Household Energy: A Climate Justice & Health Equity Issue

As we experience more extreme weather events due to climate change, we would expect our federal government to take leadership in addressing safety and health consequences. Instead, we are witnessing the Trump administration denying the existence of climate change itself and cutting funding to disaster relief and programs that combat its effects. Meanwhile, the administration is funding projects that further harm our air, water, and other resources.

The consequences of climate change for people across the United States play out in our safety, health, and well-being. Health inequities exist in how people are impacted by climate change and therefore, it's critical to recognize this as an issue of climate justice. As health professionals, we must do what we can to use our knowledge and voice to eliminate health inequities in our own localities and states.

Public Health Awakened developed this resource to connect the issues of climate change, household energy needs, and health equity, and to provide basic guidance to public health professionals on ways to advocate for local, state, and federal actions to support household energy needs during extreme weather events.

Household Energy Needs are a Climate Justice and Health Equity Issue

Climate Change Is Here, and It's a Public Health Issue

We experience climate change through the weather — heat waves in the summer, shorter and warmer winters, heavier rainfall, and more tropical storms. These extreme weather and climate events are getting worse and more frequent. Last year, 2017, was among the 3 hottest years on record in the United States with more extreme heat days, and more intense events like hurricanes, rain and snow storms, and severe cold.

Extreme weather events will continue unless we actively address climate change. While the Trump administration has dismissed the National Climate Assessment, scientists are clear that human activities like using fossil fuels and certain industrial agriculture practices are connected to climate change, and that the effects significantly threaten our health and the future of our planet.

The public health sector has to respond — equitably — to the health emergencies resulting from extreme weather and climate events. We must do this keeping in mind that climate change will over time exacerbate these emergencies, and spread them across communities in unequal ways (The Brookings Institute, 2014).

In fact, the consequences of climate change are already disproportionately affecting low-income communities and communities of color. Working class families are the ones living and working in closest proximity to fossil-fuel pollution and extraction. They are also the people who face the steepest uphill battles in rebuilding a home and a life after losing everything to a hurricane, a fire, or a mudslide. With record-breaking heat in the summer, many low-income families don't have access to air conditioning or can't afford the cost while balancing other expenses. Similarly, when the temperatures inevitably drop in the winter to record lows, it's low-income people who are forced to choose between paying for (increasingly expensive) heat or buying groceries.

Health and Equity Impacts of Household Energy Needs Due to Climate Change

Housing inequality means that low-income families of color are more likely to live in lower-quality housing with physical issues or energy inefficiencies. These inefficiencies are underscored in an era of visible climate change.

Energy insecurity refers to households that can't meet their basic energy needs (Hernández, 2016). Families that experience energy insecurity often have a hard time paying high energy bills and may live in homes with unhealthy conditions and physical issues or inefficiencies, like faulty heating or cooling systems, and poor insulation.

Access to reliable, affordable energy is a public health necessity. With more intense extreme heat and cold events, and rising energy costs, we need to ensure that energy is affordable and prevent health harms for people on the frontlines of climate change.

Many families struggle to pay energy bills, leading to financial insecurity, stress, and unsafe heating practices.

- Difficulty paying bills is pervasive — 1 in 5 US households have their utilities shut off because of it.[1]
- When utility companies shut off power, people are forced to use alternative heat sources and risk injury or death from fire or carbon monoxide poisoning. In fires started by home heating equipment, space heaters claimed more than 4 out of 5 lives, ¾ of injuries, and more than half of direct property damage.[2] In 2015, a family of 8 died of carbon monoxide poisoning from a generator after the power company cut their utilities.[3]

When people struggle to pay energy bills, it affects their health.

- Families that can't pay energy bills often struggle to cover other basic needs such as housing, food, and medication. High energy bills in the winter can trap people in a "heat or eat" dynamic: in one study, adults and children in low-income households did what wealthier households did not -- reduced their calories by 10% during the winter, resulting in lower weight.[4]
- Families are forced to forgo buying adequate food so they can pay for heat or air conditioning — a particularly serious "choice" for families with young children, who experience extraordinary brain and body growth from birth to age 3.[5]
- Without power, people can't keep insulin and other medications cold, or use life-saving equipment like nebulizers or oxygen tanks.[6]
- Difficulty paying energy bills contributes to chronic stress, which harms mental and physical well-being and is linked to greater risk of illness.[7]
- General health suffers when people go into debt to pay energy bills — it's associated with conditions like stress, anxiety, severe depression, ulcers, and heart attacks.[8] [9]
- Financial shocks due to high energy costs harm a family's ability to plan and save money in the long-term.

People of color are hit "first and worst" by climate change and pay more for energy.[10]

- Black and Latinx families, as well as low-income households and renters, pay more for utilities per square foot than the average household.[11]
- People of color and people in low-income households, are more likely to live in "urban heat islands" where high temperatures may be up to 22 degrees hotter than surrounding areas.[12],[13]
- Black people are nearly twice as likely as the average resident to die during a heat wave, according to projections in Los Angeles.[14]

Children, the elderly, and people with chronic illnesses experience immediate harms during climate events.

- By 2030, about 38 million older adults will live with physical activity limitations, making it harder for them to reach community cooling and heating centers during heat waves and cold spells.[15]
- People with diabetes, cardiovascular disease, and obesity are more sensitive to temperature fluctuations.[16]
- It is particularly difficult for people living with Alzheimer's, mental illness, and disabilities to respond to weather-related evacuations and emergencies.[17]
- Approximately 1 in 10 US children have asthma, and changes in air pollutants that come with hotter temperatures make it worse.[18]

People die and become ill during extreme weather conditions.

- Extreme cold increases the risk of pneumonia, flu, bronchitis, colds, and hypothermia.[19]
- Extreme heat increases a person's risk of heatstroke and heat-related illness.
- More than 9,000 people in the US have died due to heat-related illnesses since 1979.[20] The threat of heat-related illness and deaths will rise across the United States, as the hottest days of the year are expected to get warmer in most places during coming years.[21]

Limited Federal Programs Exist to Support People's Household Energy Needs

The United States has programs that offer vital assistance in the face of extreme weather events and rising energy costs — the Low Income Home Energy Assistance Program (LIHEAP) is one important example. LIHEAP helps approximately 6.7 million households, providing essential assistance in paying for life-saving heating and cooling bills, weatherization, and low-cost home repairs (Campaign for Home Energy Assistance, 2017).

LIHEAP focuses on households struggling to make ends meet that pay a high proportion of their income to energy bills. In particular, it serves people who may suffer health harms from extreme weather conditions, such as elderly people, disabled people, young children, and people with pre-existing medical conditions (US Department of Health and Human Services, 2017).

Approximately one-fifth of households that are eligible for LIHEAP funds, actually receive them because of a lack of funding (Campaign for Home Energy Assistance, 2017). There is far more need than resources devoted to LIHEAP currently, despite increasing numbers of and more severe climate events.

While LIHEAP does not cover weatherization in many states, the Weatherization Assistance Program (WAP), administered by the Department of Energy is the largest residential energy efficiency program in the United States. WAP funds are available to low-income families for homes that they own or occupy. Weatherization of homes can reduce heating costs by an average of 30%. WAP provides energy efficiency services to approximately 35,000 homes per year through home repair, including improvements in insulation, air sealing, and HVAC systems. Additionally WAP funds can provide health and safety checks to eliminate energy related hazards in homes (US Department of Energy, 2017).

LIHEAP recipients may sacrifice their personal health when utility costs are too high.

- About 9 out of 10 households that receive LIHEAP grants include an elderly adult, child, disabled person, or other person particularly affected by extreme weather.[22]
- More than ⅓ of LIHEAP households skipped needed medical or dental care, or did not take their full prescription because of energy bills.[23]

Public health research shows that better home energy efficiency means better health outcomes.[24,25]

- Reduced allergies, colds, sinus infections, and headaches
- Improved blood pressure and other cardiovascular conditions
- Improved mental health and wellbeing
- Improved housing conditions, such as reduced radon, particulate matter, and formaldehyde exposure. These improved conditions could reduce cancer and other health risks.
- Had the greatest benefits among people with pre-existing health conditions that were linked to housing risk, such as respiratory or cardiovascular diseases
- Improved overall health, such as reduced COPD and asthma symptoms, hospitalizations, and medication use

Low-income communities and communities of color can benefit most from energy efficiency services.

- Black and Latinx households are 2 times as likely as White households to live in rental housing, which is more likely to be in substandard condition than owner-occupied housing.[26]

- Low-income communities and communities of color are more likely to have pre-existing medical conditions that are affected by housing, such as asthma.
- Low-income people spend significantly greater percentages of their incomes on energy bills.

Weatherization lets households get heating and A/C and save money by saving energy.

- About 1 in 4 consumers with an unpaid utility bill lived in homes with problems that weatherization could fix.[27]
- People whose housing defects are fixed are 4 times more likely to pay bills on time.[28]
- Weatherization is related to more productive workers, better sleep, fewer missed workdays, less need for food assistance, and less healthcare costs.[29]

Federal funds for energy assistance, including bill assistance and energy efficiency programs, are limited and constantly at risk of being cut. States and local governments can play an important role to fill federal funding gaps and expand on the federal programs to reduce energy insecurity for all households.

Ways to Take Action: What Public Health Can Do

As a public health professional, you can use your knowledge and voice to:

1. **Connect people to weatherization and energy efficiency programs.**

   Healthcare and public health professionals who work directly with clients are uniquely positioned to understand which clients and patients may benefit from housing improvements. Find opportunities to do so, and learn from colleagues nationwide.

   Health organizations and health departments can support employees in acting as a bridge that connects people to energy efficiency programs. The Database of State Incentives for Renewables & Efficiency describes programs and policies by state and territory.

   Examples:

   The Fresno County Department of Public Health co-directed a project called Nurses for Cool and Healthy Homes that incorporates a 3-minute heat risk assessment and referrals into home visits nurses already make.

   Washington state has participated in the Weatherization Plus Health initiative to combine energy efficiency and health improvements in low-income homes through home visits and education. Through this program, clients are able to be connected to a wide range of health and energy assistance services.

2. **Provide information on what clients can do during times of extreme heat or extreme cold.**

   During power outages or extreme weather events, health professionals can connect clients or patients with community-based resources. For example, the US Centers for Disease Control and Prevention publishes information and infographics on preventive actions against extreme heat and winter weather. Use these documents and infographics during extreme weather events to help keep your clients safe, and make sure they know where local cooling and heating centers are located.

3. **Look for opportunities to incorporate a health-focused approach to climate change.**

   Example:

   The public health department in Contra Costa County helped colleagues in the Department of Conservation and Development bring a health analysis into a Climate Action Plan. The health department identified many health co-benefits associated with various strategies in the Climate Action Plan to increase energy efficiency and home weatherization.

4. **Write an opinion piece or op-ed and submit it to your local paper.**

   Here are tips about how to write an op-ed lifting up energy insecurity as a public health issue in the face of climate change.

1. Choose an outlet where you want to submit an op-ed.
2. Check out the outlet's op-ed guidelines and word count limit (often around 750 words). Check out the kinds of pieces they publish. (Here's an example from the Sacramento Bee, from the summer)
3. Read guidance on how to write an op-ed at The Op-Ed Project or the Journalist's Resource. Pay attention to advice on what kinds of op-eds get published.
4. Write!
    i. Clearly define your theme - the big overarching idea. Write it in 1 short sentence. For example, that energy insecurity and energy efficiencies are crucial public health issues.
    ii. Clearly define your topic - the person, place, issue, incident or thing that you'll mainly focus on. Write it down in 1 short sentence. For example, if there is a specific policy proposed in your state to improve energy insecurity, or if it's about to get REALLY cold.
    iii. Write your first sentence and introduction (1 paragraph): Grab the reader's attention with a strong claim, a surprising fact, a metaphor, a mystery, or a counter-intuitive observation.
    iv. Write the body of your op-ed (2-3 paragraphs): Use the data points in this resource to bolster your argument. Add local facts (for help, see state specific fact sheets on LIHEAP funding). Tie it to a personal story, example or case study you have come across in your work.
    v. Write a conclusion (1 paragraph): Tie back to the program and the specific action that needs to be taken. For example: "Expand the state's funding for energy bill assistance and weatherization."
5. Re-read the tips about writing an op-ed at the links above, then edit. Ask a friend or colleague to read it and give you feedback.
6. Submit the op-ed.
7. Let us know how it goes! Email sari@humanimpact.org with your takeaways and lessons learned.

5. Identify funding and/or legislation gaps regarding energy assistance in your state or city

Resources to use:

1. State Policy Opportunity Tracker for Clean Energy (SPOT), by The Center for the New Energy Economy in partnership with The Nature Conservancy
2. ACEEE's State and Local Policy Database, by the American Council for an Energy-Efficient Economy
3. State fact sheets on LIHEAP funding, by The National Energy & Utility Affordability Coalition

6. Advocate for stronger state and local policies on energy efficiency, weatherization, and energy bill assistance.

Work with public health professionals, health departments and other government agencies to advocate for policies that advance health equity by eliminating energy insecurity. Call your state and local legislators to let them know that home energy assistance is an important public health issue.

Policy examples:

- 43 states have energy efficiency policies in their residential building codes. For example, Vermont has "stretch" building codes that achieve greater energy savings than the baseline codes, and that buildings and municipalities have the option to adopt (State of Vermont Department of Public Service, 2017; US Climate and Health Alliance, 2017).
- At least 22 states have policies that include a surcharge on electric and/or natural gas bills of ratepayers, that in turn fund energy efficiency and low-income energy assistance programs (US Climate and Health Alliance, 2017).
- A number of states, including Ohio, Colorado, and New Jersey, have policies about Percentage of Income Payment Plans that reduce utility rates for low-income households.
- Massachusetts state law says a household's heat cannot be shut off if people living in the home are certain ages or are seriously ill, and it has what is called a winter moratorium, meaning heat can't be turned off during mid-November to mid-March if a household hasn't paid its bills (Public Health Post, 2017)

For an electronic version of this document and access to hyperlinks, visit: PublicHealthAwakened.com

Public Health Awakened is a group of public health professionals from across the US organizing for health, equity, and justice. It is convened and staffed by Human Impact Partners. If you have questions or edits, please email: info@publichealthawakened.com.

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