



MULTIPLE BENEFITS OF MULTIFAMILY ENERGY EFFICIENCY FOR COST- EFFECTIVENESS SCREENING

Highlights from ACEEE's June 2015 Report

Full Report
<http://wp.me/a5WT9H-oL>

Highlights

Key Learnings

Report focuses on cost-effectiveness measurement of multiple benefits of multifamily EE programs, but many findings are applicable to EE programs in general (including single-family focused).

- All utilities are mandated by their regulatory agencies to demonstrate cost effectiveness of their programs, as these programs are ultimately paid for by ratepayers.
- Most of the regulator-approved tests used to not include the value of benefits beyond cost of energy saved, even though tests are designed to include them.
- Most program administrators are measuring all participant costs, yet are not measuring participant, utility, nor societal benefits - thus providing an inaccurate picture of true cost benefit analysis.
- Beneficiaries of multifamily programs include participants, utilities and society. Sample benefits to each include:
 - Participant (building owner/operators)- reduced maintenance costs, improved appliance/equipment performance and lifespan, greater property value, increased building durability, increased tenant comfort, health and safety, improved tenant satisfaction, reduced turnover and vacancy rates, reduced debt collection losses
 - Utility - fewer shutoffs, reconnects, customer calls, debt collection efforts, reduced carrying cost on arrearages (particularly with low-income programs)
 - Societal - positive impact on local economy (lower utility bills = more money spent locally for other goods/services), reduced dependence on government aid, job creation
- National Efficiency Screening Project's [Resource Value Framework](#) can help guide cost-effectiveness testing that accurately represents value of multifamily programs. RVF recommends that efficiency screening should include all relevant benefits regardless of difficulty in quantifying, by using rough approximations.
- $\frac{1}{3}$ of jurisdictions surveyed by ACEEE include customer benefits other than energy savings when applying tests, while >math>\frac{3}{4}</math> include all participant costs.
- Majority of affordable, low-rent apartments are privately owned and do not receive and federal or state rental assistance.
- Average income for multifamily households is lower than single-family households.
- According to a HUD survey, 33% of renters have moved in the past year, and over $\frac{1}{3}$ that moved cites a housing-related reason for moving, like desire for a better home or lower maintenance costs
- Industry rule of thumb estimates cost of \$1,000 for turning over a unit in a multifamily complex.
- On average 90% of multifamily units across 50 largest municipalities surveyed by ACEEE are located in buildings where tenants are responsible for at least one metered utility.
- 81% of multifamily tenants pay directly for energy used for plug load, 75% pay for cooling load, 56% pay for heating load, 37% pay for water heating energy.
- Maintenance and repair expenses for multifamily building owners come primarily from addressing equipment, lighting and building durability issues.
- Average annual maintenance cost per apartment in U.S. is \$1095.
- In the Elevate Energy Boulevard Apartments case study referenced in the report, reduction in maintenance cost was shown to have a value of ~150% of the value of energy saved.

- In another case study noted, although overall maintenance and repair costs increased, rental income, likely due to increase in number of tenants, resulted in overall increase in net operating income of 3.3%
- An Elevate Energy report referenced in this report found that when comparing buildings that had undergone retrofits vs. those that had not, those that underwent retrofits had 4.8% higher rental income, valued at \$8,240 per unit annually.
- Utility benefits that have been quantified in low-income programs include reduction in arrearage carrying costs, bad-debt write-offs, terminations and reconnections, customer calls, notices and safety-related emergency calls.
- Failure to adequately address multiple benefits in cost-effectiveness testing leads to underinvestment in EE in the multifamily sector.

Contact

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