Innovative Financing Strategies for High-Performance Affordable Housing: The Value of Comprehensive Energy Audits

June 10, 2019

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Dorchester Bay Economic Development Corporation's Dudley Terrace (Photo Credit: Sparhawk Group)

LISC Boston's Green Retrofit Initiative

- (2010-2012) Build owner demand
  - New utility program created: LEAN Low Income Multi Family
  - 11 Boston nonprofits enrolled
- (2012-2015) Achieve deeper savings
  - HUD Energy Innovation award
  - Goal: achieve 20+% savings
  - Actual: 29% electric, 23% gas
  - 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, resilient and healthy homes
  - Comprehensive energy audits for properties nearing rehab
  - Optimization assessments, grants for existing clean energy technologies
  - Resiliency assessments and emergency management plans for vulnerable properties

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Why Comprehensive Energy Audits?

- Provides opportunity to discuss deep energy efficiency and clean energy savings opportunities collectively
- Informs program and policy design for more state and municipal level resources and assistance
- Provided comprehensive energy audits for 24 projects approaching rehab

Allston Brighton Community Development Corporation's Green Retrofit Project with Cliff Geissler and Dariela Maga (Photo Credit: Dariela Maga).

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What We Learned (Audit Program)

- Importance of well-timed, coordinated audits
- Predictability and knowledge of programs
- Deep energy and water savings available, but barriers exist (high upfront costs)
  - $26M expected to be leveraged through utility program alone for 24 audited properties (~$8,800/unit)
- At least 8 audited properties could seek financing through MHP's new Green Retrofit Financing Program (required reduction of property's annual usage by 30%)
  - Average for applicable audits = 33.9% property savings
  - Utility program alone = 18.3% property savings average

Audit Program Recommendations

1. Mandate comprehensive energy audits/IPNAs and benchmarking
2. Develop clean energy toolkit for owners and ensure predictable programs
3. Encourage early and close coordination among all stakeholders to ensure commitment to finance all available savings
4. Overcome obstacles that exist for permanent lenders to underwrite anticipated savings

LEAN Multifamily Program's Quick Guide Roadmap for Maximizing Energy and Cost Savings at Refinance (from leanmultifamily.org/).

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Comprehensive Energy Audit Program (current)

- Eligible properties: Approaching rehab/recapitalization or pursuing adaptive reuse
- 50% match for ASHRAE Level II audit and kickoff design meeting
- Owners may choose from 7 firms
- Includes resiliency and healthy housing lens
- Referrals to solar+storage feasibility
- Benchmarking through 1 year post-rehab
- 60 projects over 2-3 years

2Life Communities' Coleman House (Photo Credit: Sparhawk Group).

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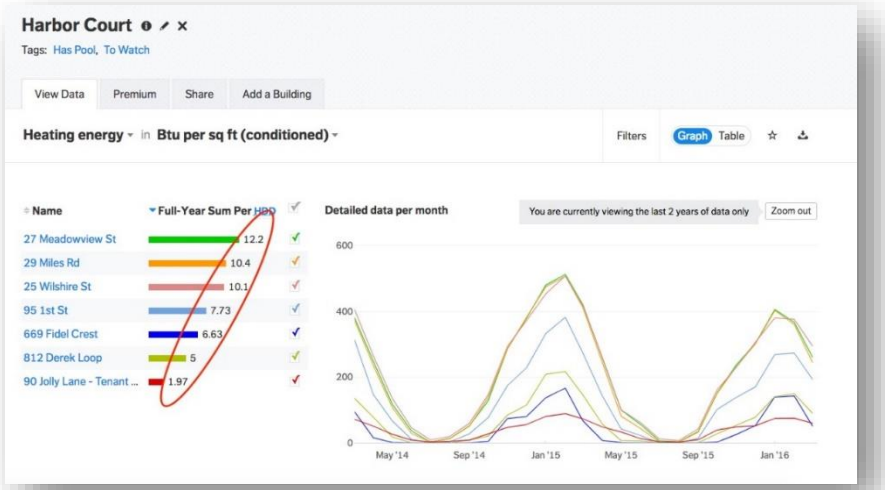
Next Steps to Advance Deeper Energy and Water Savings

1. Benchmark portfolio to identify savings opportunities
2. Maximize utility energy efficiency program (between capital cycles)
3. Receive comprehensive energy audit (nearing rehab)
4. Access MassCEC's Commercial Solar (+Storage) Ask an Advisor Service: masscec.com/ask-advisor
5. Ask your permanent lender to offer Green and Healthy Financing
6. Commission, commission, commission – and train staff!



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

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Forums and Peer Learning Groups

- Past Events: Passive House, Resiliency for Affordable Housing Forums
- Upcoming Events: Building Operator Certification training, Benchmarking, Clean Energy Programs, Solar + Storage, Healthy Building Materials, etc.
- Energy Cohort to share innovative financing strategies and other promising practices
- Share your ideas!

Thank You

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

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