Better Buildings Residential Network Peer Exchange Call Series:

Affordability – The State of Energy-Efficient Housing for All Americans

September 12, 2019

Agenda and Ground Rules

- Agenda Review and Ground Rules
- Opening Poll
- Residential Network Overview and Upcoming Call Schedule
- Featured Speakers:
  - **Jennifer Gremmert,** Energy Outreach Colorado
  - **Jacqueline Berger**, APPRISE
  - **David Hepinstall**, Assn. for Energy Affordability
- Open Discussion
- Closing Poll and Announcements

Ground Rules:

1. **Sales of services and commercial messages are not appropriate** during Peer Exchange Calls.
2. Calls are a safe place for discussion; **please do not attribute information to individuals** on the call.

The views expressed by speakers are their own, and do not reflect those of the Dept. of Energy.

Better Buildings Residential Network

Join the Network

Member Benefits:

- Recognition in media and publications
- Speaking opportunities
- Updates on latest trends
- Voluntary member initiatives
- One-on-One brainstorming conversations

Commitment:

- Members only need to provide *one number*: their organization's number of residential energy upgrades per year, or equivalent.

Upcoming Calls (2nd & 4th Thursdays):

- Sep 26: DISASTER! Resilience and Adjusting & Adapting Pre- and Post-Disaster
- Oct 10: Why Good Contractors Are Hard to Find – The Green Workforce Shortage
- Oct 24: Health and Energy Efficiency Are Trending

Peer Exchange Call summaries are posted on the Better Buildings website a few weeks after the call

For more information or to join, for no cost, email bbresidentialnetwork@ee.doe.gov, or go to energy.gov/eere/bbrn & click Join

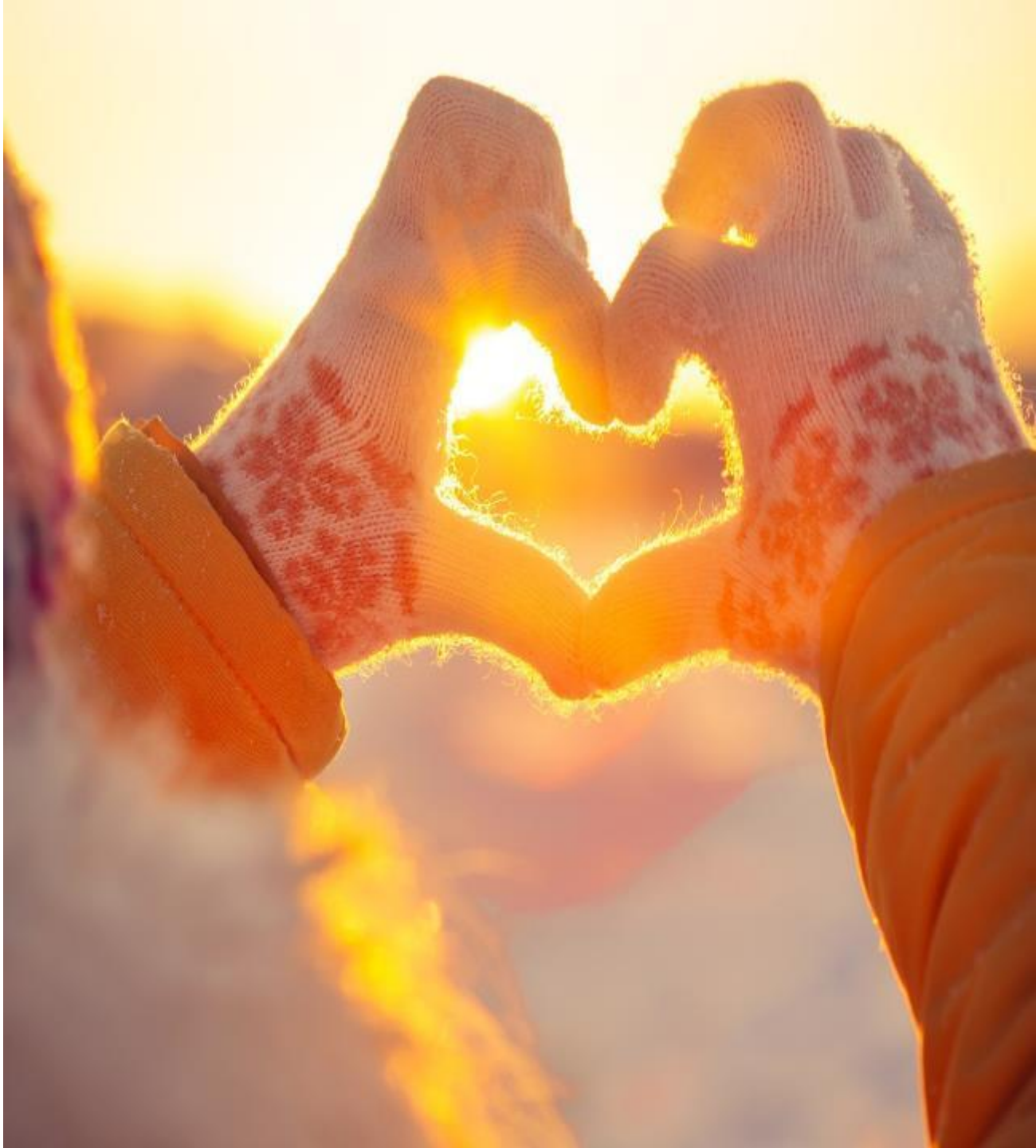
Jennifer Gremmert

Energy Outreach Colorado

U.S. DEPARTMENT OF ENERGY

ENERGY OUTREACH COLORADO

Together We Power Stability



AFFORDABILITY – THE STATE OF ENERGY EFFICIENCY HOUSING

SEPTEMBER 12, 2019

COLORADO SOLUTIONS

COLORADO SPECIFICS

Energy Assistance Programs

LEAP (November – April)

- Heat only; county administered; 3rd party serves 47 of 64 counties
- Credit on utility bill
- Provides access to utility rate discounts and other programs

Energy Outreach Colorado (Year-round)

- Emergency Assistance – electricity and natural gas
- Homeless to Home Program
- Percent of Income Payment Programs in place

COLORADO SPECIFICS

Energy Efficiency Programs

Weatherization

- Administered by Colorado Energy Office (CEO)
- Funded by LIHEAP, DOE and occasionally State funds
- Coordinates with utility DSM programs
- Rooftop solar is integrated into program

Energy Outreach Colorado

- Administers majority of utility DSM Programs; coordinates with CEO
- Administers Multi-family Weatherization Program statewide
- Has contracts with municipalities, REAs and municipal utilities

WHO DO WE HELP?

Low Income Energy Consumers

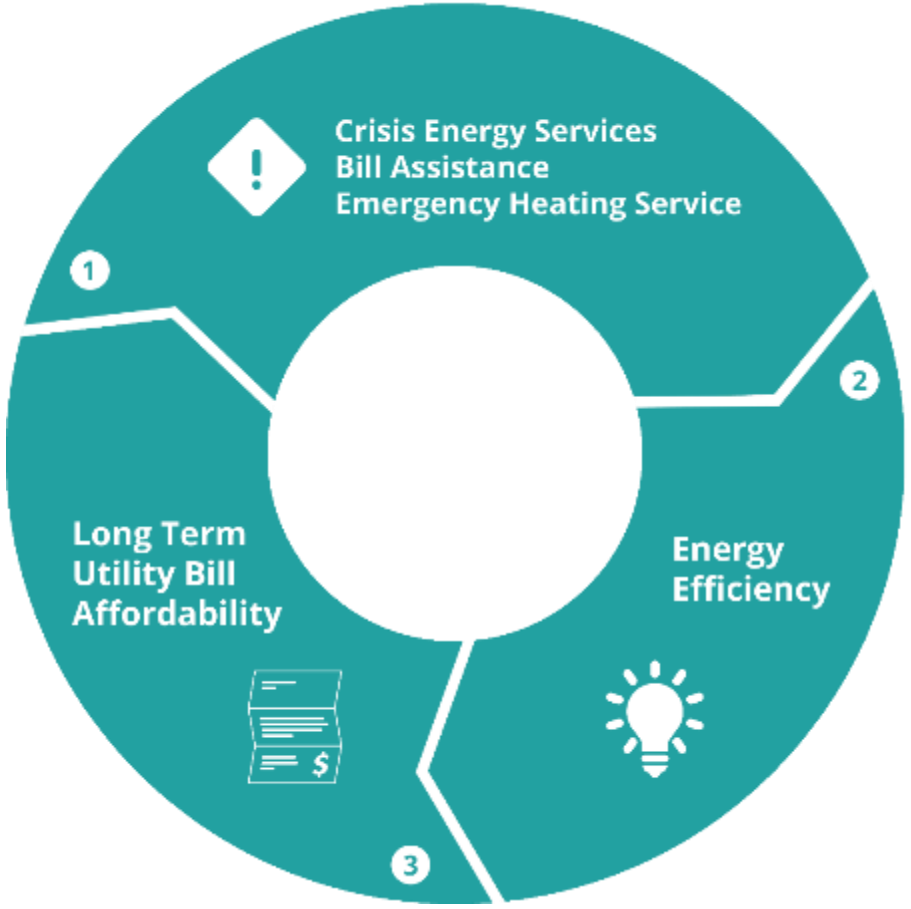
- Coloradans statewide
- Seniors, families with children, disabled, veterans, teachers, neighbors
- Residential homes in critical need of energy related home improvements
- Multi-family affordable housing
- Nonprofit facilities serving vulnerable households
- All residential ratepayers through advocacy work

HOW DO WE HELP?

Our Programs

- In 2018, we provided 16,038 homes with energy bill payment assistance
  - $7 million statewide – partner with LIHEAP
- Subscribed households in Community Solar Gardens
  - 700 participants will save average of $750/yr – over 20 years = $10.5 M
- Energy efficiency improvements to more than 4,000 multi-family units in 84 properties – more than $500,000 in annual savings
- 51 nonprofits received energy efficiency upgrades and will save $250,000/yr
- 1,500 families received emergency furnace repair and replacement
- Reduced service and facilities charges for multiple utilities
- 1,500 households received energy behavior change workshops

OUR PROCESS


Crisis Energy Services
Bill Assistance
Emergency Heating Service
1
2
Energy Efficiency
3
Long Term Utility Bill Affordability

PROGRAMS

What We Do to Integrate Programs

- Energy bill payment assistance, weatherization, residential and multi-family home energy efficiency enhancements, non-profit facility energy-saving upgrades, energy efficiency education, solar garden subscriptions

- Fill the resource gap:
    - Colorado's Affordable Residential Energy (CARE)
    - Crisis Intervention Program (CIP)
    - Homeless to Home
    - Health and Safety Funding

WHY ARE THESE PROGRAMS IMPORTANT?

Benefits of Strong Low Income Energy Programs

- Ensure energy affordability
- Preserve Existing Affordable Housing Stock
- Resiliency during extreme weather events
- Help people get back on their feet
  - Help provide financial stabilization
  - Reduce social service costs
  - Maintain health and safety
- Healthy, stable households are less likely to fall into homelessness

MULTI-FAMILY WEATHERIZATION

Unique Process

- One-stop shop – our organization manages all aspects of the project
- Leveraging multiple funding sources, including owner contributions
    - Projects rarely completed without multiple funding sources
- Key funding from utility Demand Side Management programs
- 50% non energy benefit adder for all IOU utility low-income programs
    - Health and Safety funding added to contract to extend reach
    - Behavior Change programs funded by utilities
- Use Youth Corps to “blast” large buildings with low-cost measures and deliver behavior change programs

COMBINATION OF EFFICIENCY AND HEALTH

Strong Partnerships: Federal and Local Government, and Non-Profit Organizations

- City and County of Denver (CCD) and Colorado Department of Transportation (CDOT) IGA
  - November 1, 2017 – December 31, 2018
- CCD Package of Improvements: $1.45
- CDOT Package of Improvements: $2.3M
- Partnerships with local non-profit organizations:
  - Energy Outreach Colorado (EOC): improvements work coordination
  - CREA Results: community outreach
  - Mile High Youth Corps, Energy Resource Center, and GroundWork Denver: assessments and installation

IMPROVEMENTS PACKAGES

Leveraging Resources To Provide Large Positive Impact

Colorado Department of Transportation

- Interior soundproof windows
- Attic insulation
- Two portable or window-mounted air conditioning units with air filtration
- Caulking and weather stripping
- Carbon monoxide detector, smoke detector, and programmable thermostat
- Energy bill credits to offset increased usage with cooling
- Furnace filters

City and County of Denver

- Heat ventilation and air conditioning (HVAC)
- Window and door replacement

Safety Concerns

- Gas leaks/CO leaks
- Holes in roof
- Severe plumbing leaks
- Knob and tube electrical
- Old, failing and non-existent furnaces
- Old, failing and leaking water heaters

PROGRAM OUTCOMES

287 Eligible Homes

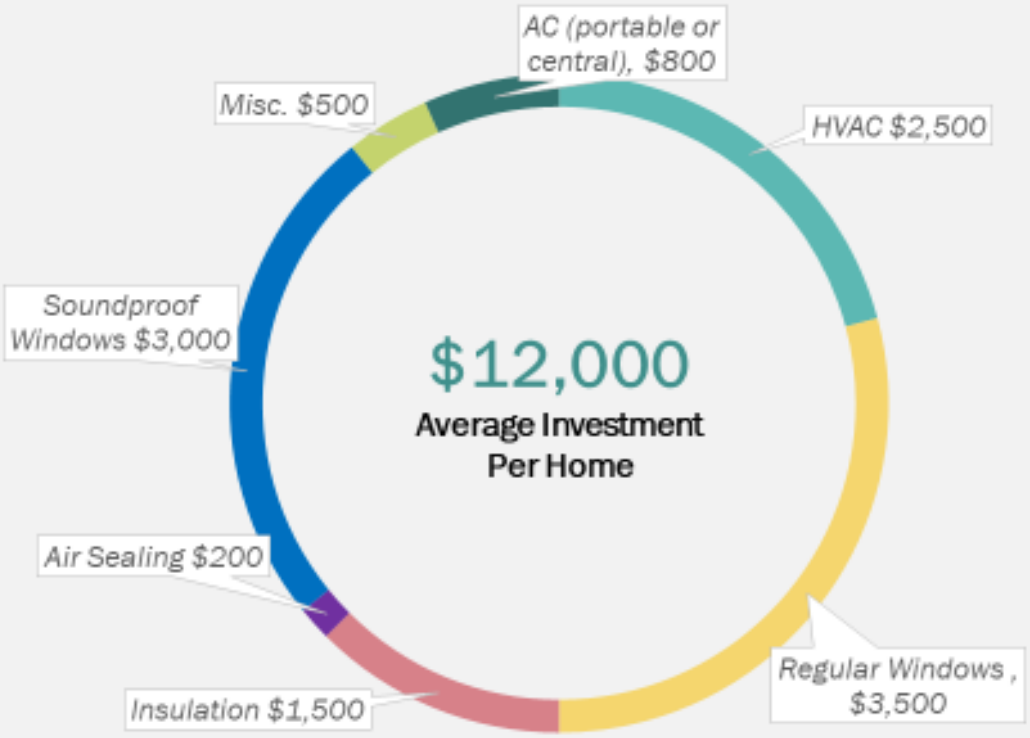
88.2%

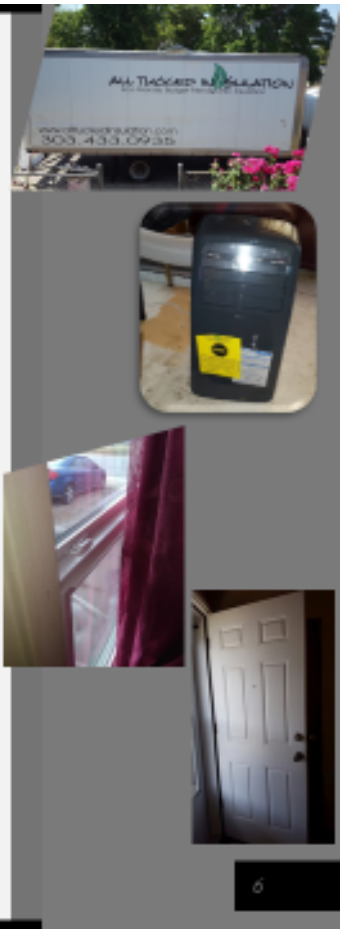
PARTICIPATION RATE

253 Participating Homes

PROGRAM OUTCOMES

PROGRAM OUTCOMES





ADVOCACY

Client Focused

- Regulatory Activities
  - Intervention in Rate Cases, Utility Mergers and Rule Making
  - Initiated Percent of Income Program through rulemaking
  - In the past, received fines from utility noncompliance
- Legislative Activities
  - Unclaimed Utility Deposits and Refunds
  - Natural Gas Deregulation (not currently active in Colorado but EOC would benefit)
  - Low Income Energy Assistance Act – voluntary check off program for all investor owned utilities
  - Severance tax funding - supports LIHEAP, EOC and Weatherization

KEYS TO SUCCESS

- Coordinating between energy efficiency and energy assistance programs
- Utilizing our own private funding/capacity to initiate, develop and implement energy efficiency projects; ability to float/finance projects
- Leveraging Funds – public, utility and other private funds
- Getting support from both the electric AND gas utilities – fuel blind
- Offering a portfolio of programs
- Partnering with organizations and contractors statewide
- **NEW ACHIEVEMENTS**
  - Subscribing Community Solar Gardens – 7 MW in next 3 years
  - Neighborhood Focused Programs – Expand Central 70 Project
  - Healthy Homes Focus – partnership with Children's Hospital Colorado
  - Water Assistance – pilot with City of Aurora

ENERGY OUTREACH COLORADO

Together We Power Stability

Jennifer Gremmert

Executive Director

jgremmert@energyoutreach.org

Jackie Berger

Applied Public Policy Research Institute for Study and Evaluation (APPRISE)

U.S. DEPARTMENT OF ENERGY

Applied Public Policy Research
APPRISE
Institute for Study and Evaluation

Health and Safety Investments to Increase Energy-Saving Opportunities

Jackie Berger, APPRISE

BBRN Webinar
Affordability – The State of Energy Efficient Housing for All Americans
September 12, 2019

Presentation Overview

- Columbia Gas LIURP Background
- Assessing the Problem
- Current Health and Safety Investments
- LIURP Savings Results
- Decision Framework for Additional Health and Safety Investments

Columbia Gas Low-Income Programs

- Pennsylvania Utility Mandated Programs
  - CAP, LIURP, CARES, Hardship Fund
  - LIURP mandated in 1988
- Targets CAP customers to reduce ratepayer subsidy
- Annual Budget $4,750,000
- 500 – 550 homes completed annually
- Company administered, contractor installations
- 11 contractors did >50 jobs over 3-year period

ASSESSING THE PROBLEM

Low-Income EE Challenge

Low-Income Energy Efficiency

- Increased challenges serving households
- Significant health and safety issues
- Prevent installation of major measures
- Lost potential for high-usage customers

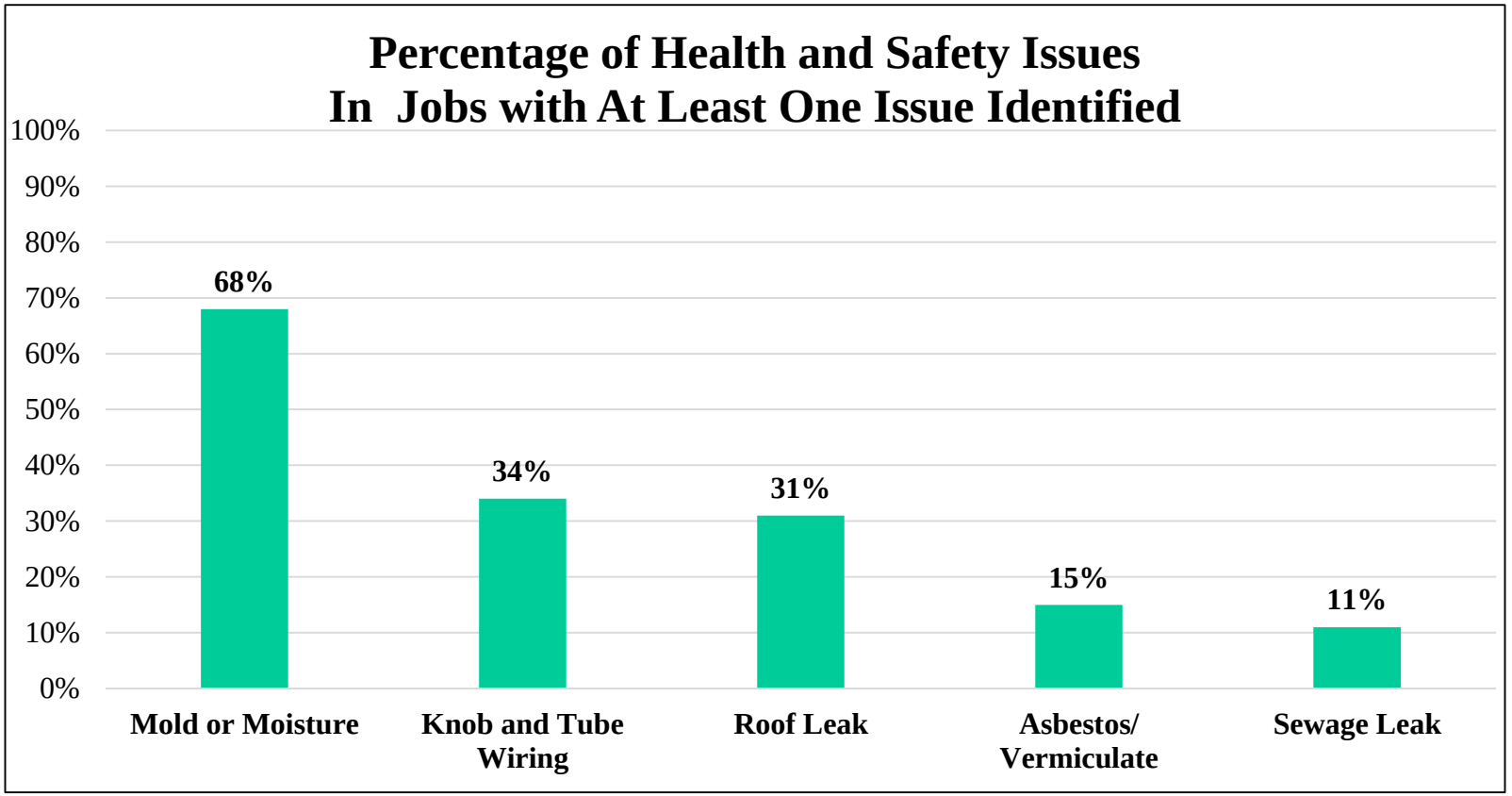
Health and Safety Investments

- Where/when can additional cost-effective investments be made?
- How much can cost-effectively be spent on health & safety?

Assessing the Problem Methodology

1. Analyze 2015 LIURP Database
   - Initial indicators of health and safety issues that prevented work
2. Review cancelled job spreadsheet
3. Review job paperwork for 229 jobs
   - Audit form, work scope, measure invoice(s)
   - 122 jobs had at least one H&S issue that prevented work
   - 12% of all 2015 jobs

Frequency of Specific Health and Safety Issues

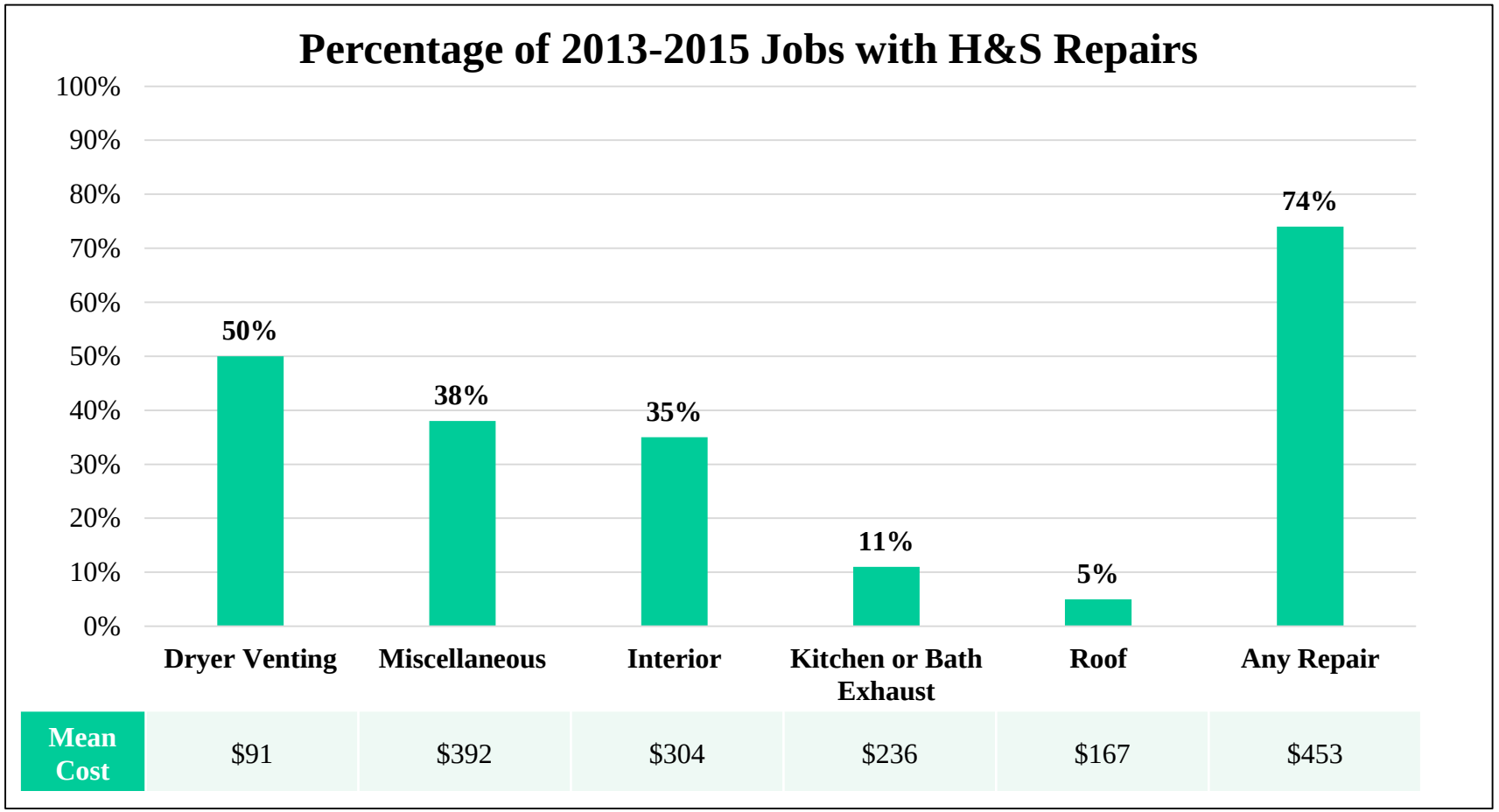


Other Issues:		
	• Infestation	• Structural Issues
	• Holes in Attic Floor	• Clutter

Health and Safety Remediation Approach

- Spend up to $650 for owner or renter
- Renter – spending usually related to HVAC
- Owner – could be roof patch, small amount of mold, etc.
- Contractors request additional H&S spending
  - Approved based on potential savings

Health and Safety Repairs



LIURP SAVINGS RESULTS

Weather-Normalized Energy Savings

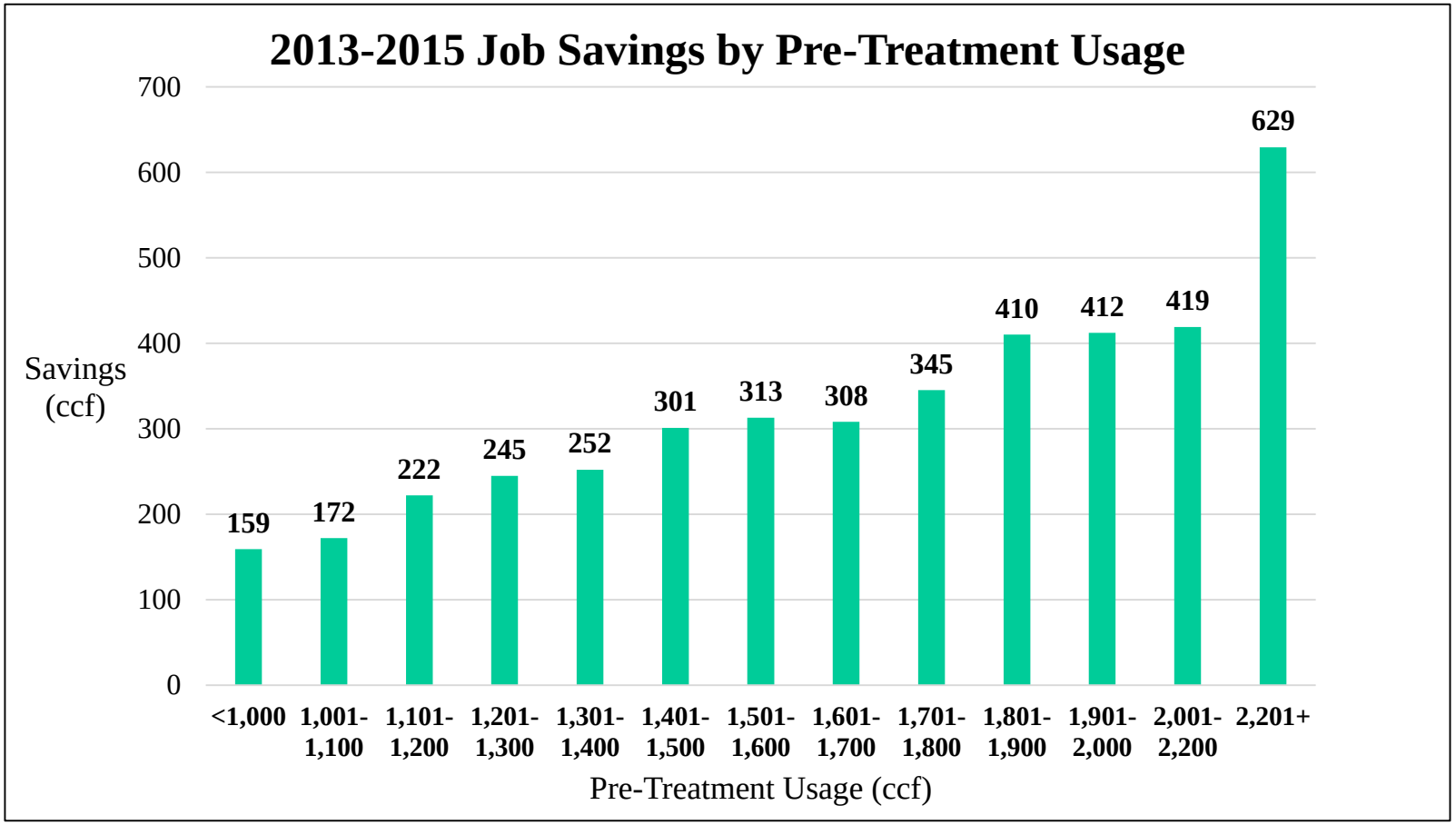
- 2013, 2014, and 2015 jobs
- Energy savings based on billing data
- 3-year analysis to allow for disaggregation
  - Pre-treatment usage
  - Contractor
  - Measures
  - Job costs

Weather-Normalized Gas Savings Analysis

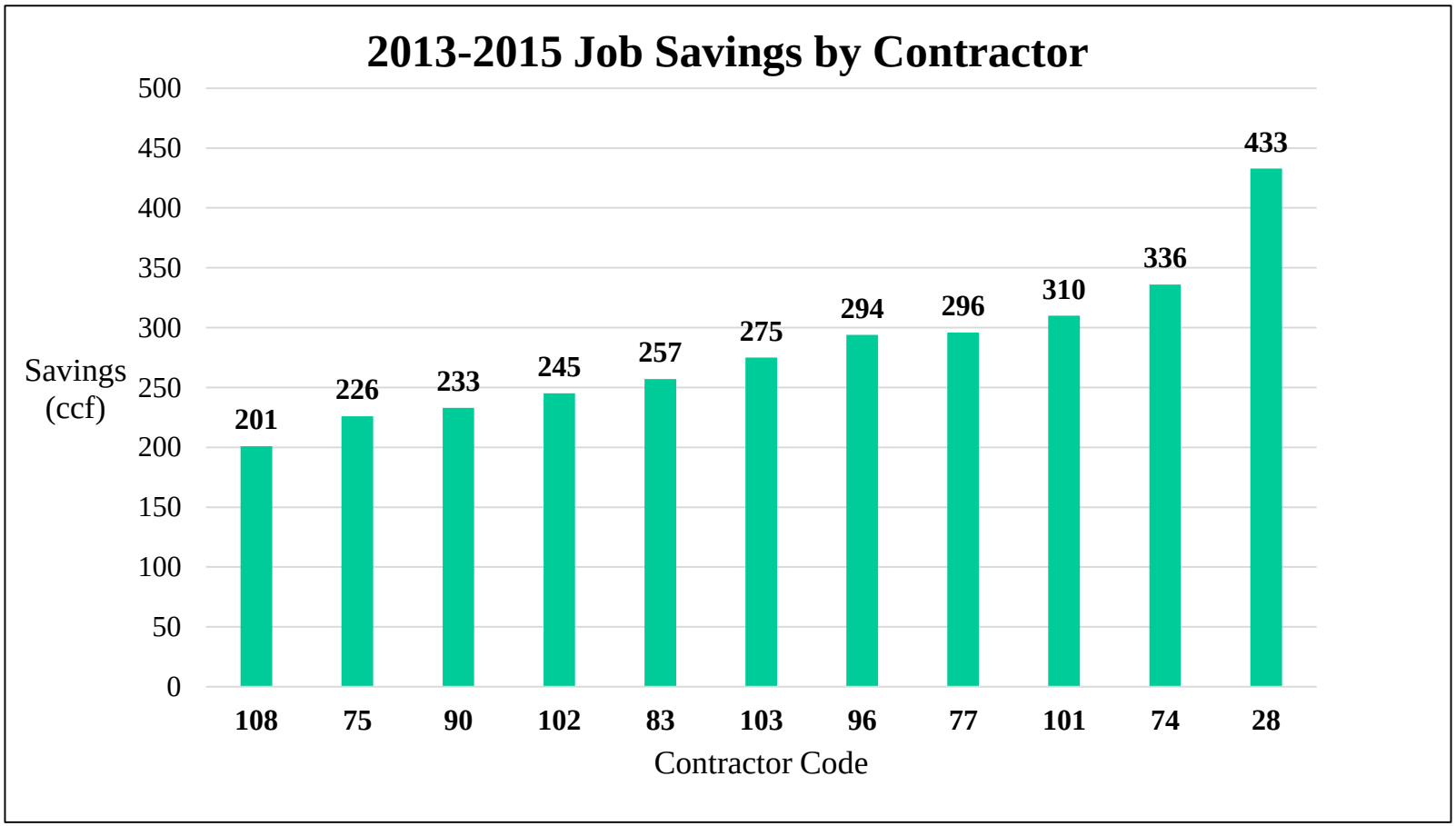
Analysis Group	Observations	Usage (ccf)		Savings	
		Pre	Post	ccf	%
2015	533	1,449	1,191	258**	17.8%
2013-2015	1,398	1,515	1,211	304**	20.1%

**Denotes significance at the 99 percent level.

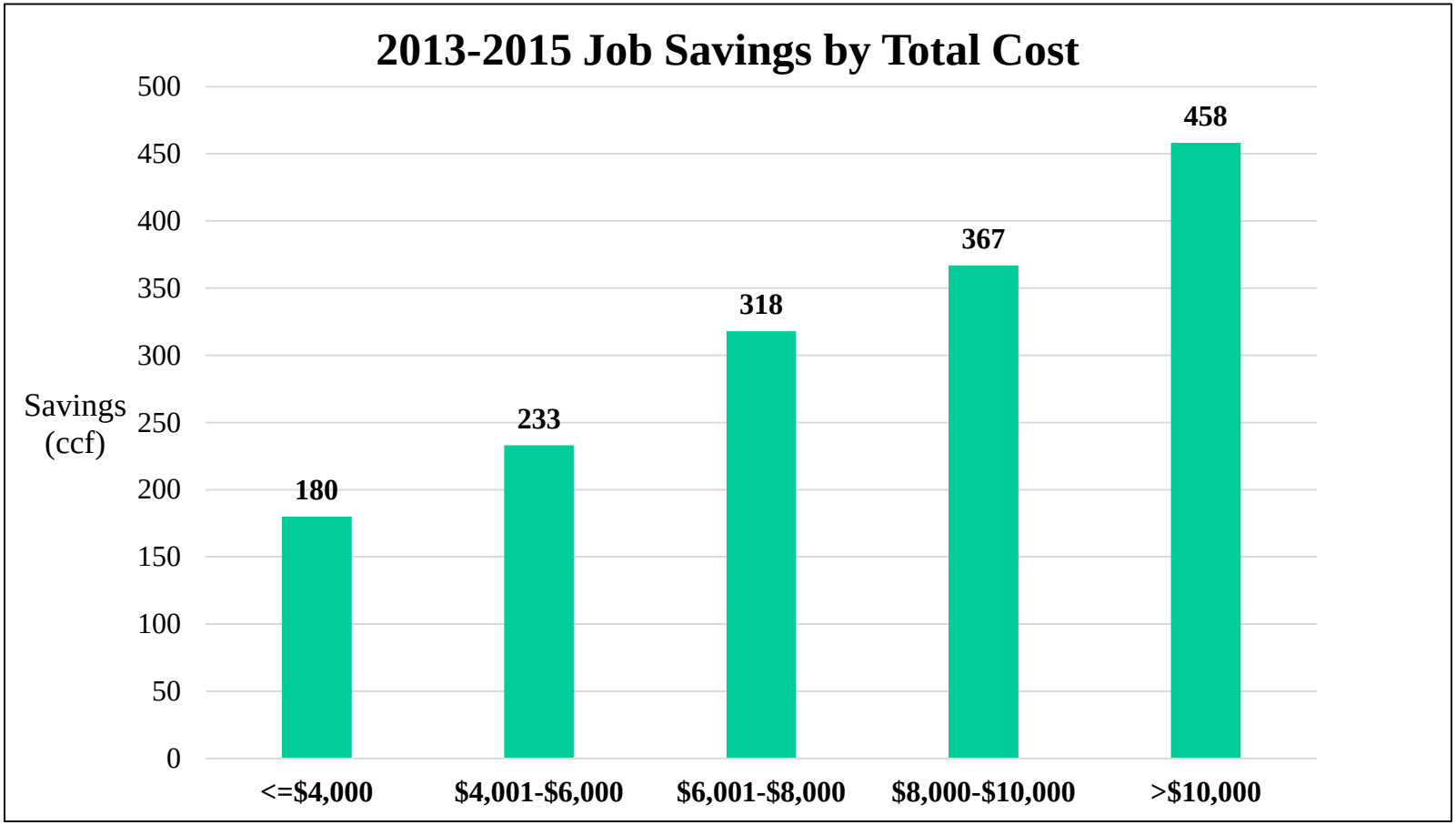
Savings by Pre-Treatment Usage



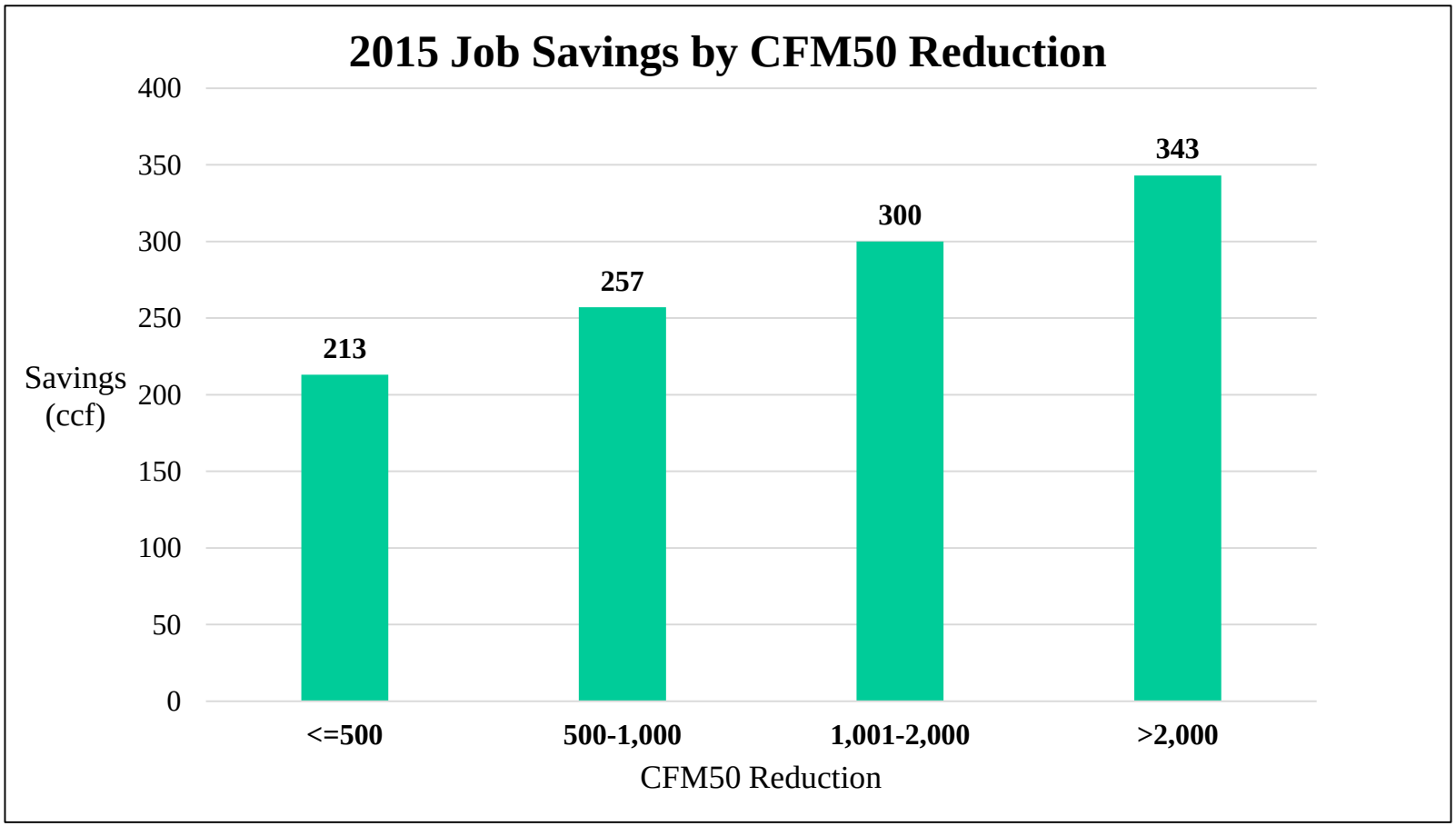
Savings by Contractor



Savings by Total Cost



Savings by Leakage Reduction



DECISION FRAMEWORK FOR ADDITIONAL HEALTH AND SAFETY INVESTMENTS

Regression Analysis 2013 - 2015

Variable	2013-2015 Participants (1,372 observations)		
	Coefficient	95% Confidence Interval	
Pre-Treatment Usage (ccf)	0.30	0.27	0.32
Home Age	-1.06	-1.51	-0.61
Square Feet	-0.09	-0.11	-0.07
Blower Door and Air Sealing Cost	0.05	0.04	0.05
Heating System Replaced (yes/no)	154.56	131.84	177.28
Duct Sealing (yes/no)	55.80	32.41	79.19
Contractor #74	79.58	36.48	122.67
Contractor #77	73.69	23.52	123.86
Contractor # 102	-72.10	-119.97	-24.22
Contractor # 103	-106.37	-162.50	-50.24
Constant	-73.01	-135.24	-10.79

Decision Framework

- Determine $ to spend on health and safety
- Model assumptions
  - 12-year measure life
  - Gas price at time of study: $1.04723/therm
  - 5% discount rate
- Model calculates
  - Predicted ccf savings & % savings
  - Present discounted value of savings
  - Max that can be spent on H&S

Model Scenarios – Scenario 1

User Entered Fields	Scenario 1
Pre-Treatment Therms	1,500
Home Age	50
Square Feet	1,500
Air seal + Insulation Cost	$800
Heat Sys Replace (yes=1)	0
Duct Sealing (yes=1)	0
Contractor 74	0
Contractor 102	0
Contractor 77	0
Contractor 103	0
Heat Sys Cost	0
Other Non H&S Costs	$800

Calculated Fields (5% Discount)	Scenario 1
Annual Savings (Therms)	214
Calculated % Savings	14%
PDV Savings (Therms)	1,897
Max Spending	$1,986
Total Non H&S Costs	$1,600
H&S Allowance	$386

Calculated Fields (No Discount)	Scenario 1
12-Year Savings (Therms)	2,568
Max Spending	$2,689
H&S Allowance	$1,089

Model Scenarios – Scenario 2

User Entered Fields	Scenario 2
Pre-Treatment Therms	1,600
Home Age	30
Square Feet	1,250
Air seal + Insulation Cost	$1,400
Heat Sys Replace (yes=1)	0
Duct Sealing (yes=1)	1
Contractor 74	0
Contractor 102	1
Contractor 77	0
Contractor 103	0
Heat Sys Cost	$0
Other Non H&S Costs	$800

Calculated Fields (5% Discount)	Scenario 2
Annual Savings (Therms)	301
Calculated % Savings	19%
PDV Savings (Therms)	2,672
Max Spending	$2,798
Total Non H&S Costs	$2,200
H&S Allowance	$598

Calculated Fields (No Discount)	Scenario 2
12-Year Savings (Therms)	3,618
Max Spending	$3,789
H&S Allowance	$1,589

Model Scenarios – Scenario 3

User Entered Fields	Scenario 3
Pre-Treatment Therms	2,500
Home Age	100
Square Feet	2,000
Air seal + Insulation Cost	$1,000
Heat Sys Replace (yes=1)	1
Duct Sealing (yes=1)	0
Contractor 74	0
Contractor 102	0
Contractor 77	0
Contractor 103	0
Heat Sys Cost	$3,500
Other Non H&S Costs	$1,000

Calculated Fields (5% Discount)	Scenario 3
Annual Savings (Therms)	578
Calculated % Savings	23%
PDV Savings (Therms)	5,126
Max Spending	$5,368
Total Non H&S Costs	$5,500
H&S Allowance	-$132

Calculated Fields (No Discount)	Scenario 3
12-Year Savings (Therms)	6,940
Max Spending	$7,267
H&S Allowance	$1,767

Model Scenarios – Scenario 4

User Entered Fields	Scenario 4
Pre-Treatment Therms	3,800
Home Age	100
Square Feet	3,200
Air seal + Insulation Cost	$2,700
Heat Sys Replace (yes=1)	1
Duct Sealing (yes=1)	1
Contractor 74	1
Contractor 102	0
Contractor 77	0
Contractor 103	0
Heat Sys Cost	$3,500
Other Non H&S Costs	$1,000

Calculated Fields (5% Discount)	Scenario 4
Annual Savings (Therms)	1,075
Calculated % Savings	28%
PDV Savings (Therms)	9,527
Max Spending	$9,977
Total Non H&S Costs	$7,200
H&S Allowance	$2,777

Calculated Fields (No Discount)	Scenario 4
12-Year Savings (Therms)	12,898
Max Spending	$13,507
H&S Allowance	$6,307

Model Scenarios – Scenario 5

User Entered Fields	Scenario 5
Pre-Treatment Therms	5,000
Home Age	100
Square Feet	3,200
Air seal + Insulation Cost	$5,000
Heat Sys Replace (yes=1)	1
Duct Sealing (yes=1)	1
Contractor 74	0
Contractor 102	0
Contractor 77	1
Contractor 103	0
Heat Sys Cost	$3,500
Other Non H&S Costs	$2,000

Calculated Fields (5% Discount)	Scenario 5
Annual Savings (Therms)	1,536
Calculated % Savings	31%
PDV Savings (Therms)	13,615
Max Spending	$14,258
Total Non H&S Costs	$10,500
H&S Allowance	$3,758

Calculated Fields (No Discount)	Scenario 5
12-Year Savings (Therms)	18,434
Max Spending	$19,305
H&S Allowance	$8,805

SUMMARY AND RECOMMENDATIONS

Summary and Recommendations

- Potential to spend more on health and safety
  - Still achieve cost-effective savings
  - For homes with high pre-treatment usage
- Potential results
  - High energy savings
  - Reduced costs for ratepayers for CAP participants
  - Increased affordability when customer leaves CAP
- Recommendation
  - Pilot approach for high-usage homes with significant H&S barriers
  - Assess savings

David Hepinstall

Association for Energy Affordability

U.S. DEPARTMENT OF ENERGY

Trends in Multifamily Building Energy Efficiency:

Challenges and Opportunities for Upgrades

September 12, 2019

David Hepinstall, Executive Director, AEA

ASSOCIATION FOR ENERGY AFFORDABILITY INC.

Diverse Opportunities in Multifamily Buildings Based on Various Factors

- Building Vintage (1900-present day, changes in construction)
- Low-rise, Mid-rise, and High-Rise Buildings
- Regional Building Stock and Climate Variations
- Central Systems (heating, cooling, hot water and/or ventilation utilities paid by owner but provided to tenants
- In-Unit Systems (often including heating, hot water and cooling, as well as other utility bills paid for by tenants)
  - Results in split incentive when equipment and appliances are property of the owner but utility bills paid by resident
- Master metered buildings where all utilities are paid by owner

Impact of Variations in End User Characteristics

- Example: New York City apartment buildings
  - Condominium vs. co-op vs. rental apartments
  - Central heat and hot-water paid for by the owner
  - Common area (lobby, hallways, basement, exterior) lighting on one or more central meters
  - “Master metered” building-wide electric meter
  - “Sub-metered” vs. direct metered apartments

Impact of Variations in Investment Decision-Making Authority

- Wide variety in building ownership structure
- Property management firm's roles
- Single building vs. a project with multiple buildings vs. a "portfolio" of buildings
  - In close proximity or spread over multiple locations
- Regulated properties (e.g., HUD, State, City programs with rules and regulations governing approval process for upgrades)
- Firms acquiring existing buildings to upgrade and sell or hold (with varying time horizons)

Cost Effective Upgrade Opportunities – Central Systems

- Repairs and retro-commissioning of existing equipment (including controls adjustment, pipe insulation)
- New controls on existing equipment to minimize waste and maximize efficiency (such as Energy Management Systems, central heating boiler controls based on indoor and outdoor temperatures, and remote monitoring of performance)
- Distribution system controls (Thermostatic Radiator Valves to reduce apartment overheating and assist in system balancing)
- Replacement with high efficiency equipment (cost effective when existing equipment is at end of useful life)
- Underutilized but potential increase in adoption:
  - Central Domestic Hot Water Recirculation Controls
  - Variable Speed Drive Circulators and ECMs for Heating Systems

Cost Effective Upgrade Opportunities – In-Unit Systems

- In-Unit Heating and Cooling Systems tend to be less cost effective due to less use and load per equipment. However, when equipment is at end of useful life, recommended options are:
  - High Efficiency Direct Vent Furnaces
  - High Efficiency Air Conditioning

- Programmable Thermostats savings can be minimal. Tenant education is key to success.
- Underutilized but potential increase in adoption:
  - Heat Pumps
  - Mini-Split Systems, provide very high efficiency cooling and heating and allow for room specific control

Cost Effective Upgrade Opportunities – In-Unit Direct Install

- Free Installation of up to 2 Smart Strips per apartment can be an effective way to address the expanding plug load and provide large tenant benefit in cost savings

- Direct install programs that include free CFLs and low-flow showerheads and faucet aerators can provide both owner and tenant benefits, when the owner pays the central DHW cost and the tenant pays for the electric use

Cost Effective Upgrade Opportunities – Lighting and Appliances

- Lighting systems can be in common areas (lobbies, stairwells, common corridors) and on exterior of building
  - Typically owner paid utilities
  - Highest paybacks because of 12-24 hour operation, even with small wattage reductions
- In-unit residential lighting upgrades often need to focus on improved atheistic quality and tenant satisfaction, in addition to energy savings
  - Often needs to be free or highly competitive incentives to entice owner investment
- Underutilized but potential increase in adoption:
  - LEDs: Better light quality, long life, “cool” early adopter factor

Overcoming the Split Incentive

- When the purchaser of the equipment does not pay the energy costs of its use, the owner and resident have “split incentives,” their self-interests collide both in what to purchase and how their behavior may create energy waste
- Although savings from some in-unit measures paid for by the owner may accrue to tenants, such actions lead to other benefits to both owner and residents, including improved living experience, marketability and tenant retention.
  - Comfort (steadier heating and cooling) and
  - Improved air quality for residents and building staff
  - Reduced recurring maintenance costs and
  - Early adopter – cutting edge image for the owner.

Collaborative Program Design Options

- Tenant measures at low or no cost to owner or as requirement for owner access to program incentives for common area measures
- Comprehensive set of cost effective energy upgrade measures that can be completed concurrently or staged in phases over time and in multiple buildings in a portfolio
- Completion of related measures maximizing energy use reduction, e.g., EMS, TRVs, master venting and low-flow DHW devices

The “Whole Building” Program Model

- States throughout the country are experimenting with variations on the Whole Building Program theme
- In California alone:
  - PG&E
  - Southern California Edison and Gas Company
  - Bay Area Regional Energy Network
  - Southern California Regional Energy Network Rater
  - Marin Clean Energy
  - San Diego Gas & Electric
  - Sacramento Municipal Utility District
  - Rate Payer On-bill Re-payment Pilot

The "Whole Building" Program Model

- By coupling a minimum % savings requirement with strong rebates, and in some cases, streamlined access to EE financing, owners are driven to engage in comprehensive common area *and* in-unit work.
- Programs leverage trigger events such as window or water heater replacements to go deeper.

Multifamily Weatherization Model

- Energy audit driven scope of work requires completion of measures with higher Savings to Investment Ratio (SIR) before those with lower SIR's.
- Ban on re-weatherization (post 1994) stimulates completion of comprehensive scope of work in a building during a single program year
- *Tenant benefit requirement* stimulates whole building scope of work and collaboration.

Cost-Effectiveness Testing: Project vs. Single Measure

- *WAP requires energy audit calculation of overall project SIR with measure interactivity*
- NYSERDA's Multifamily Performance Program initially focused on *total project TRC*.
- Energy Efficiency Portfolio Standard programs promulgated by Public Utility Commissions often base incentives on *single measure cost-effectiveness*

Sample Upgrade Scope 1

Building Type	Garden-style	Climate Zone	3	Year Built	1965
Floor Area	35,412	Units	40	Stories	2

	Savings
Windows – Replace windows with double pane (U-Factor = 0.350 SHGC = 0.4)	1.5%
Upgrade Existing Attic Insulation to R-38	1.9%
Install Low-Flow Showerheads and Aerators	6.8%
Replace Halogen and Incandescent Lighting with CFL's and LED's	2.3%
Total for All Improvements	**12.5%**

Sample Upgrade Scope 2

Building Type	Garden-style	Climate Zone	12	Year Built	1970
Floor Area	5,775	Units	5	Stories	2

Improvements	**Estimated % Savings**
Windows – Replace windows with double pane (U-Factor = 0.340 SHGC = 0.31)	5.8%
Appliances – Replace Washing Machines with CEE Tier III	7.3%
Install Low Flow Showerheads and Aerators	.4%
Add Sensors to Exterior Lighting and Laundry Room	.2%
Total for All Improvements	**13.7%**

Work Quality Standards

- Energy efficiency upgrades that are supported by program incentives also are affected by program rules, cost-effectiveness standards and quality assurance/quality control processes required to draw down these incentives.
- *Work Quality standards and a trained work force are key ingredients* to successful energy efficiency upgrades in multifamily housing

Changing Utility Roles

- Traditional “demand side management” programs
- Utility restructuring leading to “public benefit” programs, e.g., NY’s System Benefits Charge (SBC) funding and then Energy Efficiency Portfolio Standard (EEPS) supporting efficiency upgrades
- “Resource acquisition” vs. Market Transformation approaches
- “Energy Efficiency as a Resource” approach to procure all cost-effective efficiency measures as equivalent to energy supply in utility calculations.

Assuring EE in Affordable Housing

- AEA's Mission: Energy Affordability through Energy Efficiency
- Market-based solutions alone unlikely to reduce the extent of energy "waste" in multifamily housing where many low and moderate-income households in NY live.
- Need for a well informed consideration of impacts on this sector in utilities' energy efficiency program design efforts.

Explore the Residential Program Solution Center

Resources to help improve your program and reach energy efficiency targets:

- Handbooks - explain *why* and *how* to implement specific stages of a program.
- Quick Answers - provide answers and resources for common questions.
- Proven Practices posts - include lessons learned, examples, and helpful tips from successful programs.
- Technology Solutions NEW! - present resources on advanced technologies, **HVAC** & **Heat Pump Water Heaters**, including installation guidance, marketing strategies, & potential savings.

https://rpsc.energy.gov

Thank You!

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Please send any follow-up questions or future call topic ideas to:
bbresidentialnetwork@ee.doe.gov