Welcome to the LIFE Webinar Series
We will begin the webinar momentarily
LIFE Webinar Series

Energy Justice – Progress in Real Time

Jamal Lewis
Green & Healthy Homes Initiative
Mission Statement

Working to help low-income New Yorkers address energy issues.

LIFE, the Low-Income Forum on Energy, is a unique statewide dialogue that brings together organizations and individuals committed to addressing the challenges and opportunities facing low-income New Yorkers as they seek safe, affordable and reliable energy.

Supported by the New York State Public Service Commission and the New York State Energy Research and Development Authority (NYSERDA), the LIFE dialogue encourages an interactive exchange of information and collaboration among the programs and resources that assist low-income energy consumers.
Webinar Series, Newsletter, Social Media

> Monthly webinars – Register at nyserda.ny.gov/LIFE-Webinar-Series
  • Thursday, February 25, 2021
  *Fostering Equity in Local Clean Energy Policy*, American Council for an Energy-Efficient Economy

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Asking Questions During Today’s Webinar

1. Locate the Q&A function in the upper right portion of your webinar panel.

   Click on the small arrow to the left of “Q&A” to expand the text field.

2. Type your question into the text field and click “send.”
Low-Income Forum on Energy: Energy Justice - Progress in Real Time

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January 21, 2021
10:30am ET
About GHHI

Vision: Advancing racial and health equity and opportunity through healthy housing.

Mission: The Green & Healthy Homes Initiative is dedicated to addressing the social determinants of health and the advancement of racial and health equity through the creation of healthy, safe and energy efficient homes. By delivering a standard of excellence in its work, GHHI aims to eradicate the negative health impacts of unhealthy housing and unjust policies for children, seniors and families to ensure better health economic and social outcomes in low-income communities of color.

Operating Value: Ensuring racial equity in all policies, practices and actions
In addition to GHHI sites, GHHI operates and manages a variety of state and local projects across the United States.
1. Understanding Energy Insecurity
2. Racial Inequities related to Energy Outcomes
3. Energy Efficiency as Energy Justice
4. Advancing Energy Justice in New York
5. Energy Equity Measurement
Understanding Energy Insecurity
Energy Insecurity: Defining Energy Hardship

- EI is characterized by an “inability of households to meet basic household energy needs” (Hernández, 2016)
  - Economic: Unaffordable energy bills; arrearages, financial spiral
  - Physical: Inferior housing and energy-related conditions
  - Behavioral: Trade-offs, vigilant energy consumption, alternative heating strategies, foregoing comfort

- National Estimate: 37 million Americans are energy insecure (1 in 3 households)
  - Primarily affects low-income households, African Americans and households with children

- Impacts
  - Thermal discomfort and poor indoor air quality
  - Trade-offs due to financial strain-foregoing other necessities
  - Crisis- disconnection notices and shutoffs
  - Psychological effects

One in three U.S. households faces a challenge in meeting energy needs

<table>
<thead>
<tr>
<th>Households that experienced energy insecure situations, 2015</th>
<th>percent of households</th>
</tr>
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<tbody>
<tr>
<td>reported any household energy insecurity</td>
<td>almost every month</td>
</tr>
<tr>
<td>reduced or forewent basic necessities to pay energy bill</td>
<td>some months</td>
</tr>
<tr>
<td>received disconnection notice</td>
<td>one or two months</td>
</tr>
<tr>
<td>kept home at unhealthy or unsafe temperature</td>
<td></td>
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</tbody>
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Source: U.S. Energy Information Administration, Residential Energy Consumption Survey 2015
The Lived Experience of Energy Insecurity

• “It's kinda hard because you can never level out [the temperature]. With the temperature being so cold, I even had to go and buy a heater because I cannot cut my heat up on 80, otherwise, I'm looking at a six, or $700 light bill. At 68 degrees the house is not warm enough for us. That’s even with us putting on extra blankets on the bed... The apartment may not be insulated right, but I've talked to the landlord about that. He has put insulation but it's still cold in here. It's just certain rooms are hot and others are cold you just can't get it leveled.” -- African American Memphis resident, interviewed in 2018

• “That furnace was in there since the house was built. It’s one of those old-fashioned furnaces that looks like an octopus with all the ducts everywhere. It needed to be replaced and I called the heating/cooling person. He had gotten it to run before but then he said, there wasn’t nothin’ that he could do for it this time. He said I should find me another house to live or buy another furnace, which would probably cost $10,000. That’s when I started using my stove to have a little heat.” -- African American Detroit resident, interviewed in 2018
Racial Inequities related to Energy Outcomes
Racial Inequities related to Energy Outcomes

- African Americans are disproportionately impacted by:
  - Housing Burden
  - Energy Burden
  - Health Vulnerabilities
  - Bundled Burdens/Economic Trade-Offs
  - Extreme Weather/Climate Impacts
  - Energy Transitions
  - Depletion of the Resilience Reserve
Housing Burden

- Lowest homeownership rates
- More likely to experience evictions, foreclosures, and other forms of transient housing (Desmond and Kimbro 2015; Evans and Kantrowitz 2002)
- Experiencing displacement at highest rates
Energy Burden

**Figure 1.** National energy burdens across subgroups (i.e., income, race and ethnicity, age, tenure, and housing type) compared to the national median energy burden.

**Figure 2.** The percentage and number of households nationally with a high energy burden (≥ 6%) across different subgroups in 2017.

Note: High and severe energy burdens are not mutually exclusive, meaning that the number of households experiencing a severe burden are also counted in the percentage that experience high burdens. All severe energy burdens (≥ 10%) also fall into the high burden category (≥ 6%). The red and orange bars in Figure 2 sum to the total high energy burdened households, and the number of households is the total that experiences a high energy burden.
Health Vulnerabilities

• African Americans have:
  • Lowest life expectancy, particularly in certain neighborhoods
  • Differentially impacted by numerous chronic health conditions
    • Diabetes, HIV, obesity, preterm births, hypertension, coronary heart disease, stroke, and infant mortality
  • Increased rate of housing-related health conditions
    • Lead poisoning
    • Asthma
    • Other respiratory diseases
Bundled Burdens/Economic Trade-Offs

- Forgoing food and medicine to pay for energy (U.S. Energy Information Administration 2017)

- Spatial distributions of housing, energy, and health inequities often overlap in predominantly African American communities
African Americans are:
- Often affected disproportionately by extreme weather events (Sharkey 2007)
- Less likely to have air conditioning and more likely to die from extreme heat (Klinenberg 2015; O’Neill 2005)
Energy Transitions

• Energy transitions refer to the evolution of energy systems that are often a result of improvements in technology, development of new policies, or the discovery of new resources.

• These transitions may disproportionately impact African Americans if we make up a disproportionate share of the households that transition to clean energy last.

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Depletion of the Resilience Reserve

• Energy insecurity can impact the availability of the resilience reserve - the amount of resilience that should be available for use in responding to a traumatic event.

• Resilience is the capacity for a person to maintain relatively stable, healthy levels of psychological and physical functioning after a traumatic event.

• African Americans contend with social, economic, medical, physical, and geographic vulnerabilities that require the use of significant resilience resources.
I CAN'T BREATHE
Energy Efficiency as Energy Justice
What is Energy Efficiency?

• **Weatherization** - the practice of protecting a building and its interior from the elements, particularly from sunlight, precipitation, and wind, and modifying a building to reduce energy consumption and optimize efficiency.

• **Energy efficiency measures** can refer to enhancements made to any non-structural items or objects within the home as well as a blanket term that encompasses any effort to improve efficiency.

• **Electrification** - the act of converting end uses to be powered by electricity as opposed to fossil fuels.
Promoting Equity with Energy Efficiency

• Need for EE, WX and electrification is caused in part by
  • Racist and discriminatory housing policies
    • Residential segregation (Geronimus 2000; Massey and Denton 2003; Oliver and Shapiro 2006)
  • Historical disinvestment
    • Denied access to loans and other resources to improve housing conditions (Aalbers 2006; Blumgart 2017; Woods 2012)

• Energy efficiency and weatherization measures
  • Include insulation, HVAC upgrades, window replacements, duct dealing, heat pump installation
  • Improve the quality and conditions of older buildings
  • Lower energy bills, improved comfort and air quality
  • Provide significant health and resilience benefits

• Access to these programs and services are impacted by historical inequities
  • Health and safety hazards and poor housing conditions lead to deferrals, thereby deepening inequities as benefits accrue to the most advantaged
  • Many EE programs are available only to homeowners
Targeted Universalism

• Targeting policies and/or programs at those who have the least access to them will, by default, make those policies and programs universally accessible.

• Electrification and energy efficiency programs should be targeted to low-income communities and communities of color.

• To maximize the benefits of EE for these populations, we must improve residential housing conditions
GHHI’s Whole-House Strategy

Based on a combination of education, assessment, and home modifications to address:
Hazards Recognition, Hazards Risk Assessment, Risk Management Strategies

- Lead-based paint hazards
- Asthma triggers (Mold, pests, VOCs, etc.)
- Injury hazards (Falls, fire, poisoning, etc.)
- Radon and asbestos hazards
- Energy efficiency/weatherization issues

Conducted by cross-trained assessors, educators, and crews addressing housing issues holistically
Role of Energy Efficiency in Promoting Equity

Achieving Health and Social Equity through Housing: Understanding the Impact of Non Energy Benefits in the United States

Comprehensive Intervention
Energy Efficiency
Electrification
Weatherization
Healthy Homes

INPUT

ENERGY OUTPUTS
• reduced kWh consumed
• reduced energy demand

NON-ENERGY OUTPUTS
• improved air quality
• increased thermal comfort
• reduced toxins

ENERGY BENEFITS
• improved service reliability
• reduced system maintenance needs

NON-ENERGY BENEFITS
• environmental quality
• occupant health
• family economic security

LONG TERM IMPACTS
• neighborhood quality improvement
• reduced health disparities
• school attendance
• economic productivity
Investing in comprehensive energy efficiency with healthy housing upgrades can achieve energy justice characterized by these tenets.
Advancing Energy Justice in New York
GHHI Partners in New York
Climate Leadership and Community Investment Act (CLCPA)

- CLCPA goals and requirements
  - 85% Reduction in GHG Emissions by 2050
  - 100% Zero-emission Electricity by 2040
  - 70% Renewable Energy by 2030
  - 22 Million Tons of Carbon Reduction through Energy Efficiency and Electrification
  - 40% of benefits accrue to disadvantaged communities

- 22-member Climate Action Council will develop a scoping plan to achieve these goals based on recommendations from Advisory Panels and the Climate Justice Working Group
# Explore State Agency Partners - New York State Healthy Homes Value-Based Payment (VBP) Pilot

**Goal**  
Develop a framework that allows New York’s managed care organizations (MCO) to fund residential healthy homes interventions as part of their value-based payment (VBP) arrangements with healthcare providers within the Medicaid Healthcare Delivery System.

**Outcome**  
Reduce energy usage, reduce utility bill costs, improve home comfort and safety. Improve asthma-related health outcomes. Reduce Medicaid utilization associated with avoidable hospitalization and emergency department use.

**Approach**  
Demonstrate a model for MCO’s to partner with energy/housing contractors within the Medicaid value-based payment framework. Validate potential healthcare cost savings and benefits to residents – including healthy homes interventions into the Medicaid Healthcare Delivery System standard business practice.

**Commitment**  
$10M from New York’s Clean Energy Fund (rate payer dollars) for feasibility assessment, pilot implementation, and market support activities.

**Partners**  
NYSERDA, NYS Department of Health
5 communities will be funded $1 million each (over 36 months) to provide housing interventions in lower income households jointly through HUD’s Office of Lead Hazard Control and Healthy Homes Programs and DOE Weatherization Assistance Program.

Demonstration Objectives
- Identify effective strategies for coordination between Lead Hazard Control/Healthy Homes (LHC) and Weatherization programs that maximize program efficiencies and benefits to occupants, including data sharing, reporting, and outreach/enrollment.
- Reduce Weatherization Assistance Program (WAP) deferrals through coordination with LHC programs.
- Support the collection of data to evaluate the housing interventions conducted through inter-program coordination (e.g., program cost efficiencies that can be achieved, improvements in indoor environmental quality, improved health outcomes, additional safety benefits to households).
Other Federal Innovations

- Most recent congressional omnibus bill
  - The Secretary may amend the regulations prescribed under paragraph (1) to provide that the standards described in paragraph (2)(A) take into consideration improvements in the health and safety of occupants of dwelling units, and other non-energy benefits, from weatherization.
  - The Secretary shall, to the extent funds are made available, award financial assistance, on an annual basis, through a competitive process to entities receiving funding from the Federal Government or from a State, tribal organization, or unit of general purpose local government through a weatherization program
    - “(A) implement measures to make such dwelling units weatherization-ready by addressing structural, plumbing, roofing, and electrical issues, environmental hazards, or other measures that the Secretary determines to be appropriate;
    - “(D) implement measures to ensure healthy indoor environments by improving indoor air quality, accessibility, and other healthy homes measures as determined by the Secretary;
Energy Equity Measurement
Measuring Equity in Energy Efficiency Programs

Six Dimensions of Equity

- Historical legacies
- Awareness of populations
- Inclusion of other voices
- Access discrimination
- Output differences
- Disparate impacts
Historical Legacies

- Displacement of some communities to make room for energy production and transmission
- Inadequate maintenance of energy infrastructure
- Disproportionate shut-offs
- Discrimination of hiring practices in energy service programs
- Measures of historical legacies
  - Total # and proportion of households affected
Awareness of Populations

• Some populations have been disproportionately affected by energy service institutions
• Data from various sources can illuminate affected populations
  • Energy Information Administration
  • Energy use data from state and local governments, utility commissions and individual utilities

Investing in Disadvantaged Communities

Invest or direct available and relevant programmatic resources in a manner designed to achieve a goal for disadvantaged communities to receive 40 percent of overall benefits of spending on:

• Clean energy and energy efficiency programs, projects or investments in the areas of housing, workforce development, pollution reduction, low-income energy assistance, energy, transportation, and economic development

Receive no less than 35 percent of the overall benefits of spending on clean energy and energy efficiency programs, projects or investments (does not alter funds already committed).
Inclusion of Other Voices

- Program designers should be representative of the communities served and underserved
- Quantitative measures
  - E.g. proportion of decision-making body
- Qualitative measures
  - E.g. level of input and influence on programmatic changes
Access Discrimination

• Are there barriers to serving the underserved?
• Which methods are currently used to reach, market, recruit, and process applicants for program services?
• It may take more resources to reach certain populations
• Focus groups and surveys can shed light on potential barriers
Output Differences

- How many people from various populations participate in energy service programs?
- Program participation can depend on ability of program to meet client needs
- Measures
  - Proportional participation for:
    - All offerings in total against the full population and group proportions
    - Clusters of offerings that are equivalent or similar in terms of intensity of implementation by participant groups
    - Individual offerings measured by proportions of eligible participants
Disparate Impacts

• Outcome measures are known among energy-efficiency programs

• Measures
  • Energy costs, savings, and consumption
  • Energy insecurity
  • Energy burdens

• Measuring outcome objectives across service and eligible populations compared to overall eligible population can highlight disparities
Questions & Comments
References

- https://www.eia.gov/todayinenergy/detail.php?id=37072&src=%E2%80%B9%20Consumption%20%20%20%20%20%20Residential%20Energy%20Cons
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