



LISC Boston's Green + Healthy Work

CHAM Webinar
December 12, 2018

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Dorchester Bay EDC's Dudley Terrace (Photo Credit: Sparhawk Group)

LISC Boston's Green Retrofit Initiative: A Quick Overview

- (2010-2012) Build owner demand
 - New utility program created: LEAN Low Income Multi Family
 - 11 Boston nonprofits enrolled
- (2012-2015) Achieve deeper savings
 - Goal: achieve 20+% savings
 - Actual: 29% electric, 23% gas
 - HUD Energy Innovation Fund award
 - Statewide engagement
- (2014-2016) Convene stakeholders, inform policy
 - Green Asset Management Plans: 20 owners, 29,000 units
 - Policy focus on connecting utilities and housing finance agencies
- (2016-present) Drive demand for efficient, clean energy
 - Optimization assessments, grants for clean energy technologies
 - Provide comprehensive energy audits for projects nearing rehab
 - Drive sustainability across housing finance agency portfolios
 - Provide green + healthy toolkit

Comprehensive Energy Audit + Clean Energy Technology Optimization Project Goals

- Audits – Getting all parties to discuss deep energy efficiency and clean energy savings opportunities
- Retrocommissioning – How do we ensure renewables are installed and maintained correctly to achieve projected savings?
- Inform program and policy design for more state level resources and assistance



Allston Brighton CDC's Green Retrofit Project with Cliff Geissler and Dariela Maga.

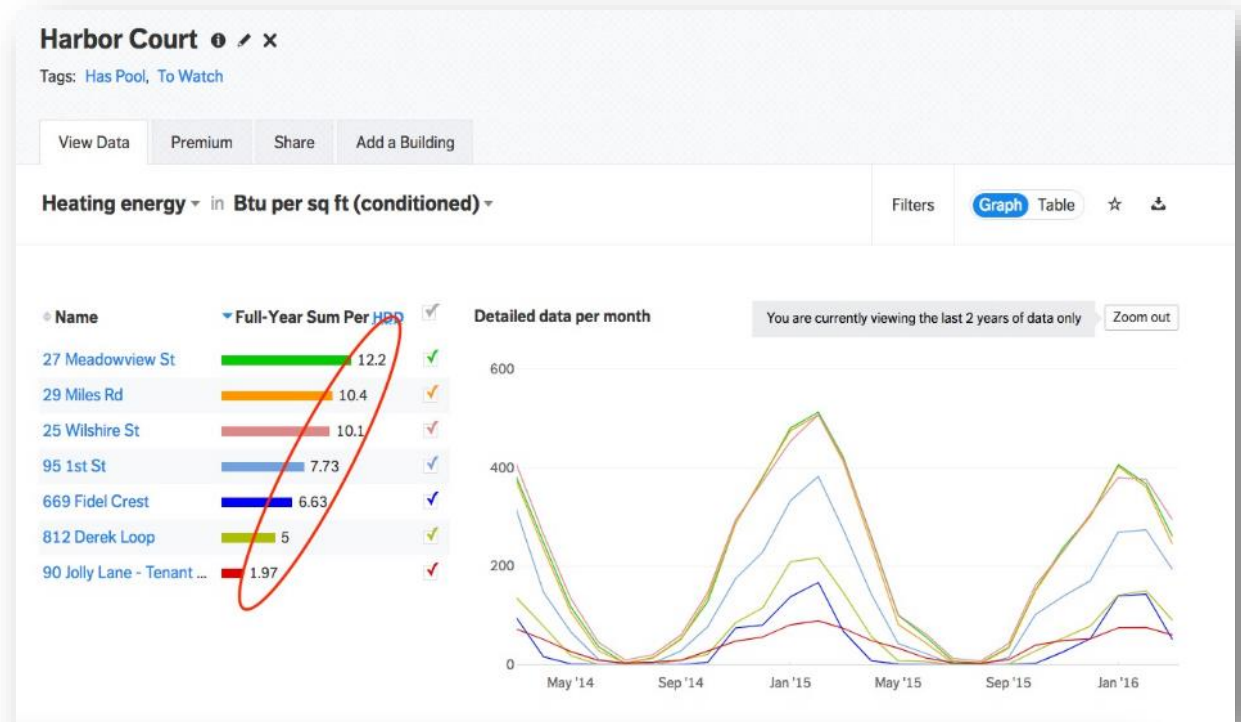
Recommendations from Audits and Retrocommissioning

- State housing agency and lenders should mandate comprehensive energy audits/IPNAs
- Build auditing field through guidance, bid review, and quality control
- Encourage early and close coordination between rehab projects and utility program to ensure commitment to fund all available energy savings
- Analyze pipeline of rehab opportunities with subsidy providers, utility program staff, permanent lenders
- Owners need clean energy roadmap, prequalified vendors, and predictable programs to make informed decisions
- Need to overcome obstacles that exist for permanent lenders to underwrite anticipated savings



“Greening” Housing Finance Agency Portfolios

- Create WegoWise (benchmarking) master account and train staff on use
- Ensure properties approaching rehab/recapitalization receive comprehensive energy audits
- Maximize utility energy efficiency program usage in between capital cycles
- Ensure owners and property managers have green + healthy toolkit



Heating Energy Intensity (btu/square foot/heating degree day) for a sample set of properties in WegoWise.

Green + Healthy Portal

- LISC has assembled resources into a comprehensive online portal (lisc.org/our-resources/resource/green-healthy-affordable-housing)
- Each Guide is catered to specific audiences (including owners, developers and managers; nonprofit intermediaries; and policymakers and advocates) to help them drive energy, water, and healthy housing related goals across their properties and/or portfolios.



Green + Healthy Property Management Guidance Tools

- Green + Healthy Property Management Guide
- Green + Healthy Asset Management Plan (GHAMP!) Template and Dashboard
- WegoWise[®] (Benchmarking) Guide



Photo Credit:
Darlene DeVita Photography

Green + Healthy Property Management

A Guide for Multifamily Affordable Housing

Local Initiatives Support Corporation

Prepared with support from Tohn Environmental Strategies
Originally published 2013, Revised 2018

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GHAMP! Template

Examples of interventions

Heating Energy Goal:

Increase to 75% by 2019 the number of gas heated residential properties that use less than 7 BTU per square foot per heating degree day (HDD). All new construction will achieve a minimum of 3 BTU/SF/HDD.

Potential actions to realize the goal:

- Define heating energy (BTU/SF/HDD) for all buildings in portfolio (see Green + Healthy Dashboard).
- Define factors that contribute to the energy consumption of each building.
- For buildings not meeting the target, identify 1) opportunities to improve performance (i.e., planned refinance/renovation, robust operating budget, utility funding), and 2) timeline for action.
- Define a schedule to audit each building and/or protocols to respond when data indicates attention is warranted to address energy consumption.

Smoke Free Housing Goal:

50% of buildings will be smoke free by 2019.

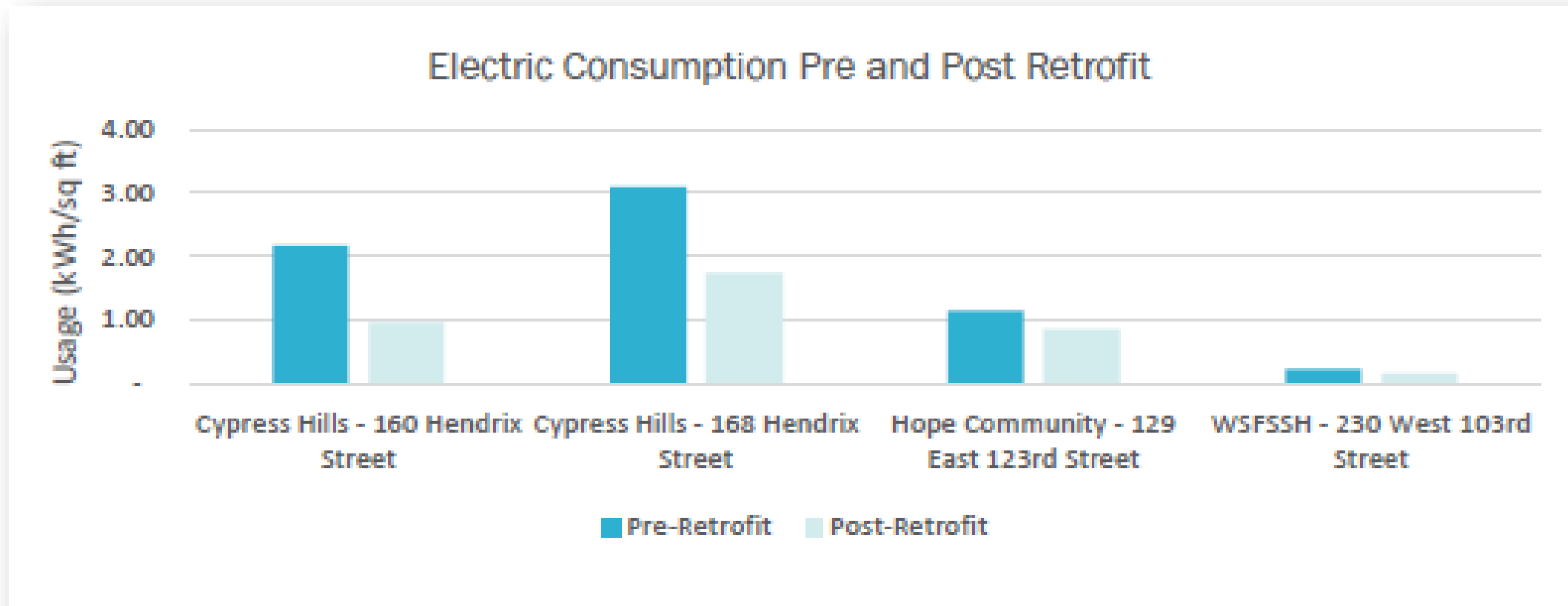
Potential actions to realize the goal:

- Define current % of building that are smoke free (see Green + Healthy Dashboard).
- Set schedule to move target number of buildings to smoke free status by 2019.
- Explore support with local health agency or advocates.

GHAMP! Dashboard


Performance Targets		Color Key															
Heating Energy Intensity (BTU/SF/HDD)	5	Green = at or below the target															
Total Gas Use (kBTU/SF) - sum of last 12 months	40	White = above the target and below 110% of the target															
Common Area Electricity (kWh/Common Area SF) - sum of last 12 mos	1.2	Yellow = above 110% of the target and below 120% of the target															
Water Use (Gallons / Bedroom / Day) - 12 month average	50	Red = above 120% of the target															
Development	Address	Heating Energy Intensity (BTU/SF/HDD)	Total Gas Use (kBTU/SF)	Electric Use (kWh/Common Area SF)	Water Use (Gal/BR/Day)	Most Recent Energy Audit (year)	Most Recent CNA (year)	Next Rehab / Refi (year)	Utility Efficiency Program Status	Utility Program Priority	Smoke Free? (Y/N)	IPM? (Y/N)	Green Cleaning? (Y/N)	Low VOC used? (Y/N)	Notes	Last Updated	
Shady Acres	123 Main Street	7.67	45.4	0.9	49.2	2007	2013	2020	Work Completed	Heating boilers	Y	Y	Y	N		7/1/2018	
Shady Acres	125 Main Street	4.63	43.6	2.1	55.0	2007	2013	2020	Applied	Common area lighting	Y	Y	Y	N		7/1/2018	
Shady Acres	127 Main Street	7.46	47.2	1.1	96.3	2007	2013	2020	Work In-progress	Heating boilers and water use	Y	Y	Y	N		7/1/2018	
Huntington Glen	456 State Ave	5.25	48.3	1.3	56.0	2016	2014	2022	Not Applied	DHW	N	Y	Y	N		1/31/2018	
Huntington Glen	458 State Ave	6.36	62.4	1.4	72.0	2016	2014	2022	Not Applied	All systems	N	Y	Y	N		1/31/2018	

WegoWise[®] (Benchmarking) Guide



Collaborative Learning: **Passive House** and Beyond

- LISC's Passive House Forum in January 2018 brought together architects, owner/developers, and builders to discuss their Passive House projects across New England.
- Upcoming Events:
 - Efficient and Clean Energy Incentives
 - Underwriting Energy Efficiency Savings
 - Benchmarking 101
 - Resiliency Strategies



PASSIVE HOUSE FOR AFFORDABLE HOUSING FORUM

January 29, 2018 from 1PM-3PM
MassHousing Boardroom, 1 Beacon Street, Boston, MA

Passive House design is smart, durable, and can cost-effectively realize substantial long-term savings for the multifamily affordable housing sector. Hear from

- Michelle Apigian (ICON Architecture)
- Hank Keating (Trinity Financial - Retired)
- Ryan Cassidy (RiseBoro Community Partnership)
- Jesse Thompson (Kaplan Thompson Architects)
- Declan Keefe (Placetaylor).

Join us! Email RSVP@masshousing.com

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Cosponsored by Massachusetts Housing Partnership, American Planning Association MA Chapter, Boston Society of Architects, CHAPA, MACDC, MAPC, MassCEC, Mel King Institute, Passive House MA, and USGBC MA Chapter. Photo credit: Jeff Stephenson.

Policy: Qualified Allocation Plan (QAP) Recommendations

- Require application to applicable energy efficiency program(s)
- Benchmark energy and water usage
- Comprehensive energy audits for projects nearing rehab
- Utilize integrated pest management
- Require smoke-free housing
- Provide bonus points for Passive House new construction projects



GreatBridge Attleboro's Bliss School Apartments Solar PV System (Photo Credit: Sparhawk Group).

Next Steps and Available Resources

- Does your clean energy agency provide a clean energy roadmap or overview of all its offerings?
- Is your umbrella organization for affordable housing advocating and coordinating with housing, energy, and clean energy agencies on this work?
- Balancing energy and housing concerns
- Green + Healthy tools make it easier
- NEWHAB (Network for Energy, Water, and Health in Affordable Buildings) is a resource!
(energyefficiencyforall.org/newhab)



Network for Energy, Water and Health in Affordable Buildings (Photo Credit: Energy Efficiency for All).

Contact Us!

Emily Jones

Program Officer, LISC Boston

617.410.4336

ejones@lisc.org

Mike Davis

Senior Program Officer, LISC Boston

617.410.4334

mdavis@lisc.org

