



Better Buildings Neighborhood Program Multi-Family Peer Exchange Call: *Shared Space vs. In-unit Upgrades in Multi-family Buildings*

Call Slides and Summary

May 9, 2013

Agenda

- Call Logistics and Attendance
- Future Call Topic Suggestions and Polling
- Discussion
 - To what extent are programs focusing on shared space and technology in multi-family buildings vs. in-unit upgrades? Where are the biggest energy efficiency opportunities?
 - What are effective strategies for each type of work? What are the challenges?
 - How does the type of building and owner/occupant arrangements impact what kind of work is most feasible and cost-effective?

Participating Programs and Organizations



- Maine
- Maryland
- New York
- San Francisco, CA
- Portland, OR
- SEEA Southeast Consortium
- Toledo, OH
- National Association of State Energy Officials (NASEO)
- TRC Energy Solutions (working with Maine and New York)

- Whole building upgrade measures include:
 - Boiler and/or water heaters upgrades
 - Pipe insulation
 - HVAC systems upgrades
 - Common area lighting upgrades
- In-unit upgrade measures include:
 - Lighting (e.g., conversion to CFLs)
 - Sensors
 - Heat pumps

Highlights of Program Experience

- San Francisco:
 - Provide on-bill and PACE financing for building owners (however, haven't seen much uptake)
 - Have affordable housing and market-rate programs
- Maine:
 - Seeing energy savings from in-unit upgrades in smaller buildings (e.g., up to 4 units)
 - Seeing opportunities in converting electrically heated units to heat pumps (in-unit and full building)
 - Have found it difficult to lend for multi-family upgrades (banks not willing to change underwriting standards)
- Portland
 - Doing multi-family upgrades through ESCOs
 - Coupling resident engagement/education with multi-family upgrades

Lessons Learned

- Many programs noted that it was feasible to achieve 15% energy savings through whole building upgrades (i.e., common spaces, building envelope, etc.). However, in-unit upgrades have often been necessary to boost savings to 20%--a target required by some funding sources
 - Performing in-unit upgrades was even more important (and in many cases, more feasible) for smaller buildings with fewer units
- Vacant units can be both a benefit and a challenge; it is easier to gain access and perform work if units are vacant, but some funding sources pay per resident and therefore exclude payments for upgrades to vacant units
- Tenant behavior is an important factor in energy savings—inefficient use of upgraded facilities can negate some of the energy upgrade benefits
 - Programs can couple tenant education with upgrades to encourage energy-saving behavior

Lessons Learned

- There are tradeoffs depending on how multi-family buildings are metered:
 - In-unit metered buildings provide a detailed look at where energy is being used, but it can be challenging to get permission from all of the tenants to access this data
 - Master metered buildings do not have the same challenge of obtaining permission for data from many sources, but it can be harder to pinpoint energy usage throughout the building
- It can be challenging logistically to access many units in a large building.
 - Participants observed that in big buildings, programs should only expect access to about 70% of the units
 - In the assessment phase, it is helpful to get into at least 10% of units to assess in-unit upgrade opportunities
- Improving the efficiency of water heating can be a major source of energy savings in multi-family buildings

Future Topics Suggestions

- Which of the following future call topics would you be most interested in?
 - Financing large multi-family projects: 67%
 - Generating demand for large multi-family building upgrades: 58%
 - Strengthening links between housing and energy agencies: 50%
 - Air quality and safety in multi-family upgrades: 33%
 - Other: 8%
- What other topics would you like to discuss on a future multi-family peer exchange call? (*responses submitted via chat*)
 - Methods for promoting construction best practices among installation contractors
 - How to provide simple, cost effective modeling and savings projections.
 - Possible topics on policy initiatives that address energy efficiency in new construction and retrofits in multifamily sector. This might include higher construction standards, procurement practices of things like appliances, and higher requirements for retrofits that get preferential financing, etc.