



2D-Denson

Presented at the 2017 ACEEE National Conference on
Energy Efficiency as a Resource

Health & Energy-Linked Programs

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American Council for an Energy-Efficient Economy



The American Council for an Energy-Efficient Economy is a nonprofit 501(c)(3) founded in 1980. We act as a catalyst to advance energy efficiency policies, programs, technologies, investments, & behaviors.

Our research explores economic impacts, financing options, behavior changes, program design, and utility planning, as well as US national, state, & local policy.

Our work is made possible by foundation funding, contracts, government grants, and conference revenue.

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Introduction/Agenda

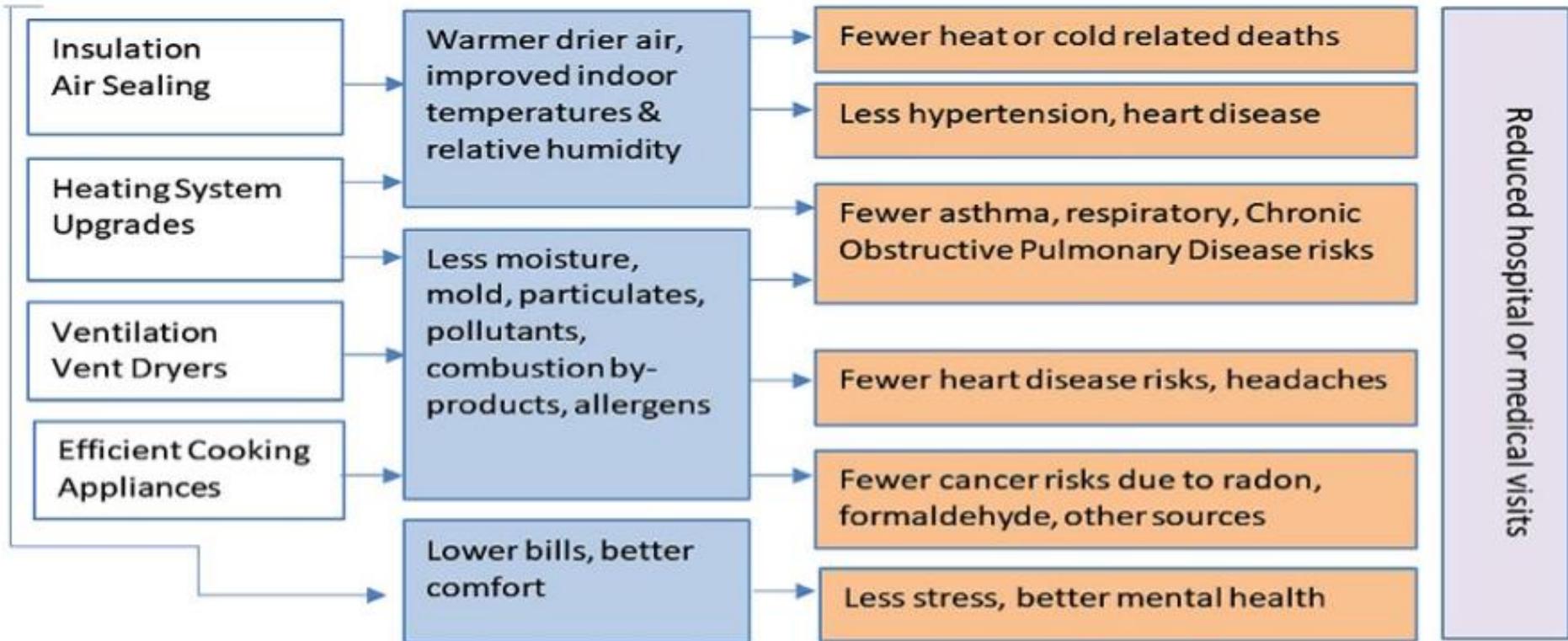
- Public Health & EE
- Program Story
- Health & Energy-Linked Programs (HELP)
- Project Description
- Project Results
- Case Studies

Public Health & Energy Efficiency?

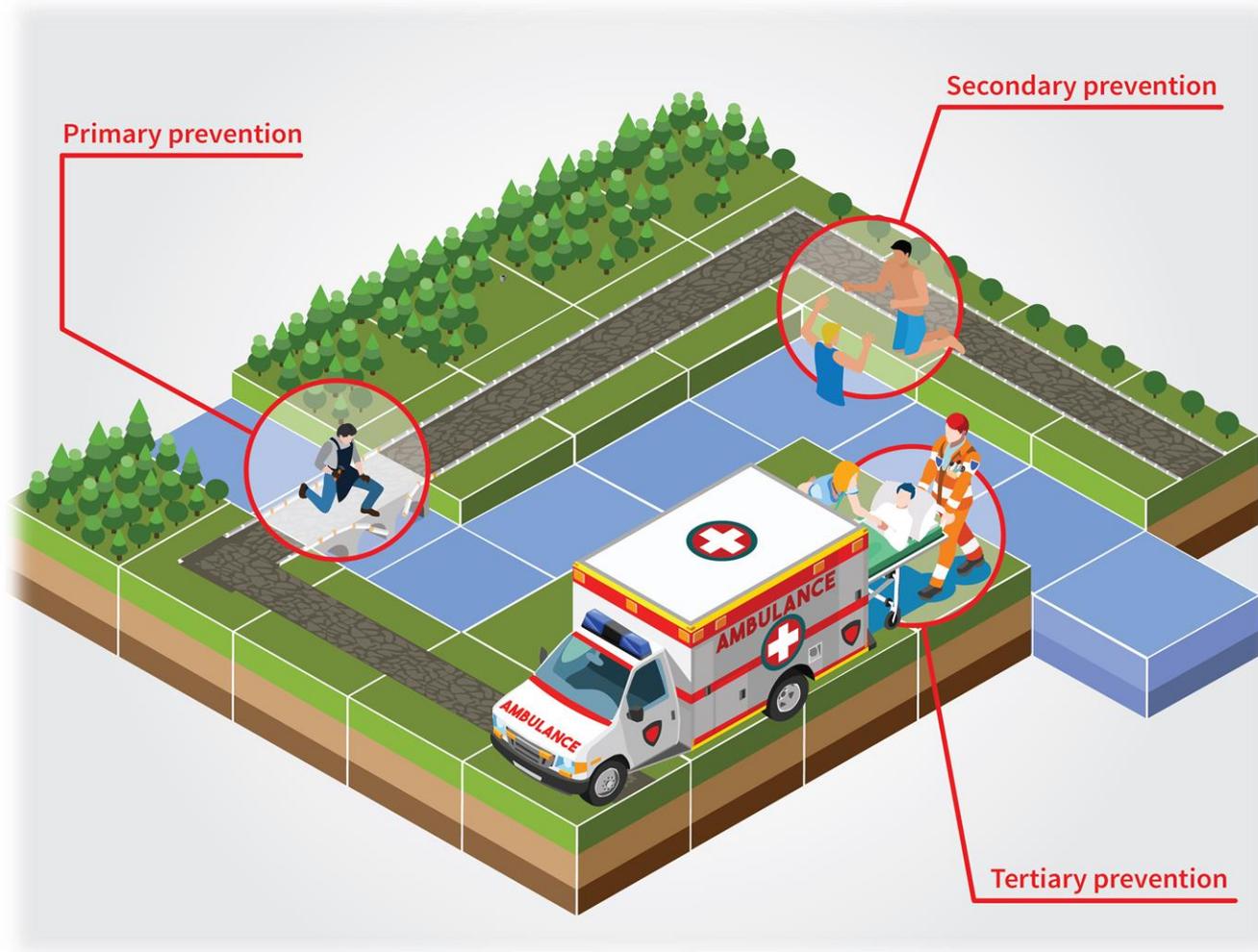
“Money can’t buy happiness, but it *can* buy life expectancy.” --Vanessa Mason



Public Health & Energy Efficiency



Upstream vs Downstream



Public Health & Energy Efficiency

Table 1. Health Benefits of Residential Energy Efficiency
Summary: 25 recent studies

Reduced Respiratory Symptoms	Reduced Other Health Risks (examples)	Reduced Emergency Dept. Visits or Hospitalizations	Improved Indoor Air Quality
Asthma COPD Bronchitis Throat irritation <i>Nasal allergies</i>	Colds, Rhinitis Headaches Heart disease Hypertension Sinusitis Fatigue Mental health Lung cancer*	Asthma Other respiratory	Moisture Condensation VOCs Moisture/Mold Dust allergens Particulates <i>Formaldehyde</i> <i>Radon</i>

*estimated based on exposure reductions

Italics: negative outcomes

COPD: Chronic Obstructive Pulmonary Disease; VOCs: Volatile Organic Compounds

Energy Efficiency as Preventative Health Care



Average Emergency Room Visit Cost: \approx \$2,000



Average Hospital Admission Cost: \approx \$20,000



Average Cost of Your Well-Being: Priceless

Story



Exemplary Programs Project



So, what are health & energy-linked programs?

 Say "Ok Google"

Google Search

I'm Feeling Lucky

Definition (*noun*):

“programs which offer to dually address energy burdens as well as improve and protect human health”

Common Offerings:

- Energy audits
- Home health assessments
- Education coach
- Structural repairs
- Financing or incentives
- New home construction
- Provision of new equipment or appliances (e.g., carbon monoxide detectors, air filters, stoves)
- Weatherization (e.g., air sealing, weather stripping, insulation, repairing heating and cooling systems, etc.)

Communities Served

- Coverage in urban, suburban, and rural areas
- Approximately half of the nominees were located in the Mid-Atlantic/Northeast (CT, DE, PA, MA, MD, ME, NH, NJ, NY, RI, VT)
- 1/3 of programs target low-income households

Buildings Served

- More than 80% of programs serve the residential sector in some capacity
- 30 out of the 49 nominated programs have served more than 300 households
- Majority of programs focus on improving existing structures (as opposed to new construction)

Funding

- 22 of 40 (55%) are funded solely or in part by utilities
- 16 of 40 (40%) are funded solely or in part by governments (local, state, & federal)
- 18 of 40 (45%) are funding by a single entity
- The median annual program cost is \$2 million USD

Exemplary Programs Project

Zero Energy Modular (ZEM) Program

Program Highlights

- Unique clientele and market
- Financial incentives
- Innovation

Efficiency
Vermont



Zero Energy
Modular (ZEM)
for mobile home
replacement

Exemplary Programs Project

Green & Healthy Homes Initiative

Program Highlights

- Holistic and balanced health and EE approach
- Tracking of program data and outcomes
- Replicability



**Green & Healthy
Homes Initiative®**

Exemplary Programs Project

WarmChoice®

Program Highlights

- Long term pre/post energy usage analysis
- Expansive coverage (2/3+ of the state)
- Longevity (30 years)

Columbia
Gas®
of Ohio

Exemplary Programs Project

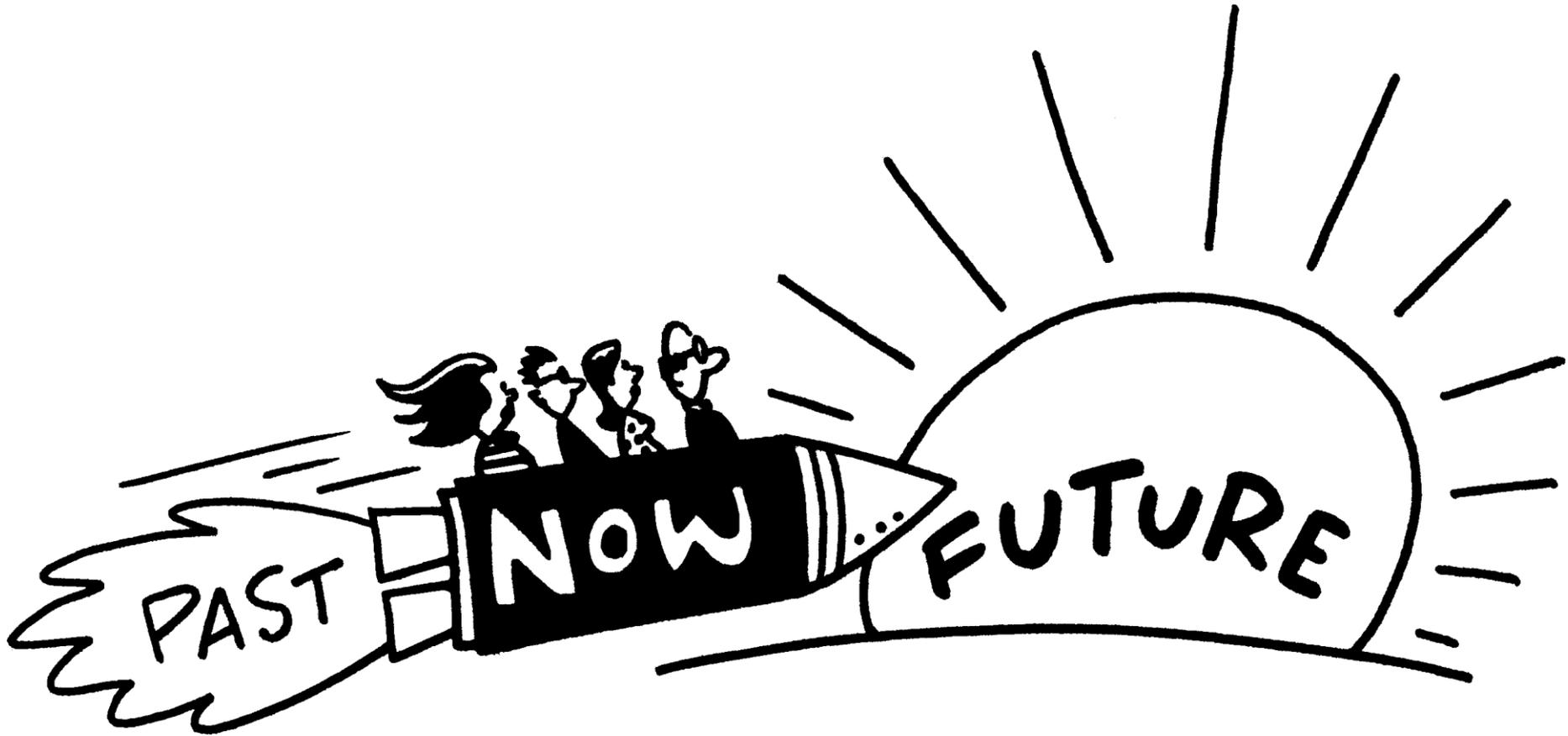
SystemVision™

Program Highlights

- Comfort and savings guarantee
- Expansive coverage of the entire state
- Longevity



Possible Future Exploration...





Upcoming Health & Environment Happenings

Health & environment video-blog series	Fall 2017	Washington, DC
Exemplary programs report	January 2018	Washington, DC
Health impacts of EE in 50 largest cities	January 2018	Washington, DC
<i>*NEW!*</i> Health and environment conference	Winter 2018	New Orleans, LA

Upcoming ACEEE Conferences

Hot Water Forum	March 20 th 2018	Portland, OR
Energy Efficiency Finance Forum	May 20 th 2018	Tarrytown, NY
Summer Study on Energy Efficiency in Buildings	August 12 th 2018	Pacific Grove, CA

The top convener in energy efficiency.
aceee.org/conferences





Thank You!

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