

USDN/BEI Building Electrification and Transitioning from Gas Learning Group

July 8, 2020
4:00pm - 5:00pm ET

Localizing Health, Safety and Financial Messaging

Jamal Lewis
Senior Policy and Technical Assistance Specialist
Green & Healthy Homes Initiative
jlewis@gghi.org



Session Outline

1. Racial Inequities
Related to Energy
Outcomes

2. Addressing
Inequities with EE
and Electrification

3. Policy and
Programmatic
Pathways to
Maximize EE
Benefits

H.E.R.

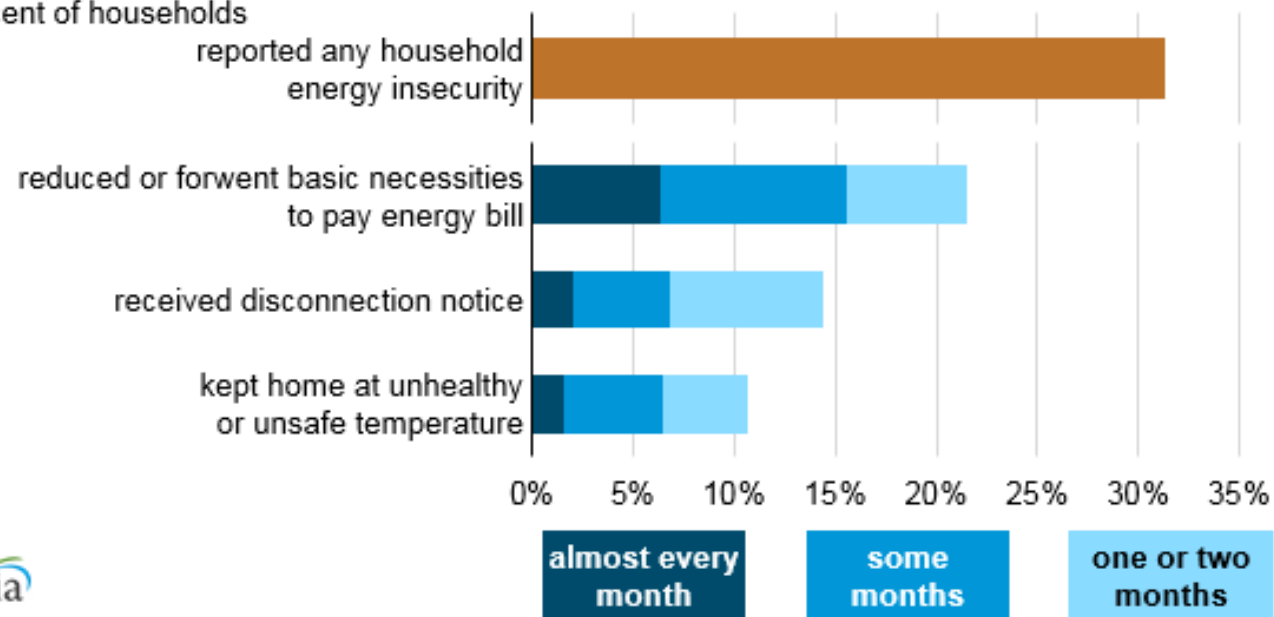


vevo

Pre COVID-19: Impact of Energy Inefficiency

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

Households that experienced energy insecure situations, 2015
percent of households



- One in five households reduce or forgo necessities such as food and medicine to pay an energy bill
- 14% of households experience energy service disconnection annually
- 11% of households keep home at an unhealthy or unsafe temperature



Source: U.S. Energy Information Administration, *Residential Energy Consumption Survey 2015*

Adverse outcomes on African Americans related to energy insecurity

- Housing burden
 - More likely to experience evictions, foreclosures, and other forms of transient housing -> housing affordability issues (Desmond and Kimbro 2015; Evans and Kantrowitz 2002)
- Energy burden and shut-offs
 - Spend the highest percentage of their income on energy costs (Drehobl and Ross 2016)
 - More likely to experience disconnections (U.S. Energy Information Administration 2017)
- Bundled burdens/economic trade-offs
 - Forgoing food and medicine to pay for energy (U.S. Energy Information Administration 2017)

Business • Analysis

Black families pay significantly higher property taxes than white families, new analysis shows

Unfair property assessments lead to widespread overtaxation of black Americans' homes

Adverse outcomes on African Americans related to energy insecurity

- Health burdens
 - Energy insecurity can lead to long period of stress that can lead to long-term health problems (Geronimus 2000; Geronimus and Thompson 2004; Hernández et al. 2016b)
 - Increased burden of lead poisoning, asthma, unintentional injuries, hypertension (Bryant-Stephens 2009; Green et al. 2013; Rauh et al. 2008)
- Extreme weather and climate impacts
 - 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)
- Depletion of the resilience reserve
 - Frequent stressors impact the ability to recover from traumatic events (Hernández et al. 2018)

Cause of Disproportionate Energy Outcomes

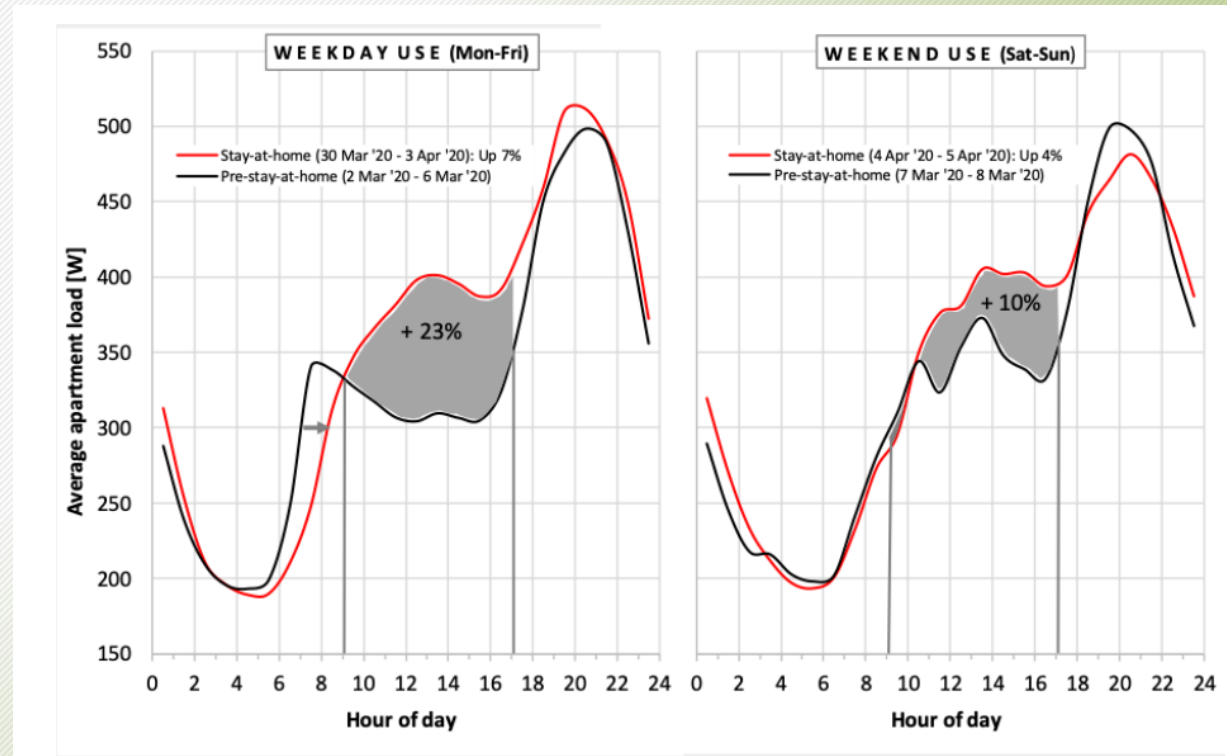
- Racist housing policies
 - Residential segregation (Geronimus 2000; Massey and Denton 2003; Oliver and Shapiro 2006)
- Historical disinvestment
 - Denied access to loans and other resources to improve housing conditions (Aalbers 2006; Blumgart 2017; Woods 2012)

What does this have to do with energy efficiency and electrification?

- Current housing conditions directly impact the need for and ability to access EE programs

Impact of COVID-19 Stay-at-home orders

- Stay at home orders
- Increased residential energy usage
- Mental health impacts
- Increased exposure to health and safety hazards
 - Lead paint hazards
 - Asthma triggers



Source: <https://blogs.ei.columbia.edu/2020/04/21/covid-19-energy-costs-households/>

Impact of COVID-19 - Economic Crisis

- 1 in 5 people working in February lost a job or were furloughed by end of April
- Estimated 447,200 clean energy jobs lost
- Higher energy cost burdens (in California, electricity use increased 15-20%)
- Reach of utility shutoff moratoriums and assistance is inconsistent
- Disruption in efficiency programs likely to have greater impact on small businesses and minority contractors

Poor Americans Hit Hardest by Job Losses Amid Lockdowns, Fed Says

Fully 39 percent of former workers in households earning \$40,000 or less lost work, and a new Federal Reserve survey shows many families have few resources to make it through.



Role of Electrification in Promoting Equity

- Electrification is the act of converting end uses to be powered by electricity as opposed to fossil fuels. Benefits include:
 - Greatest need in older buildings
 - Benefits include lower energy bills, improved comfort and air quality
 - Cost is a significant barrier
- Coupling electrification with weatherization and deep energy efficiency upgrades can maximize benefits
 - Greatest need for EE and Wx in older buildings
 - Measures include insulation, HVAC, window replacement, lighting, duct sealing
 - Health and safety hazards and poor housing conditions lead to deferrals, thereby deepening inequities as benefits accrue to the most advantaged

Role of Energy Efficiency in Promoting Equity

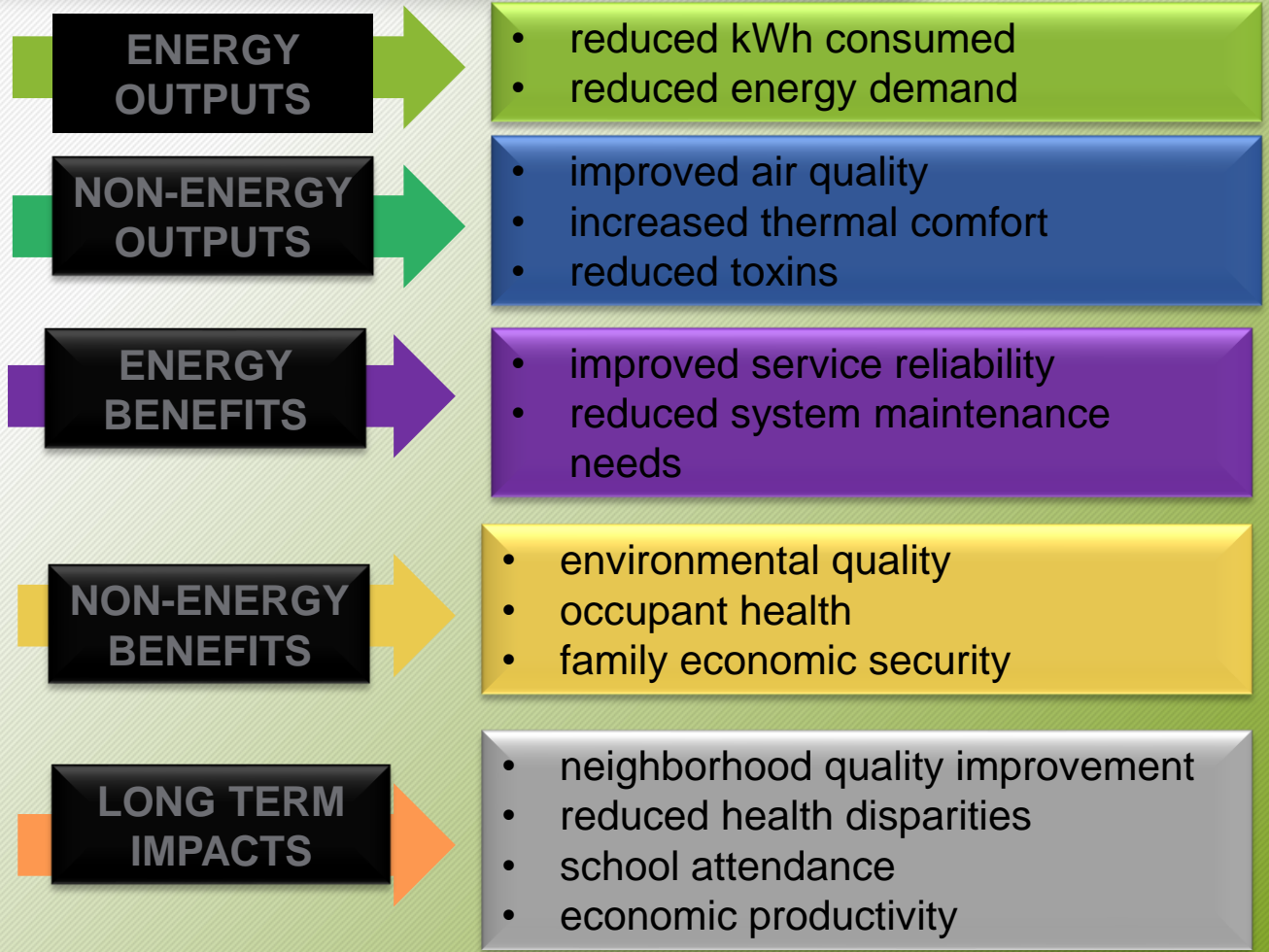
Achieving Health and Social Equity through Housing: Understanding the Impact of Non Energy Benefits in the United States

Green & Healthy Homes Initiative



Comprehensive Intervention

Energy Efficiency
Electrification
Weatherization
Healthy Homes



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. If these populations can benefit, then everyone can.
- 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



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

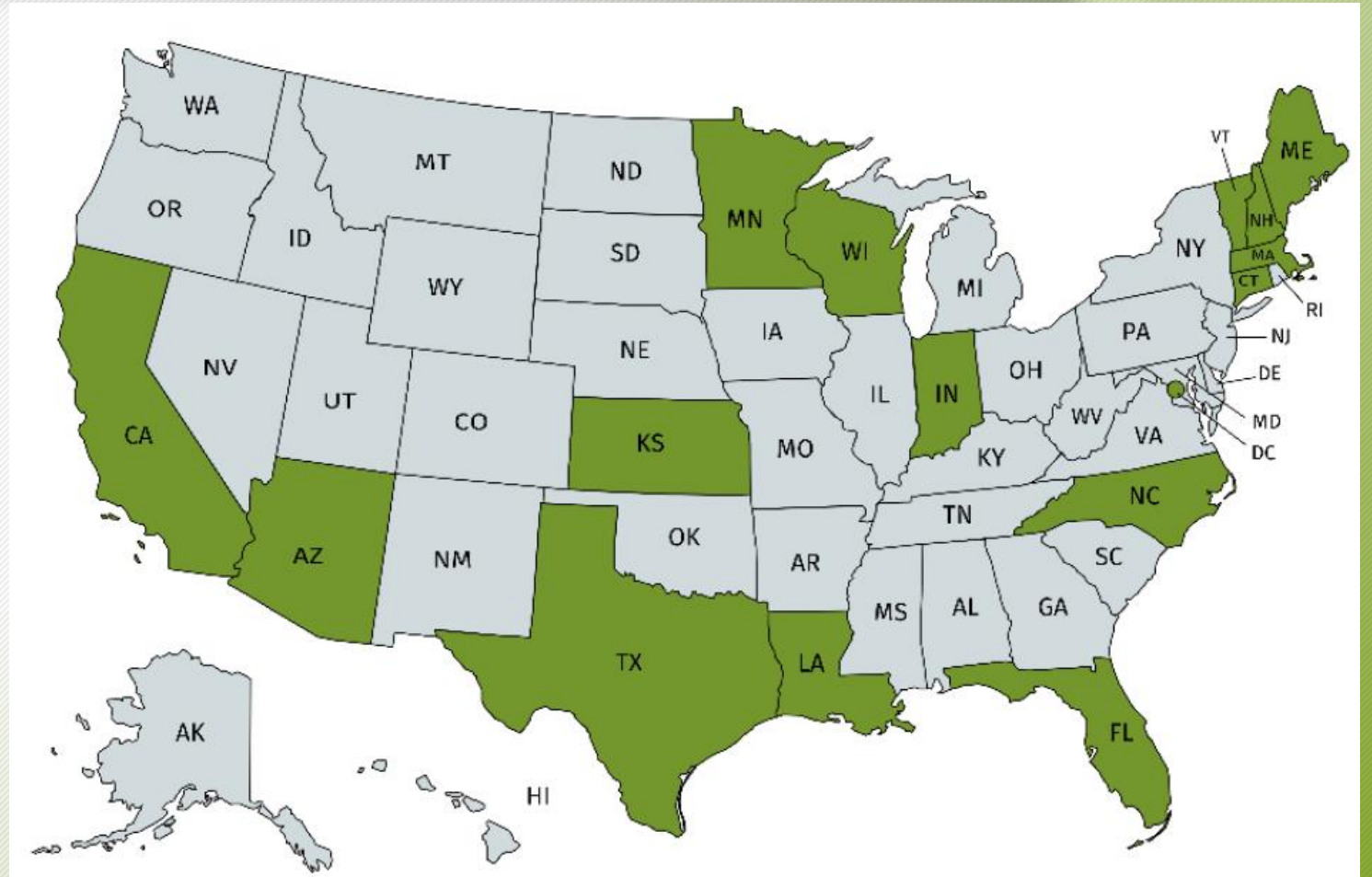


Maryland Energy Efficiency Plus

- Funded at \$21 million over 3 years by Exelon/Constellation Merger
- Provided funds specifically to:
 - Address common deferral reasons, such as electrical system upgrades (e.g. knob and tube wiring) and roof repair and replacement
 - Expand energy services provided, including conversions of oil to natural gas
 - Expand health/safety services provided, such as mold removal
- Per house budget of \$36,000 with \$30,000 used for health safety

Rental Inspection/Mold Standards

- Can help alleviate a primary causes of EE deferrals
- Proactive rental inspection for lead hazards
- At least 15 states plus DC have an indoor air quality standard related to mold



Measuring Equity in Energy Efficiency Programs

Six Dimensions of Equity

Historical
legacies

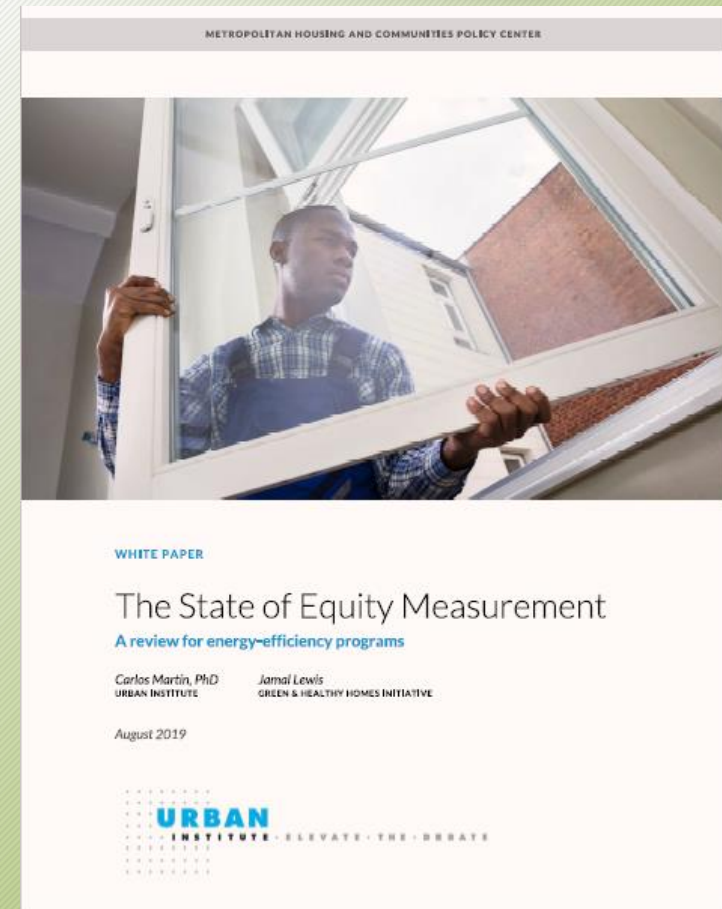
Awareness of
populations

Inclusion of
other voices

Access
discrimination

Output
differences

Disparate
impacts



Questions & Comments

References

- [https://www.eia.gov/todayinenergy/detail.php?id=37072&src=-%E2%80%B9%20Consumption%20%20%20%20%20Residential%20Energy%20Consumption%20Survey%20\(RFC1\)-42](https://www.eia.gov/todayinenergy/detail.php?id=37072&src=-%E2%80%B9%20Consumption%20%20%20%20%20Residential%20Energy%20Consumption%20Survey%20(RFC1)-42)
- Massey, D. S., & Denton, N. A. (2003). American apartheid: segregation and the making of the underclass
- Desmond, M., & Kimbro, R. T. (2015). Eviction's fallout: housing, hardship, and health. *Social Forces*, 94(1), 295-324. <https://doi.org/10.1093/sf/sov044>.
- Evans, G. W., & Kantrowitz, E. (2002). Socioeconomic status and health: the potential role of environmental risk exposure. *Annual Review of Public Health*, 23(1), 303-331. <https://doi.org/10.1146/annurev.publhealth.23.112001.112349>.
- Drehobl, A., & Ross, L. (2016). Lifting the high energy burden in America's largest cities: how energy efficiency can improve low income and underserved communities. *American Council for an Energy Efficient Economy*, 56.
- U.S. Energy Information Administration. (2017). Residential Energy Consumption Survey. Retrieved from <https://www.eia.gov/consumption/residential/data/2015/hc/php/hc11.1.php>
- Geronimus, A. T. (2000). To mitigate, resist, or undo: addressing structural influences on the health of urban populations. *American Journal of Public Health*, 90(6), 867-872.
- Geronimus, A. T., & Thompson, J. P. (2004). To denigrate, ignore, or disrupt: racial inequality in health and the impact of a policy-induced breakdown of African American communities. *Du Bois Review: Social Science Research on Race*, 1(02). <https://doi.org/10.1017/S1742058X04042031>.
- Hernández, D., Phillips, D., & Siegal, E. L. (2016b). Exploring the housing and household energy pathways to stress: a mixed methods study. *International Journal of Environmental Research And Public Health*, 13(916). <https://doi.org/10.3390/ijerph13090916>.
- Sharkey, P. (2007). Survival and death in New Orleans: an empirical look at the human impact of Katrina. *Journal of Black Studies*, 37(4), 482-501.
- Klinenberg, E. (2015). *Heat wave: a social autopsy of disaster in Chicago*. University of Chicago Press.
- O'Neill, M. S. (2005). Disparities by race in heat-related mortality in four US cities: the role of air conditioning prevalence. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, 82(2), 191-197. <https://doi.org/10.1093/jurban/jti043>.
- Hernández, D., Chang, D., Hutchinson, C., Hill, E., Almonte, A., Burns, R., Shepard, P., Gonzalez, I., Reissig, N., & Evans, D. (2018). Public housing on the periphery: vulnerable residents and depleted resilience reserves post-Hurricane Sandy. *Journal of Urban Health*, 95(5), 703-715.
- Melvin Oliver, & Thomas Shapiro. (2006). *Black wealth / white Wealth: A New Perspective on Racial Inequality*. Routledge. <https://doi.org/10.4324/9780203707425>.
- Woods, L. L. (2012). The Federal Home Loan Bank Board, redlining, and the national proliferation of racial lending discrimination, 1921-1950. *Journal of Urban History*, 38(6), 1036-1059. <https://doi.org/10.1177/0096144211435126>.
- Aalbers, M. B. (2006). 'When the banks withdraw, slum landlords take over': the structuration of neighbourhood decline through redlining, drug dealing, speculation and immigrant exploitation. *Urban Studies*, 43(7), 1061-1086. <https://doi.org/10.1080/00420980600711365>.
- Blumgart, J. (2017). How redlining segregated Philadelphia. pdf. Philadelphia. Retrieved from <https://search-proquest-comezproxy.cul.columbia.edu/docview/1984343798?pqorigsite=summon&accountid=10226>

The image shows the exterior of a brick building with a modern glass entrance. A sign on the brick wall reads "Green & Healthy Homes Initiative" with a leaf logo. A semi-transparent grey box is overlaid on the center of the image, containing contact information. A young tree is planted in a planter box in front of the entrance.

www.greenandhealthyhomes.org

Twitter: @HealthyHousing

[Facebook](#)

[LinkedIn](#)