



AUGUST 21-23, 2018 • CLEVELAND, OHIO

From the Bottom to the Top

Institutionalizing Efficiency in Multifamily Organizations

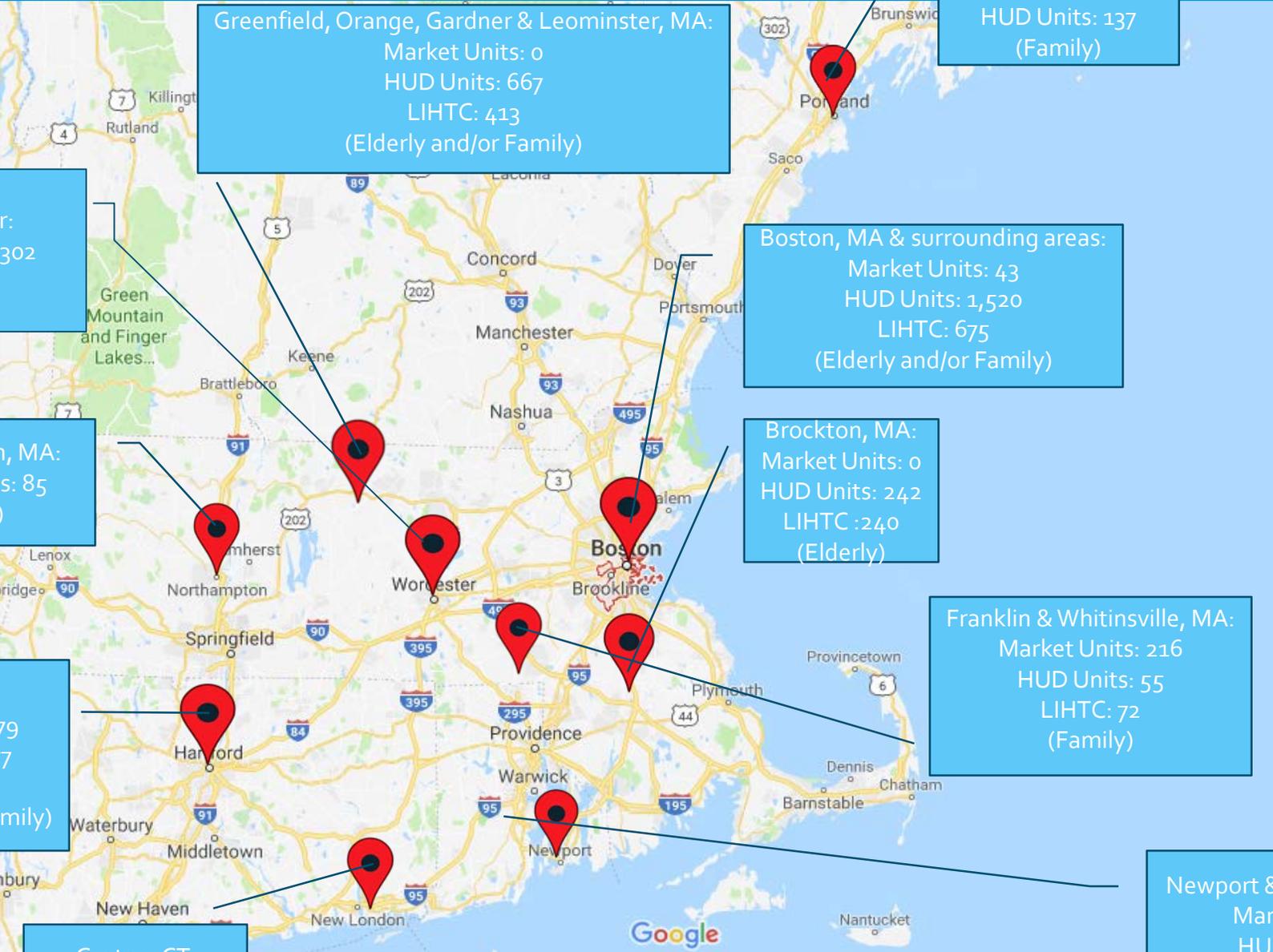
PROPERTIES **COMMITTED**
TO
SUSTAINABILITY

The Schochet Companies – AMO ®

SCHOCHET BACKGROUND

- Schochet Companies is a full service real estate development and management company
- Founded by Jay R. Schochet over forty five years ago
- Developed, owned, and/or managed in excess of 7,000 apartments and over 600,000 square feet of retail and commercial space throughout New England and on the West Coast
- Currently we own and/or manage over 5,000 apartments and 100,000 square feet of commercial space throughout New England
- Headquartered in Braintree, MA, we have offices in Rhode Island, Connecticut, and Maine and employ over 165 people

Portfolio:



Total Units: 5,116

VISION – TOP DOWN IS CRITICAL

To continuously reduce the environmental footprint of our multi-family properties.



OBJECTIVES

- To implement a consistent, comprehensive, corporate-wide methodology across all owned and managed properties that 1) minimizes energy and water consumption, 2) reduces solid waste tonnages and 3) reduces the use of toxic chemicals.
- To pursue all cost-effective strategies for reducing energy and water consumption including conservation, efficiency, and alternative and renewable technologies.
- To incorporate the concepts of conservation, efficiency and continuous improvement into our corporate culture.

CONTINUOUS IMPROVEMENT



PROCESS/ COMMUNICATION

- Energy and water benchmarking using WeGoWise
- Implementation of No and Low Cost measures
- Pursuit of on-going operational improvements
- Inclusion of efficiency and healthy environment considerations when making equipment/building replacement and upgrade decisions
- Comprehensive multi-year planning of capital projects, Road maps integrated with site CNAs/financing
- Budgeting and long term planning

EMPLOYEE RESPONSIBILITIES/ ENGAGEMENT

- Be proactive
- Aggressively pursue all cost-effective efficiency opportunities
- Incorporate energy & water efficiency into all decisions
- Incorporate healthy environment considerations into all decisions
- Support NCLC, reporting, and other portfolio-wide programs
- Leverage company people and resources to ensure compliance with all responsibilities
- Maintain energy and water tracking records

PHASES 1 & 2:

Phase 1 (2009-2011):

- Beginning March 2009, we enlisted RPM to help identify and eliminate energy inefficiencies throughout the portfolio – 2008 was the baseline year
- A Sustainability Initiative was developed with the goal of creating a business model that includes a focus on sustainability, efficiency and accountability
- Gain a clear focus and take advantage of all emerging technologies
- Create goals to move forward and begin making real change throughout the portfolio

Phase 2 (2012-2015):

- To continue to reduce the Companies' environmental footprint by improving building performance
 - Energy and water consumption optimization (toilet retrofits, laundry upgrades, etc.)
 - Minimize solid waste and toxic material use
 - Recast the baseline
- Work to promote continuous improvement and staff engagement with
 - Sustainability Conference Calls
 - Operations Surveys – Questionnaires to collect pertinent information and data
 - Road Maps – track/ plan past, current and future projects and sustainability efforts
 - Information sharing through established channels

Phase 3 (In Progress)

PHASE 3 GOALS

BY YEAR END 2018 USING 2015 AS THE BASELINE YEAR

- Reduce energy consumption by 3%.
- Reduce CO₂ emissions by 3%.
- Reduce water consumption by 3%.
- Build on healthy living initiative by implementing policies related to green cleaning, and environmentally preferable products and services.
- Augment the company's current sustainability training with a focus on better monitoring of utility usage for property managers and routine systems training for maintenance staff.
- Leverage all appropriate, available federal, state, and local incentives.
- Pursue at least one opportunity per year to share our success and lessons learned with others in the industry.

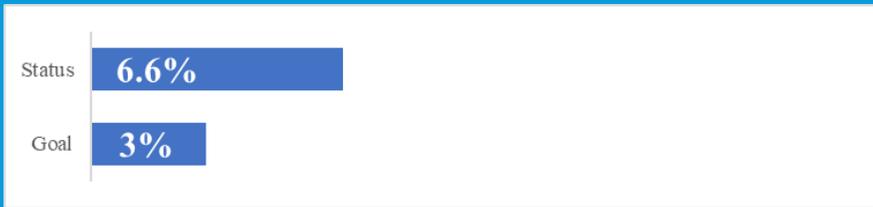
PORTFOLIO UTILITY USAGE REDUCTIONS

Comparing calendar year 2017 to the baseline year of 2015, as a portfolio, usage for owner-paid electricity, gas and oil, and water have all surpassed Phase 3 reductions goals.

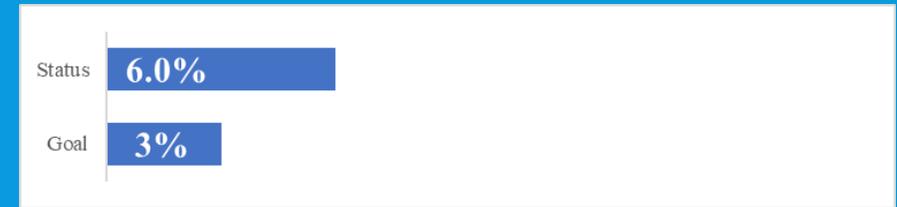
PHASE 3 PORTFOLIO UTILITY USAGE REDUCTIONS

YEAR END 2017 USING 2015 AS THE BASELINE YEAR

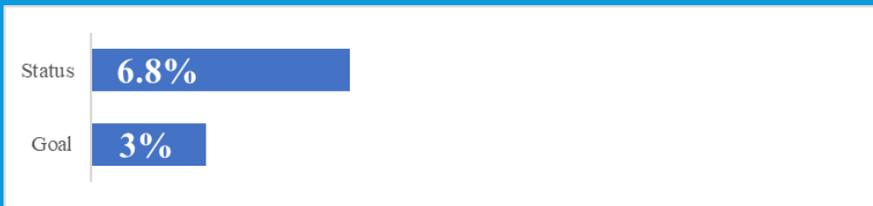
Total energy use (kBTUs) decreased 6.6%



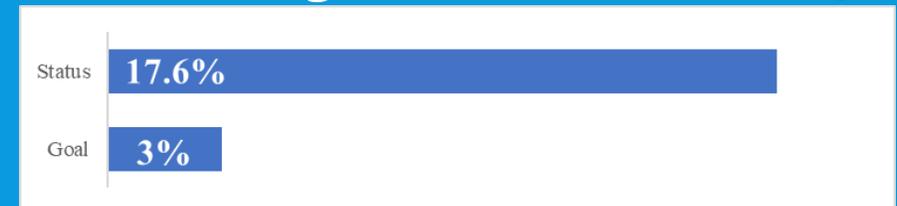
Electricity use (kWh) decreased 6.0%



Gas use (therms) decreased 6.8%



Water use (gallons) decreased 17.6%

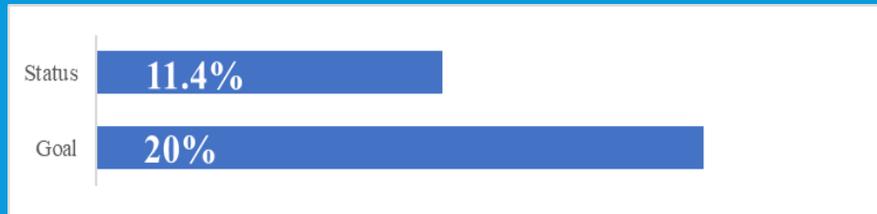


*This calculation does not include 6 properties with incomplete data

ALL PHASES - PORTFOLIO UTILITY USE REDUCTIONS

2011 THROUGH EOY 2017

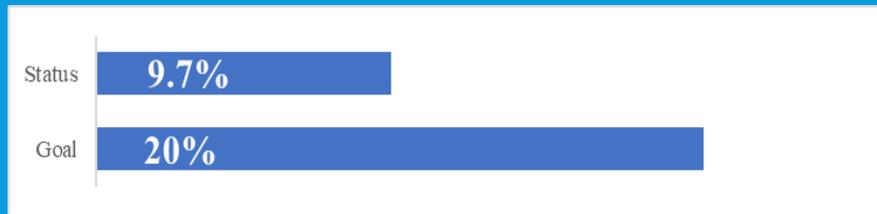
Total energy use (kBTUs) decreased 11.4%



Electricity use (kWh) decreased 14.6%



Gas use (therms) decreased 9.7%



Water use (gallons) decreased 22.7%



*This calculation does not include 6 properties with incomplete data

ALL PHASES - INITIATIVE RESULTS

- Schochet has implemented over 150 projects across the portfolio with a value of over \$7 Million.
- 73% of the costs were covered by incentives and grants.
- Greenhouse gas reductions are approximately 4,200 tons per year, which is equivalent to 1,030 cars off the road.
- Water reductions are estimated at 1.2 million gallons per year.
- Policies and procedures have been implemented to cultivate a spirit of sustainability and improvement for all employees.
- A major barrier to improvement has been tackled
 - Ready access to capital
 - To address this Schochet introduced the **Roadmaps** concept into budgeting and refinancing processes
 - Roadmaps are a site level list of projects that would benefit a property, and are updated annually.

RESOURCES

- Peter Lewis, Vice President, Property Management
peter.lewis@schochet.com
617-398-5143 Office/Direct
- Ilene Mason, Sustainability Consultant
Rethinking Power Management
imason@rpmpowerllc.com
508-259-5030



From the bottom to the top *and sideways*: Institutionalizing Efficiency in Multifamily Organizations

Julie Klump
Vice President
Design and Building Performance

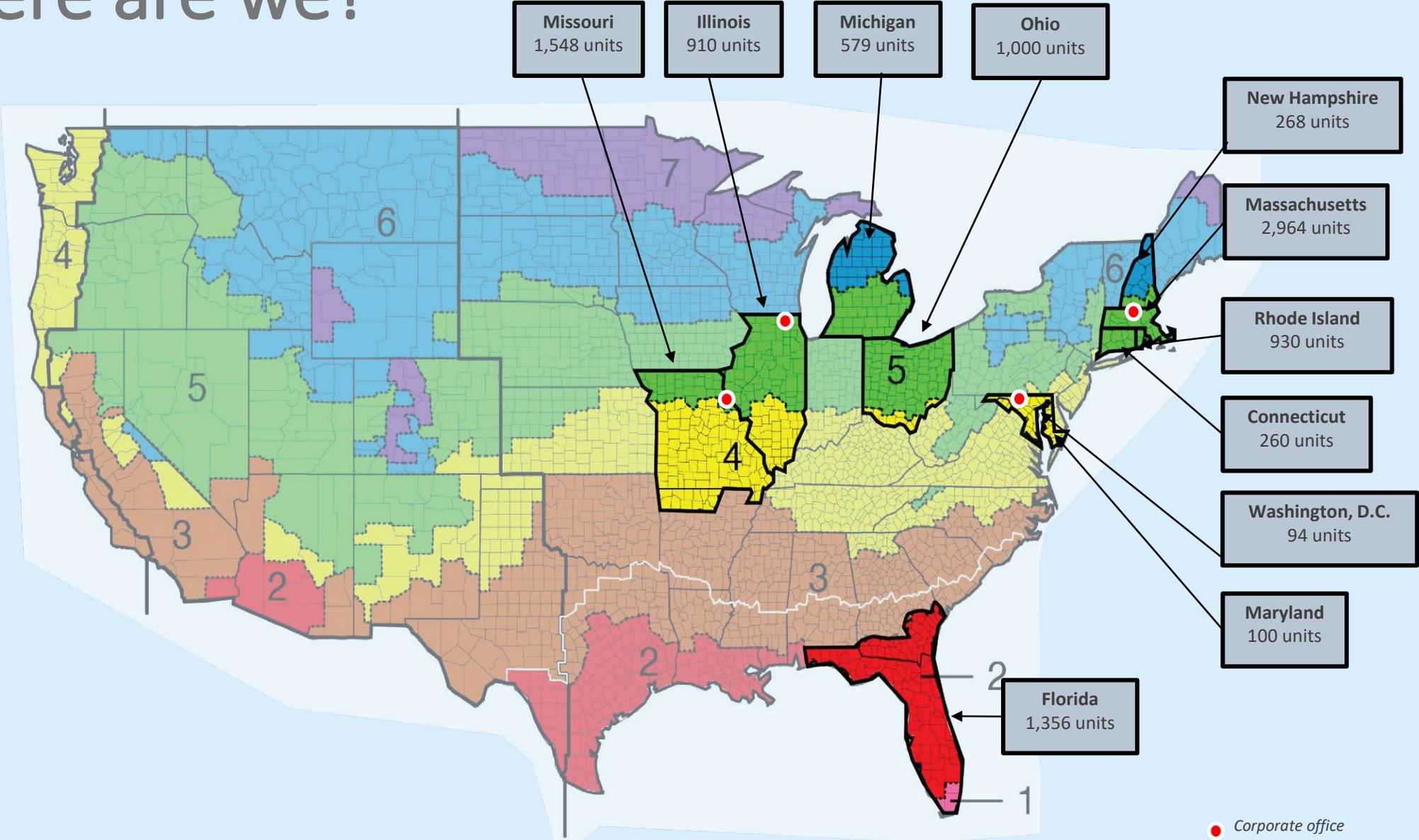
Who are we?

POAH is a nonprofit organization whose mission is to preserve, create, and sustain affordable, healthy homes that support economic security and access to opportunity for all.

The Design + Building Performance Team: The Design + Building Performance Department holistically integrates energy and water efficiency into development projects and the owned portfolio, working closely with property management staff to maintain each building's green upgrades and monitor the effectiveness of our conservation initiatives.



Where are we?



Basis of Design Utility Tracking Project Highlights Energy Reporting





WELCOME TO THE BASIS OF DESIGN

A POAH Building Design Resource



Some units look like this when we buy them.

But of course the goal is to have units that look like this.



PRODUCTS + SPECIFICATIONS



A/C COVERS



APPLIANCES



BATH ACCESSORIES



BUILDING ENCLOSURE



CABINETS



DOORS



FLOORING



LIGHTING



PAINT



PLUMBING



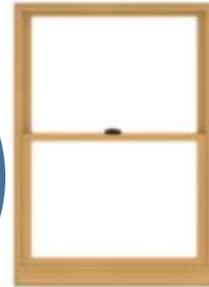
ROOFING



SIGNAGE



VENTILATION



WINDOWS

Current BOD sections

Utility Tracking



Invoice By Date
POAH - 7/23/2018

Filter Valu

Location Status Acti

wegowise

All Developments

View Data Add a Development

Total energy use in Btu per square foot

Name	Full-Year Sum	Detailed Data per Month (Deselect All)
Brandy Hill	83.3K	500
Meadowbrook	68.4K*	500
8330 on the River	61K	400
• Cromwell Court	40.8K	300
Bridle Path	32K*	300
Torrey Woods	21.5K	200

• = Properties owned by other users
* = Incomplete total due to missing meters
red = Incomplete total due to missing data



33 Blossom Street, Boston, MA, 02114

Owner Energy B 50 kBtu/ft²/yr ↓ Most Recent Year - Owner Mar 2013 - May 2014

Cooling A 0.2 BTU/ft²/CDD ↓ 7 mmBTU

Heating C 4.9 BTU/ft²/HDD ↓ 3,808 mmBTU

Electric Baseload D 2,739 kWh/unit/yr ↑ 1,355 mmBTU

Dashboard Properties Reports Help Feedback



PortfolioManager®

Welcome POAHENERGY: [Account Settings](#) | [Contacts](#) | [Help](#)

MyPortfolio Sharing Planning Reporting Recognition

Properties (12)

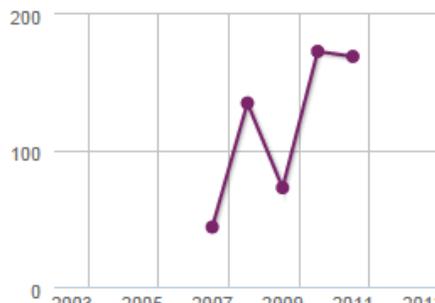
Add a Property

Notifications (1)

You are connected to [Barry Poage](#)

Clear

Source EUI Trend (kBtu/ft²)



Properties (12)

Filter by: View All Properties (12)

[Create Group](#) | [Manage Groups](#)

Name	Action
8330 On the River	I want to...
920 On the Park	I want to...

How did we do? Project Highlights

AA M/ 88 unit 20% U Owner

Owner Utility Change (current rate applied)

Utility	Annual Savings (\$/Use)	% Savings
Electricity	\$12,900	20%
Full building	293,500 kBTU	
Gas	\$9,145	28%
Resident heating and DHW	938,700 kBTU	
Water	\$6,100	11%
Full building	330 kGal	
TOTAL	\$28,145	20%

Rehab & Utility Program Measures

Upgrades affecting owner-paid utilities

- New Energy Star windows
- New energy recovery ventilators
- All new 1.28 gpf toilets
- Low-flow plumbing fixtures
- Foam injection into wall cavities (complete 11/2017)
- Common area and exterior lighting to LED

* Irrigation was added, accounting for the temporary post-rehab increase in water usage. Irrigation schedule has since been adjusted to run less frequently.

OLI HIG 65 unit 33% L Owner

Owner Utility Change (current rate applied)

Utility	Annual Savings (\$/Use)	% Savings
Electricity	\$6,500	9%
Full building	140,400 kBTU	
Gas	\$24,500	51%
Common areas	2,551,100 kBTU	
Water	\$11,600	55%
Full building	1,100 kGal	
TOTAL	\$42,600	33%

Rehab Measures

Upgrades affecting owner-paid utilities

- Fuel change from oil to gas
- New condensing boilers (space & DHW heating)
- All new 1.1 GPF toilet replacements
- Low-flow plumbing fixtures
- Common area lighting upgrade to LED fixtures
- New windows
- Roof replacement with added insulation



- These are done in excel
- Completed for all projects
- Show utility and rehab projects
- Highlight discreet measures and their impact

How did

Q1 2018 actual s Briston Arr

Negative numbers indicate uti

Electricity

Owner pays for:

% change

Value change

Natural Gas

Owner pays for:

% change

Value change

Water

Owner pays for:

% change

Value change

Sewer

Sewer provided by utility or onsite?

% change

Value change

Year Over Year Electric Cost, Usage, and Rate

Electric Jan-Mar 2018 Briston Arms Apartments

Change (Q1 2017 to Q1 2018)

Owner pays for:	Common Areas	Notes:
Cost change	17%	Utility Direct Install of LED Lights

Usage change

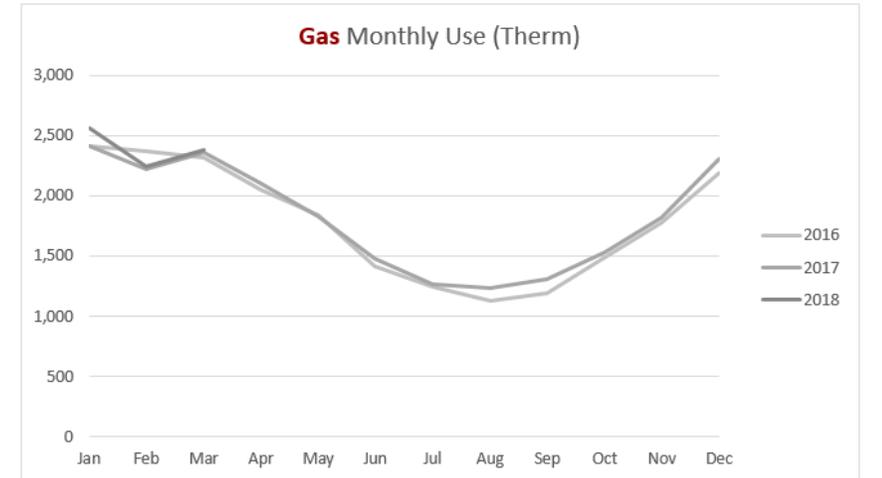
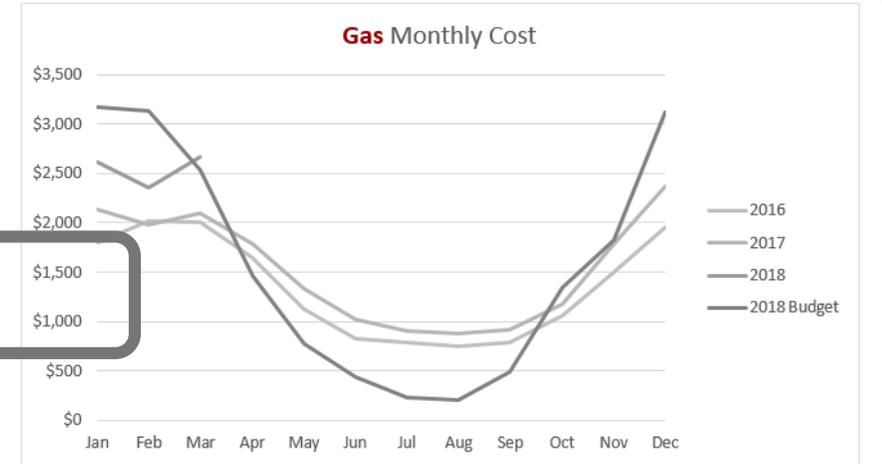
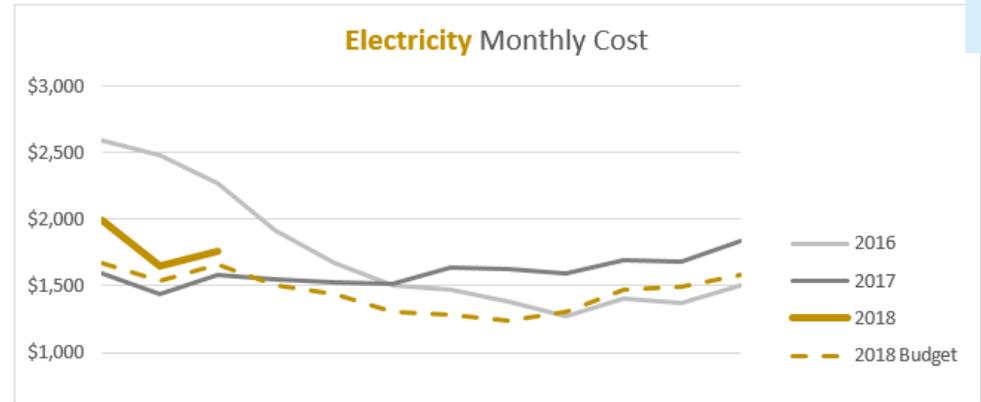
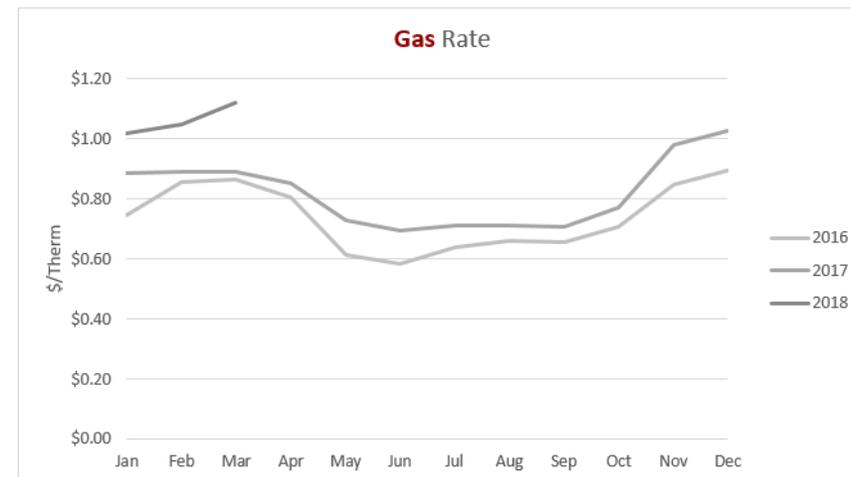
Rate Change

Year Over Year Gas Cost, Usage, and Rate

Natural Gas Jan-Mar 2018 Briston Arms Apartments

Change (Q1 2017 to Q1 2018)

Owner pays for:	Resident DHW	Notes:
Cost change	23%	Solar Thermal System in design
Usage change	\$1,418	
Rate Change	201 Therm	
	19%	
	.172 \$/Therm	



Communication is Key.

- It lets the architects and builders know what we expect for building performance
- It highlights for the development team what their work in rehabs is accomplishing or not
- It highlights for site staff what happened as a result of the rehab or utility program
- It keeps sites up to speed on ongoing utility spend, consumption and rate, and what we are doing about it.





Thank you.

Julie Klump

jklump@poah.org

Sustainability Integration Framework

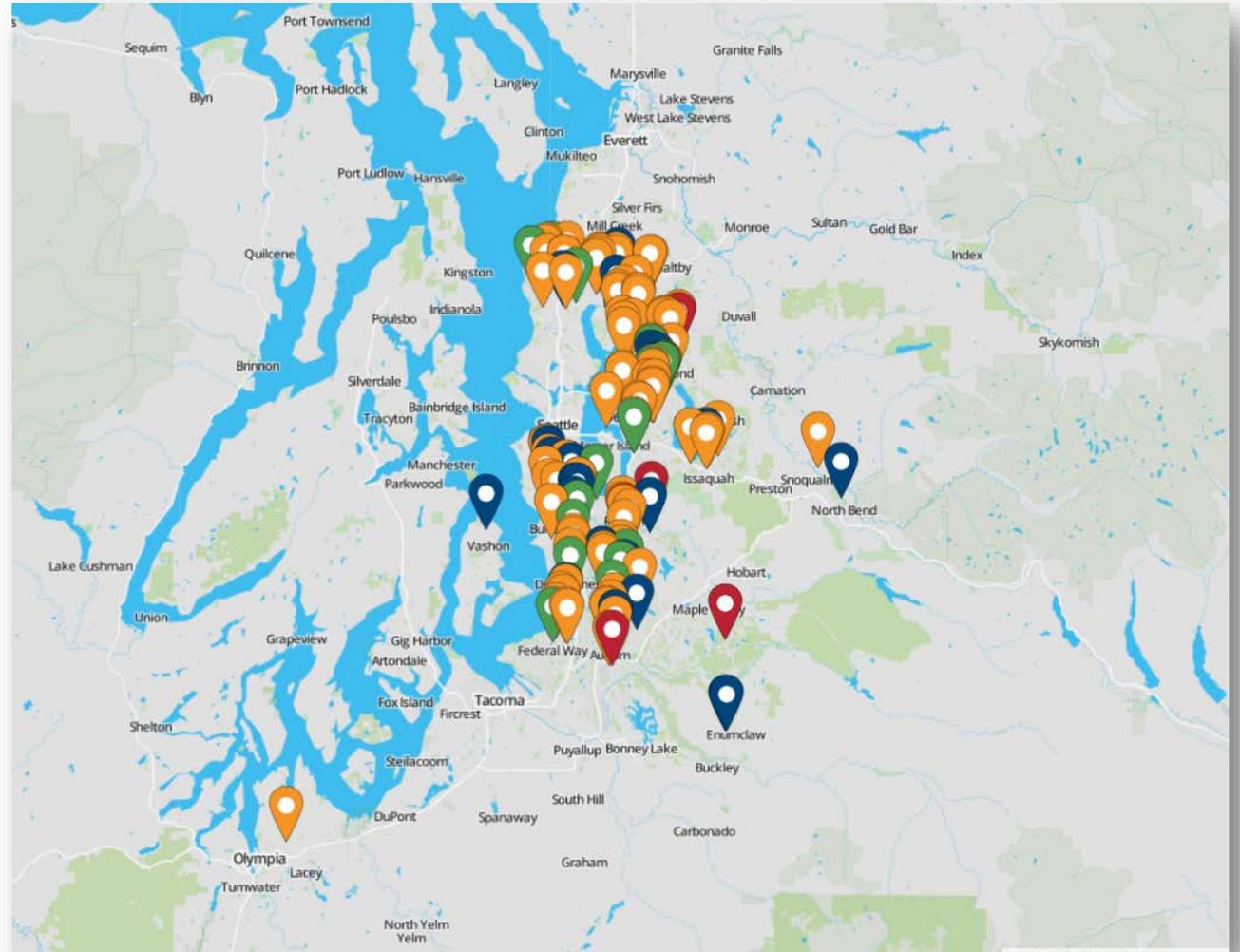
Institutionalizing Utility Efficiency in Multifamily Organizations



Jenna Smith
Resource Conservation Manager
July 16, 2018

King County Housing Authority

- Serves mainly King County (excluding Seattle)
- About 150 properties
- Over 10 million square feet
- Elevator, garden style, mobile home, single-family, plus community centers and office space
- Public housing, tax credit, and non-profit ownership
- Includes Housing Management, Weatherization, Construction, New Development and Resident Services departments



History of Sustainability at KCHA

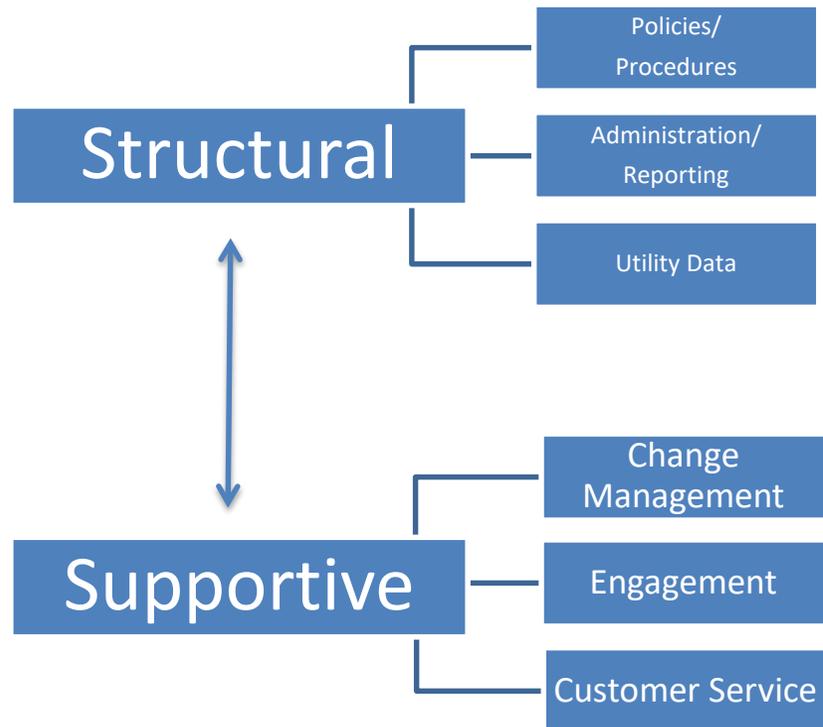
- 1970s: Manage low-income weatherization state funding
- 2004: The Sustainability Project (O'Brien & Co.) report
- 2005: KCHA Board Resolution 5005 Commitment to Sustainable Communities Through Excellence in Environmental Stewardship and the Establishment of Resource Conservation Department
- 2007: Completed 1st EPC project
- 2010: Resource Management Plan (2011 – 2016)
- 2016: Environmental Sustainability Plan (2017-2021)
- 2017: Completed 2nd EPC project



Environmental Sustainability Plan

2017-2021 Year-End Goals							
7 Sustainability Plan Goals	2016 (Baseline)	2017	2018	2019	2020	2021	2021 Stretch Goal
10% reduction in gallons per person per day (GPD) for multifamily properties (without irrigation)	50.3 GPD	46.6 GPD	45.6 GPD	44.7 GPD	43.7 GPD	42.8 GPD	41.4 GPD
10% reduction in normalized energy use per square foot (EUI) for all multifamily properties	36.8 EUI	36.0 EUI	35.3 EUI	34.6EUI	33.8 EUI	33.1 EUI	32.0 EUI
5% reduction in greenhouse gas emissions from building electricity and gas (Kilograms CO2e/ft ²)	4.464 kg CO2e/ft ²	4.420 kg CO2e/ft ²	4.375 kg CO2e/ft ²	4.331 kg CO2e/ft ²	4.287 kg CO2e/ft ²	4.243 kg CO2e/ft ²	4.022 kg CO2e/ft ²
100% increase in capacity of renewable energy systems installed	98.6 kW	195 kW	195 kW	195 kW	195 kW	195 kW	250 kW
55% recycling and organic waste composting diversion rate	40%	43%	46%	49%	52%	55%	60%
100% qualified properties certified as 3 EnviroStars	50%	60%	70%	80%	90%	100%	100% 5 Stars
31% KCHA vehicles use alternative fuel	8%	10%	17%	22%	26%	31%	40%

Sustainability Integration Framework



Sustainability Integration Framework

Structural– adoption of new policies and procedures that integrate sustainability organization-wide.

- Utility data management
- Resolutions
- Policies/Procedures
- Cost benefit analysis
- Reporting (monthly and annually)

Supportive– ensuring progress by managing the process, getting organizational buy-in, overcoming barriers.

- Upper management & field support
- Employee engagement
- Messaging/communications
- Partnerships
- Marketing

Supportive

Change Management

- Managing sustainability initiatives through strategic stakeholder communications.

Engagement

- Using quantitative data and qualitative research to design behavior change programs and initiatives.

Customer Service

- Serving staff and residents by troubleshooting barriers and process, highlighting benefits, and providing education and training.

EPC – Energy & Water Project

- Advance warning – “It’s coming”
- Solicit feedback from maintenance staff – “We hear you”
- Troubleshoot barriers
- Provide product maintenance training
- Highlight progress and benefits with multiple messages
- Use data and be honest with results
- Closure – “It’s over”
- Ongoing support to staff – “We still hear you”

Thank you

Jenna Smith

jennas@kcha.org

