

Presentation on Housing, Energy Efficiency, and Carbon Reduction to the Governor's Executive Order 57 Work Group

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Who Are We?

The Virginia Multifamily Energy Efficiency Coalition

Housing Advocates

Housing Developers and PHA's

Energy Efficiency Professionals

Weatherization Providers

Environmental Groups

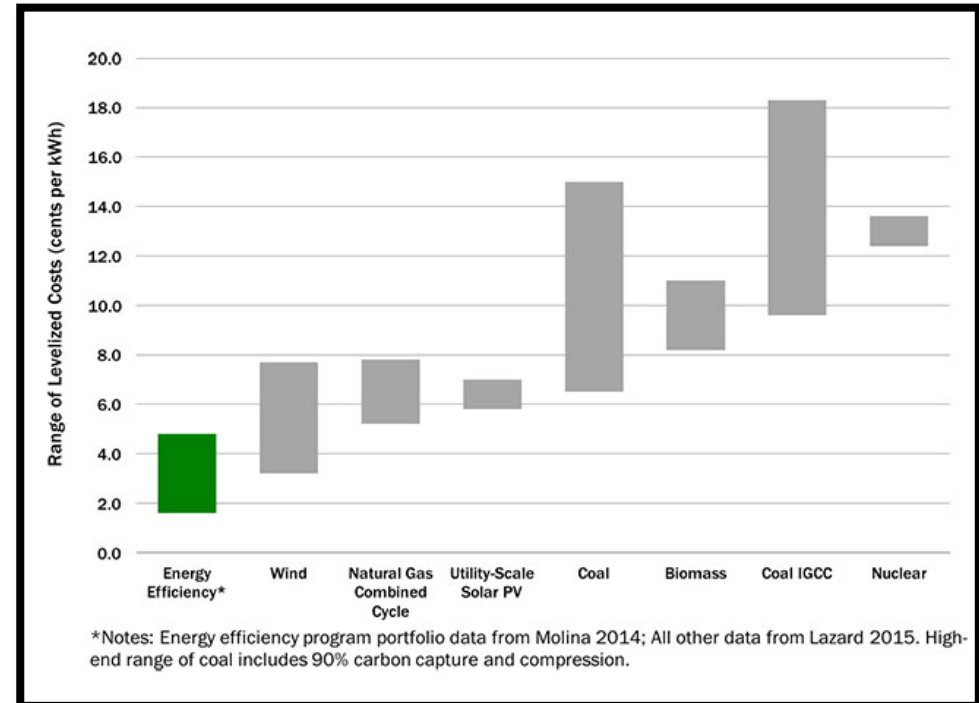


The Coalition: Why Multifamily focus?

- MF traditionally left out of energy efficiency programs due to barriers
 - * Split incentive, metering structure, common areas
- MF rental housing less efficient residential stock – Higher energy costs per square foot - 76% higher than in owner-occupied, single family homes on average ([Gary Pivo, 2014](#))
- Many of Virginia's low-income households live in multifamily rental housing – 49% of Very Low Income renters live in MF housing (nationwide) ([Gary Pivo, 2014](#))
- In VA, African American and Latino families twice as likely to live in MF Housing as whites (2014 ACS 5-year Estimates, IPUMS)
- VA is 1 of 9 states with more than one million residents living in MF housing ([National Multifamily Housing Council](#))

Energy Efficiency is Cheaper and Directly Benefits Low Income and Vulnerable Communities

- On average, EE is 1/3 the cost of other new generation resources
- Data consistent over the last decade as other energy sources fluctuate
- EE now 3rd largest electricity resource in the US (larger than nuclear), could be 1st by 2030
- Most states could meet at least 25% of CPP emissions reductions through EE policies and investments, many could achieve 100% through EE
- For states participating in the Clean Energy Incentive Program (CEIP), EE and Renewable projects in low income communities receive double credit for carbon reductions!



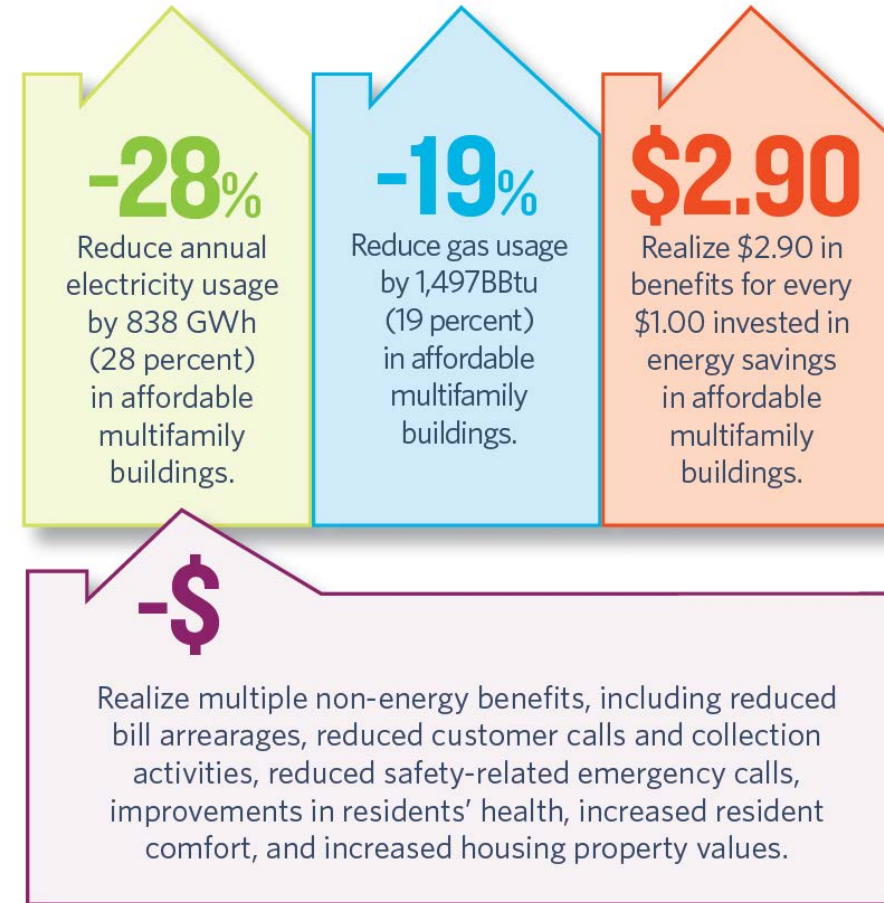
ACEEE Report on Energy Efficiency and Carbon Reduction:

<http://aceee.org/sites/default/files/publications/researchreports/u1604.pdf>

Virginia has great Energy Efficiency potential in its affordable multifamily housing sector

Energy Efficiency for All Study:

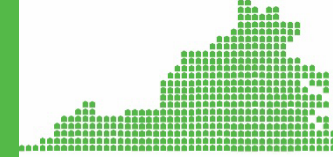
<http://www.energyefficiencyforall.org/sites/default/files/EEFA%20Potential%20Study.pdf>



12% | PERCENTAGE OF VIRGINIA HOUSING STOCK THAT IS AFFORDABLE MULTIFAMILY

385,000 | UNITS OF AFFORDABLE MULTIFAMILY HOUSING IN VIRGINIA

**Figures included Non Energy Benefits in cost effectiveness calculations*



APRIL 2016

Lifting the High Energy Burden in America's Largest Cities:

How Energy Efficiency Can Improve Low
Income and Underserved Communities

Ariel Dreihobl and Lauren Ross



ENERGY
EFFICIENCY
FOR ALL

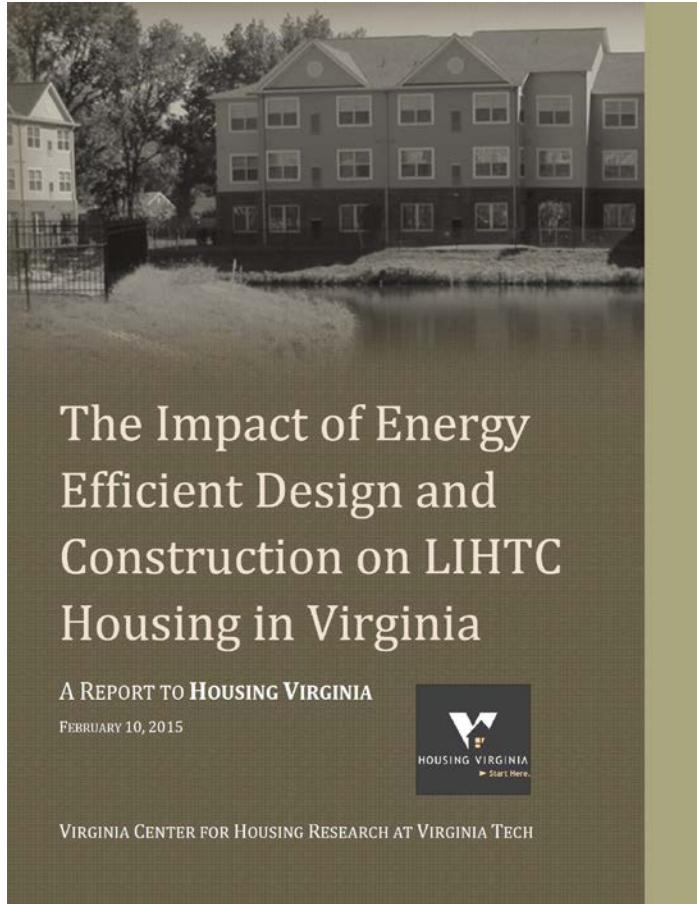
ACEEE
American Council for an Energy-Efficient Economy

ACEEE Energy Cost Burden Report

- Nationally, Low Income renters spend over 3 times as much of their income on utilities as higher income households
- Virginia Beach – 7.5% of income for low-income* households vs. 3.9% average households
- Richmond - 6.5% of income for low-income households* vs. 3.1% average households
- Low-income renters living in MF rental housing spend more on their utilities – 5% of income for low-income MF renter households* vs. 3.5% average households
- Renters, African American, Latinos have higher energy cost burdens

Report Link: <http://aceee.org/press/2016/04/report-energy-burden-low-income>

*<80% Area Median Income



Virginia Center for Housing Research study:

<http://files.ctctcdn.com/8811fceb001/13f4c1d8-6789-4605-96a0-8565b49cf03c.pdf>

Energy Efficiency and Housing Affordability

- Used actual utility data to demonstrate cost savings in Low Income Housing Tax Credit projects built to EarthCraft program standards
- Demonstrated savings outperformed modeling by 16.6% on average, 40% more efficient than code built
- Average savings to tenants - \$54/month, over \$600/year
- Improved housing affordability by 5.6% for 50% AMI households, by 9.3% for 30% AMI (Extremely Low-Income Renters)

Multifamily Energy Efficiency Programs in Action

Unique Building



Public Shelter

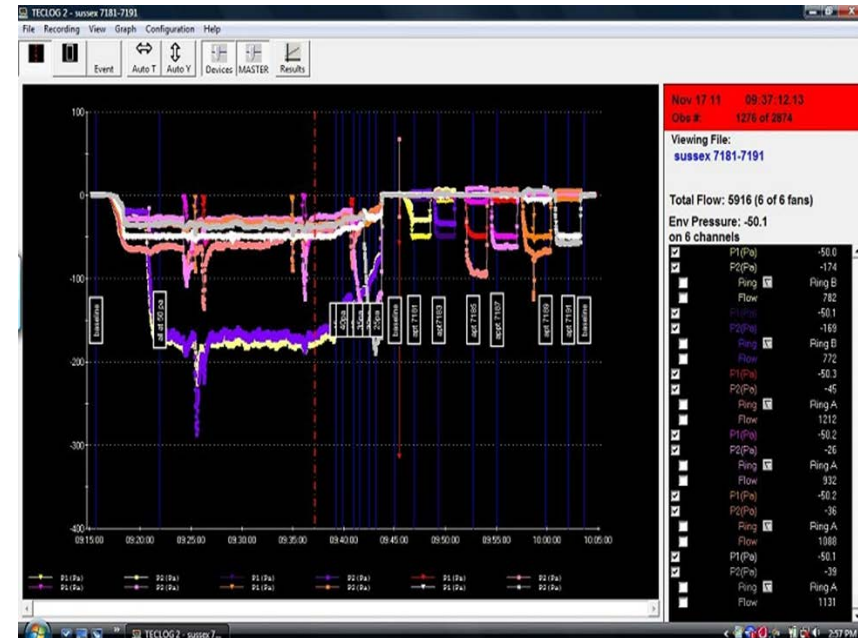


Multifamily Energy Efficiency Programs in Action

Testing In to Establish a Baseline



Testing Out to Quantify Results



Multifamily Energy Efficiency Programs in Action

Before Picture of Attic



Post Retrofits Picture of Attic



Multifamily Energy Efficiency Programs in Action

Baseload Pre Photo



Photo LED retrofits



Low Income Multifamily Property Weatherization Project

Again - Testing In



Testing Out



Low Income Multifamily Property Weatherization Project

Commitment to good results requires innovation!

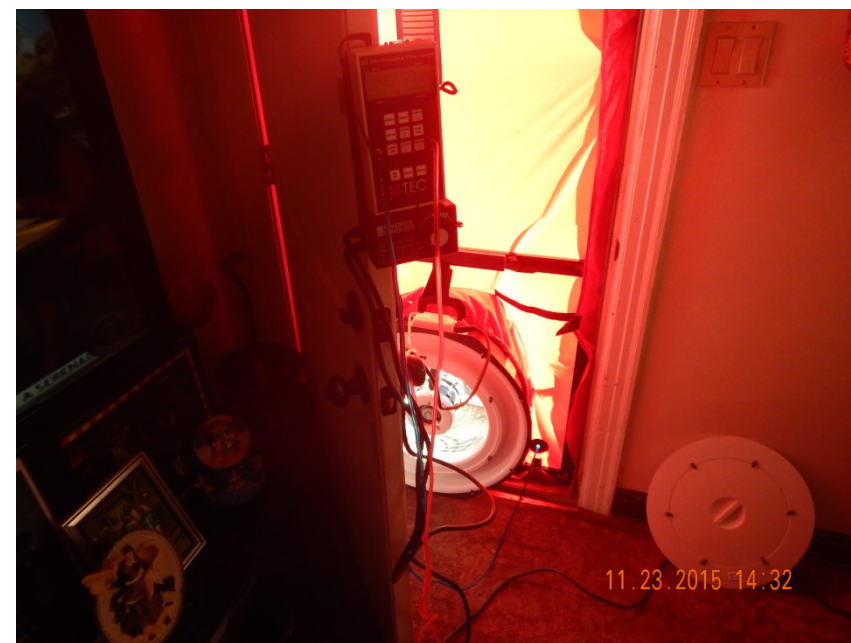


Low Income Single Family Property WX Project

Single Family Home



Testing Verifies all Measures



Low Income Single Family Property WX Project

Sample Measures



Sample Measures





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