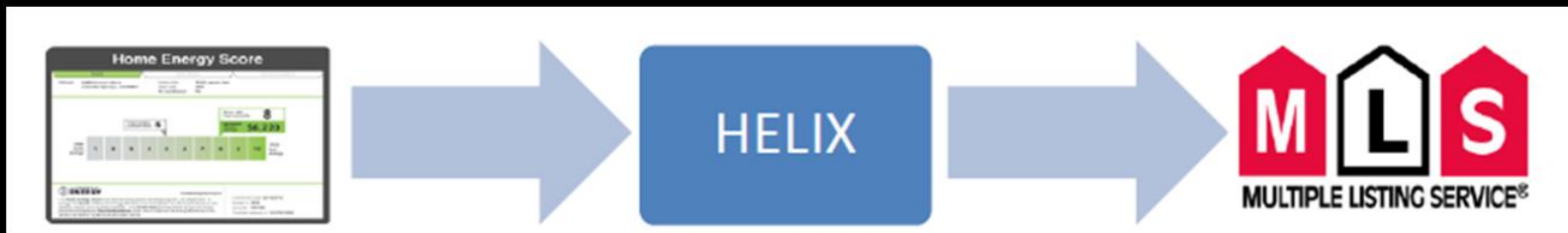


NEEP HELIX Project

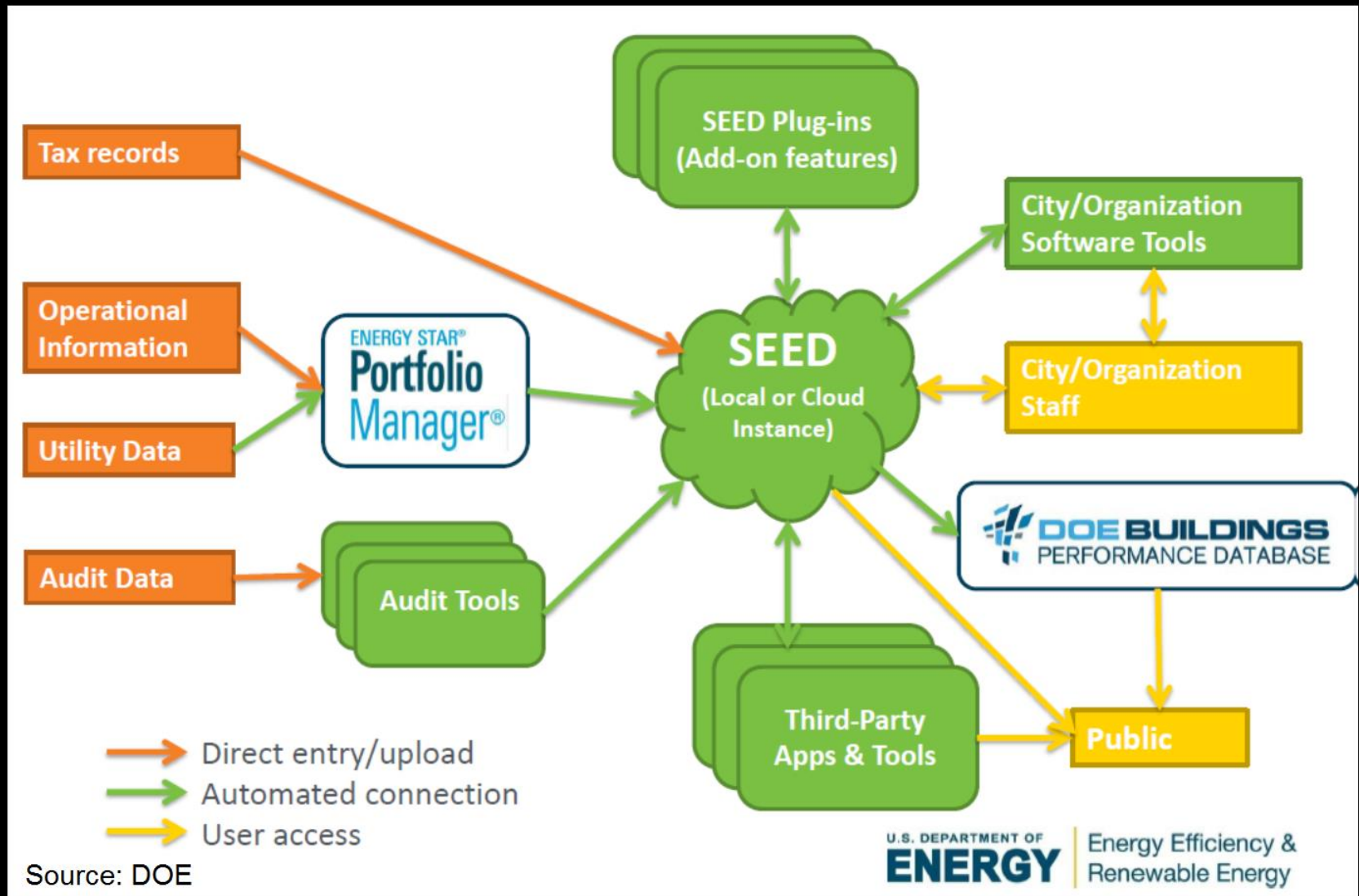


Making data readily accessible with appropriate privacy protections is critical to the inclusion of home energy information in home appraisals and sales

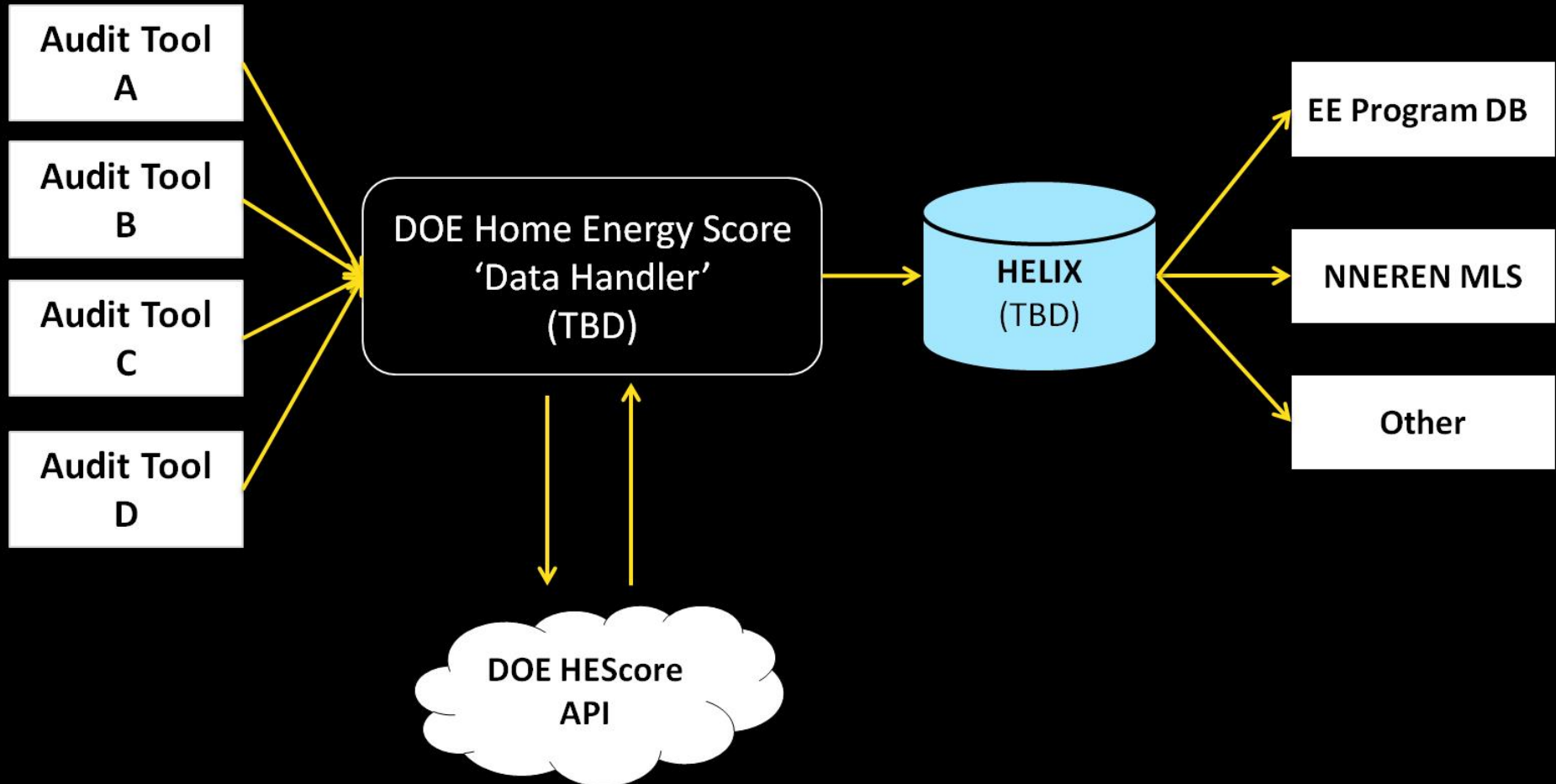
- Three-year regional project
- Research, design, develop & deploy
- Publicly accessible database (HELIX)
- Database for DOE Home Energy Score data
- Conduit for incorporating data into MLS



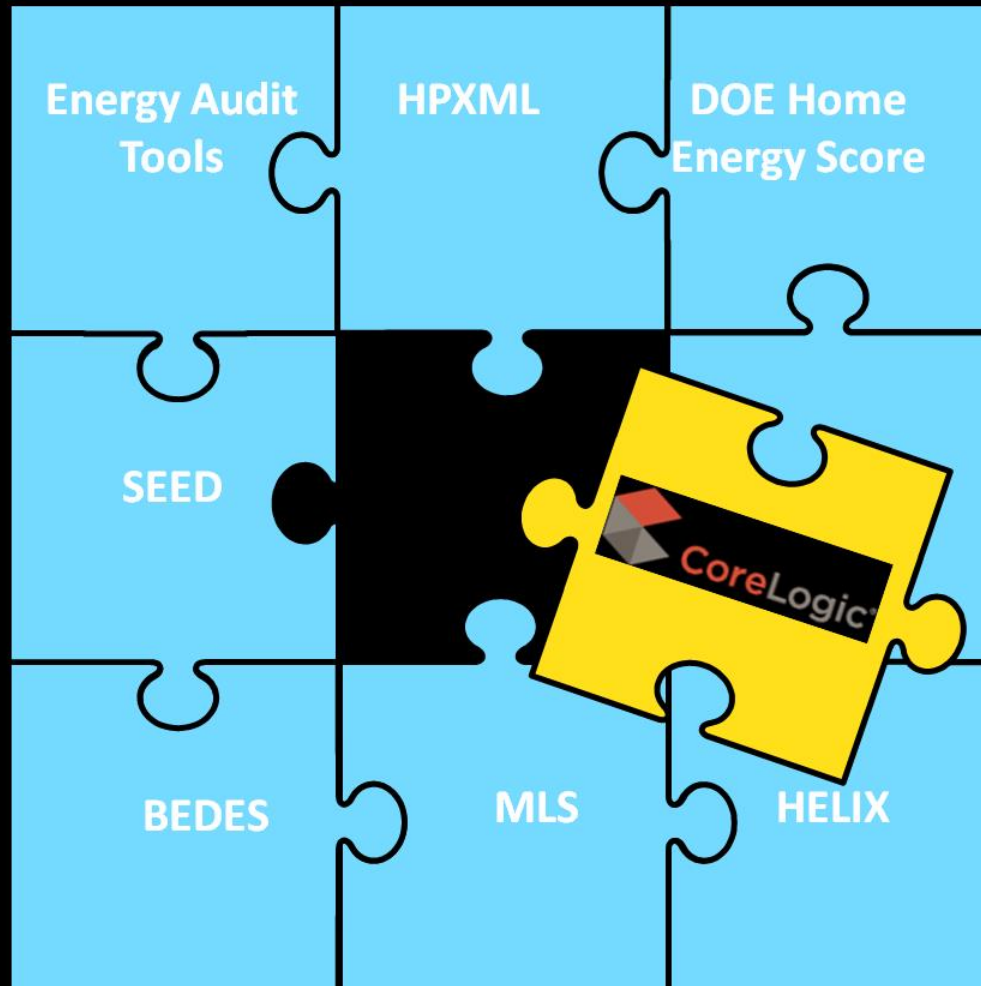
Vision for SEED



Vision for Vermont



Find the Right Partners



Education is Key

- Real estate industry symposium planned for October 29th
- Realtors, appraisers, and bankers from VT and NH
- Continuing education courses
- Objective is to create a registry of green real estate professionals available to people who are looking to buy and sell energy-efficient homes



Thank you!

Emily Levin

Manager, Consulting

Vermont Energy Investment Corporation

802-540-7694

elevin@veic.org



Ron Mohr
Los Angeles County



County of Los Angeles's Current Regional Infrastructure "DATA" Efforts

Ronald Mohr
County of Los Angeles
Internal Services Department
County Office of Sustainability

What are the County's Current 'DATA' Efforts

- Hosting & development of DOE's Suite of Commercial Building Analysis Tools
 - Standard Energy Efficiency Data Platform (SEED)
 - Energy Asset Scoring
 - Building Synch (Energy Auditing schema)
 - All DOE components are built on the common BEDES schema
- Utility Billing Data tracking & reporting for municipal agencies (EEMIS, 15,000+ Service Accounts, 56 local governmental agencies)
- The Interactive Energy Atlas of Los Angeles County



What is SEED?

- SEED is an standardized, open source software application/database that helps governmental agencies in gathering & managing energy performance data for a large portfolio of buildings
 - Application development has been funded and led by DOE, it ties in with numerous other tools designed to measure and improve building performance
- Users can combine data from multiple sources, (Assessor, GIS, Energy Star) clean it, validate it, report it and share it with others



What's SEED's Ultimate Goal?

- The application provides an easy, flexible, and cost-effective method to improve the gathering, archiving and accessibility of data to help influence the implementation of policies, programs and investments in energy efficiency, and demonstrate the resulting economic and environmental benefits of those efforts
 - Without having relevant data on the energy performance of existing building stock, local governments have been severely limited in pursuing local codes & ordinances or programs that can influence energy consumption
- SEED is the SECOND step in a process, EPA Energy Star, SEED, Building Sync, Asset Score....

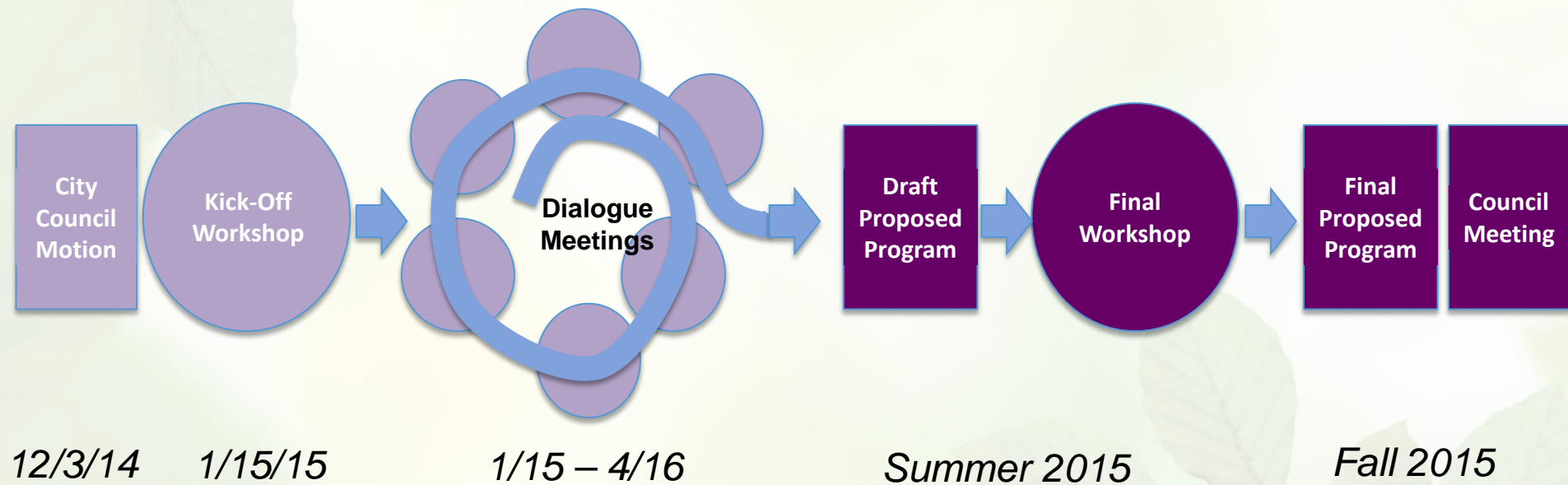


How & Who?

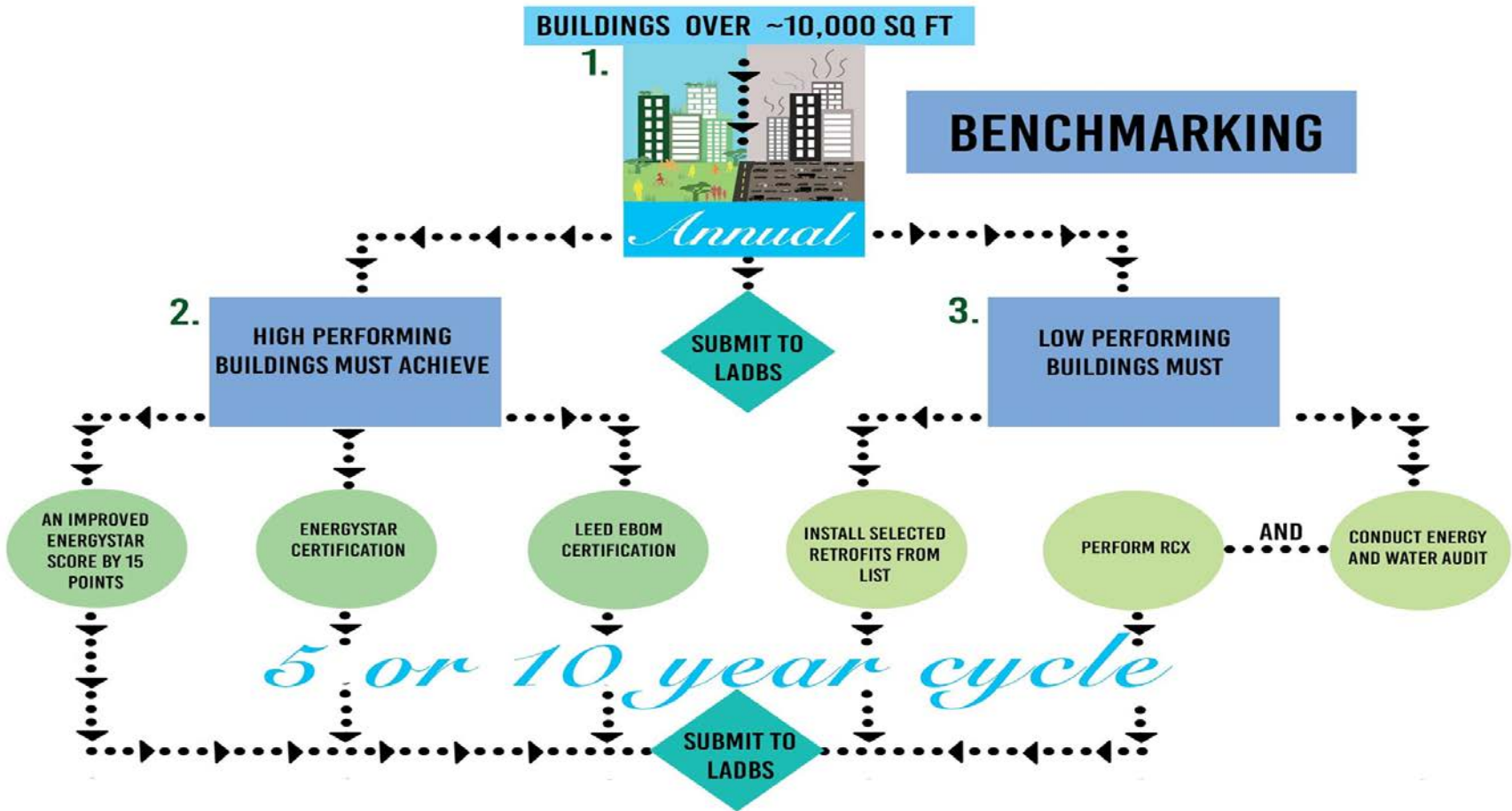
- Throughout the nation, local governments (maybe State), are adopting building performance reporting regulations for private and/or public buildings
- Some of the players include New York City, Seattle, Washington DC, San Francisco, Austin, Philadelphia, Chicago



Roadmap for SEED Adoption



City of Los Angeles, “Programmatic Approach”



SEED Development Has Already Started 'Exposing' Data

- Data analysis from LA City effort
 - Data Analysis showed that building energy accounted for 51% of GHG total emissions
 - 50% of energy consumed by the local building stock, came from 4% of the buildings
 - Somewhere near 4500 parcels will be in the first reportable group...> 20,000 sq ft.



County of Los Angeles's SEED Data Infrastructure Goals

- The County is already hosting & administering DOE's SEED for use by the City of Los Angeles, the County will offer SEED to any LG wishing to utilize their services
- The County is currently in a collaborative partnership developing DOE's Building Synch capabilities in order for Building Owners to easily evaluate their facility with other tools, including DOE's Asset Scoring application



Thank You



Ronald Mohr
County Office of Sustainability
County Of Los Angeles
c. 323-627-4070
rmohr@isd.lacounty.gov

Zach Wilson
District of Columbia/New City Energy

More data. **Less Carbon.** Zero Excuses.

BuildSmart DC

A Public-facing, Municipal Building Efficiency Portal for the District

Better Buildings Summit | 5-27-15

Zach Wilson
Program Manager, DGS (DC Gov)
Sustainability & Energy Division

BuildSmart DC



+



+



=



Site Overview: Main Pages

BUILDINGS

Search the Building Directory to learn about utility costs, building performance and efficiency projects.

SEARCH

FILTER

1-15 of 356 buildings



Waterfront Municipal Center West

1101 4TH STREET SW

Office

EnergyStar Rating 50



Department of Human Services #1

2100 MARTIN LUTHER KING JR AVENUE SE

Office

EnergyStar Rating 45



Parkview Elementary

3560 WARDER STREET NW

Repurposed School

EnergyStar Rating 54



Waterfront Municipal Center East

1100 4TH STREET SW



ENERGY STAR RATING **90**

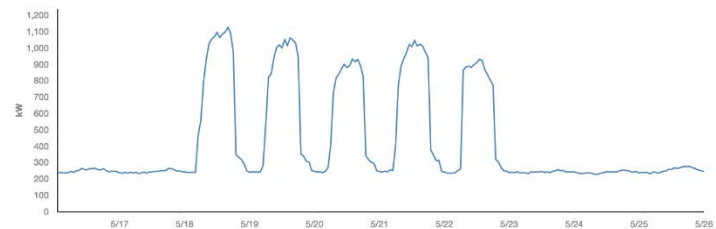
Waterfront Station is a mixed-use urban center in Southwest Washington, DC. The project includes seven new buildings totaling over 2 million square feet including Class-A office space, new residential units and neighborhood oriented retail in the heart of Southwest. [Show More](#)

Last Recorded Day
05/25/2015

Last 10 Days
Electricity Demand

Monthly
Energy Usage

Downloads











Site Overview: Public Data Downloader

Last Recorded Day
05/25/2015

Last 10 Days
Electricity Demand

Monthly
Energy Usage

Downloads

Electricity Interval	Utility Billing	Benchmarking & Profile
 09/13/13 - 05/25/15	 Electric Jan. '13 - Dec. '14	 Dec. '14
<input type="text" value="15 mins"/>	 Nat. Gas Jan. '13 - Dec. '14	
	 Water Jan. '13 - Dec. '14	
 Download	 Download	 Download



Site Overview: Admin Tools 1

Select data to export

Electricity Interval

Select from

Buildings

Filter by tag

Office

Load a report

Delete report

two years all sites hourly

Search

100 H Street NE Lights
107 Wayne Place Apartments
10th Street Overlook Lights
117 Wayne Place Apartments
11th Street Bridge Lighting (East)
11th Street Bridge Lighting (West)
1200 Block 16th Street NW Lights
13th & E St Park
14th Street Bridge Lights
1st & Florida Park
1st District Headquarters
1st District Substation
200 I Street Municipal Building
2nd District Headquarters
3rd District Headquarters
4th District Headquarters
4th District Substation
5th District Headquarters
5th St. Bus Lot
6th District Headquarters
6th District Substation
7th District Headquarters

- 100 H Street NE Lights
- 107 Wayne Place Apartments
- 10th Street Overlook Lights
- 117 Wayne Place Apartments
- 11th Street Bridge Lighting (East)
- 11th Street Bridge Lighting (West)
- 1200 Block 16th Street NW Lights
- 13th & E St Park
- 14th Street Bridge Lights
- 1st & Florida Park
- 1st District Headquarters
- 1st District Substation
- 200 I Street Municipal Building
- 2nd District Headquarters
- 3rd District Headquarters
- 4th District Headquarters
- 4th District Substation
- 5th District Headquarters
- 5th St. Bus Lot
- 6th District Headquarters
- 6th District Substation
- 7th District Headquarters

Add all



Remove all

Export settings

Time range

Last week

Last month

Last year

Time granularity

Hourly

Start date

02/01/2013



End date

02/01/2015



Select export format

Aggregate intervals by

- Building
- Account
- Meter (No aggregation)

Add to header

- Building name
- Account
- Address
- Building type

Insert totals

- By row
- By column

Pivot results

Save report format

Send a download link

Report name

Email

Generate report

Site Overview: Admin Tools 2

New Project

* **Name** This is the name of the project that will be publicly displayed

Building This is the building that the project is tied to, and will be used for M&V

Not a specific building ▾

Entity This is the name of the Entity or Building that will be publicly displayed

* **Headline** This is the headline that will be displayed for the project, it should be one short sentence

* **Detail** This is the detail. Use HTML <p> and </p> to separate paragraphs and add as many as you like

Start Date **End Date**

BSDC DGS App

Notes

Access Log
API Log
Export Log
Refresh API cache
Deleted Buildings
Manage Users
Back

What Data Gets Mashed Up?

Interval

Pepco's Green Button Electricity Interval Data is the foundation. Additional interval sources (Natural Gas, Building Automation) are being piloted.

Billing

Electronic Utility Billing is provided by Washington Gas and DC Water. Pepco is still sending the District paper bills!

External Analyses

BuildSmart DC transmits data via API to multiple third parties, including two-way communication with the EPA's Energy Star Portfolio Manager.

Building

DGS-SE works across the District government to collect and maintain up-to-date information on buildings including occupancy rates and hours.

Project

DGS-SE collects project information to enhance building data and track project effectiveness.

Temperature

BuildSmart DC collects temperature data from the national weather service and directly from temperature sensors on site at some facilities.

...And Who Uses It?

Operations Engineers / FMs

- Check Load Curves
- Manage Equipment Schedules
- Impact Utility, O&M, and Capital Costs

Energy & Sustainability Division

- Maintains Portfolio Data
- Creates and Tracks Projects
- Engages and Trains other Divisions
- Generates Budget and Forecast Reports
- Manages Supply

Efficiency Experts / Analytics

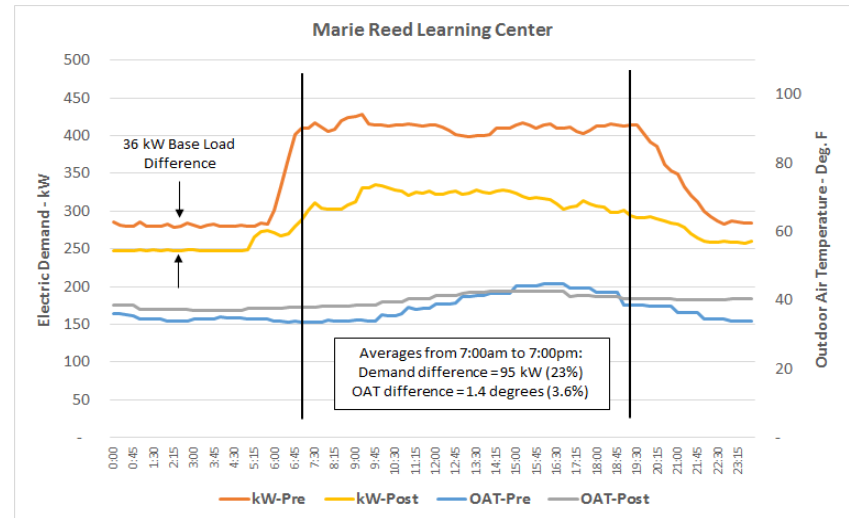
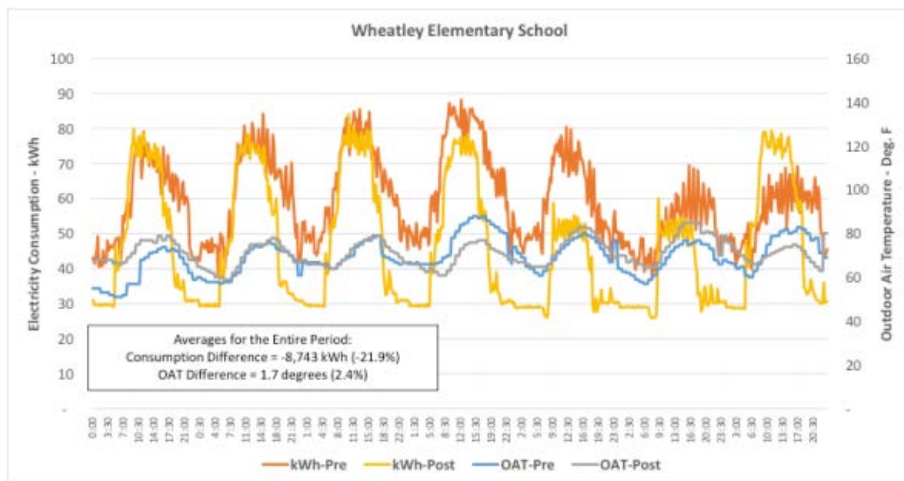
- Access Data via API and Export Tools
- Track Projects
- Recommend Improvements

The Public

- Checks Facility Performance
- Uses Data for Research
- Keeps DC Accountable

Progress Tracking & Goal Setting

- Project M&V is currently being built out as follows:



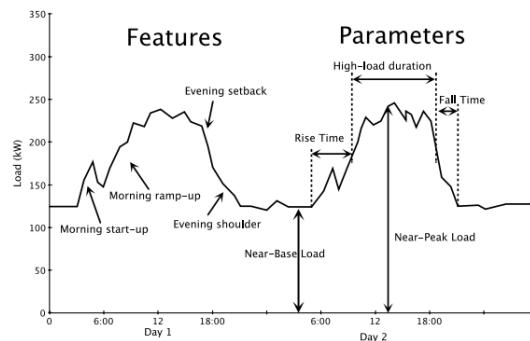
Anomaly Detection

- Interval Data – Automated Quality Control (live)

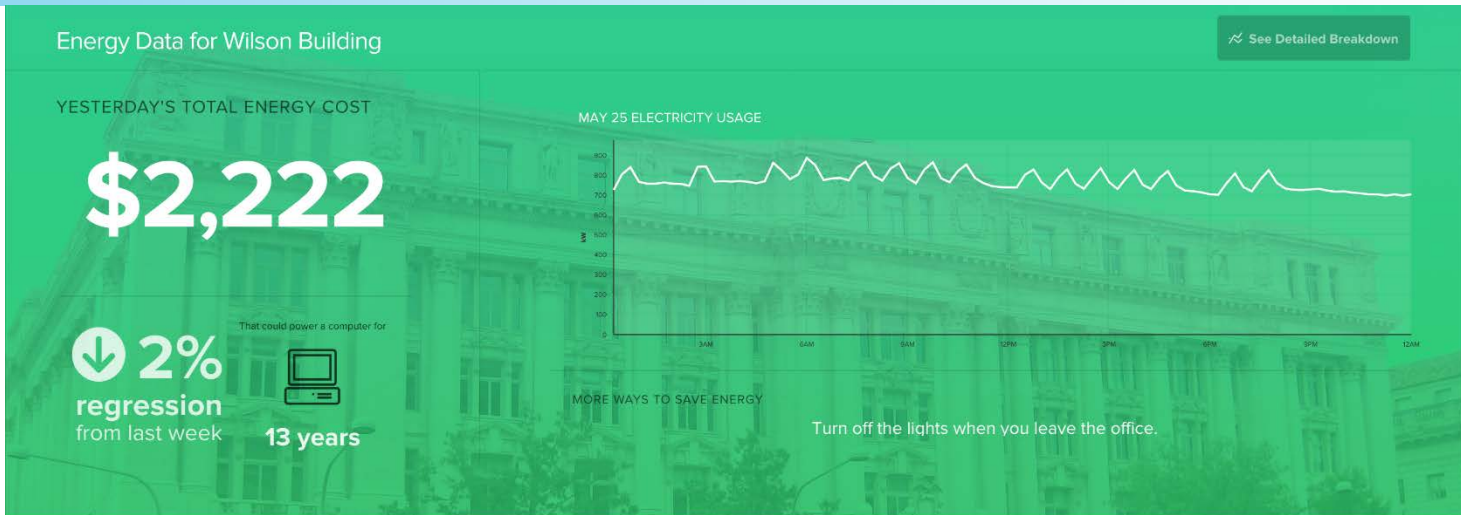
Search:

Billing Account	Interval Account	Billing Name	Billing Address	Interval Field	Master Name	Master Address	Master ID	Start Date	End Date	Last 12 Months Billing kWh	Last 12 Months Interval kWh	Not Zero-Adjusted Variance	Zero-Adjusted Variance
55015957578	0116209511	200 I St SE	200 I St SE	225 Virginia Av SE	200 I Street Municipal Building	200 I STREET NE	7	1/14	1/15	83673.00	83422.29	1.00	1.00
55015957958	0116209610	200 I St SE	200 I St SE	225 VIRGINIA AVE S.E.#T1	200 I Street Municipal Building	200 I STREET NE	7	1/14	1/15	392084.00	391646.66	1.00	1.00
55016692315	0132878117	200 I St SE	200 I St SE	225 Virginia Ave SE #sb1	200 I Street Municipal Building	200 I STREET NE	7	1/14	1/15	2243700.00	2323931.05	0.97	0.97
55016692661	0132878216	200 I St SE	200 I St SE	225 VIRGINIA AVE SE	200 I Street Municipal Building	200 I STREET NE	7	1/14	1/15	1904672.00	2476520.77	0.77	0.77

- Load Curve Analysis (under development)



Engaging Occupants Via Kiosks



Alyssa Turner
Deputy Facilities Services Officer
DGS
14 years of service

DC ENERGY HEROES

Alyssa's team is the first line of communication with the agency occupants of DGS-managed municipal buildings. She coordinates building operators and engineers to assure tenants are comfortable and that buildings run efficiently.

Touch to read more about Alyssa

GREEN SCHOOLS CHALLENGE



DGS-SE and DCPS – Green Schools Challenge: Accepted
Touch to read more about DGS-SE and DCPS work.

TRANSIT

Federal Triangle

- Franconia-Springfield 0 MIN
- Wiehle-Reston East 3 MIN
- Largo Town Center 4 MIN
- New Carrollton 7 MIN

Capital Bikeshare

14th & D St NW / Ronald Reagan Building
7 AVAILABLE / 18 DOCKS
[See Bus Schedules](#)

WEATHER

78°

Later Today **84°**

Tonight **85°**

Thu **70 / 88°**

More data. **Less Carbon.** Zero Excuses.

BuildSmart DC

A Public-facing, Municipal Building Efficiency Portal for the District

Better Buildings Summit | 5-27-15

Zach Wilson
Program Manager, DGS (DC Gov)
Sustainability & Energy Division