

Better Buildings Residential Network Peer Exchange Call Series:

Conversations with Utility Commissions, Efficiency Programs, and Homeowners: Translating Building Science to the Real World

November 12, 2020



Agenda and Ground Rules

- Agenda Review and Ground Rules
- Opening Poll
- Residential Network Overview and Upcoming Call Schedule
- Featured Speakers:
 - Sally Talberg, State of Michigan
 - John Shipman, Franklin Energy
 - Janja Lupse, CLEAResult
- Open Discussion
- Closing Poll and Announcements

Ground Rules:

- Sales of services and commercial messages are not appropriate during Peer Exchange Calls.
- 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.

<u>Upcoming Calls (2nd & 4th Thursdays):</u>

Dec 10: A Review of the Historic Past Year in Energy Efficiency

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 <u>bbresidentialnetwork@ee.doe.gov</u>, or go to <u>energy.gov/eere/bbrn</u> & click Join







Sally Talberg
State of Michigan



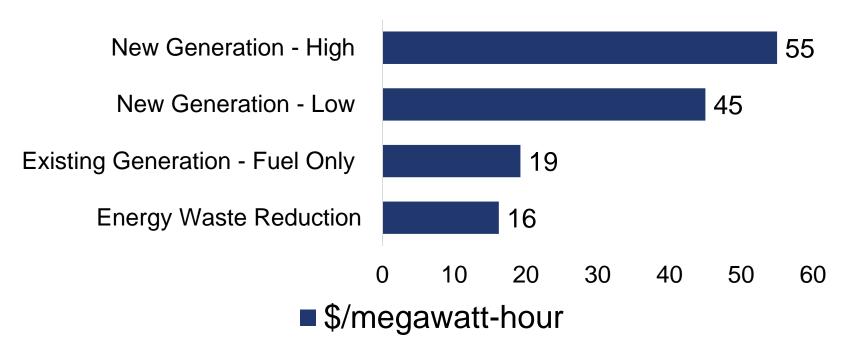
Conversations with Utility Commissions, Efficiency Programs, and Homeowners – Translating Building Science to the Real World

Michigan's Experience

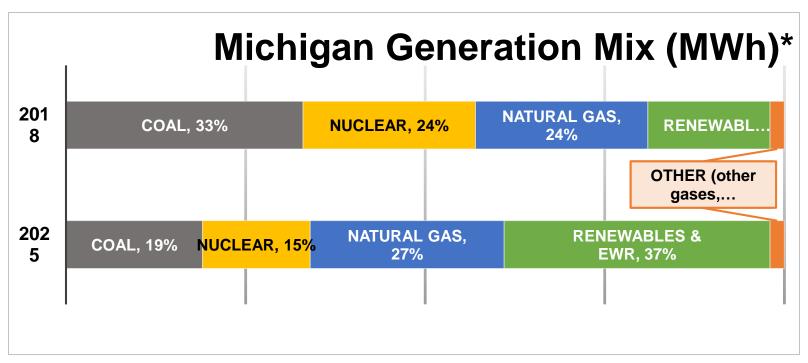
By Panelist Sally Talberg, Commissioner, Michigan PSC November 12, 2020



Energy Waste Reduction Lowest Cost Option for Meeting Energy Needs



Michigan's Evolving Generation Mix

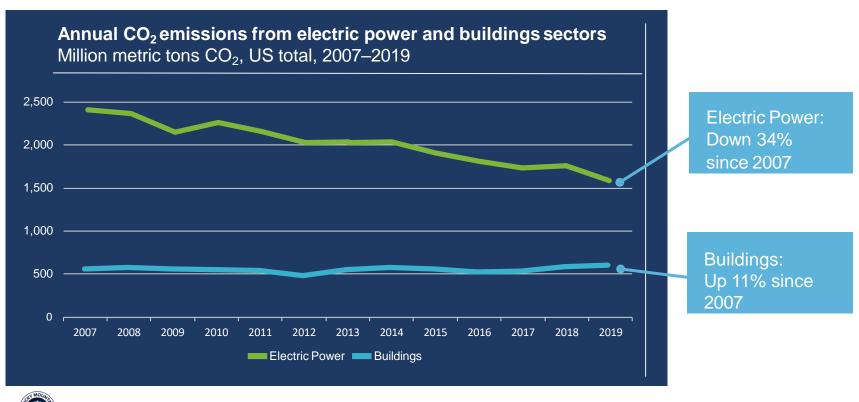


^{*}Includes full generating output of Cook nuclear units. Demand Response is not considered an energy source.

Source: MPSC 2019 Annual Report



US has reduced carbon emissions in electricity sector, but not buildings sector

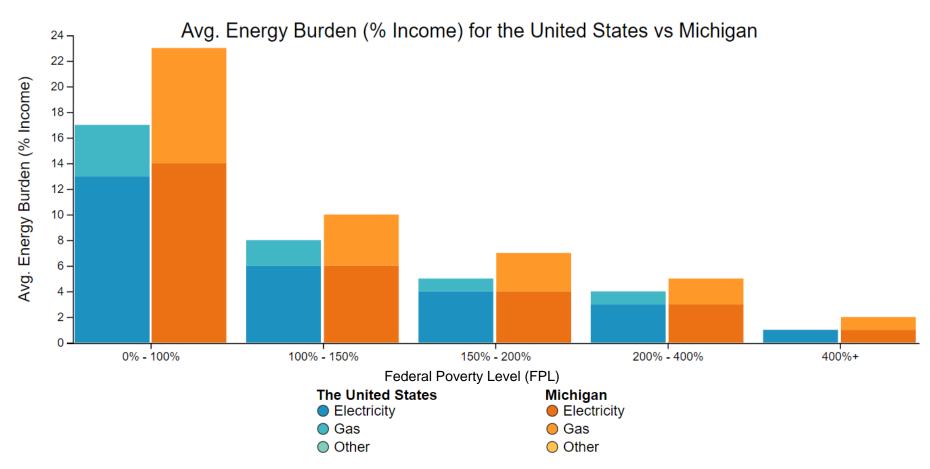




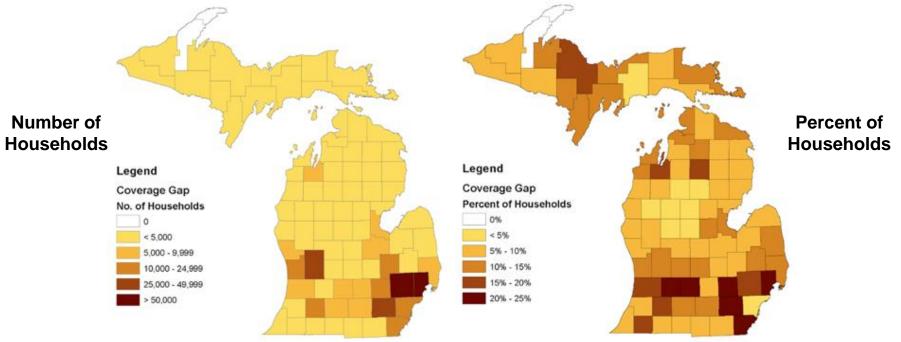
Source: EIA 2018; Rhodium Group (2019)



Affordability



U of M Study: 1 in 8 MI households fall into an energy efficiency funding coverage gap



Statewide, an estimated 12%, or nearly 460,000 households fall into the energy efficiency funding coverage gap.

Source: Tony G. Reames, PhD, PE – Residential Energy Efficiency Disparities Across Race, Class, and Place University of Michigan, LIFE Webinar – July 16, 2020

Regulatory Framework Matters to Drive Utility Behavior

Independent EM&V Integration with Long-Term Planning

Decoupling

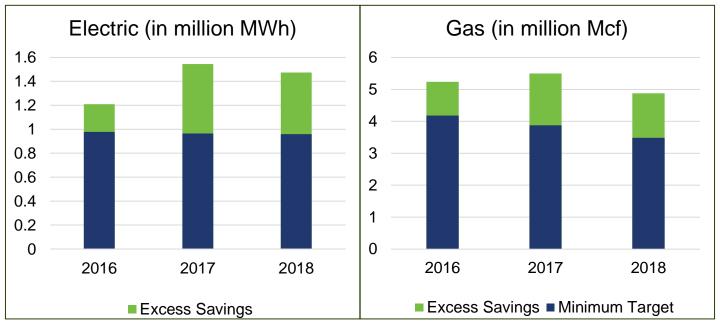
Dedicated Funding

Financial Incentives

Minimum Standards

Demonstrated Success and Increasing Targets

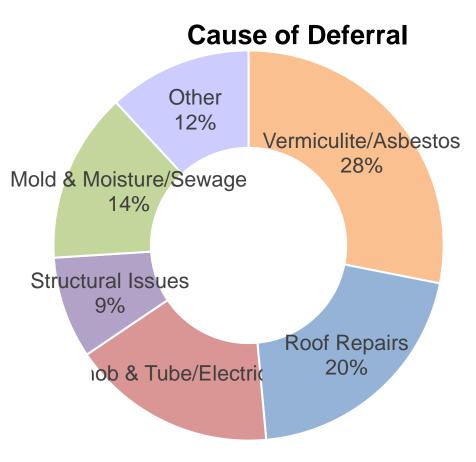
Electric and Gas Targets vs. Savings Achieved



2021 targets for investor-owned utilities exceed statutory minimum of 1% of annual sales with two largest utilities at 2%

DTE Energy Health and Safety Pilot

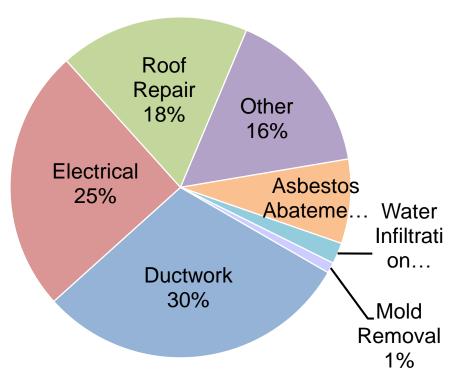
- Problem: Health and safety problems defer large number of low-income weatherization projects
- Approach:
 - Identify top six causes and alternative funding
 - Utility pilot funding (electric and gas)
 - Single-family: \$1.6 M
 - Multi-family: \$80k
 - Delivery through CAAs/nonprofit partners



Pilot Results (as of 10/30/2020)

- 96 single-family and 3 multi-family projects completed
- 40% of total health and safety project costs exceed \$7,500
 - Average cost per measure: \$4,574
- Average energy savings
 - Gas: 22 MCF (28.3%)
 - Electricity: 0.63 MWh (8.2%)

H&S Measures Installed



Contact Information

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www.Michigan.gov/MPSC



John Shipman Franklin Energy









BUILDING SCIENCE PROFESSIONALS & WORKFORCE EDUCATION & TRAINING

1

Who Is Franklin Energy

- A national energy portfolio solutions organization
- Residential S.F & M.F and commercial, utilities, governments, schools and NGO's
- Support innovation and program adoption nationally

2

Creating Awareness And Developing Pathways Via Collaboration

- · Full spectrum of professionals contractors, real estate professionals, communities
- K-12 (kits and Curriculum), community colleges and 4-Year universities
- Support trade allies and suppliers, utility-based programs, governmental policy

3

Real World Education And Training That's Timely And Matters

- Professional development leading to meaningful benefits
- Innovative and targeted training & education designed to energize a generation
- Developing a building science training & education infrastructure
- An eye on community-centric social equity



2020-2021 EDUCATION & TRAINING GOALS

Focus on Building Science and Transformation: Energy Efficiency & Electrification; WE&T; Social Equity; Behavioral Change; Climate Mitigation

Key Collaborations Linking Silos

- K-12 Community Colleges Communities
- Contractors and Trade Allies
- Weatherization Technicians
- Energy Assessors and Raters
- Real Estate Professionals
- NGO's and Communities—Collaboration/Consistent Messaging



Current Engagement Offerings 2020-2021



15 WAYS

To Transform Your Community Through Innovative Training and Education

1	BRIDGIA ROCKNOW IF BATTERS BRID BURGATON (MAD	Assumed geen being and automatic trackes practices. TEALTHEE lean about recover officient, maketing green properties, and areity programs/partners.
2	ACRESTE GREEK APPLICATIONS	More wer-supported and accurate valuation determination for evergy efficient cycleris, innervation, and green-nava properties supporting the and carbon milligetice.
3	CHITRE GREAT (2009)C PROTOCORAL (2009)	Energy Efficient, (E.) financing, overcoming it suncted parties to installing Et ingloversered, and according green it stalking products supporting sole EE programs.
4	CHINE WHEN THE STATE PROFESSION.	Clearland for the National Association of Repl Calaria Grawers (NAPCO) Replicated first languet blockness estate trade organization harps professoriest communities attain heres ownership and access EE financing options.
5	NOW THEREF SCHOOL BOOT COMP (MS)	Home Energy Score (ACS) makes GE performance in homes visible. Department of Energy (COG) national rating standard. Course creates local DGE HEE Assessme.
6	EDITAL HOME SETTAPENT MATER ROWSER HOPE	Cariffed green have whos support tous poverwherk fulfilly programs, EE, carbon mitigation, and trop homeowners codestand the maket value.
7	CHIEFE SHEA BILLING MOTESCHAL COST.	Green building techniques and training for residents wome Performs nos Contractions on basic to advanced green building techniques of new and existing homes.
8	SILING THE SAN STA	Often a plear understanding of the value of lidar FV and morevable elega- tion to determine fader Ps value, and how to have the associated value based conversation.
9	RACINA MOYORALIMI	Provides mended coaching of relatativishin to inquirid life letter, put them this practice, and were screament with building professional programs generating its related projects.
10	RE ARREST ADVES - REMOTE ARREST (ADVES	audinesses value and penetro of accessory towering units (ADIV), related tools loade follows, holyding shortages; creating abort wealth, ET durings, gentratication, and local equity.
11	ALI RECTRE ABUS (1808)	Alt-eachic ADV design and development, managers six design, and neeting carbon origination efforts for contractors to result characters be have been expensed as
12	ELECTRIFICATION (SINCATION (SID)	Now that 25% is tree, what's need? Destrification and fael switching, steeligent enclavity, and the benefits for teamwiseers to Home Wapeston, are the next hander.
13	MULTRY HOUSING PRINCIPLES (HIP)	The resistancing between hearth and building performance (BP) has been know to pushe; hearth groups for years. BP and health is exempted for a BPI Cartificate
14	BREIN MAN ESTAT MANNESWE SHOWS	Proven marketing too from a green real estate practitioner on lessons examed utatly community programs, manurary creent as grant, and promis at time of surrection.
15	DATEM CONSIST STABILINE MINIMODIALE	E-earning modules beind on electing that top and are used to people perfeculations to support a wide range of son exustry EE and electromisation programs.

Thank You To Our Sponsors For This Presentation

San Diego Gas and Electric

Franklin Energy



Educational Cultural Complex



San Diego City College



Great ICI Exercise: Identify the Hos/Bly Home Problem



Contact

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Janja Lupse CLEAResult



New Jersey's Clean Energy ProgramTM

Home Performance with ENERGY STAR®

November 12, 2020

Janja Lupse, NJ Program Director



NJCEP Background

ADMINISTERED BY

New Jersey Board of Public Utilities' Division of Clean Energy

FUNDING

Societal Benefits Charge (SBC) on utility bill

PROGRAM GOALS

- Education
- Change behavior
- Provide opportunity for ALL NJ residents to reduce energy and lower operating cost
- Protect the environment and lower emissions
- Meet Governor's goal of 100% clean energy by 2050





Homeowner/Contractor Tactics

- Webinars to homeowners
 - Rutgers University Environmental Team and Sierra Club
 - Green Teams
 - Our own virtual Green Fair
- Technical Training for Contractors
 - Building Science Basics
 - HVAC Technical Classes
- Cooperative Advertising for Participating Contractors
 - 50% reimbursement, fiscal year cap
- NJ Clean Energy Marketing Awareness Campaign Launch
 - Digital, social media, TV, radio
- Outreach Team Provides 30 Minute Webinars to Contractors



Virtual Green Fair Snapshot

Trivia Question!

Which of these Residential Programs offers up to \$4,000 in Rebates and 0% Financing for up to 7 Years?



A) Appliance Rebate Program

New Jersey

C) Comfort Partners Program

New Jersey's

cleanenergu



D) WARM/COOL Advantage Program



B) Home Performance with ENERGY STAR Program



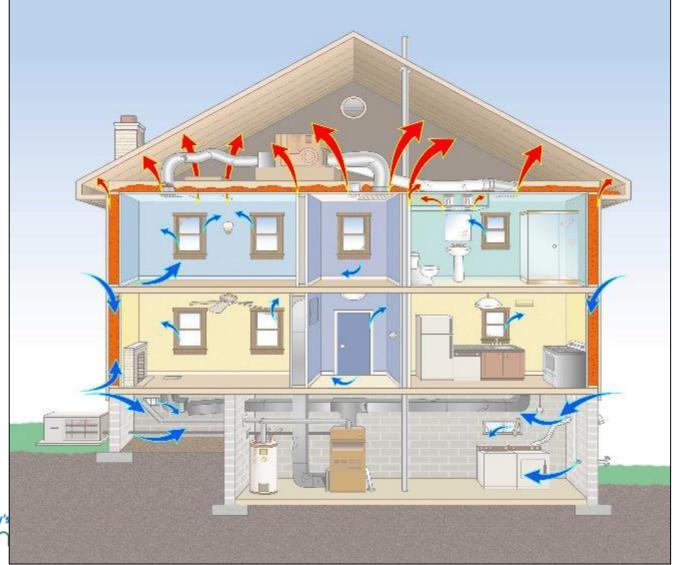
E) Residential New Construction Program







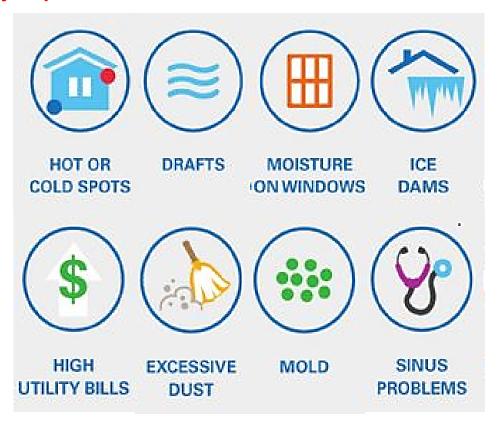
Sample Imagery





Sample Imagery

Symptoms of Poor Home Performance





The Home Assessment

NJCleanEnergy.com/HP



Combustion Appliance Testing

- Diagnostic equipment is used to test the conditions of your heating system, hot water heater and oven
- Testing results determine opportunities for upgrades

Visual Inspection of the Home

 Technician views indoor and outdoor parts of home to view insulation and air sealing upgrades

Blower Door Test

Thermal Imaging (optional)





Home Performance Typical Tools





Blower Door set-up

What your eye sees

What the IR Camera sees



Eligible Measures

- Attic Air Sealing and Insulation
- Duct Sealing / Insulation
- Mechanical Ventilation
- Qualified HVAC Equipment
- Qualified Water Heaters
- Health & Safety Repairs









More Information

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New Virtual Sessions from Solar Decathlon on Innovative Homes and Energy Careers

The Solar Decathlon announced a new webinar series starting in September that will include virtual tours of innovatively designed homes and address a variety of topics from the rise in zero energy homes to clean energy careers.







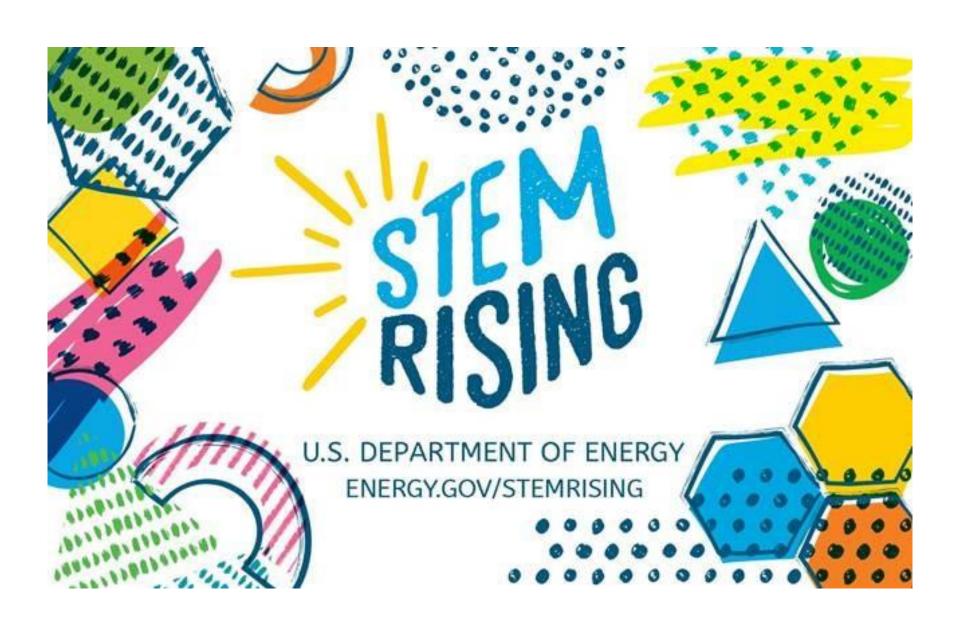
Upcoming DOE Solar Decathlon Virtual Sessions

Register for Upcoming Sessions and Watch Prior Sessions at solardecathlon.gov/virtual_sessions.html

- A Virtual Hands-On Energy Workshop for Families Wednesday, November 18, 2020, 6–7 p.m. E.T.
- Solar Student Leaders of Tomorrow Showcase Wednesday, December 16, 2020, 1–2 p.m. E.T.
- Resilient Home 411: Strategies to Weather and Recover from Natural Disasters Wednesday, January 20, 2021, 1–2 p.m. E.T.
- Zero Energy Ready Homes: New and Growing Fast Wednesday, February 17, 2021, 1–2 p.m. E.T.
- The Future of Solar: A Tour of Cutting-Edge Solar Research with the U.S. Department of Energy Wednesday, March 17, 2021, 1–2 p.m. E.T.
- Solar Decathlon Build Challenge Team House Tour Friday, April 16, 2021, 1–2 p.m. E.T.
- Winning Solar Home The DOE Solar Decathlon Build Challenge Winners Wednesday, May 19, 2021, 1-2 p.m. E.T.



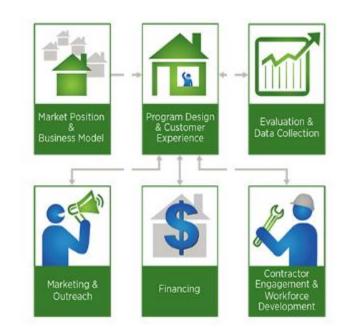




Explore the Residential Program Solution Center

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





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Please send any follow-up questions or future call topic ideas to:

bbresidentialnetwork@ee.doe.gov



