Better Buildings Residential Network Peer Exchange Call Series: *Roadmap for Integrating Health and Home Performance (201)*

September 8, 2016

Call Slides and Discussion Summary

Agenda

- Agenda Review and Ground Rules
- Opening Polls
- Brief Residential Network Overview
- Featured Speakers
  - **Kevin Kennedy**, Director of Environmental Health, Children's Mercy Hospitals and Clinics
  - **Ellen Tohn**, Founder and Principal, Tohn Environmental Strategies
  - **Jonathan Wilson**, Director of Research and Chief Financial Officer, National Center for Healthy Housing
- Roadmap Discussion
  - What specific services, products, marketing or collaboration strategies has your program found most successful to connect energy efficiency and health and take advantage of the health market?
  - What resources, tools, or information would your program find most helpful to integrate health and home performance?
- Closing Poll and Upcoming Call Schedule

Better Buildings Residential Network

Better Buildings Residential Network: Connects energy efficiency programs and partners to share best practices and learn from one another to increase the number of homes that are energy efficient.

Membership: Open to organizations committed to accelerating the pace of home energy upgrades.

Benefits:

- Peer Exchange Calls 4x/month
- Tools, templates, & resources
- Recognition in media, materials
- Speaking opportunities
- Updates on latest trends
- Voluntary member initiatives
- Residential Program Solution Center guided tours

Commitment: Provide DOE with annual number of residential upgrades, and information about associated benefits.

For more information or to join, email bbresidentialnetwork@ee.doe.gov, *or go to* energy.gov/eere/bbrn *and click Join*

Topic Overview:
Children's Mercy Hospitals and Clinics

U.S. DEPARTMENT OF ENERGY

Home Performance: A New Part of Health Care

Kevin Kennedy, MPH, CIEC

Environmental Health

BEST CHILDREN'S HOSPITALS U.S.News RANKED IN 10 SPECIALTIES 2012-13

MAGNET RECOGNIZED AMERICAN NURSES CREDENTIALING CENTER

2015 Winner-
HUD Secretary's Award
for Healthy Homes

Children's Mercy HOSPITALS & CLINICS Kansas City

Why Homes Matter?

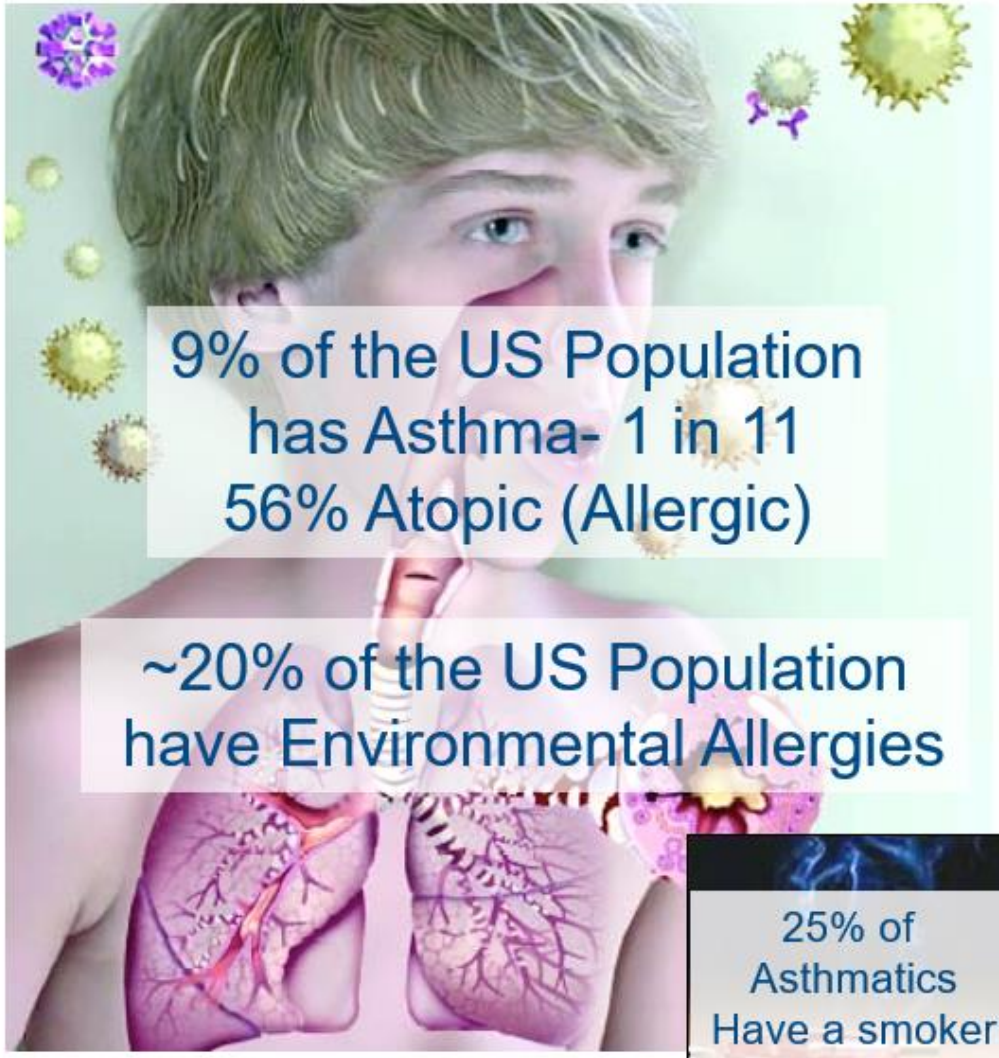
Where do we experience illness?

In 2012, 117 million people in U.S. had a chronic health condition.

http://www.cdc.gov/chronicdisease

Children's Mercy HOSPITALS & CLINICS Kansas City

Asthma and Allergies in US



9% of the US Population
has Asthma- 1 in 11
56% Atopic (Allergic)

~20% of the US Population
have Environmental Allergies

From: www.aafa.org

25% Allergic
to Dust Mites

25% Allergic
To Pollen

25% Allergic
To Mold

25% Allergic
To Pets

25% of
Asthmatics
Have a smoker
in the home

75% of
Urban homes
Have mouse
Allergen
in the dust

25 - 60% of
asthmatics
in urban areas
allergic to roaches

Economic Evaluation of Home-Based Environmental Interventions

Systematic review

Strong evidence of effectiveness -reducing symptom days, improving quality of life or symptom scores, and reducing the number of school days missed

Recommendations

Use home-based, **multi-trigger, multi-component interventions** with an environmental focus for children and adolescents with asthma

Return on Investment

Net positive returns on investment - **Benefit/cost ratio from 5.3 to 14**

CDC Task Force, Findings and Rationale Statement Interventions for Children and Adolescents with Asthma, 2010
http://www.thecommunityguide.org/asthma/rrchildren.html

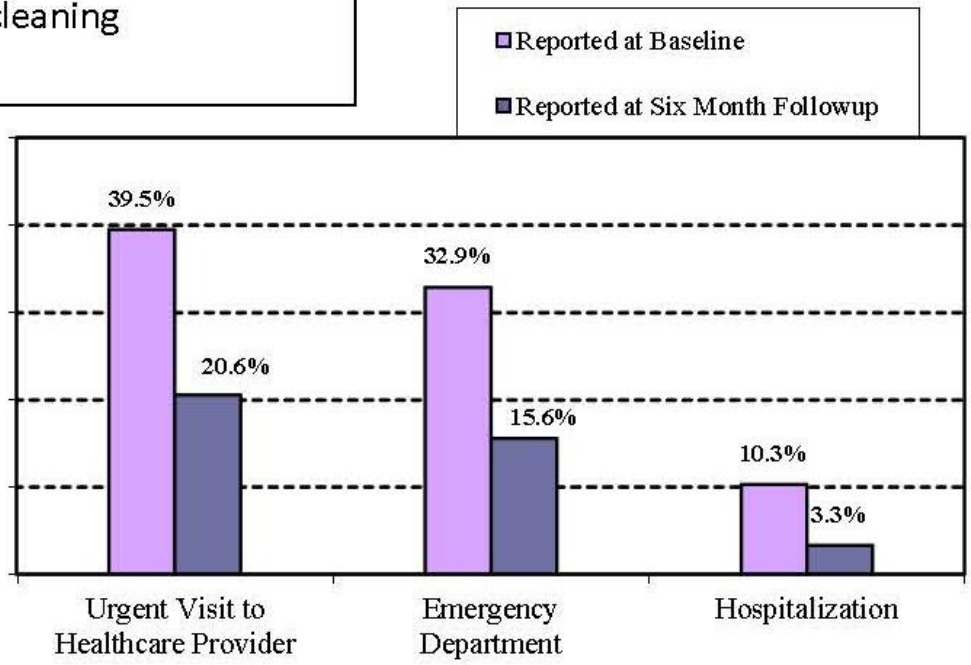
Children's Mercy HOSPITALS & CLINICS Kansas City

Mich. Dept. of Community Health

Asthma Tier I Interventions	Asthma Tier II Interventions
HEPA vacuum	Beds and/or pillows
Non-scented bleach	Carpet removal
Non-scented cleaning Furnace filters	Air conditioning unit
Smoking cessation kit	Floor replacement
Mattress/pillow covers	HEPA air filter unit
	Bathroom vent installation
	HVAC duct cleaning

Cost Benefit (3 years)
Total Program Cost:
$1,299,207

Net Benefits:
$2,524,193

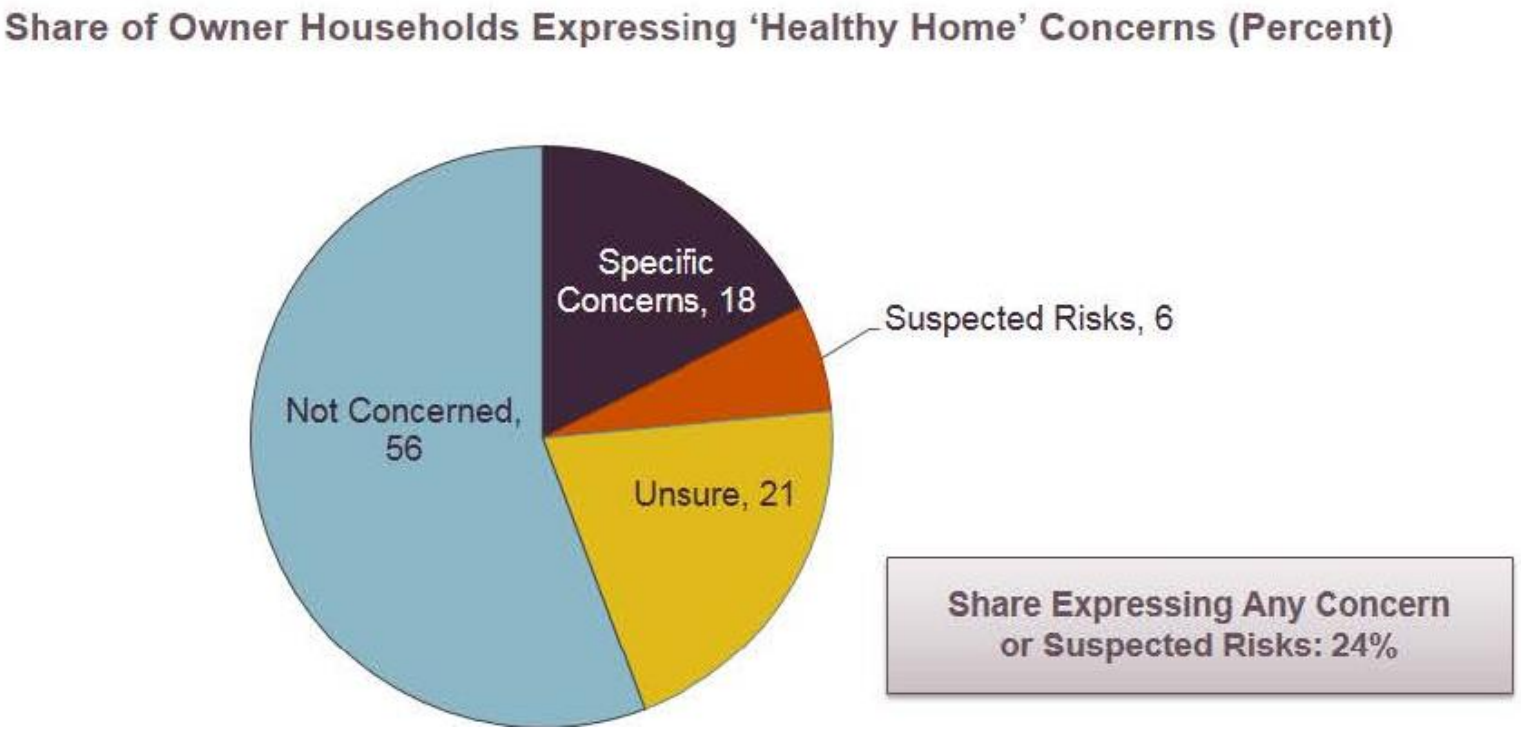


Case Studies: The Benefits of Home Visits for Children with Asthma- *National Center for Healthy Housing, Report, 2014*

State Medicaid Reimbursement Policies:

- 27 states (54%) reported having some Medicaid reimbursement policy in place for
  - home-based asthma services
  - follow-up services for children with lead exposure.
- 7 states (14%) reported that one or more private payers in the state provide for home-based asthma services
- 7 states (14%) report one or more private payers exploring services implementation.
- 3 states (6%) reported knowledge of private payers who reimburse for or provide lead follow-up services

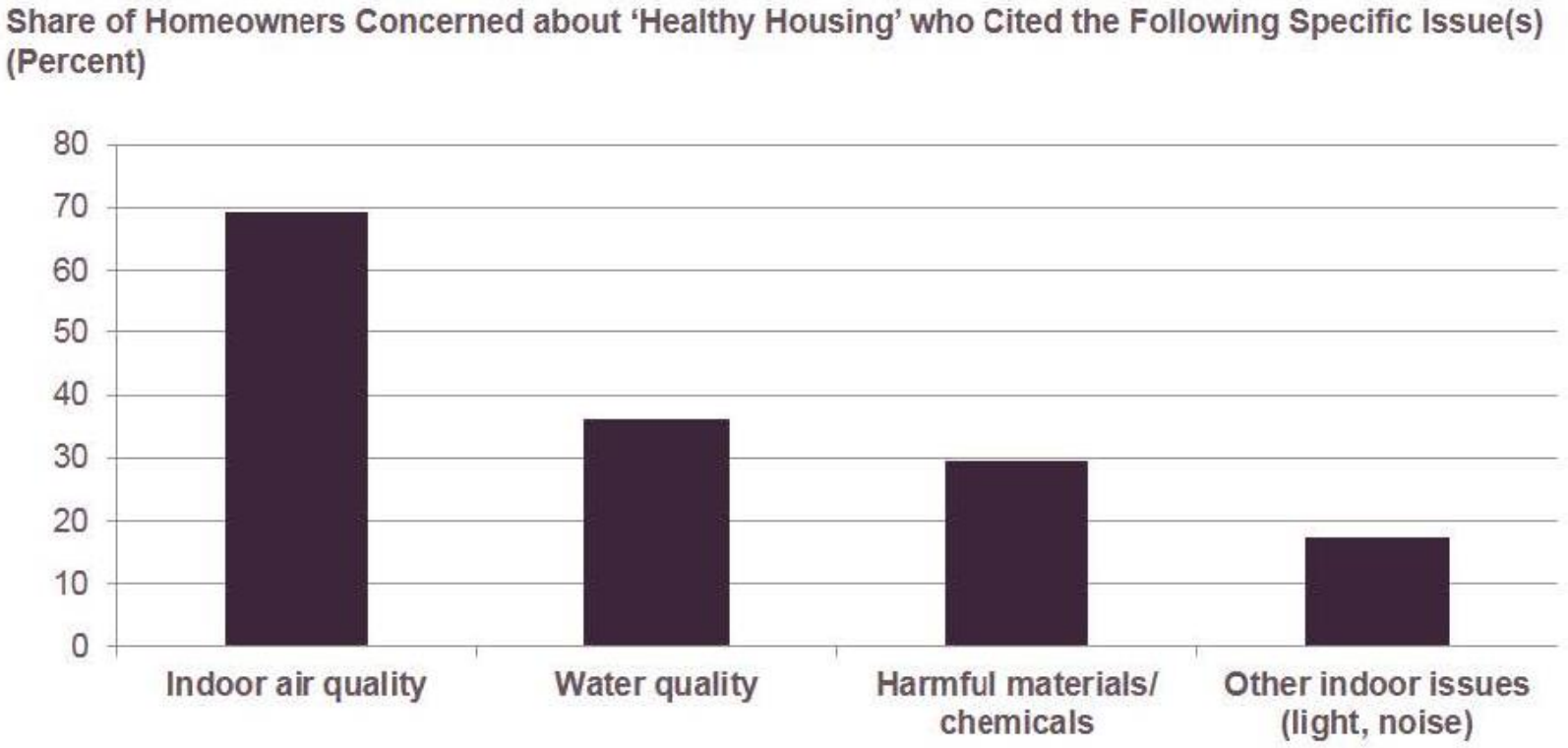
24% of Surveyed Households have Specific Concerns about Home Risks



"Challenges and Opportunities in Creating Healthy Homes: Helping Consumers Make Informed Decisions"

http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/healthy_homes_wolfson_la_jeunesse.pdf

Homeowner Interest in Healthy Housing



"Challenges and Opportunities in Creating Healthy Homes: Helping Consumers Make Informed Decisions"

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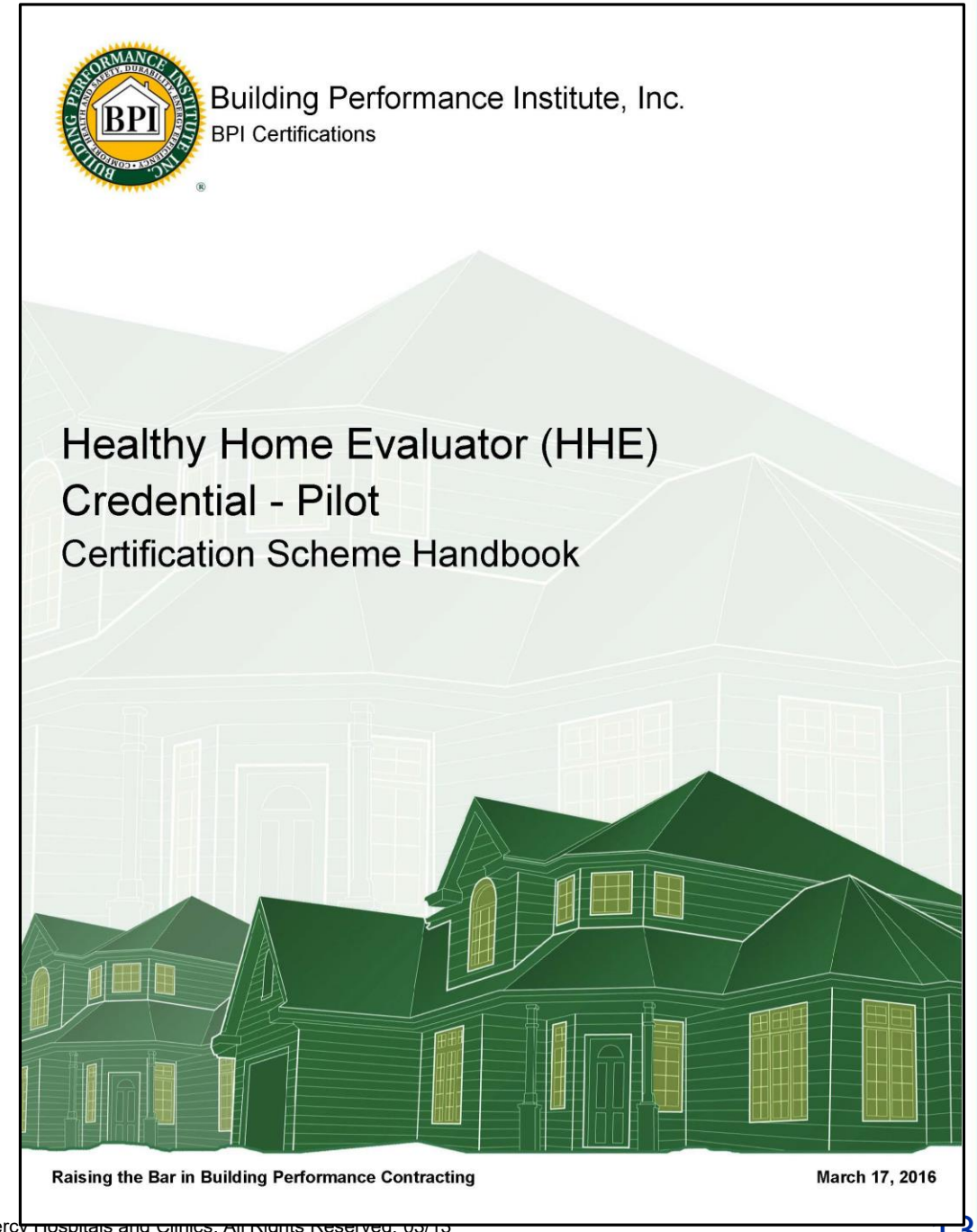
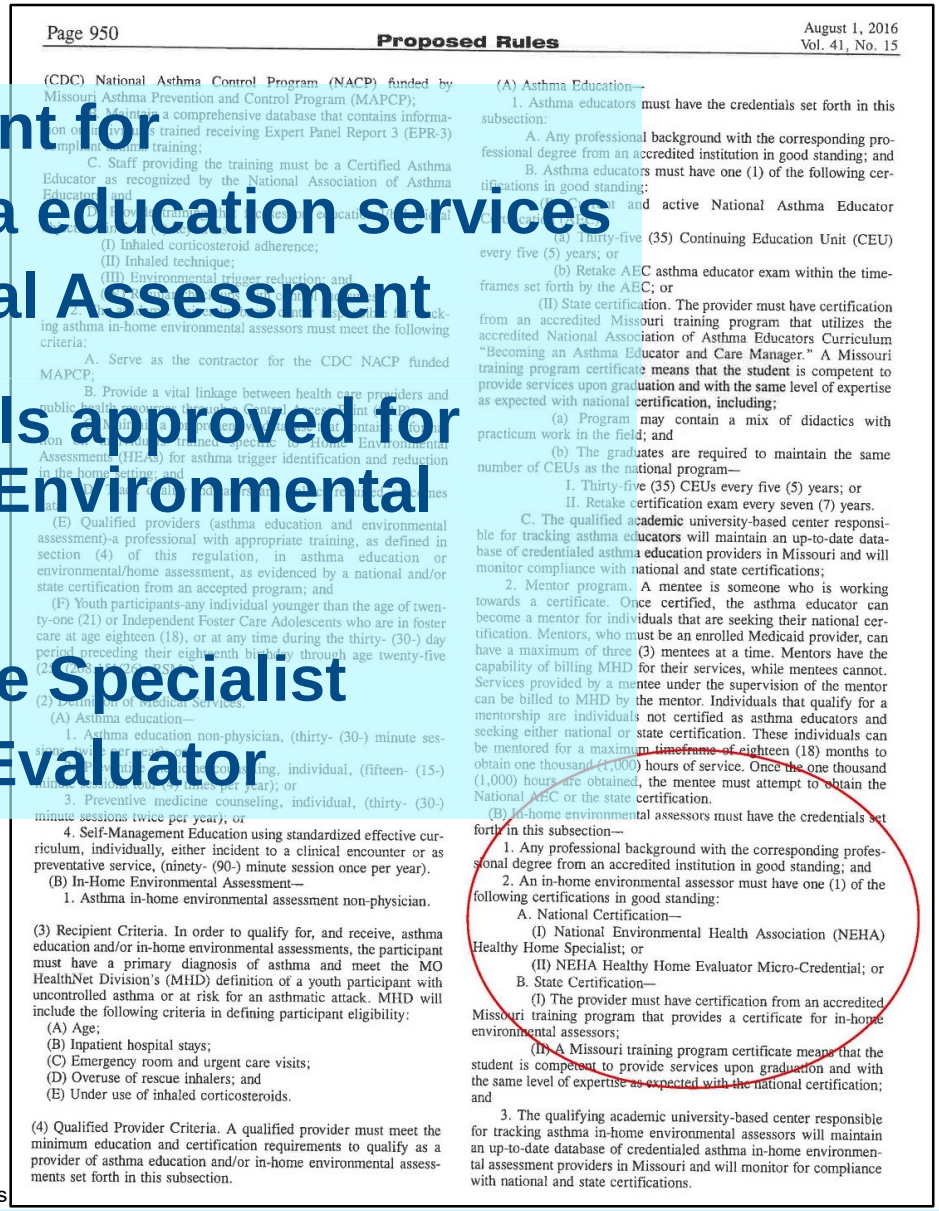
Healthy Home Evaluator-

New Micro-credential



State of Missouri Policy Finalized

- Medicaid reimbursement for
  - home-based asthma education services
  - Home Environmental Assessment
- Two national credentials approved for individuals to provide Environmental Assessments:
  - NEHA Healthy Home Specialist
  - BPI Healthy Home Evaluator



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(CDC) National Asthma Control Program (NACP) funded by Missouri Asthma Prevention and Control Program (MAPCP);

B. Maintain a comprehensive database that contains information on [illegible] trained receiving Expert Panel Report 3 (EPR-3) compliant asthma training;

C. Staff providing the training must be a Certified Asthma Educator as recognized by the National Association of Asthma Educators and

[illegible]

(I) Inhaled corticosteroid adherence;

(II) Inhaled technique;

(III) Environmental trigger reduction; and

[illegible] tracking asthma in-home environmental assessors must meet the following criteria:

A. Serve as the contractor for the CDC NACP funded MAPCP;

B. Provide a vital linkage between health care providers and public health programs through Central Coordinated Intervention [illegible] trained specific to Home Environmental Assessments (HEAs) for asthma trigger identification and reduction in the home setting; and

[illegible]

(E) Qualified providers (asthma education and environmental assessment)-a professional with appropriate training, as defined in section (4) of this regulation, in asthma education or environmental/home assessment, as evidenced by a national and/or state certification from an accepted program; and

(F) Youth participants-any individual younger than the age of twenty-one (21) or Independent Foster Care Adolescents who are in foster care at age eighteen (18), or at any time during the thirty- (30-) day period preceding their eighteenth birthday through age twenty-five (25).

(2) Definition of Medical Services.

(A) Asthma education—

1. Asthma education non-physician, (thirty- (30-) minute sessions [illegible]

[illegible] counseling, individual, (fifteen- (15-) minute sessions [illegible] per year); or

3. Preventive medicine counseling, individual, (thirty- (30-) minute sessions twice per year); or

4. Self-Management Education using standardized effective curriculum, individually, either incident to a clinical encounter or as preventative service, (ninety- (90-) minute session once per year).

(B) In-Home Environmental Assessment—

1. Asthma in-home environmental assessment non-physician.

(3) Recipient Criteria. In order to qualify for, and receive, asthma education and/or in-home environmental assessments, the participant must have a primary diagnosis of asthma and meet the MO HealthNet Division's (MHD) definition of a youth participant with uncontrolled asthma or at risk for an asthmatic attack. MHD will include the following criteria in defining participant eligibility:

(A) Age;
(B) Inpatient hospital stays;
(C) Emergency room and urgent care visits;
(D) Overuse of rescue inhalers; and
(E) Under use of inhaled corticosteroids.

(4) Qualified Provider Criteria. A qualified provider must meet the minimum education and certification requirements to qualify as a provider of asthma education and/or in-home environmental assessments set forth in this subsection.

(A) Asthma Education—

1. Asthma educators must have the credentials set forth in this subsection:

A. Any professional background with the corresponding professional degree from an accredited institution in good standing; and

B. Asthma educators must have one (1) of the following certifications in good standing:

[illegible] and active National Asthma Educator [illegible]

(a) Thirty-five (35) Continuing Education Unit (CEU) every five (5) years; or

(b) Retake AEC asthma educator exam within the timeframes set forth by the AEC; or

(II) State certification. The provider must have certification from an accredited Missouri training program that utilizes the accredited National Association of Asthma Educators Curriculum "Becoming an Asthma Educator and Care Manager." A Missouri training program certificate means that the student is competent to provide services upon graduation and with the same level of expertise as expected with national certification, including;

(a) Program may contain a mix of didactics with practicum work in the field; and

(b) The graduates are required to maintain the same number of CEUs as the national program—

I. Thirty-five (35) CEUs every five (5) years; or

II. Retake certification exam every seven (7) years.

C. The qualified academic university-based center responsible for tracking asthma educators will maintain an up-to-date database of credentialed asthma education providers in Missouri and will monitor compliance with national and state certifications;

2. Mentor program. A mentee is someone who is working towards a certificate. Once certified, the asthma educator can become a mentor for individuals that are seeking their national certification. Mentors, who must be an enrolled Medicaid provider, can have a maximum of three (3) mentees at a time. Mentors have the capability of billing MHD for their services, while mentees cannot. Services provided by a mentee under the supervision of the mentor can be billed to MHD by the mentor. Individuals that qualify for a mentorship are individuals not certified as asthma educators and seeking either national or state certification. These individuals can be mentored for a maximum timeframe of eighteen (18) months to obtain one thousand (1,000) hours of service. Once the one thousand (1,000) hours are obtained, the mentee must attempt to obtain the National AEC or the state certification.

(B) In-home environmental assessors must have the credentials set forth in this subsection—

1. Any professional background with the corresponding professional degree from an accredited institution in good standing; and

2. An in-home environmental assessor must have one (1) of the following certifications in good standing:

A. National Certification—

(I) National Environmental Health Association (NEHA) Healthy Home Specialist; or

(II) NEHA Healthy Home Evaluator Micro-Credential; or

B. State Certification—

(I) The provider must have certification from an accredited Missouri training program that provides a certificate for in-home environmental assessors;

(II) A Missouri training program certificate means that the student is competent to provide services upon graduation and with the same level of expertise as expected with the national certification; and

3. The qualifying academic university-based center responsible for tracking asthma in-home environmental assessors will maintain an up-to-date database of credentialed asthma in-home environmental assessment providers in Missouri and will monitor for compliance with national and state certifications.

Is Home Performance Healthy?

**Thanks to Eric Werling for conceiving of this illustration

Children's Mercy HOSPITALS & CLINICS Kansas City

Center for Environmental Health

Children's Mercy Hospitals & Clinics

816-960-8918

Discussion Highlights: Children's Mercy Hospitals and Clinics

- **Homes are tied to health:** Homes are where people take care of themselves and experience and manage illnesses.
- Due to the significant amount of asthma and allergies in the U.S., research on healthy homes has primarily looked at these two illnesses.
- **The benefits of having health intervention programs for residences is clear**, now the discussion is centered on implementation:
  - Many states are working to reimburse home-based asthma services, over half of U.S. states are participating with Medicare.
  - Missouri has finalized a policy that allows **reimbursement for certified building analysts to conduct healthy homes assessments and asthma education services.**

Health Benefits of Energy Efficiency Part I: Tohn Environmental Strategies

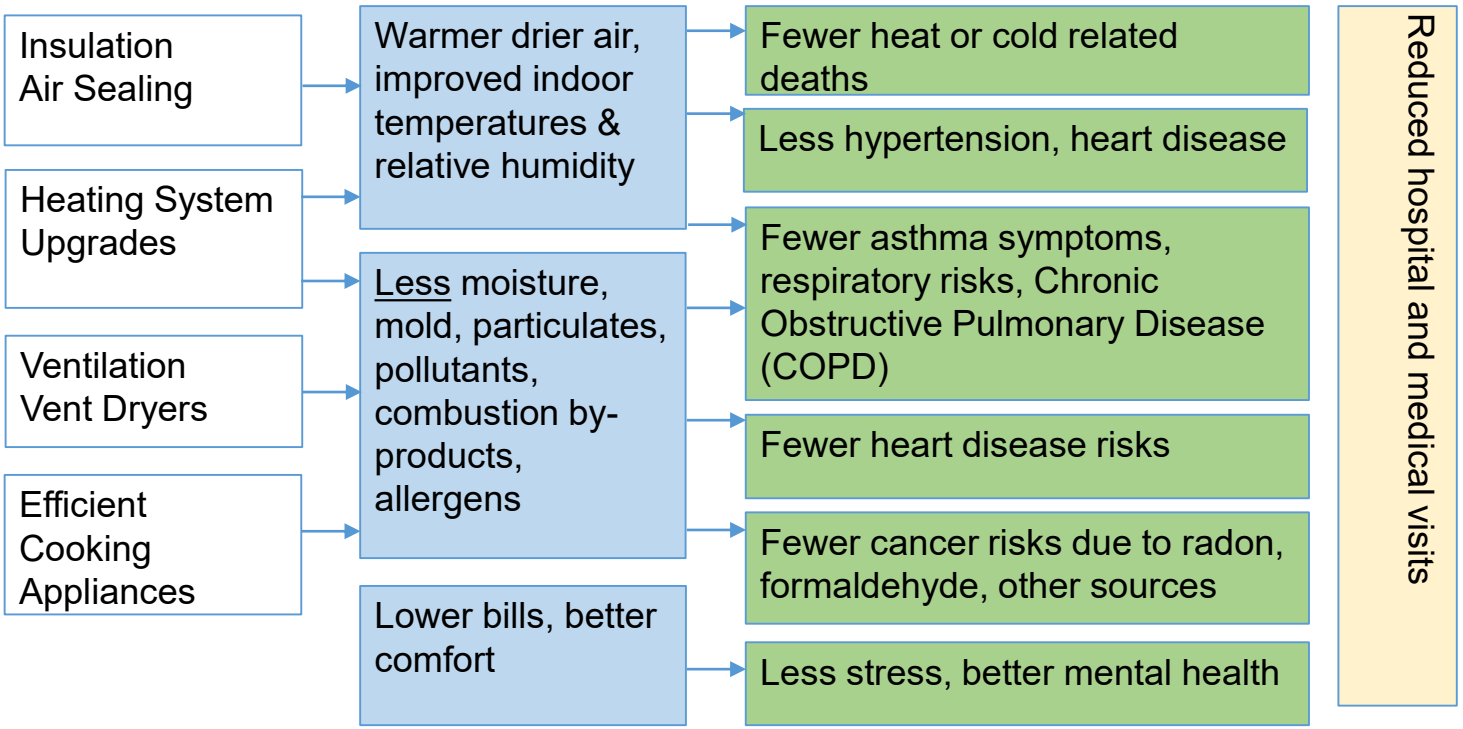
U.S. DEPARTMENT OF ENERGY

Health Benefits of Residential Energy Efficiency

Ellen Tohn
Tohn Environmental Strategies
etohn@tohnenvironmental.com
September 2016

Tohn
Environmental Strategies

How energy efficiency can reduce health risks



Tohn
Environmental Strategies

Home asthma triggers

Tohn
Environmental Strategies

Home energy efficiency health improvements

Type of Energy Related Work	Reduced Respiratory Risks	Reduced Other Health Risks	Reduced Emergency Dept. Visit or Hospitalization*	Improved Indoor Air Quality
Core Energy Efficiency (6 studies)	Asthma COPD Bronchitis *Nasal allergies*	Colds Headaches Hypertension Sinusitis Thermal Stress Overall Health Mental health	Asthma Other Respiratory	Moisture Condensation VOCs *Formaldehyde* *Radon*
Enhanced Energy Work (7 studies)	Asthma	Hypertension		Moisture/Mold Dust Allergens Particulates Acetaldehydes
Ventilation (9 studies)	Asthma	Lung cancer (predicted)		Moisture Formaldehyde Radon NO_2, CO_2

Italics: decreased air quality

Other supplemental services can also produce improvements: (wood stove replacements, room HEPA air cleaners, gas to electric stove replacement)

Tohn Environmental Strategies

Base energy efficiency can improve health

Author and Date of Publication	Health-Related Outcomes						
	Healthcare Utilization	General Health/ Wellness	Lower Respiratory Health/Asthma	Upper Respiratory and Other Health	Comfort (Temperature/ Relative Humidity)	Indoor Air Pollutants	Other
Osman (2010)	~	~	+		~		
Barton (2007) Richardson (2006)	~	~	+		+	~ (PM)	
Howden-Chapman (2007)	+	+	+	+ (cold/flu)	+		+ (mold)
Walker (2009)	~	+	~	+ (heart disease/ hypertension	+		
Pigg (2014a) Tonn (2014)	~	+	~	+	-	- (formaldehyde, radon)	
Wilson (2014)		+	+/-	+ (sinus infection, hypertension)	+	~	

Tohn Environmental Strategies

We see asthma and respiratory improvements

Study	Work Done	Health Outcomes
Tonn 2014 **US:** LI; SF	Weatherization	Asthma ED visits – 11% reduction
Wilson 2014 **US:** LI; SF/MF	Weatherization or insulation, heating system, air sealing	Asthma rescue medication use - 20% reduction Asthma symptom days and sleep disruption – *increased* Sinus infections – 5% reduction
Breysse, 2014 **US:** LI; MF	Enhanced energy upgrades with home education visit	Asthma out of control – 23% reduction (vs. home education)
Osman 2011 GB: MR; SF	Insulation, heating system	Respiratory symptom score – improved
Barton 2007 **Richardson 2006** **GB:** LI, SF	Insulation, heating system, windows, exhaust ventilation, roof repair	Respiratory symptom score – improved
Howden Chapman 2007 **NZ:** LI, SF	Insulation, heating system	Child sleeping problems due to wheeze – reduced (0.57 OR) Respiratory hospital admissions – reduced (0.54 OR)

Statistically significant $p < 0.1$

Tohn Environmental Strategies

Health partners are engaging with energy programs

- VT: Neighborworks of Western VT supported by Rutland Medical Center to provide energy and home rehab in homes of asthmatics and COPD patients
- Washington State: Weatherization program sets aside funds for Weatherization Plus Health, will track Medicaid savings. Targets higher risk asthmatics, with referrals from community health centers

Health Benefits of Energy Efficiency Part II: National Center for Healthy Homes

U.S. DEPARTMENT OF ENERGY

Health Benefits of Residential Energy Efficiency – Part II

Jonathan Wilson, MPP

Director of Research

September 8, 2016

National Center for
HEALTHY HOUSING

Studies of Enhanced Energy Efficiency Measures

Study, Lead Author, Date of Publication, Country; Bldg Type; Income	Additional Home Performance Activities	
	Ventilation	Other
Highline Communities Healthy Homes Project Breysse (2014) US; SF; LI	Exhaust*	Remove carpets, CO/smoke alarms, water leak repair
Impact of Weatherization and Healthy Homes Interventions on Asthma-Related Medicaid Claims Rose (2015) US; SF; LI	Exhaust	Remove carpets, pest exclusion, dehumidifier, mattress cover, HEPA vacuum
Indoor Environmental Quality Benefits of Apartment Energy Retrofits Noris (2013) US; MF; MR	Whole-House* (ERV) Exhaust*	Fan, CO alarms, stand-alone HEPA filter,* mold removed*
Evaluation of Canadian R-2000 Standard Leech (2004) CA; SF; MR	Whole-House (HRV)	Healthy material standards, CO alarms
Heatfest Study Lloyd (2008) GB; MF; MX	Whole-House (HRV)	Porches, solar panels
Health Optimisation Project for Energy-Efficient (HOPE) Homes Spertini (2010) CH; MF; MR	Whole-House (HRV)	(Not described) Homes built 20+ years ago
Mechanical Ventilation in Tight Homes v. Natural Ventilation in Standard Homes Wallner (2015) AT; MX; MR	Whole-House (HRV)	Passive House (Not described)

* Conducted in some homes

National Center for HEALTHY HOUSING

Effects of Enhanced Energy Efficiency Measures

Author and Date of Publication	Health-Related Outcomes						
	Healthcare Utilization	General Health/ Wellness	Lower Respiratory Health/Asthma	Upper Respiratory and Other Health	Comfort (Temperature / Relative Humidity)	Indoor Air Pollutants	Other
Breysse (2014)			+				+ (mold, water damage)
Rose (2015)	+				+		+ (mold)
Noris (2013)					+	+ (CO_2, VOCs, PM, acetaldehyde); +/- (formaldehyde)	
Leech (2004)			+	+ (cold symptoms, fatigue, irritability)			
Lloyd (2008)	~	+		+ (blood pressure, respiratory infections)			
Spertini (2010)			~		+	~ (airborne mold)	+ (dust mite allergens)
Wallner (2015)					+	+ (CO_2, TVOCs, formaldehyde, radon, airborne mold)	

+ Improvement; +/- mixed results; ~ inconclusive results

National Center for HEALTHY HOUSING

Green Housing Renovations and New Construction: *Comprehensive Energy Efficiency and Healthy Housing*

Six renovation studies and four new construction studies in the U.S.:

- **Green housing improves environmental conditions**
  - **Particulate matter**
  - **Nitrogen dioxide**
  - **Volatile Organic Compounds**
- **Green renovation work can improve overall physical and mental health, respiratory health, and injuries**
- **Green new construction improves health outcomes for children with asthma and reduces healthcare utilization**

National Center for HEALTHY HOUSING

Enhanced Ventilation: *Studies of the Effectiveness of Mechanical Ventilation*

Nine studies of ventilation systems were considered:

- **Indoor environmental conditions generally improved with enhanced ventilation**
  - **Asthma triggers**
  - **Mold**
  - **Volatile Organic Compounds**
  - ***Nitrogen dioxide increased***
- **Installation of HRVs/ERVs associated with fewer asthma/respiratory symptoms**
- **Installation of whole-house ventilation associated with lower dust mite levels**
- **Reductions in radon exposures maybe possible with enhanced ventilation**

National Center for HEALTHY HOUSING

Take Home Message

- Multiple studies find that residents feel better, have fewer respiratory symptoms, and experience fewer headaches after energy efficiency measures.
- No one should use this research to guarantee health effects for any particular client, but the evidence is clear that population health benefits are real.
- Consumers should be educated that a properly conducted energy efficiency job will improve the indoor environment and will likely improve occupant health.

www.nchh.org ♦ @NCHH ♦ facebook.com/HealthyHousing

National Center for HEALTHY HOUSING

Health Benefits of Energy Efficiency: Presentation Highlights

- Asthma triggers in the home include mice feces, smoking, mold, and moisture, all of which can be **addressed through home upgrades that reduce energy use as well.**
- Energy efficiency doesn't just benefit physical health. **Lower energy bills can result in less stress and improved mental health**.
- New programs are tracking the effects of weatherization on health and energy savings for participants.
- Enhanced efficiency measures (e.g., whole home ventilation upgrades) have the greatest effect on improved air quality:
  - Enhanced upgrades reduce pollutants, such as dust mites and mold, and reduce moisture in the air.
  - Studies have found the implementation of enhanced measures has reduced the sinus infection cases and improved blood pressure and hypertension for residents.

Health Benefits of Energy Efficiency: Research Gaps and Limitations

- **Gaps and limitations remain in the research on the intersection of home performance and healthy outcomes:**
  - Energy efficiency measures are not guaranteed to improve a person's health at the individual level.
  - The majority of studies from the United States focus on low-income households, so less is know about the affect of home performance on health in middle- or high-income households in the U.S.
  - Studies primarily analyzed individual components of energy upgrades, such as the impact on mold or air pollutants. None of the studies examined a holistic range of benefits for upgrades, such as cost, resiliency, and health.
  - Very few studies have begun to analyze the impact that climate change may have health as it relates to home performance, such as extreme heat.
  - The studies included in the research used different metrics to measure their outcomes, which limits the ability to draw comparisons between studies.

Integrating Health and Home Performance: How Do We Get there?

Roadmap Discussion

U.S. DEPARTMENT OF ENERGY

Roadmap Discussion Question 1

What specific services, products, marketing or collaboration strategies has your program found most successful to connect energy efficiency and health and take advantage of the health market?

Summary of Responses:

- Low cost indoor air quality sensors are now readily available in the market.
- Incorporating health benefits into messaging and marketing materials to help strengthen the portfolio of benefits for energy efficiency beyond cost savings.
- Using the energy efficiency and health connection to collaborate with community hospitals and health organizations.

Roadmap Discussion Question 2

What resources, tools, or information would your program find most helpful to integrate health and home performance?

Summary of Responses:

- More data on the impact of home interventions on healthcare costs.
- Resources on sources of financing for home interventions that can improve health outcomes.
- Tools and messaging resources to market the benefits of home interventions on health to consumers, contractors, raters, and BPI professionals.
- Resources on how to approach hospitals to integrate home energy efficiency into their programs.
- A list of renovation activities that improve both health and efficiency in the home.

Possible Focus Areas of an Industry Roadmap*

- Estimating health market channel potential impact on EE delivery and savings
- Challenges of developing health market channel:
  - Establishing credibility of HP services to improve health
    - Need to prioritize and fill gaps in research
  - Understanding the healthcare industry and relevant actors
    - *Payers of healthcare have different motivations than users of healthcare – What would cost-effectiveness tests look like?*
    - What is the business value of HP to healthcare industry?
    - Who are likely champions?
  - Braiding consumer resources from different funders
  - Data and privacy

*DOE will not be developing all the elements of the roadmap. It is expected that industry stakeholders will contribute resources and materials they are already or planning to develop to the roadmap.

Possible Focus Areas of an Industry Roadmap (Contd)

- Delivery of HP targeting health likely requires:
  - Additional workforce training & credentialing
  - New verification systems, protocols, and standards
  - Exploration of new business models and partnerships
  - Better understanding of liability concerns and guidance to help manage liability
  - Possible local and/or state ordinances facilitating access to HP for health purposes

To get involved in roadmapping process, please email homehealth@csra.com

Related Resources in the Residential Program Solution Center

Explore resources related to health and home performance:

- Review how to develop effective partnerships with the Program Design & Customer Experience – Identify Partners handbook.
- Explore best practices for including non-energy benefits of energy efficiency in program marketing & cost-effectiveness testing in ACEEE's Recognizing the Value of Energy Efficiency's Multiple Benefits.
- Leverage complementary benefits of energy efficiency to broaden your reach & identify partnership opportunities with this Tip for Success.
- Read the case study on nonprofit GTECH Strategies' initiative to improve indoor air quality through home energy upgrades.

https://rpsc.energy.gov

- While you're there, see the latest Proven Practices post on Tailored Messaging.
- We regularly add new resources to the Solution Center. Member ideas are wanted!

Peer Exchange Call Series

We hold one Peer Exchange call the first four Thursdays of each month from 1:00-2:30 pm ET

Calls cover a range of topics, including financing & revenue, data & evaluation, business partners, multifamily housing, and marketing & outreach for all stages of program development and implementation

Upcoming calls:

- September 22: Home Improvement Catalyst Quarterly Call (201)
- September 29: Highlights from ACEEE Summer Study Sessions (201)
- October 6: Secret Sauce: Recruiting and Retaining Qualified Contractors (101)
- October 13: Moving Beyond Split-Incentives: Engaging Rental Property Tenants and Owners in Energy Efficiency (301)

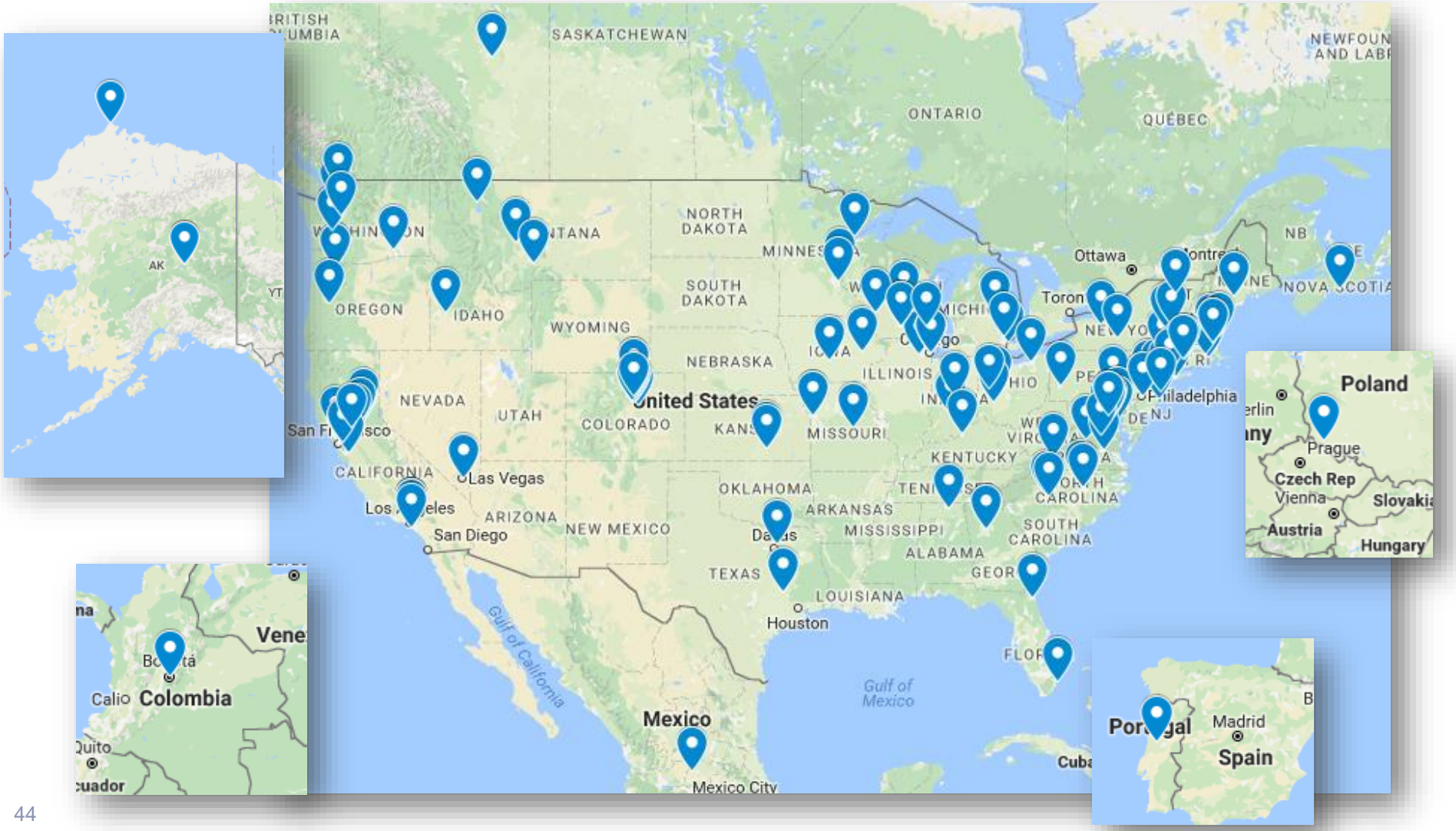
Send call topic ideas to peerexchange@rossstrategic.com

See the Better Buildings Residential Network Program website to register

Addenda: Attendee Information and Poll Results

U.S. DEPARTMENT OF ENERGY

Call Attendee Locations



Call Attendees: Network Members (1 of 2)

- American Council for an Energy-Efficient Economy (ACEEE)
- AppleBlossom Energy Inc.
- Arlington County Government
- Build It Green
- Building Performance Center, Inc.
- Building Performance Institute
- CalCERTS, Inc.
- Center for Energy and Environment (CEE)
- Center for Sustainable Energy
- City of Fort Collins
- City of Plano
- CLEAResult
- Cleveland Public Power
- Connecticut Green Bank
- Eastern Research Group, Inc.
- Ecolibrium3
- Efficiency Nova Scotia
- Efficient Windows Collaborative
- Elevate Energy
- Empower Efficiency, LLC
- Energy Efficiency Specialists
- Essess, Inc.
- Fort Collins Utilities
- Group14 Engineering Inc.
- Metropolitan Energy Center
- Midwest Energy Efficiency Alliance (MEEA)
- National Housing Trust/Enterprise
- New York State Energy Research and Development Authority

Call Attendees: Network Members (2 of 2)

- North Slope Borough - Public Works Weatherization Program
- Operation Green Team
- Ouachita Electric Cooperative
- Pennsylvania Interfaith Power & Light
- Pepco
- Performance Systems Development (PSD)
- Research Into Action, Inc.
- Rural Ulster Preservation Company (RUPCO)
- Southface
- TRC Energy Services
- Vermont Energy Investment Corporation (VEIC)
- Wisconsin Energy Conservation Corporation (WECC)

Call Attendees: Non-Members (1 of 2)

- AjO
- Association of Polish Electrical Engineers
- Bay City Electric Light and Power
- BIG
- BKi
- BlocPower
- City of Bloomington
- City of Milwaukee
- City of Philadelphia
- Cold Climate Housing Research Center
- Ecobeco
- Emerson Electric
- Energy Metering Technology Ltd
- Energy Outfitter
- EnergyWize
- Everblue
- Eversource
- Facility Management Consultores
- Fairbanks North Star Borough
- FCI Management
- Flathead Electric Cooperative
- Fraunhofer USA
- Gary E. Hanes & Associates, LLC
- GoodCents
- Green Compass Sustainability Consulting
- HDR Consulting
- Healthy Building Research
- Home Office Training & Technology
- HVI

Call Attendees: Non-Members (2 of 2)

- Optimal Energy Inc.
- Osram Sylvania
- Pacific Northwest National Laboratory
- Panasonic Eco Dolutions
- Passive House
- Passive House Institute US
- Pennsylvania Public Utilities
- POCH
- RAS Engineering
- Redhorse Corp
- Rothschild Doyno Collaborative
- RTI International
- Southface Energy Institute
- Stone Energy Associates
- Texas A&M University
- The Energy Guy
- Therma-Stor LLC
- Third Rail Technologies
- University of Oregon – Center for Sustainable Business Practices
- USDA Forest Products Laboratory
- USG
- V3
- Washington Department of Commerce
- Washington LEAP
- Washington State University Energy Program
- Windheim EMF Solutions

Opening Poll #1

- Which of the following best describes your organization's experience connecting health and home performance?
  - Some experience/familiarity – ***60%***
  - Limited experience/familiarity – ***22%***
  - Very experienced/familiar – ***16%***
  - No experience/familiarity – ***1%***
  - Not applicable – ***0%***

Opening Poll #2

- Which of the following best describes your organization's affiliation?
  - Non-Profit – ***37%***
  - State/Local Government – ***23%***
  - Contractor – ***18%***
  - Other (please chat in) – ***15%***
  - Utility – ***7%***

Closing Poll

- After today's call, what will you do?
  - Seek out additional information on one or more of the ideas – ***72%***
  - Consider implementing one or more of the ideas discussed – ***14%***
  - Other (please explain) – ***12%***
  - Make no changes to your current approach – ***2%***