



MF BBC - Tips from the Field: Using 3rd Party Software for Successful Utility Benchmarking

February 16, 2017



Presenters

Moderator

- Janine Cuneo, ICF

Speakers

- Kathleen Berube, Sustainability Associate, National Housing Trust – Enterprise Preservation Corporation
- Brian Bieler, Director of Asset & IT Management, REACH CDC

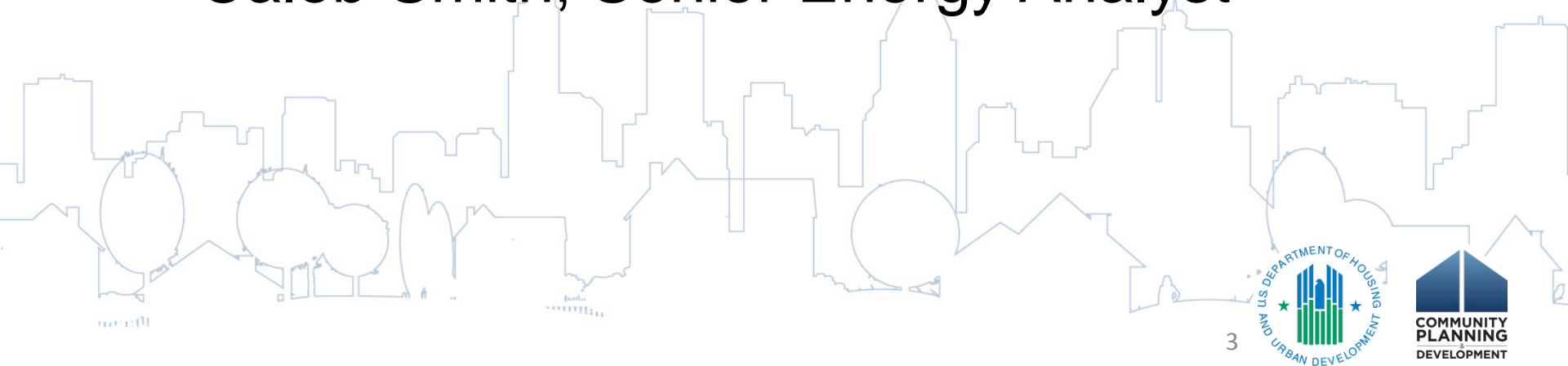
3rd Party Software Representatives

WegoWise


- Paula Seville, Director of Strategic Initiatives

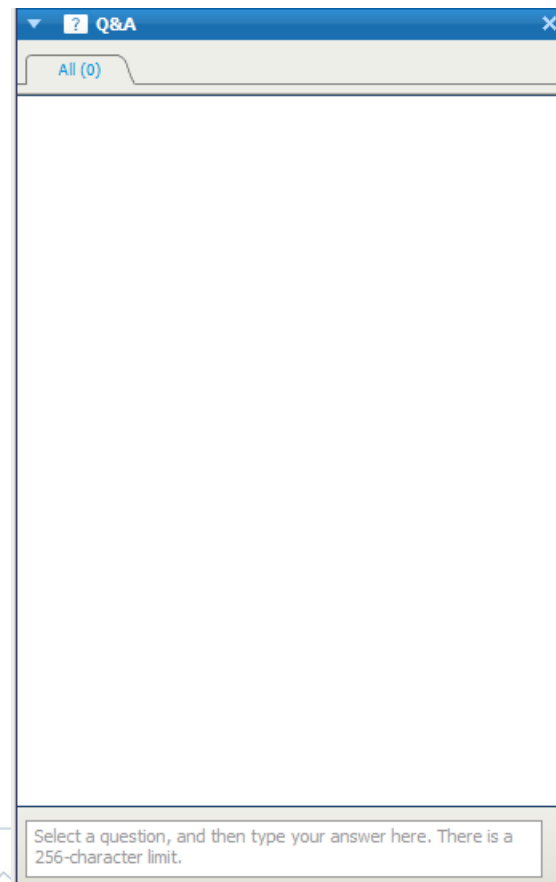
BrightPower

- Caleb Smith, Senior Energy Analyst



Webinar Logistics

- Submit content related questions via the WebEx Q&A box - submit to All Panelists 
- Submit technical issues related to WebEx in the Chat box – submit to Host



NHT-Enterprise.

WegoWise and the Better Buildings Challenge

02.16.17 | Kathleen Berube, Sustainability Associate

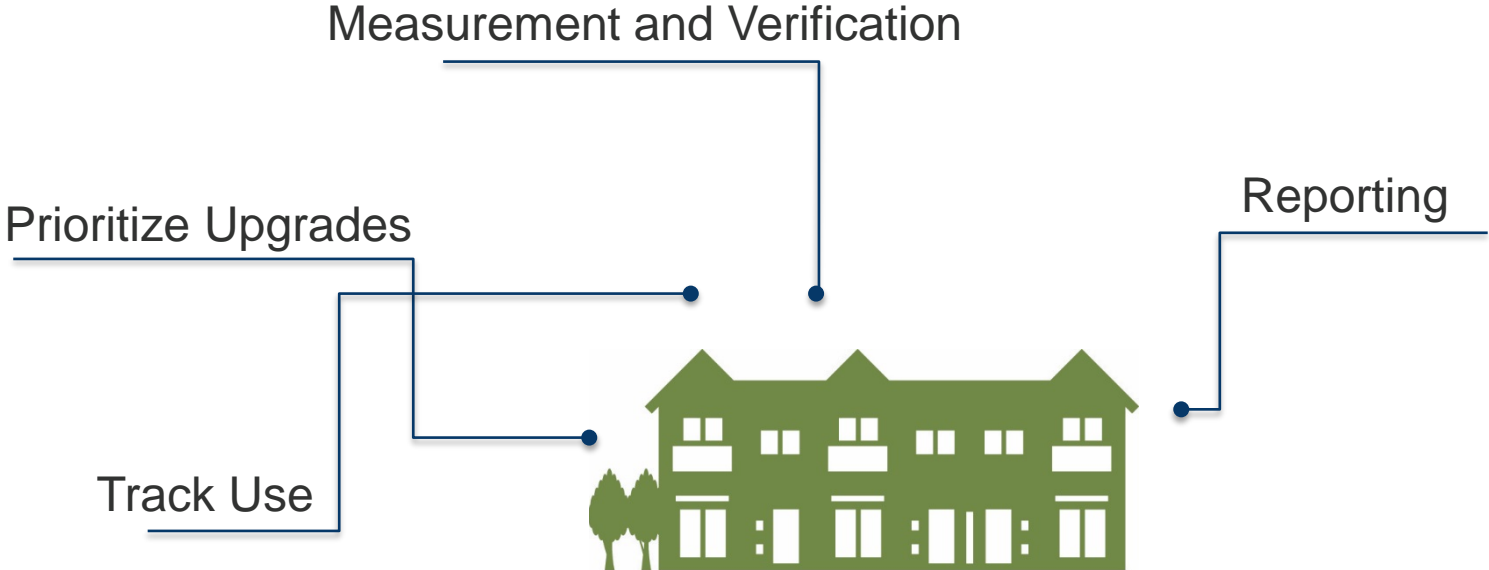
National Housing Trust –Enterprise Preservation Corporation

About Us:

- Affiliate of the National Housing Trust
- Preserve affordable housing
- Portfolio of 3,000 units
- 17 properties and 1,794 units directly owned/asset managed
- Strong focus on sustainability and green retrofits
- Joined Better Building Challenge (BBC) in 2010



Using WegoWise to Meet BBC:



Track Usage

wego**wise**

Dashboard Properties Reports Financing Help NHTEAdmin1

R Street Apartments << R Street Apartments

Summary View View Data Premium WegoScore Apartments Utility Accounts Building Upgrades Share

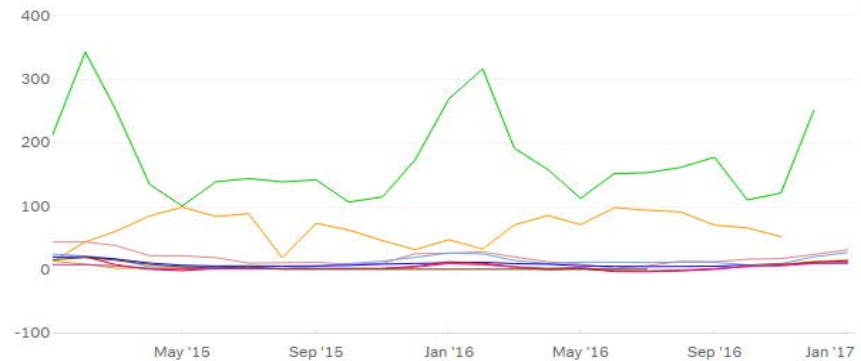
Total energy use in Btu per square foot

Graph Table

Name	Full-Year Sum	
Apt. 000 Electric #RStr...	65.9k	✓
Solar #SolarPVRStreet	24.4k	✓
Electric #5501310564...	5.56k	✓
Electric #5501271848...	4.95k	✓
Electric #5502116453...	2.54k	✓
Electric #5501258182...	1.46k	✓
Electric #5501263114...	1.15k	✓
Electric #5501265707...	1.11k	✓
Water #00322784	Not included in total reports	
Water #02026532	Not included in total reports	
Water #02026540	Not included in total reports	
Water #02026615	Not included in total reports	
Water #02026623	Not included in total reports	
Electric #5501815413...	0	✓

Detailed data per month

You are currently viewing the last 2 years of data only Zoom out



Track Usage

[View Data](#)
[Import Data](#)
[Edit Data](#)
[Supply Contract](#)

Data in This Electric Account

[+ Add Data](#)
[Download](#)
[Fetch data now](#)

Up to date as of 1 day ago

 Show all columns

	End Date MM/DD/YYYY	Start Date MM/DD/YYYY	Usage kWh	Total Charge	Supply Charge	Delivery Charge	Service Charges	Rate \$/kWh
⬇	01/30/2017	12/30/2016	3,283 kWh	\$403.51				0.12 \$/kWh
⬇	12/29/2016	11/30/2016	2,892 kWh	\$374.96	\$239.75	\$104.47	\$30.74	0.13 \$/kWh
⬇	11/29/2016	10/29/2016	3,050 kWh	\$392.74	\$252.94	\$139.80		0.13 \$/kWh
⬇	10/28/2016	09/30/2016	2,951 kWh	\$393.21	\$244.65	\$148.56		0.13 \$/kWh
⬇	09/29/2016	08/27/2016	3,405 kWh	\$446.75	\$281.55	\$165.20		0.13 \$/kWh
⬇	08/26/2016	07/29/2016	2,927 kWh	\$385.29	\$242.29	\$143.00		0.13 \$/kWh
⬇	07/28/2016	06/29/2016	3,043 kWh	\$397.22	\$251.79	\$145.43		0.13 \$/kWh
⬇	06/28/2016	05/28/2016	3,364 kWh	\$432.30	\$277.14	\$155.16		0.13 \$/kWh
⬇	05/27/2016	04/29/2016	2,954 kWh	\$359.28	\$237.37	\$121.91		0.12 \$/kWh
⬇	04/28/2016	03/29/2016	3,081 kWh	\$372.97	\$247.49	\$125.48		0.12 \$/kWh
⬇	03/28/2016	02/27/2016	2,923 kWh	\$355.76	\$234.80	\$120.96		0.12 \$/kWh
⬇	02/26/2016	01/29/2016	2,855 kWh	\$350.12	\$229.34	\$120.78		0.12 \$/kWh
⬇	01/28/2016	12/31/2015	2,915 kWh	\$358.47	\$234.15	\$124.32		0.12 \$/kWh
⬇	12/30/2015	11/26/2015	3,423 kWh	\$419.29	\$274.96	\$144.33		0.12 \$/kWh
⬇	11/25/2015	10/30/2015	2,738 kWh	\$339.35	\$219.94	\$119.41		0.12 \$/kWh
⬇	10/29/2015	09/30/2015	2,832 kWh	\$368.24	\$227.49	\$140.75		0.13 \$/kWh
⬇	09/29/2015	08/29/2015	3,009 kWh	\$390.54	\$241.70	\$148.84		0.13 \$/kWh
⬇	08/28/2015	07/31/2015	2,595 kWh	\$343.34	\$208.45	\$134.89		0.13 \$/kWh
⬇	07/30/2015	06/30/2015	2,494 kWh	\$330.44	\$200.33	\$130.11		0.13 \$/kWh
⬇	06/29/2015	05/29/2015	2,487 kWh	\$331.14	\$199.77	\$131.37		0.13 \$/kWh

Prioritize Upgrades

Dashboard

Performance Overview

Premium

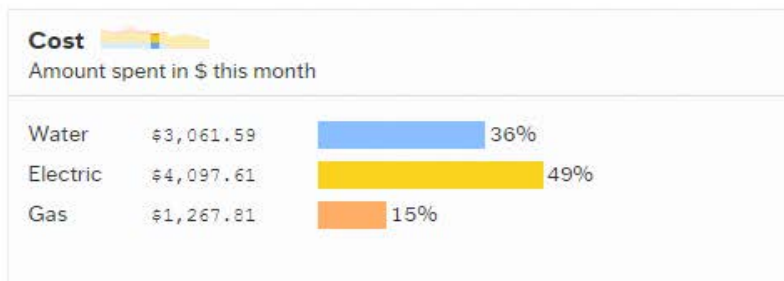
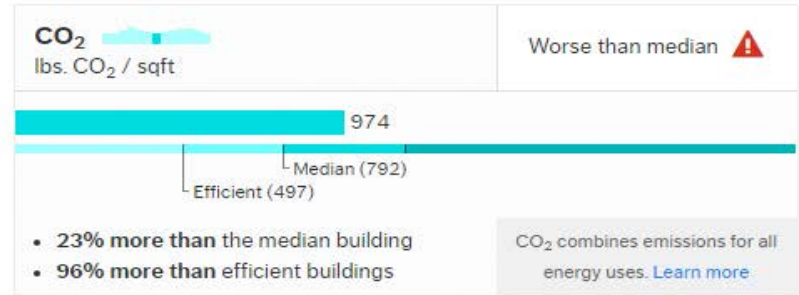
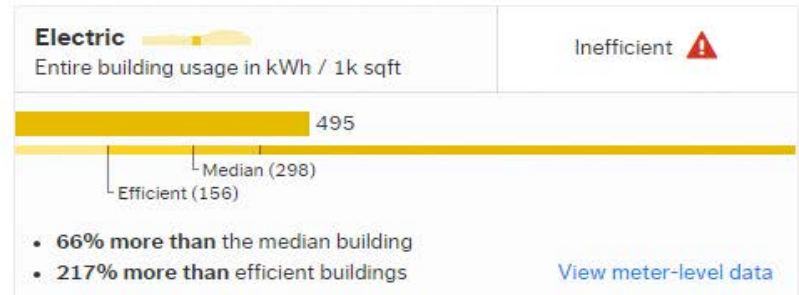
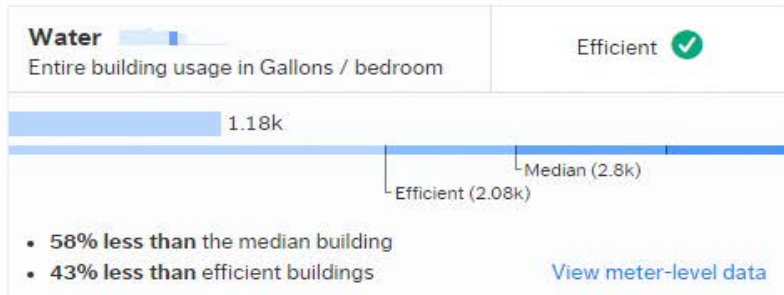
Utility Accounts

Building Upgrades

Relative performance of buildings in your portfolio - Every point is a building. The top right are problems that need attention



Prioritize Upgrades



Measurement and Verification

Briarcliff    << Briarcliff

Summary View

View Data

Premium

WegoScore

Apartments

Utility Accounts

Building Upgrades

Share

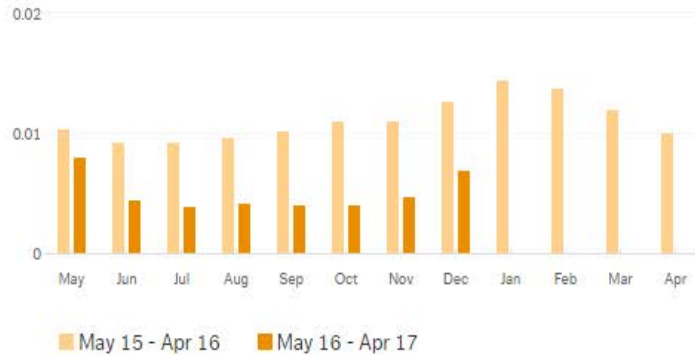
Briarcliff Exterior and Common Area Lighting - May 26, 2016

[View all upgrades](#)

[View & manage documents](#)



Electric: kWh  per square foot 



Before: Hps pole lights, hps wall pack, 4' 2 lamp t12 strip, wall "flick" switch

After: 24w led corn cob lamp, 30w led wallpack, t8 d-lux led replacement lamps, wall switch sensor

Cost: \$2,622.14

Expected savings: 11%

Affected utilities: Electric

Categories:

- Lights and Appliances – Lighting



Measurement and Verification

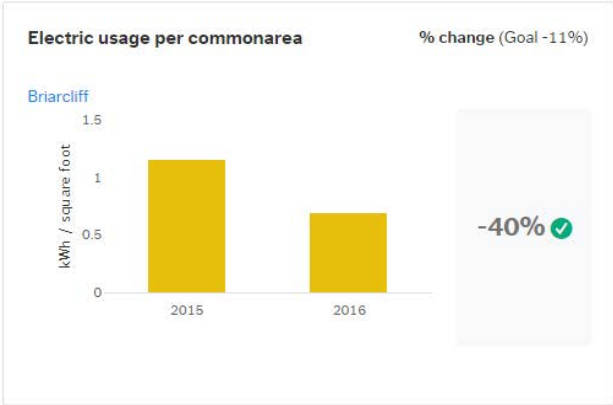
Briarcliff Electricity ✎ ✕ << Custom Reports

View Report

Electricity use in kWh per square foot

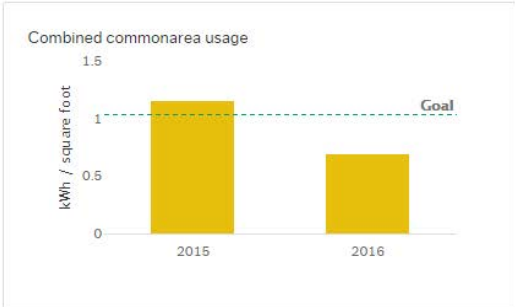
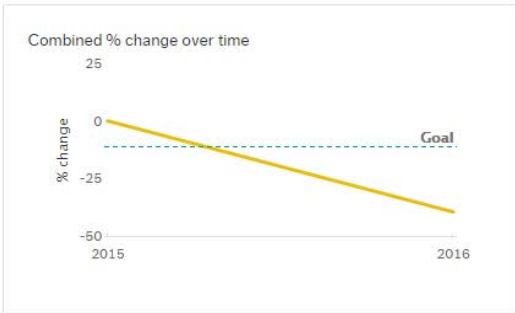
Weather Normalized

Graph Table



Combined % change: **-40%** ✓

Combined kWh change: **-2.09k kWh**



Reporting

*2016BBCChannel ✎ ✕ < Custom Reports

View Report

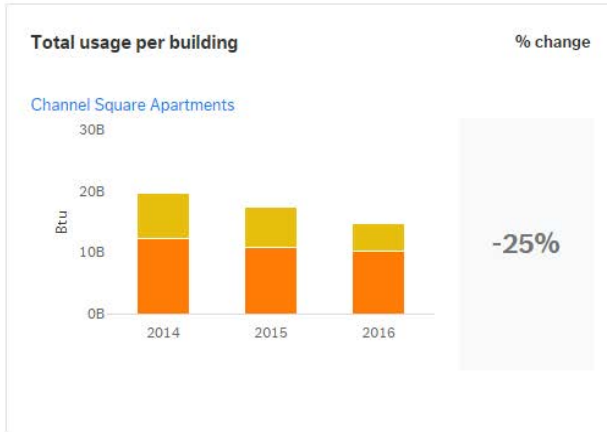
Total energy use in Btu (not normalized)

Weather Normalized

Graph Table

☆ ⬇

Electric Gas



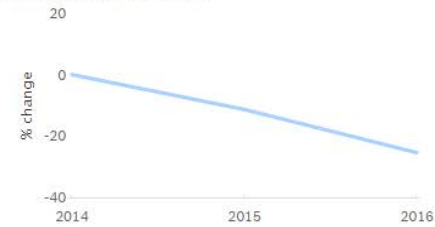
Combined % change

-25%

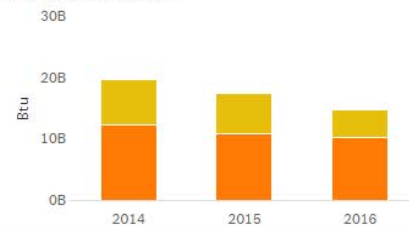
Combined Btu change

-5.02B Btu

Combined % change over time



Combined building usage



NHT-Enterprise Time & Staff Commitment

- Sustainability Associate (5-10 hours a week)
- Intern (15 hours a week)



NHT-Enterprise.

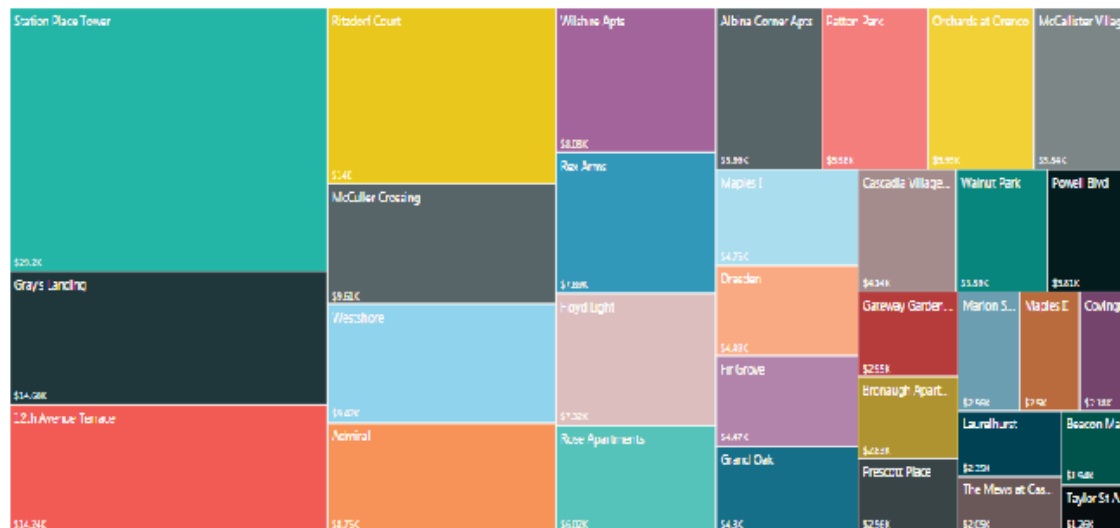
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EnergyScoreCards & the Better Buildings Challenge

- **Began with a series of Energy Audits for performance outliers in the REACH portfolio in 2010**
- **Engagement with EnergyScoreCards shortly thereafter to benchmark and identify areas of opportunity**
- **EnergyScoreCards is able to populate Portfolio Manager with the necessary owner and resident utility data to meet program requirements**
- **Data is “scraped” directly from utility provider in almost all instances**
- **REACH is looking to add an intern 2Q17 to further assist our efforts to bring maximum tenant data directly into EnergyScoreCards**
- **Bright Power staff work directly with REACH staff to review data and identify gaps prior to BBC submission**

BRIGHT POWER Summary of Opportunities Combined Annual Utility Dollar Savings by Property



Savings Thresholds - Energy	
D	25%
C	15%
B	10%
A	5%

Savings Thresholds - Water	
Applied to All	15%

Prioritization Report



Portfolio Priority Report							Previously Implemented Measure	On-site Irrigation (Y/N)	Potential Annual Energy Savings	Potential Annual Water Savings	Combined Annual Utility Savings
Property Name	Number of Units	Building Configuration	Annual Owner Energy Spend	Energy Priority Rank	Annual Owner Water Spend	Water Priority Rank					
Gray's Landing	209	(T)TTO	\$ 68,465.90	1-High	\$ 75,041.12	2-Medium			\$ 3,423	\$ 11,256	\$ 14,679
Station Place Tower	176	(T)TTO	\$ 73,021.79	1-High	\$ 72,968.70	2-Medium	Low-flow Devices Installed	Yes	\$ 18,255	\$ 10,945	\$ 29,201
12th Avenue Terrace	119	(T)TTO	\$ 35,125.75	1-High	\$ 59,815.72	2-Medium			\$ 5,269	\$ 8,972	\$ 14,241
Ritzdorf Court	90	(T)TTO	\$ 28,805.76	1-High	\$ 45,318.03	2-Medium			\$ 7,201	\$ 6,798	\$ 13,999
Admiral	37	(O)OOO	\$ 23,610.24	1-High	\$ 19,055.78	3-Low	TRV Replacement		\$ 5,903	\$ 2,858	\$ 8,761
Rose Apartments	58	(O)OOO	\$ 27,567.47	1-High	\$ 21,765.44	3-Low	Low-flow Devices Installed, Lighting Retrofit		\$ 2,757	\$ 3,265	\$ 6,022
Westshore	113	(T)TTO	\$ 22,453.31	1-High	\$ 47,804.18	3-Low	Low-flow Devices Installed, Lighting Retrofit	Yes	\$ 2,245	\$ 7,171	\$ 9,416
Orchards at Orenco	57	(T)TTO	\$ 17,236.90	2-Medium	\$ 33,896.76	3-Low		Yes	\$ 862	\$ 5,085	\$ 5,946
Patton Park	54	(T)TTO	\$ 18,126.71	2-Medium	\$ 33,827.61	3-Low	Lighting Retrofit		\$ 906	\$ 5,074	\$ 5,980
Albina Corner Apts	48	(T)TTT	\$ 9,874.71	3-Low	\$ 36,636.36	2-Medium	Low-flow Devices Installed, Lighting Retrofit	Yes	\$ 494	\$ 5,495	\$ 5,989
Floyd Light	50	(T)TTT	\$ 1,909.73	3-Low	\$ 48,153.31	2-Medium	Low-flow Devices Installed, Lighting Retrofit	Yes	\$ 95	\$ 7,223	\$ 7,318
McCallister Village	48	(T)TTT	\$ 9,248.83	3-Low	\$ 32,745.85	2-Medium			\$ 925	\$ 4,912	\$ 5,837
McCuller Crossing	40	(T)TTT	\$ 12,415.43	3-Low	\$ 43,365.21	2-Medium		Yes	\$ 3,104	\$ 6,505	\$ 9,609
Rex Arms	62	(T)TTO	\$ 13,415.88	3-Low	\$ 30,246.91	2-Medium	Low-flow Devices Installed, Lighting Retrofit		\$ 3,354	\$ 4,537	\$ 7,891
Wilshire Apts	42	(T)TTT	\$ 14,303.58	3-Low	\$ 30,058.32	2-Medium	Low-flow Devices Installed, Lighting Retrofit		\$ 3,576	\$ 4,509	\$ 8,085
Beacon Manor	20	(T)TTT	\$ 740.01	3-Low	\$ 12,704.77	3-Low	Low-flow Devices Installed, Lighting Retrofit		\$ 37	\$ 1,906	\$ 1,943
Bronaugh Apartments	51	(T)TTT	\$ 2,967.38	3-Low	\$ 17,895.92	3-Low			\$ 148	\$ 2,684	\$ 2,833
Cascadia Village Apartments	51	(T)TTT	\$ 4,856.49	3-Low	\$ 22,739.59	3-Low			\$ 728	\$ 3,411	\$ 4,139
Covington Commons	40	(T)TTT	\$ 2,829.26	3-Low	\$ 13,977.35	3-Low		Yes	\$ 283	\$ 2,097	\$ 2,380
Dresden	30	(T)TTO	\$ 7,502.53	3-Low	\$ 17,397.91	3-Low	Low-flow Devices Installed, Lighting Retrofit		\$ 1,876	\$ 2,610	\$ 4,485
Fir Grove	31	(T)TTO	\$ 11,882.78	3-Low	\$ 17,885.66	3-Low		Yes	\$ 1,782	\$ 2,683	\$ 4,465
Gateway Garden Apartments	32	(T)TTT	\$ 3,749.06	3-Low	\$ 13,432.93	3-Low			\$ 937	\$ 2,015	\$ 2,952
Grand Oak	42	(T)TTO	\$ 13,100.23	3-Low	\$ 19,906.70	3-Low			\$ 1,310	\$ 2,986	\$ 4,296
Laurelhurst	23	(T)TTO	\$ 4,884.37	3-Low	\$ 14,039.41	3-Low	Low-flow Devices Installed, Lighting Retrofit		\$ 244	\$ 2,106	\$ 2,350
Maples I	30	(T)TTO	\$ 7,563.40	3-Low	\$ 19,152.27	3-Low		Yes	\$ 1,891	\$ 2,873	\$ 4,764
Maples II	21	(T)TTO	\$ 6,354.65	3-Low	\$ 12,421.17	3-Low		Yes	\$ 635	\$ 1,863	\$ 2,499
Marion Street	24	(T)TTT	\$ 1,951.46	3-Low	\$ 15,766.67	3-Low	Low-flow Devices Installed, Lighting Retrofit		\$ 195	\$ 2,365	\$ 2,560
Powell Blvd	20	(T)TTT	\$ 8,594.45	3-Low	\$ 11,093.27	3-Low			\$ 2,149	\$ 1,664	\$ 3,813
Prescott Place	20	(T)TTT	\$ 3,059.83	3-Low	\$ 15,060.11	3-Low	Low-flow Devices Installed, Lighting Retrofit		\$ 306	\$ 2,259	\$ 2,565
Taylor St Apts	10	(T)TTO	\$ 2,679.64	3-Low	\$ 6,646.19	3-Low	Low-flow Devices Installed, Lighting Retrofit		\$ 268	\$ 997	\$ 1,265
The Mews at Cascadia Village	24	(T)TTT	\$ 2,676.11	3-Low	\$ 11,877.82	3-Low			\$ 268	\$ 1,782	\$ 2,049
Walnut Park	38	(T)TTT	\$ 7,399.90	3-Low	\$ 13,608.27	3-Low		Yes	\$ 1,850	\$ 2,041	\$ 3,891
Allen Fremont Plaza	64	(O)OOO	\$ -	Data Pending	-	Data Pending	Lighting Retrofit		#N/A	#VALUE!	#N/A

Portfolio Trends – Energy Use by End-Use



Energy Use	Full Year 2015	Full Year 2016	Difference	Unit
Owner Energy	27,040	27,809	↑ 770 3%	mmBTU
Cooling Energy	193	190	↓ -3 -2%	mmBTU
Heating Energy	10,567	10,513	↓ -54 -1%	mmBTU
Electric Baseload Energy	8,150	8,506	↑ 356 4%	mmBTU
Fossil Fuel Baseload Energy	8,130	8,601	↑ 471 6%	mmBTU

Top 10 Energy Savers			
Property	2015 Energy Usage (mmBTU)	2016 Energy Usage (mmBTU)	Percent Change
Rose Apartment	2,234	2,015	-10%
Walnut Park	310	292	-6%
Taylor St Apts	206	193	-6%
Floyd Lights	52	49	-6%
Ritzdorf Court	1,964	1,863	-5%
Westshore	1,554	1,508	-3%
McCuller Crossing	559	540	-3%
Maples I	437	422	-3%
Fir Grove	621	604	-3%
Admiral	1,893	1,848	-2%

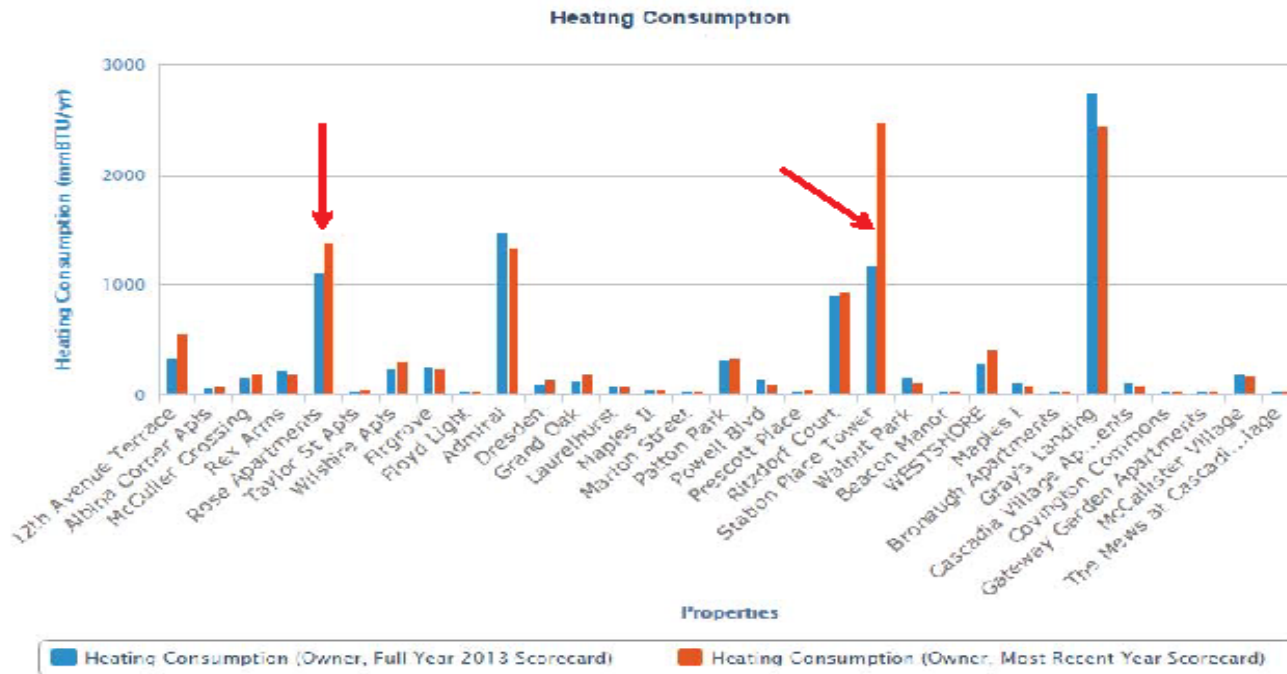
Top 10 Energy Increases			
Property	2015 Energy Usage (mmBTU)	2016 Energy Usage (mmBTU)	Percent Change
Bronaugh	99	165	67%
Powell Blvd	243	321	32%
Gray's Landing	4,773	5,524	16%
Dresden	410	462	13%
Beacon Manor	12	14	13%
Prescott Place	73	81	11%
Wilshire Apts	1,073	1,152	7%
Patton Park	941	996	6%
Maples II	318	337	6%
Laurelhurt	291	310	6%

Identify trending projects to examine for savings

Portfolio Heating Consumption

2013 v. Most Recent Year

(arrows denote properties where heating has increased)

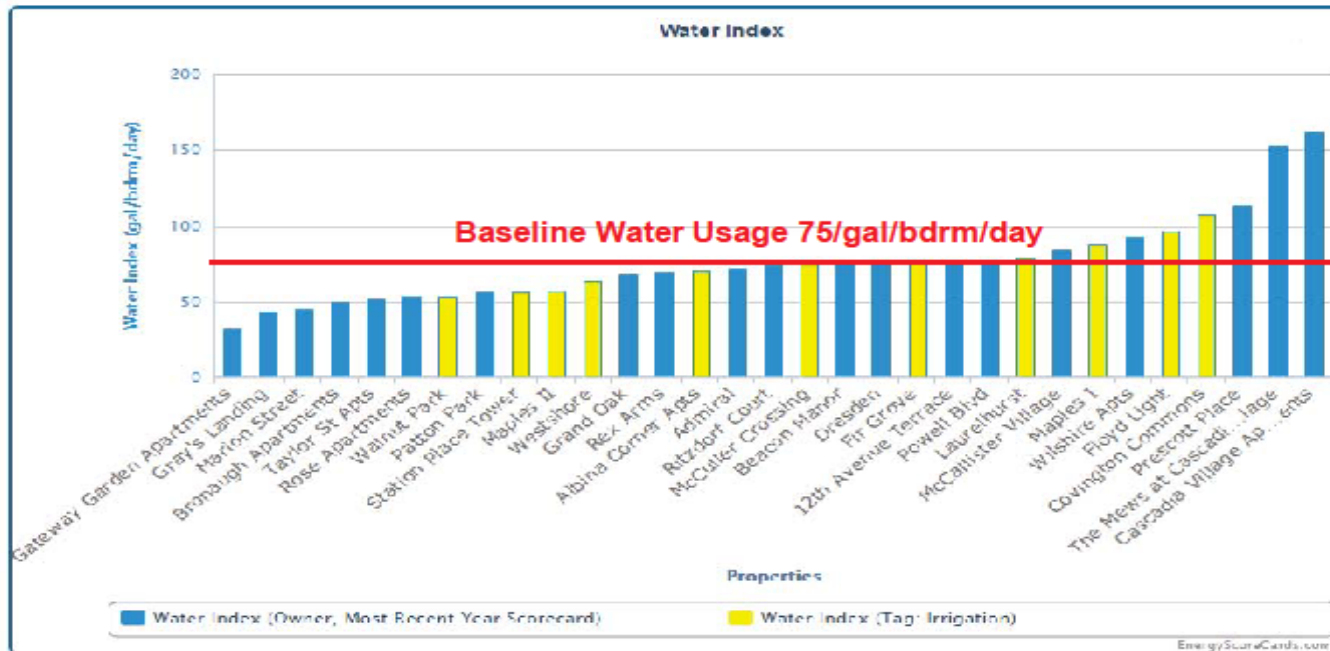


Property alerts can be monitored in system or receive e-mail updates

BRIGHT POWER

Water Opportunities

Onsite Irrigation



Can set benchmark point and easily monitor outliers

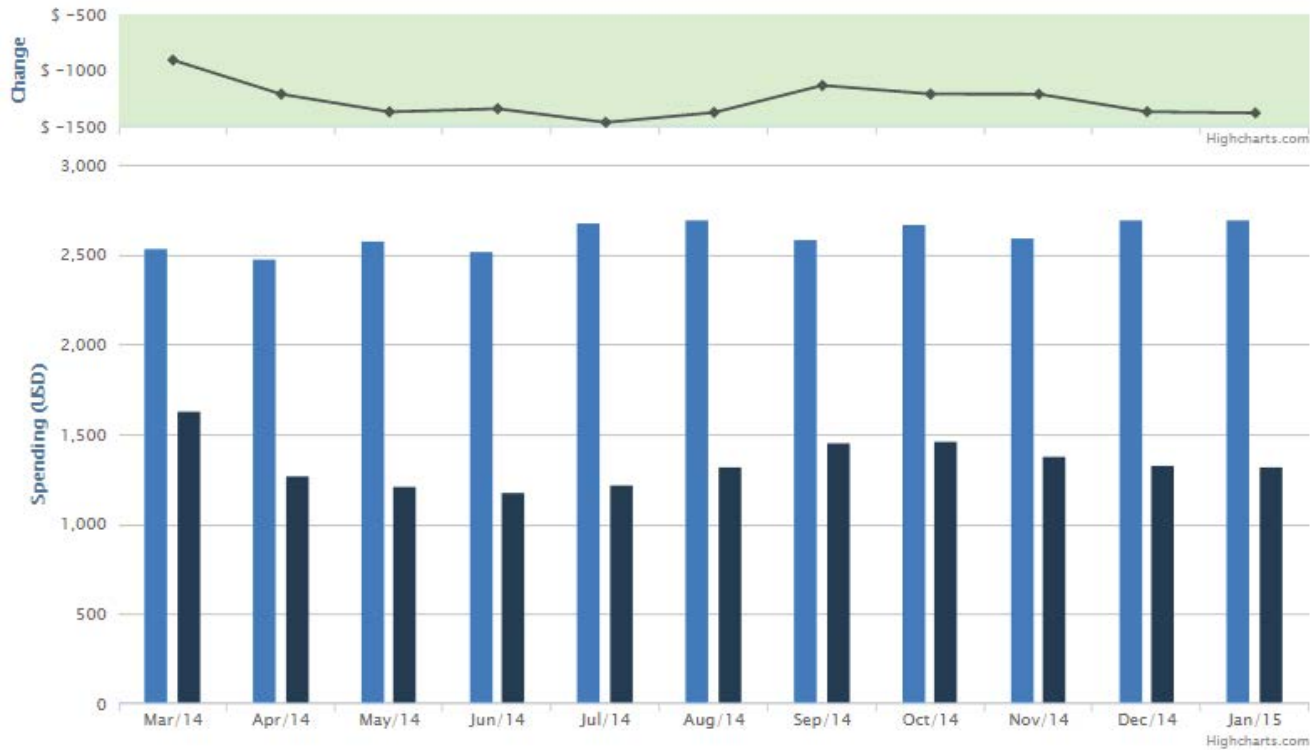
Demonstrating savings

Package: **Tenant Water Intervention**

Status: N/A

Savings to Date: **\$13,933**

Water Savings: **48.63%**



Baseline Period for Report

Full Year 2013 - Total
Jan 2013 - Dec 2013



Water

Display

Spending Usage

Display Series

Baseline vs Actual

Accounts

Assumptions

Savings to artificially high baseline created by excessive water use by resident



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 @reachcdc

 /reachcdc

 /REACHCDC

Resources

Going Live TOMORROW!

Revamped BBC site on the HUD Exchange:

<https://www.hudexchange.info/programs/better-buildings-challenge/>

New information:

- News & Announcements section
- Direct Links to Multifamily Sector pages on DOE's BB Website
- Incentives of the BBC Program



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