

ENERGY JUSTICE AND HEALTH IN A CHANGING CLIMATE

July 2022

Kimberly Mashke, Vermont Law School
Olivia St Pierre, Vermont Law School
Jhena Vigrass, Yale School of the Environment
Sarah Gledhill, Yale School of the Environment
Epongue Ekille, Yale School of the Environment
Erika-Ann Kim, Yale School of Public Health

Project Partners:
Gannon Long and Brenda Watson,
Operation Fuel

Faculty Advisor:
Laura Bozzi, PhD



Yale SCHOOL OF PUBLIC HEALTH
Center on Climate Change and Health

ENVIRONMENTAL
JUSTICE CLINIC

Vermont Law School



CONTENTS

Executive Summary	3
Introduction	4
Methods	5
Findings	5
Financial Strategies and Coping Mechanisms	6
Building Maintenance Concerns	7
Environmental Factors	8
Energy Assistance Channels and Accessibility	9
Medical and Health Factors	12
Social Dynamics	14
Recommendations	17
Next Steps	20
Appendix	21
Acknowledgements	29
Endnotes	30

EXECUTIVE SUMMARY

Energy – whether for heating, cooking, or electricity – is a utility that is essential for comfort and survival. Energy insecurity, that is, the inability to meet basic household energy needs, has a significant impact to health and wellbeing. However, the relationship between energy insecurity and health in Connecticut is under-researched in the state. As extreme weather events worsen in Connecticut with more heat waves and severe storms due to climate change, household energy use also will undergo changes that will shape energy costs and availability. These changes will have a greater impact on disproportionately vulnerable groups, including low-income, communities of color, older adults, persons with disabilities, and people living with chronic diseases.

In Spring 2022, a team of Yale University and Vermont Law School students, in partnership with the non-profit organization, Operation Fuel, conducted a study to explore how Connecticut residents perceive their energy costs, utilize different forms of energy throughout the year, and take actions for lowering energy costs – either through energy assistance programs or by taking steps to weatherize homes. We conducted 10 semi-structured focus groups that included 22 participants who ranged in age, area of residence, and race.

We analyzed the focus group findings to produce several key themes across participant responses. Participants painted pictures of energy unaffordability, including having to make sacrifices to pay for energy bills, needing to negotiate bill amounts with energy companies, and limiting energy use during certain times of the year. These experiences were compounded with feelings of significant stress, anxiety, depression, and guilt. Participants also described how certain marginalized identities, such as being Black, disabled, or having a chronic

medical condition, intersected with being energy insecure and resulted in heightened mental and physical health consequences.

Our findings shed light on the knowledge residents hold about current forms of energy assistance in Connecticut. While some participants do possess knowledge of ways to access energy assistance, many of our participants do not. These findings indicate that there is a need for more targeted outreach to meet residents that qualify for assistance where they are.

We also explored the topics of weatherization and energy efficiency with focus group participants. Many of our participants are renters and have not been able to take steps to weatherize their homes due to having limited control over the building's maintenance. Significant power dynamics between landlords and tenants often meant that participants had limited access to control their home's energy sources, resided in energy inefficient homes, and bore the costs of high energy bills resulting from conditions outside their control. In addition to sharing their experiences with energy use and energy costs, our participants provided a number of policy and assistance program recommendations, which we provide at the end of this report.

We held a Town Hall discussion on May 6th, 2022, where we presented the study's findings and fielded questions from roughly 100 attendees that spanned the representatives of the Connecticut Department of Energy and Environmental Protection, Low-Income Energy Advisory Board, utility companies, fuel banks, community members, and advocates. The event was broadcasted live on CT-N, and a link of the recording can be found on the [Yale Center on Climate Change and Health's website](#).

INTRODUCTION

Energy is a basic household need. In various forms such as electricity, propane, or gas, energy supports essential activities like cooking, lighting, bathing, cleaning, heating, cooling, and powering life-sustaining medical devices.¹ Without secure access to energy, caused by unaffordable bills or power outages, residents experience significant negative health and wellbeing impacts. These harmful health impacts include respiratory illness, malnutrition, anxiety and depression, and even death.¹ There is a growing literature investigating inadequate access to energy, which revolves around the terms: *energy burden*, *energy poverty*, *energy justice*, and *energy insecurity*. This study will focus on *energy insecurity* and its impacts on Connecticut residents.

Energy insecurity can be defined as “the inability to meet basic household energy needs.”² Estimates state that a household that spends over 6-10% of its income on energy is energy insecure.^{2,3} Energy insecurity can also be experienced as a lack of comfort in the home, such as through inefficient housing and appliances, poor ventilation, mold and moisture issues, and uncomfortable indoor temperatures. Connecticut holds the highest retail electricity price in the continental United States and has amongst the highest overall energy costs in the country.⁴ The mean household in Connecticut spends 11.8% of its income on energy, but this percentage is substantially higher for low-income residents; renters and homeowners earning below 30% of the state median income have an energy burden that is six to seven times higher than the statewide average.⁵ Indeed, about one-third of Connecticut households are “income-eligible” for energy assistance funding.³ In addition, a 2017 study estimated that the Home Energy Affordability Gap in Connecticut is approximately \$450 million.⁵ This gap measures how much home energy bills exceeded affordable home energy bills for those with income at or below the 200% Federal Poverty Line.⁵

Energy insecurity is also experienced as a lack of energy reliability. Power outages from extreme weather events, poorly maintained power grid infrastructure, and faulty wiring in aging homes harm the wellbeing of residents. Those especially vulnerable to power outages include children, the elderly, and those with medical conditions that require certain temperatures or rely on electric medical equipment.¹ Connecticut experiences frequent power outages due to factors including falling trees, aging infrastructure, and lack of utility preparedness. In particular, Tropical Storm Isaias in Summer 2020 left over one million Connecticut residents without power, some for up to nine days.⁶ This failure to manage Tropical Storm Isaias spurred the Take Back Our Grid Act, signed into law in October of 2020, which created performance-based incentives and penalties for utility storm management.⁷ Connecticut’s Public Utilities Regulatory Authority (PURA) also conducted an eight-month investigation into Eversource and United Illuminating that found that both utilities failed to meet acceptable performance standards for storm management. For these infractions, PURA issued the maximum fines allowed by the law.⁸

This study was guided by principles of community-engaged research, which is research conducted in partnership with community members or other key community stakeholders. In Spring 2022, the team of Yale University and Vermont Law School students, in partnership with the non-profit organization, Operation Fuel, conducted a study to explore Connecticut residents’ experiences of energy insecurity through a series of focus groups. Operation Fuel is a non-profit statewide program that aims to ensure equitable energy access. It provides energy assistance to residents that earn between 60 and 75% of the state median income through a network of fuel banks and advocates for energy affordability in Connecticut. Through this study, we seek to bring the focus group participants’ lived experiences into the conversation around energy insecurity in Connecticut to bring about a more just, sustainable, and healthy energy system.

METHODS

The study's methodology was reviewed and approved by the Yale Institutional Review Board, a research ethics committee that ensures that research participants are not mistreated and that their rights are protected.

We recruited focus group participants through email, social media posts, and personal and community networks. Eligible participants were Connecticut residents who self-identified as qualifying for energy assistance or as having trouble paying their energy bills. All focus group participants were sent a \$75 gift card.

The focus groups were conducted via Zoom. During each focus group, a researcher asked a set of questions to guide the group discussion. We recorded and then transcribed each focus group. We analyzed the transcripts according to six central themes: (1) Financial Strategies and Coping Mechanisms, (2) Building Maintenance Concerns, (3) Environmental Factors, (4) Energy Assistance Channels and Accessibility, (5) Medical and Health Factors, and (6) Social Dynamics. We then summarized each theme's overall findings, as presented in the sections below. (See Appendix for additional focus group participant quotes.)

Since this is a qualitative study, these findings do not represent an entire population; rather, we aim to provide a detailed and nuanced description of our participants' experiences and to amplify their voices.

FINDINGS

Focus groups were conducted in Spring 2022. The group sizes ranged from one to five participants, and each focus group lasted one to two hours. Figures 1 and 2 describe summary statistics on the focus groups as well as participant characteristics.

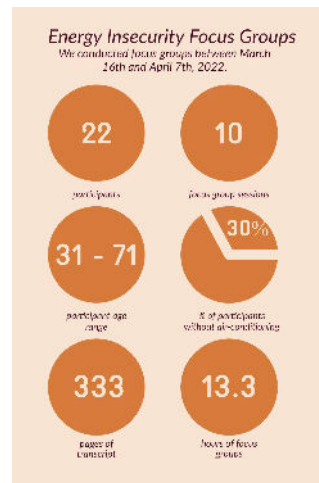


FIGURE 1. General focus group statistics. We performed 10 focus groups with a total of 22 participants who ranged in age from 31 to 71. Just under one-third of participants did not have access to air-conditioning. These focus groups resulted in 13.3 hours and 333 pages of content that were analyzed for this report.

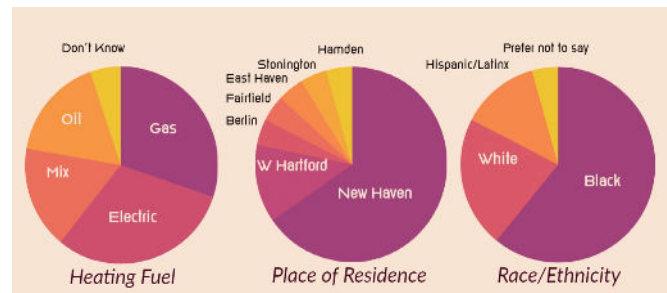


FIGURE 2. Participant characteristics. About one-third of participants use gas heating, one-third use electric heating, and the remainder either use oil, a mixture of heating fuels, or did not know. Most participants reside in New Haven, but there was representation from West Hartford and five other Connecticut municipalities. The majority of participants were Black, under one-quarter of participants were white, and the rest were Hispanic/Latinx or preferred not to say.

FINANCIAL STRATEGIES AND COPING MECHANISMS

Our participants manage energy costs through financial sacrifice and behavior changes. Some behavioral changes can result in unsafe living conditions, such as utilizing an oven for heat and subsequently releasing carbon monoxide into the home. Participants discussed how energy costs are one of many financial stressors they juggle.

Energy Conservation

Notably, many of the participants are hyper-aware of ways to conserve energy. Participants recounted their strategies to reduce costs, which include reducing transportation; unplugging appliances such as the TV, microwave, and freezer; adjusting habits based on the time of day; lining the doors with newspapers during the winter; avoiding the dryer in the summer; and pushing the limits on indoor temperature comfort. In the winter, participants wear extra clothes to avoid using heat. In the summer, they either avoid air conditioning completely or limit air conditioning to one room. Others discussed not saving for retirement, avoiding paying rent, delaying visits to the doctor, paying one utility bill instead of another, and extensively using an oven for heating only to later discover an undetected gas leak. However, some energy uses are harder to cut out, such as refrigeration and lighting. Also, if a home is not air-sealed ("leaky"), bills remain unaffordable even if residents reduce demand for heating and cooling.

Food Insecurity

Participants adjust their food purchasing habits to better afford their energy bills. In many cases, they shop at a variety of stores to find the best prices rather than one single supermarket. Other participants spoke of supplementing grocery shopping with food banks. One single mother commented that a deep freezer is useful for her

food budget. Her deep freezer helps her buy in bulk to save time and money on food purchases, but she is so concerned about paying for the electricity usage of an inefficient freezer that she unplugged the appliance. Now, without buying in bulk, food costs much more.

Another participant was faced with the difficult choice between buying food and paying the electric and gas bill, what is commonly referred to as the "heat or eat dilemma." Ultimately, the participant chose to pay the utility bills over food:

"All the time we sacrifice to keep the lights on. We can't go without it. I had to choose between food and keeping the lights on, or the gas. We didn't get the food, we just kept the lights and the gas on. But the next bill was coming around again, and it was just high. We didn't know what we were going to do for that one."

Food is a priority expense for the below participant. Due to a health condition, the participant's teenage son's diet is very limited and requires shopping at specialty stores where prices are higher:

"My biggest out of pocket really is buying extra food. I have a teenager, ...so he eats me out of the house and home. But he can only eat what he can eat, which usually means that I can't just go to the regular supermarket. I go to a more expensive grocery store and the food goes pretty fast. If you want to eat healthy, you got to pay. That's what I'm usually doing. I'm paying for what he can eat. Stop & Shop might have chicken on sale for \$5, but I can't get that. I've tried it. He's throwing up. He's using the bathroom. I have to buy what he can eat, and it's usually five times more than what I'm used to paying."

Without financial assistance for food, this mother shared that she would likely miss meals to prioritize feeding her child:

“I get food stamps too. If I wasn’t getting any help, I don’t think my son would be able to eat. I talk about him first, because to be honest with you, I’m going to feed him before I feed myself. But, he wouldn’t be able to eat.”

Vulnerability to Accumulated Costs

While utility payment plans can help free up cash, some participants can only pay a portion of the balance. One participant commented that when the Winter Protection program keeps the power on, cash can be used elsewhere. However, not paying the utility bill then accumulates to an unaffordable balance in May after the Winter Protection program ends. In a pinch, some participants turn to payday lenders or reach out to family members for a personal loan to get them through.

Homeowners and renters alike feel vulnerable to unexpected costs. Typically, homeowners plan for the exact amounts of weekly expenses and thus have little wiggle room for unexpected expenses such as a furnace repair or property tax increases. These financial burdens force participants to consider selling their homes, even though they have no desire to leave.

Hourly workers also are a particularly vulnerable group to unexpected costs. Unreliable weekly work hours make it challenging to balance a budget, and one participant shared how it directly impacts whether they can pay for their energy bills. As an hourly worker, this person is often concerned about not being scheduled for enough hours at work to afford their utility bill.

“There were times where if my hours were cut at a job, I would get nervous because I’m like, “Oh man, I won’t be able to still pay enough on the bill and still have my electricity running or gas or both.””

The energy bill is just one of many that cause financial hardship. One participant balances their own moving costs, supporting their oldest child going to college, and needing money for travel to visit an incarcerated child. In one month, a rural homeowner was faced with replacing a boiler, an empty oil tank, and a costly \$450 monthly electric bill, even after enrolling in a payment plan. Under the current economic circumstances with the price of gas and other goods increasing amidst residual COVID-19 pandemic effects, global conflicts impacting international trade, and record-high inflation, the budget compression is even greater.⁹

BUILDING MAINTENANCE CONCERNS

The focus groups included both homeowners and renters with varied concerns about building maintenance. We found that renters have overwhelmingly negative experiences with the condition of their homes and unresponsive landlords. On the other hand, homeowners feel overwhelmed by the needs of repairs, upgrades, and taxes.

Insulation and Air Sealing

Renters who participated in our focus groups shared experiences with drafty and poorly insulated homes. One participant dubbed a room in their home the ‘ice box’ because it does not get any heat. Feeling too cold in the winter is especially stressful for elderly participants, participants with children, and participants with medical conditions. In addition to feeling uncomfortably cold, participants shared that the drafty buildings also mean higher energy bills.

“The [utilities] were definitely more expensive... and I used them way less than the other places because it was just so drafty. It was like there was almost no point in putting [the heat] on because it didn’t stay.”

Carbon Monoxide, Water Leaks, and Mold

Other concerns shared by many focus group participants include carbon monoxide, water leaks and mold. Participants shared that when carbon monoxide leaks happen, the gas company will turn off the gas. When landlords are slow or unresponsive, residents must then live without gas for weeks or pay for the upgrades themselves (which one participant had to do). An asthmatic mother described being called to stand outside in the middle of a winter evening when the furnace broke and leaked carbon monoxide into the building. Since the furnace remained broken for weeks, she was supplied with electric space heaters, which failed to provide adequate heat while driving up her electric usage. When water leaks occur due to faulty plumbing or roof leaks, unresponsive landlords imply that residents should “move or shut up.”

“My landlord told me when the ceiling was falling down on me to move out. He wasn’t fixing it. I’ve been told to move out or shut up, basically. They don’t do anything about the problem.”

Unresponsive Landlords

Poorly maintained buildings are a direct result of unresponsive landlords who are slow to fix maintenance issues or do not fix them at all. One participant shared that a neighbor contacted the health department due to poor building conditions, and still nothing changed. While landlords might be a logical resource to help provide efficient and healthy homes for renters, participants consistently

expressed distrust of their landlords’ ability to respond promptly to their concerns, even with incidents as extreme as gas leaks.

“We had leaks in our apartment for like, I don’t know, for years. We had buckets in the middle of the floor. I’m looking at the ceiling now, I’m asking them, “How long is your roof going to last?” Because I’m on the fourth floor and the roof is right over me. It looks like there’s a bubble over the kitchen. It looked like it possibly leaked before. It makes mold. It gets my kids sick and it’s disgusting. You can’t enjoy your apartment. It’s bad.”

ENVIRONMENTAL FACTORS

With climate change, power outages from extreme weather are likely to become more frequent, and summers are heating up. Focus group participants worry about temperature fluctuations from season to season and the dangers of extreme heat and cold exposure. Without power, whether due to a shut off or a power outage, participants worry about their health as well as perishable food.

“I’m most concerned about having my electricity shut off in the summer because everybody’s using their air conditioning. The rates go up and I have to keep it on. My kid is asthmatic, I’m asthmatic, so we can’t turn it off.”

Air Conditioning

For many participants, air conditioning is essential during the summer months. Air conditioning is often necessary to keep indoor temperatures at safe levels, especially for children, the elderly, and those with medical ailments. One person mentioned that they had to increase their air conditioner usage throughout the COVID-19 pandemic to stay

comfortable while working-from-home. For others who lack air conditioning, they choose to utilize fans in lieu of buying a window AC to save on their electric bill. In the heat of Connecticut summers, however, fans are often not enough, and parents plan to utilize public spaces with their children to cool down, such as splash pads, libraries, and public beaches.

Trade-offs Between Comfort and Saving

Energy bills peak at different times for different people, depending on their use of air conditioning. For some, air conditioning causes energy bills to be higher in the summer than they are in the winter. For others, summer bills are a reprieve from winter months since they do not have AC. One participant said that they keep the blinds open during the day to avoid turning on the lights, but there is a trade-off with this approach since the sun heats up the rooms. Another participant tries to eat as much cold food as possible to save on gas usage from cooking.

“Whether you’re cooling down by AC or humidifier, fans, whatever usage to stay cooler [in the] summer, you want to be able to enjoy it, not feel like you’re walking on eggshells. And when you see the bill, you’re like, “Whoa, this bill is way too high.” And in the winter, reverse. In the winter, same thing, you want to stay warm. We all know... some of these winters can be brutal. And who wants to come home to an iceberg?”

Food Spoilage During Power Outage

Participants worry about outages due to extreme weather events. Multiple participants are keenly aware that with outages, food can spoil. Using store-bought ice to chill food is one strategy to avoid spoilage, but ice only lasts for so long before it melts. Worry about outages has increased as extreme weather events seem to happen more and more frequently.

“[I felt] at-risk... Vulnerable. We had to do different things, trying to get ice and trying to save food. We did a lot of cooking out, grilling. It was challenging, just not knowing when you were going to get anything, any lights back on... We just waited it out. You look at the past, like [Hurricane] Katrina or other disasters, and you really didn’t understand what the people went through. You really don’t understand the dependency that we have on electricity until you go through some of these situations.”

ENERGY ASSISTANCE CHANNELS AND ACCESSIBILITY

Participants try to participate in energy assistance programs but face a variety of obstacles that keep them from receiving support. Participants face poorly trained customer or client service representatives, lack of respect and empathy, long wait times, difficulty paying to fax information, difficulty paying shutoff fees, overly complicated application processes, invasive questioning, and onerous rules when trying to get help.

Assistance Program Barriers

Assistance programs offered by utilities in Connecticut include winter protection, medical protection, bill assistance, bill matching, weatherization assistance and energy efficiency. The Winter Protection Plan protects customers from having their utility services shut off between November 1st and May 1st, and customers must reapply every year, starting in October. Medical Protection protects customers from having their utility service shut off for non-payment in the event they have a serious medical condition. The Matching Payment Program helps customers who cannot pay their outstanding bill by reducing the balance and setting a monthly payment that is matched by the utility

company. Home Energy Solutions is a program that supplies energy audits and energy efficiency updates, with free services for qualified, low-income customers. The Weatherization Assistance Program is funded by the US Department of Energy and provides energy-saving upgrades to eligible residents. More information for individuals seeking assistance from these programs can be found [here](#).

The programs described above serve slightly different but overlapping populations, mostly focused on residents at 60% and below the State Median Income. Unfortunately, these programs suffer from inconsistent funding. For example in 2018, Connecticut lawmakers diverted \$155 million in ratepayer funds intended for energy efficiency programs.¹⁰ The federally funded Low-Income Home Energy Assistance Program (LIHEAP) funding fluctuates every year. In the past, state agencies have been limited by staff capacity to manage energy assistance and efficiency programs, which has impacted implementation and opportunities for expanded programs. These inconsistencies, inefficiencies, and lack of coordination in the service delivery system make it more challenging for residents to know what programs would work for them, or even that programs exist to help them at all.

Indeed, focus group participants described the difficulties they are encountering in accessing the programs. Oftentimes, members of a participant's social network can be more helpful to provide assistance information than a Community Action Agency, which serves as the point of contact for many programs listed above, or the utility company. For instance, without contact with a neighbor, one participant would not have heard about the available energy assistance programs.

When reaching out for help, participants found the customer service agents at utilities or client service representatives at Community Action Agencies to be poorly trained and inconsistent. One participant discussed that, when navigating the Matching

Payment Plan program, every time she called and spoke to a different agent, they had no record of her previous conversations. This meant that she was given inconsistent information about how much and when payments were due to avoid shut-off. Some agents she spoke to at the utility were not even aware of the assistance programs available. In general, participants expressed the pain of getting a customer service agent on the phone who has no empathy for their situation. They discussed how agents at the utility or Community Action Agency rarely resemble them or have experienced what they have experienced. When participants do speak with someone who has their best interest in mind, the experience is much more positive:

"...when a person can be helpful and insightful and congenial, and then you feel like, we're on your side, we want you to win, we want you to do things. That's important to me."

Intrusive Questioning and Feeling Disrespected

When reaching out to an energy assistance organization like Operation Fuel or a Community Action Agency location, the overwhelming feedback was that these organizations ask intrusive questions that foster shame and make participants feel disrespected. Many participants named intrusive questioning as something that prevents them from seeking energy assistance at all. Not only are participants asked to answer detailed questions about their financial status, but they are asked questions about their networks and personal lives. One young woman trying to access the Weatherization Assistance Program for a multi-family building in Hartford was asked about her roommates' and neighbors' incomes. As their neighbors are strangers to them and roommates' income felt intrusive, the participant felt uncomfortable collecting this information thus did not receive any weatherization assistance. Another participant went to a

Community Action Agency over 20 years ago and was asked about the income and criminal history of her ex-partner, with whom she was no longer in contact. This memory of intrusive questioning prevents her from seeking assistance to this day.

“We shouldn’t have to struggle, our Black and Brown people. We shouldn’t have to do that. I want to be treated just like everybody else, with dignity and respect when I go to ask for services.”

Assistance Application Barriers

The applications for utility assistance are long and complicated. Some programs still require participants to mail, fax, or physically turn in detailed information, which costs money, and the utilities fail to acknowledge receipt or follow up in a timely fashion. One participant shares frustration about the time and costs associated with applying for energy assistance.

“We are already dealing with poverty and now we have to pay to show that we are in poverty.”

One participant discussed how they were told by the utility not to call about their application for winter protection for six weeks. Consequently, waiting six weeks put them in the middle of the winter season – without protection. Another participant spoke to the lack of consistency about eligibility requirements, lack of clarity in identifying the root causes of high energy costs, and inconsistent information on how to submit documentation. Some years the participant remembers the application could only be submitted on paper, and other years email was acceptable.

“Sometimes it just discourages people and some people need the help, but they don’t even have the energy or the means

to print out stuff... There’s been times where I just be like, you know what, I’ll figure out a way because they ask for something I couldn’t get or obtain. So I feel like they make it really rigorous to get to help.”

Once participants successfully enroll in an assistance program, the programs prove to be precarious. The rates for matching payment plans are still unaffordable. Individuals who were supposed to be protected under medical protection programs shared that they had their utilities shut off despite their medical protection status. Energy efficiency work does not proceed due to structural or safety issues. As soon as a child gets a summer job, the increased household income disqualifies them for various forms of assistance due to income guidelines.

Renewable Energy and Energy Efficiency

While renewable energy and energy efficiency could help alleviate energy insecurity, these technologies do not seem available to focus group participants. Homeowners worry about the upfront costs of green technology, and renters have too much trouble dealing with basic livability issues (mold, water leaks, and carbon monoxide) to make progress with their landlords on energy efficiency and renewable energy. Participants expressed a desire to access weatherization assistance, but any efforts made were halted due to mold or gas leak issues. Some participant suggestions included increasing access to subsidized LED light bulbs at the store (as opposed to through Home Energy Solutions’ limited reach), requiring landlords to upgrade to energy efficient technology when replacements are due, and improving access to solar technology and energy efficiency through education and outreach. Even for technically inclined homeowners, navigating access to renewable energy proves to be complicated.

“This technology’s all available. We just need it more accessible because my head’s spinning trying to figure out watts versus voltage.”

“To stay warm [during a winter storm], we shared blankets and that probably wasn’t a great idea because one of us definitely had a cold.”

MEDICAL AND HEALTH FACTORS

Many participants experience health concerns that intersect with energy insecurity. Some have specific medical conditions that require reliable energy or feel that their medical condition is worsened by their energy insecurity. Participants experience logistical challenges to accessing medical designations from utility companies. Most significantly, participants worry about the impact that temperature regulation has on medical conditions, financial stress, and mental health.

Universal Need

“Everybody needs [electricity], whether you have a condition or not.”

Participants feel that energy should be treated as a basic human right, regardless of disability status or medical vulnerability. Even individuals with no pre-existing medical conditions are more vulnerable to physical and mental health impacts when they face power outages, competing financial priorities, and other stressors associated with energy insecurity. It is important to consider that inequities in energy access leave individuals and families without pre-existing conditions more susceptible to developing health issues in the future. For example, when people use the oven or stovetop to heat their home, this practice exposes users to toxic chemicals and carbon monoxide, as well as risk of fire. Loss of electricity may also result in people crowding into a single room or area, which creates higher rates of pathogen transmission amongst individuals. One participant shared:

This participant shared that others then became sick shortly thereafter. She also shared that when they initially lost power, they tried to use candles as light. She said that she noticed that *“the candles dry out the air and we couldn’t breathe,”* so she stopped using the candles and lived in the dark for several days until the power was restored.

Medical Necessity for a Climate-Controlled Home

Many individuals facing medical vulnerabilities are more susceptible to temperature-related changes, rely on electricity for management or treatment of their condition, and may have increased needs for reliable electricity in their home. Some participants shared a need for air conditioning and fans, in some cases even in the wintertime, to manage temperature, humidity, and air circulation in the home. One participant shared:

“I have to use air conditioning in my house, sometimes even in the winter, because I’m asthmatic and my kid is asthmatic. I’ve tried to go days without it. Neither one of us are well enough to do that. What happens is we both get sick. Then the other one can’t take care of the other one. We have to turn it on.”

Other participants also shared their necessity for climate control throughout the year. One woman shared that she has been taking medication for years that makes her sensitive to temperature change, so even if she wanted save money or the environment, she is uncomfortable without air conditioning in the summer or when the building is too hot in the winter.

Several participants discussed intentionally keeping the heat low or off in the wintertime to manage energy costs despite knowing that they would feel more comfortable with warmer temperatures in the house. One participant shared their experience living with chronic pain in a cool environment. They share, *"I have chronic pain, so I can't sit there and be cold. As warm as I try to dress, there's only so much you can do."* Conditions like lupus, anemia, Lyme disease, multiple sclerosis, diabetes, and others have been shown to worsen with cold weather and make individuals living with these conditions more susceptible to 'flares.'

Reliance on Electricity for Management of Conditions

"I have a child living with me who is a kidney transplant kid and I have to have lights."

Many individuals rely on electricity for management of medical conditions. For instance, several of the study's participants have asthma or have family with asthma; asthma is one of a number of lung conditions that can require use of a home oxygen tank or pump. Other in-home electronic medical devices include CPAPs, dialysis machines, nebulizers, humidifiers, and fans.

"God forbid they go cutting off your electricity and now your medical device is not going to work. It gives you additional life and support, it's very vital."

One participant shared an anecdote about a power outage in the summer. She shared that her asthma was triggered by the increased humidity and temperatures when the air conditioning went out during a seasonal storm. She shared that she and a family member used their rescue inhalers to calm the wheezing. She said, *"We used our pumps, but we really needed the nebulizer. We couldn't use the nebulizer without the power."* From this example,

we see how power outages may compound health concerns. Someone who relies on climate control to manage a pre-existing condition experiences increased vulnerabilities when the power fails or is shut off. As a result, they are unable to manage their medical needs at home, which increases reliance on the healthcare system, urgent and emergency care, and nearby friends. One participant shared that whenever the power gets cut due to unpaid bills or weather events, they relocate to a friend's house to use medical equipment such as a nebulizer for asthma.

Medical Protections

*(b) No such company, electric supplier or municipal utility shall effect termination of service for nonpayment during such time as any resident of a dwelling to which such service is furnished is **seriously ill**, if the fact of such **serious illness is certified to such company**, electric supplier or municipal utility by a registered physician or an advanced practice registered nurse within such period of time after the mailing of a termination notice pursuant to subsection (a) of this section as the Public Utilities Regulatory Authority may by regulation establish, provided the customer agrees to amortize the unpaid balance of his account over a **reasonable period of time** and keeps current his account for utility service as charges accrue in each subsequent billing period.¹¹*

Medical protection is an assistance program implemented by the utilities for individuals who demonstrate "serious illness." This program is difficult for individuals to navigate on their own. Utilities require a specific medical form to receive medical protection, and sometimes doctors are reluctant to sign the form because the language on the form is threatening. This form recently changed to be less discouraging to doctors, but participants still deal with lingering reluctance from medical professionals.

Even when people gain access to medical protection, the program is not without limitations. For starters, "medical designations" do not provide protection against losing power during unforeseen climate events like hurricanes, windstorms, tornadoes, and

blizzards. While medical designations may be used as identifiers for priority restoration of power, many vulnerable individuals and families still go days without power following storms.

Additionally, the Medical Protection Program does not entirely prevent shutoff. One participant shared that she was able to get a medical designation because she has a CPAP machine. However, she shared that she believes her utilities can still be shut off if no payment is made. Her impression is that as long as some amount is paid to the utility, no shutoff will occur. Another participant shared about a situation where the utility company, United Illuminating, was aware that individuals had medical hardships and shut off their power anyway.

Beyond the fact that medical designations are not a comprehensive protection to keep power intact, participants also voiced frustrations about the application process.

“The electric company told me that in seven days, my medical agreement will no longer be valid. I have to get it refilled by the doctor. They said you have seven days. The problem is that when I went to my doctor’s office, they said you have to make an appointment to submit this paperwork. I said, “Okay, I’ll get a doctor’s appointment in a week, right?” No, they don’t have openings until next month. But the electric company says that if the paperwork is not filled out, your lights are going off. You can beg them all you want, please just take the paperwork, but they say no, not until your appointment. And you can’t get it signed at an urgent care because they don’t have your chart, they don’t know you.”

“Some doctors don’t want to fill out the paperwork. Sometimes it’s because you’re new and maybe they’re just getting your chart. Then sometimes they tell you the truth. They say, “This is paperwork and I don’t have time for this.” You’re stuck looking for another doctor that will fill it out. That doctor might not be able to give you an appointment for two or three months.”

SOCIAL DYNAMICS

Participants shared that social dynamics may be strained due to energy insecurity. In part, participants named shame and stigma around not being able to pay their energy bills or relying on family to help pay the bills. Parents expressed feelings of inadequacy around parenting, providing for children, and having conversations around energy insecurity with their children. Participants also shared that the COVID-19 pandemic heightened their feelings of isolation. Participants explained that having limited income put strain on their social relationships, in that it often meant not being able to visit friends due to budgeting travel, or not having the money to go out for lunch with friends. Other participants shared anecdotes about how familial, residential, faith, and social networks were lifelines during hard times. Participants shared that landlords or neighbors could ‘make or break’ feeling supported.

Shame Associated with Energy Insecurity

The feeling of shame surfaced as a prominent theme during focus group conversations. Even if assistance is accessible, a sense of pride, embarrassment, and an awareness of stigmas tied to poverty and disabilities can be an obstacle to seeking help or talking openly about experiences with energy insecurity.

"We all need help at some point in our life. I don't care who you are, whether it's financially, whether it's emotionally, we all need help. At some point in our life there's going to become a time. But some people just too proud."

Participants talked about how the COVID-19 pandemic had exacerbated feelings of isolation, which especially became an issue when participants were in need of the social and emotional support usually received from family members, friends, and neighbors. Despite the importance of these social networks, participants described how being burdensome to friends or neighbors was top of mind. One participant chose to take cold showers for a month when her gas was shut off rather than taking showers at neighbors' homes, in order to avoid contributing to their gas bills. Another participant living in senior housing feared becoming a burden on fellow church members during emergencies and actively sought out programs where individuals are assigned a volunteer or social worker to act as a point of contact in an emergency.

Participants with children discussed feeling significant pressure to maintain their children's confidence that they could adequately provide for their comforts as the head of the household.

"...that's embarrassing for a mother to not be able to provide lights for their kids..."

"[It] broke my heart because I didn't want [my kids] to think less than me because I couldn't afford a... bill. Some of this is really sad to me."

Parents expressed a desire to shield their children from the struggles of energy insecurity to protect them from worrying. They also found energy insecurity to be difficult to explain to children.

"Well, when [the energy shut off] happened with me like I said, it was years ago and my children were small. So you want to protect them from that and keep them isolated from 'Mommy can't provide,' as well as working with the UI company."

Another participant shared a similar experience of feeling sadness and guilt when needing to explain to their child that an energy shutoff occurred.

"You can't really tell your kid, 'I'm sorry, I'm not going to be able to pay the lights this month.' They don't really understand that."

Familial Relationships and Other Sources of Support

Although some participants explained that they experience feelings of guilt that deterred them from seeking assistance from family, friends, or neighbors during the time of an energy shut-off, others shared experiences of finding significant support, primarily from family members and neighbors, during particularly difficult times. Additionally, participants talked about how in the times of acute energy events (such as power outages) residential communities have come together to create strong networks of assistance and support.

"Anytime there's a catastrophe in one's life, you get a chance to see who's who. So my neighbors and I, we pulled together, we checked on each other. We supported each other, made sure each other had our needs met... We had a lot of candles, sat on the porch a lot. And thank God it was the summertime."

These experiences of reaching out for help and receiving it were also tainted with negative feelings associated with relying on others for essential needs, like energy. One participant discussed this predicament when recalling a time she had to receive help from her mother for electricity.

“Luckily I had my mother to help me out, but it’s still very stressful having to rely on people, having to live in the dark, having to explain to your child why you’re living in the dark – and it stays with you. I think I made a vow to myself back then that I was never going to let myself get in that situation, and knock on wood I have.”

Another participant shared similar sentiments relating to the positives of community cohesion and resilience during energy disasters and simultaneous stress to remain independent.

“You’ve got to handle it yourself. And I would like to have all of the resources to be able to handle it myself because then I feel in control of what’s going on. And I don’t feel like I just have to wait on the generosity of the system to come and rescue me in their form.”

While family members can be a safety net for some, not everyone has positive relationships with family members, which can mean that social relationships play a stronger role in some participants’ support systems. Additionally, lacking a sense of safety within one’s community or residence was linked to energy consumption, as participants described how they didn’t feel comfortable opening windows to cool the house when gun violence was a concern. One participant shared a harrowing story about being assaulted in the elevator in her apartment building.

“It’s not a safe environment. I stay to myself, that helps a lot. I just know that certain people are not riding in the elevator with me. It would help if they put those cameras on that we have, but they don’t. They tell us it doesn’t work, so people know that they can get away with a lot here. It’s really scary.”

Gendered Experiences Accessing Support

The majority of our focus group participants for this study were women. Male participants offered a different perspective surrounding energy insecurity, shame, and societal assumptions of caretakers. One participant shared his experiences navigating a system of energy assistance that he perceived was generally geared toward assuming that caretaker roles were solely assigned to women. He felt that as a Black man providing for his family, assistance was not as readily accessible:

“I get the impression that those kind of agencies aren’t suited to help men who are head of household, or Black single men. They’re more prone, they’re more apt to help a single woman, but to help men, it seems like that there’s unorthodox feelings about that... because we’re men, that we don’t need assistance. And also I think it’s a systemic way of how they see people’s roles in terms of their needs as well, that we don’t need the assistance, that we don’t need the support, and that nobody really gives a hoot. You’re supposed to be able-bodied and all this other stuff added to it. So I think it’s almost like a lot of subsidized programs are supposed to support everyone.”

This participant also spoke to the patriarchal expectation of men to never show weakness:

“I think anytime that a man is not doing his part, or better yet, that he’s not stepping up to what social society says, I think it’s always looked upon as, what’s wrong with you? Why can’t you handle this? I just think that that attitude is there too.”

RECOMMENDATIONS

Through a series of focus groups, we investigated how Connecticut residents perceive their recent energy costs and explored how paying for energy as well as securing energy assistance affects them. Throughout our conversations, participants shared ideas and recommendations about how to address the issues they raised. These recommendations do not constitute formal policy recommendations, but rather general guidance that can be further explored through a policy, health, or business lens.

Renter Rights

- 1 **Improve transparency on energy bills** to show exactly where the costs are coming from. To some, there is a disconnect between their minimal energy usage and the high cost of the bills.
- 2 **Mandate** landlords to install heat pumps and efficient appliances when older technology needs to be replaced.
- 3 **Improve access to legal resources** in the event of livability or safety issues inside the home.
- 4 **Improve enforcement** of habitability laws at state and municipal level.

Renewable Energy and Energy Efficiency Access

- 1 **Center community-rooted solutions** in expanding access to renewable energy. One participant pointed out that the focus for companies offering these services must reach beyond the technology itself to center human needs. She suggested hiring staff based on personality traits of empathy and ability to communicate personalized solutions.

- 2 **Provide free or reduced priced LED light bulbs** to low-income residents where they normally shop rather than through a separate avenue. People go to the store when a light bulb or appliance goes out, and people with low-income opt for the lower up-front cost of inefficient lighting (incandescents) and thus pay more for electricity over the life of the bulb.

Assistance Channels

- 1 **Facilitate accessibility** through remote access channels like a 24/7 hotline, regularly checked mailboxes, and actively managed email inboxes for assistance information. Because many cannot visit physical locations to inquire about energy assistance due to work and personal schedules or lack of transport, clarity and access to information in multiple forms is essential.
- 2 **Adjust** the application opening date for Winter Protection to allow more time to apply.
- 3 **Streamline** applications for those who re-apply for Winter Protection every year, and for those eligible for medical protections.
- 4 **Create and enforce reasonable follow-up windows** when an application for any form of assistance is submitted. Participants want to know the status of their applications, when they are received, and if any additional info is needed sooner rather than later or not at all.
- 5 **Reduce intrusive questioning** wherever possible. When dealing with public funds, organizations must adhere to certain guidelines and provide specific information to disburse the public dollars. Participants generally understand that these requirements mean they must provide financial information. However, this data collection should be done in a way that maintains respect for the people who need assistance.
- 6 **Prioritize racial and socioeconomic representation** in staff and leadership at assistance organizations and utility companies. Utilities and Community Action Agencies should recruit more people who reflect the demographics of the clients they serve.
- 7 **Improve outreach and marketing.** Meet people where they are: in their communities.
- 8 **Utilize schools** to share information. One participant suggested: *"I think they should also give it to the kids in school. I think the kids are old enough to bring those flyers home. They should be able to say, 'Hey, there's a program and this can help us.' It's just educating mom and dad about it. It can help a lot. My son did a summer youth program and if he didn't tell me about the heating program I used before, I would've never known about it."*
- 9 **Simplify the application process** wherever possible. Remove requirements to provide multiple forms of documentation to receive assistance.
- 10 **Create multiple avenues to apply** for assistance. Provide online, paper, and in-person options for all assistance applications.
- 11 **Connect customers with resources** to find doctors who can help them access the Medical Protection Program.
- 12 **Recognize** that people remember when they feel shamed or disrespected; a negative experience from 20 years ago may still steer people away from assistance today. Any efforts to improve assistance programs today must reckon with past mistakes.

Utility Structure

- 1 **Adjust the price of energy based on income.** Potential policy could mirror Section 8 housing where a percentage of one's income goes toward rent, and the rest is covered. Many participants want to see this established for energy bills.
- 2 **Improve customer service** at utility companies for energy assistance specifically. Representatives should be able to provide clear, consistent information with empathy.
- 3 **Stop charging fees to restart service** after a shut off has occurred. As one participant expressed, *"If I didn't have money to pay the bill, why do you think I have money to pay for not paying the bill?"*
- 4 **Prioritize** restoring power to medically vulnerable households during seasonal outages. This practice is currently required but can still be improved.

Social Services

- 1 **Increase the income threshold and add a transition period** for all assistance programs (SNAP/food stamps, etc.). In some assistance programs, when someone in the household gets a new job, assistance is taken away or reduced if the household income increases over an eligibility threshold. If that person doesn't keep the job or the job is temporary, household income goes back down, and it can take a long time to re-apply. Providing a 90-day transition period and increasing the income requirements are two ways to help prevent people from falling through the cracks.
- 2 **Create or expand bundled programs** that cover housing assistance, energy bill assistance, SNAP/food stamps, and other forms of assistance to create a comprehensive system.

For example, the Department of Social Services requires a separate application for energy assistance than all other programs people can apply for through their Community Action Agency.

Among the recommendations described above, community-rooted solutions and increased ease of access are central themes. Outreach efforts should make use of existing community networks, and utility and agency hiring practices need to prioritize representation of the communities they serve. There is also an overarching theme of a need to ease access: our participants made clear that applying for energy assistance is the most profound barrier, rather than simply a lack of outreach or marketing (although this is also an issue). Applications are long and detailed, often asking for more information than seems to be needed. Getting help with the application is also tedious, as it often takes weeks or months to receive a response, at times coming after the application deadline has passed.

While having conversations with participants, it was clear to us that there was distrust towards energy companies, educational institutions like Yale University, and even towards energy assistance organizations such as Operation Fuel. There were numerous recounts of ways participants were wronged by any of these entities, even going back 15 to 20 years. Although participants were happy to see research on energy insecurity taking place, a few mentioned that they truly hoped to hear results from us and steps forward, rather than being used for information and left in the dust. Connecticut residents want to move towards energy efficiency and more sustainable energy, but they struggle with keeping their electricity on in the first place.

NEXT STEPS

This study aims to provide organizations such as Operation Fuel, as well as both municipal- and state-level policymakers, with an increased understanding of the many ways that Connecticut residents are affected by energy insecurity. By incorporating the study's findings – which represent perspectives directly from communities – into future policies and initiatives, we believe that progress can be made in minimizing energy cost burden and energy insecurity in Connecticut while supporting an equitable clean energy future.

While having conversations with participants and hearing their stories, it became apparent to us that the issues they voiced were much more than just energy insecurity. Every domain we analyzed contains underpinnings of health and equity. Financial strategies and coping mechanisms for energy bleeds into inequitable food access that can cause mental health issues due to stress surrounding accumulated costs. Building structural concerns, particularly drafty residences, can have significant effects on individuals who have difficulty with temperature regulation. Access to assistance assumes that participants have the resources and connections to find those assistance programs. Outages due to extreme weather events hit those who are less financially stable more than anyone else.

Further research should investigate the long-term health and wellbeing effects of power outages, sustained financial stress, not saving for retirement, forgoing a comfortable environment, or skipping meals. This research should explore the effects of coping strategies on those with existing medical conditions, as well as how inequity leaves those without pre-existing conditions more susceptible to developing issues in the future.

The experiences of poverty shared by the focus group participants highlight the cross-cutting nature of energy insecurity. Access to adequate housing, healthy and affordable food, and a comprehensive social service program each play a key role in solving energy insecurity in Connecticut. For more information or to get involved, please visit www.operationfuel.org.

APPENDIX

Participants shared an abundance of personal experiences with energy insecurity. Since there were many more quotes than could be included in the body of the report, this appendix includes an extended list of first-hand accounts organized under the six domains: Financial Strategies and Coping Mechanisms, Building Maintenance Concerns, Environmental Factors, Energy Assistance Channels and Accessibility, Medical and Health Factors, and Social Dynamics.

FINANCIAL STRATEGIES AND COPING MECHANISMS

"I'm super conscious of when I have my lights on, what I cook, because I have electric stoves too. I try not to cook during prime time. It was suggested to me. So in the morning time, like now, I would probably cook dinner instead of waiting. If I use my lights, I try not to leave my lights on when I'm asleep or something. I time my television, put my timer on it, so it'd shut off automatically if I fall asleep. I try to use as much daylight as I can, natural daylight"

"It's like 'Robbing Peter to Pay Paul'... You finagle as much as you can and even more so during these times. [With] the economy, there's an increase in a lot of things as of late, and not only just with the gas thing, but at the supermarket. If you turned around and looked back, it just seemed like, damn, that was 2.99 last week, but now here it is 4.99. Seeing those things and recognizing those things, you know that you can't flow the way you used to flow maybe from two years ago and what happened during that time."

"The price of electricity keeps going up and up. Sometimes I have to decide if I'm going to pay the electricity, or buy a little bit of groceries, which one should I do?"

"I use the nightlight. That saves. I have nightlights around the house. We can unplug everything. We have to have the refrigerator on, usually unplug the TV. But, you're still running up the bill with the air conditioner."

"We've used the oven many times for heating in the winter. We did that plenty of times. Unfortunately, we had some type of gas leak and we didn't know. We were using the stove. Luckily, I had the window cracked most of the time, but we were breathing that in for a while and we didn't know. We had to use it because it was the only way to warm up the house."

"There's no way I can afford air conditioning." I said. 'Because this time of the year is when the utilities go down and we can't afford to have them go up because of air conditioning, so put a fan on and just take some clothes off, drink plenty of water, stay hydrated and we'll get through the summers.'"

"I know what to do whenever they make the payment suggestion amount. If it's too high for me, I'll call them and negotiate with them and say 'I can't afford this,' and usually they'll say 'okay, we'll lower it for you'... tell them you can't afford this. I need my heat. I have medical conditions... they're usually quite reasonable, and if not, just keep fighting."

"I'm not one of those people that go buy all kinds of Christmas presents to give my family a little bit of a better Christmas, but I sometimes don't pay the bills in December and that's the honest truth. So then I have a bigger bill in January and that's what gets me behind. And I think that's what gets a lot of people behind then they think about Christmas and they deal with that."

"Either you're going to do your laundry or you're going to have the fans on."

"I've turned off the heat. And I stay in one room with the space heater. I just couldn't take it no more. The bill was not going down. So I said, you know what? It hasn't been freezing. So for the past month, my heat has been off."

"I feel like it was rigged, honestly, because I was paying more than I felt like I was using, but I guess that's just the rate in Connecticut..."

"There's just really no reason why it should be so unaffordable to us to pay an electric bill. It's just outrageous. And I just feel like it's so centered in greed where you have these people who are making so much money off of us and we're just struggling to keep the lights on."

"It stresses me out because I lose sleep when I'm stressed. I lose sleep because I'm worrying about how I'm going to figure out how I'm going to pay these lights and gas. We need the gas to eat, we need the lights on too. It's a no win for me, but I try to scrape change or anything to pay them. But, it's scary because once you had your lights turned out before, that's what you are looking forward to if you don't pay these lights."

BUILDING MAINTENANCE CONCERNS

"There was one place I lived... I was only at the place for two months or so. I remember that I got my first bill and my bill was almost \$300. So, I called and spoke with a rep, and she was like, "No. Your bill shouldn't even be that high." Come to find out, everybody was using power from each other. On top of that, the heater was broken. That was fine but it's not fine when somebody's using somebody else's electricity. I had to move. I didn't want to do it. Of course I lost my security. It was a frustrating time in my life dealing with that. Who wants to live in a place where your bill skyrockets and you haven't lived there that long and you have a slumlord. So it was very, very tough."

"We were in another apartment where we flushed our toilet, in some type of way, our plumbing was connected to the neighbor. All of the back sewage came up from our toilet and their toilet into our tub."

"If maintenance does come, they want to know why they have to come. Our lights went out in our house and he said he was going to put it urgent, but it'd be like next week when they get back here. It is really bad. They do not fix anything."

"We had mold in our other apartment really bad. In this apartment, the bathroom I believe there is mold in the bathroom air vent. It's also around the shower part. We're constantly trying to clean it, but we can't reach the air vent. We did tell maintenance about it, but he said it's not a concern."

"Our neighbors have similar experiences of maintenance not responding. Some of them have contacted the Department of Health in the building and the building will tell you that they know about it and you should stop calling them. Basically, you're not getting it anywhere. We had other neighbors who had the ceiling in their apartment just fall down while they were there."

"We have a landlord, and a compliance lady. The compliance lady is actually very nice. After I've been here 12 years, she's the first person that's ever asked me how am I feeling today? She actually helped me with a bag of groceries to my door. I told her thank you, because I have never been treated that way by landlords here."

"To be in here two days without using your own bathroom facilities takes a toll on you. It's something that you will never forget. It is very frightening. When you go to the bathroom now you're checking it to make sure it's going to work. You're paranoid about it. I don't think anybody should be treated that way."

"I just moved to this apartment in December and I have maybe 16 plus windows and it's a very spacious place, high ceilings. And my first bill was 400 and something dollars. So I was just freaking out, because I'm like, why is my bill so freaking high? And they're like, oh, it could be the windows. It could be this, it could be that. And I say, oh, it could be that you have high rates."

"I've written letters [to management]. I've told them what happened here. Sometimes I was like so afraid to get up and just walk in my own building again, because of all the things that happened. When you live a place, you want to feel safe. But, if you can't use your bathroom, if you're worrying about the gas, if you worry about the people attacking you, it could become scary."

"Maintenance will also leave your door unlocked. They can come in here and they said that they're checking something. They leave your door unlocked. You can get robbed. I just was heard that there was a robbery in the building. I got a camera for my apartment just in case."

"But the landlord doesn't want to make that type of repair. He says it costs too much, but then it's costing me because if I don't fix those windows up that heat goes right out."

"My door to the entrance of the house, it doesn't fit. You can literally see into my door. So that means the air from the hallway's coming right through the door in the living room. So this is stuff that he told me he would take care of when I first moved in and it hasn't been taken care of yet. And of course I'm new here, so I don't want to be a nuisance. I don't want to be pest and a nag, but I'm like, all right, I need this stuff done because if he don't do it, I'm going to do it. I'm going to have to do it because I'm the one that has to live here, and that's going to cost me money."

"In addition to offering assistance to keep the lights on right now, an investment needs to be made in partnership with your landlord... to replace the windows with not cheap replacement windows, triple pane windows that are completely insulated around them."

"You have to have pride in ownership of your home. Everybody deserves that."

ENVIRONMENTAL FACTORS

"It's rough to live with [landfill pollution]... It's like everybody's oblivious to it and they don't want to know it, or they don't want to know it until some crazy stuff happens. But the thing of it is that what in reality of all of this is saying, is that it may not be at your door today, but just like a shell on the ocean, that tide comes in, that shell's sooner or later going to go out in the ocean."

"There have been two occasions when we've lost power in the wintertime. Once, it was a bad snowstorm and the power went out for the whole neighborhood, but all the groceries were bad. We didn't have any more money to get any more groceries... The flashlight batteries died, there was nothing we could do. We were just walking around with our phone battery light for as long as we could until that went dead. We don't have a car so we couldn't get around. The snow was really high and we didn't know where to go because we didn't have any TV or any electricity to tell us where to do. We were just hit. We were just stuck here like that for two weeks."

"It's more the gas that with the having the heat for so long here in Connecticut, it becomes a hardship once the winter ends. I mean, I was going to turn off my heat in March and I had to leave it on until now, April."

"The water company was working on the line and somehow it triggered the line for the electric and it made my power go out and I had to put candles... I ended up having a fire because I forgot one of the candles."

"Summertime is harder because in the winter you have things like winter protection and hardship. So in the winter they can't cut you off because of the winter month. But in the summer you best believe they be at your door, soon as winter protect is over, they're cutting your utilities off. That's why a lot of people go all summer without gas. And then once winter protection starts, then they get to enjoy the gas for the winter months."

ENERGY ASSISTANCE CHANNELS AND ACCESSIBILITY

"I'm vaguely aware that there's various programs that I probably qualify for right now because I don't make money."

"I look at the long history of subsidiary people, of subsidiary agencies and the history of trying to be supportive and take care, especially in Black communities where they're supposed to be being helpful. And are they really doing their job? And they're continuously doing the same thing, getting the same results. And it's like, if this stuff ain't working, then let's do something different."

"[Community Action] outreach needs to be stronger."

"Training's always key, but to build that experience, so it's not like all they're about is just talking, but not listening, as far as with representatives. And they just need to be more human and understandable, even if they never went through it."

"Everything needs to be revolutionized to be better for the generations now and generations coming up and generations in the near future, so that all of us can live sustainable, healthy, productive lives, and not feel like we're living in a box."

"When people have a monopoly on a situation, it changes the whole game. United Illuminated around here has the monopoly as the electric supplier. Let's not kid each other."

"You have to get the paperwork from your doctor because they have to say that you have the conditions, asthma or something, that you need the nebulizer and the lights on. You can't get it from the urgent care because the urgent care doesn't have your chart, they don't know you."

"What if you pay, for the people that is paying their bill, maybe take a percentage off or you get one month free? That would help a lot of families, because especially in the summertime, you can stock up a little bit and you have money to pay the future months. If you're on a payment plan and you're showing that you're trying to pay, maybe they can let you off on something too."

"The information that they want is just too intrusive.... So this is when my 40 year old was living with me, when he was a child. And they want to know about his father, which I said that we weren't together anymore. They want to know about him, his income. Has he ever been arrested? I'm like, "My God, really? Wow.""

"The only issue with me, I have my son living with me and he works full time. So I'm hoping that he'll find his own place before it gets to the point where his income is too high for me to get energy assistance."

"I went to an appointment, and it was at one my kids got out at three and I was still sitting at the waiting room and I would have to leave. I would have to tell the lady, I'm sorry, I have to go. She'd be like, "Oh, but your appointment?" I was like, "I have to reschedule because you guys are still not ready for me." I think back about those issues because it was heartbreaking. I've seen people sitting there with the kids hungry because it's been two hours and they just fed them breakfast and you cannot eat at the waiting room. It's things like that in the long run it makes a difference. I seen the elderly people sitting there for hours. I mean, we have to do better. It's time that we do better."

"It doesn't take that long. It's just as long as you have all your documentation, they want to know your income, how many people in the household, that type of information. So if you bring everything the first time, boom, it's done."

"I definitely just applied for Operation Fuel and it was a difficult application... why are you making me go through all of these hoops?"

"That reconnection fee that they charge is a crime. It's like a poverty tax... If I already didn't have money, it's like an overdraft fee. What makes you think I have extra to get for the reconnection fee? And I think it just should be illegal to leave kids in the dark without power. That should be on the state that it's like child abuse, because how can you do that?"

"There's been short outages recently for whatever reasons, car accidents or just natural disasters. And I've been conscious to sometimes think that, but the funny thing about it is that when something goes on with my lights, second nature tells me, see if everybody else's lights is on, to make sure it wasn't my bill."

"Every person who signs up for solar this month, we'll donate \$5,000 to help build the program." ... I'm like, where's the \$5,000 coming from? Why do you have that extra? Why are you making so much money off of this?"

"They should be more forthcoming with the information. I don't understand why they don't, if it's going to help a community, or a state like Connecticut, why doesn't everybody know about it?"

"There have been times that I missed, but I won't get no phone call. I would get that letter that says shut off due to, I guess, missing one, two payments, instead of getting a phone call saying, "Hey, we're reaching out because we're concerned, you missed one or two payments. We don't want you to lose that plan." I don't know if anybody gets that kind of phone call, but I haven't."

"[The energy company] is just ready to press that button [to shut off power]. And to me, it's insane how quick they move to do that"

"Most of the people that I have to communicate with, they've been congenial, and they've been forthcoming with being honest... but their hands are tied, too, and they're just doing their job"

"When I lost power for a week due to a summer storm, I never heard from the UI company."

"Two of the three times [we lost power], I heard from the utility company. They apologized and they said they were working on trying to get the lights back on in our area. As soon as it gets on, they'll send us an email, but we were just happy that the lights came on. That was the sign."

"I've had at it so bad before. I've called electric company and I told them, "I don't have the money. I'm just asking you not to turn off the lights. We got candles, but please do not turn off the lights. We really need this." It didn't work, but it was worth a shot."

"They send you a shutoff notice and they tell you that if you don't have the payment by that day, they will be turning it off. Then that day comes and you just hear a boom and everything is out."

"I definitely would've used energy assistance had I known about it sooner. The first time I heard about it was on the bus. They had a sign, a billboard on the bus and I was like, "Oh, Operational Fuel." I was like, "I'm going to call them." Then I heard about it again, there was a sign in my neighborhood that was advertising if you had heat problems, call them up."

"As far as energy and larger concepts go, I'm so interested and even concerned, about renewable energy [...] I think people feel powerless in general sometimes. In these systems, I feel it's even harder, but I wish everything would be solar energy, and I wish it would change as quickly as possible. I don't see direct avenue for me to influence that."

"[Solar energy] is not promoted that much in urban communities. It is not promoted because we are not considered to be concerned about environmental concerns when it comes to urban communities. And I think that has to be a real focus on, and it just seems like we don't matter when it comes to that. It's like, give them the hogs and give them the hog skins and dump it all there. Even landfills, that are in our community."

MEDICAL AND HEALTH FACTORS

"Well, it is stressful because the thing is that you have to keep juggling in your mind how are you going to pay all of these different bills and pray that something doesn't happen where you have to spend a big amount of money."

"I wish I were more determined, but it's tough, especially with a clinical diagnosis of depression, it's a lot to push through."

"I have family who have medical equipment that needs to stay on... Or some equipment they could, okay, I'm going to shut it off for now, and then I can turn it back on, as long as I'm able to do it within that amount of time. And it's scary. Like I said, some people, they've got a oxygen tank or they've got a tank, or some kind of humidifier, whatever for asthma. I mean, whatever the condition is... it could be scary."

"It is really bad when the power gets shut off. You have to wait for them to connect it back. You have to get all the money together, which is really hard, because it was high already. Now, you have to pay the whole balance. It meant that I didn't get the extra groceries that I needed for the house and the groceries we had went bad. We lost all of that. It also meant that we couldn't use our nebulizer."

"I haven't had the funds to buy a portable nebulizer (for when the power goes out) and it's not covered by my health insurance. If that goes out, the lights, we're stuck with no nebulizer again. I try to keep our emergency pump, I have that."

"My son has IBS. He eats Kosher food. He eats fresh vegetables. He can't eat certain fruits, they upset his stomach. He's also allergic to peanuts, beans, eggs, nuts. You name it, this boy's allergic to it. We have different diets and there's a lot of things that we can't eat because we're allergic, or it will upset our health. We need fresh food, which goes bad when the power goes out. For that, I haven't figured out what to do."

"I have a torn ankle and a dislocated knee. In the dark, you're bound to fall on something, hit something."

"I have acid reflux, so certain foods are going to bother my stomach if it's not heated up."

"The air condition, I've tried to go days without it. Neither one of us are well enough to do that. What happens is we both get sick. Then the other one can't take care of the other one. We have to turn that on."

"In anticipation of shutoff, it is fear, straight fear, because you start thinking about, well, how am I going to use my nebulizer? Then I start trying to see what food in the refrigerator I don't care about. That makes it better, but it doesn't. Then I have to decide, okay, they're going to turn it out tomorrow. Let me just try to put it in the freezer right now and get it ice cold and see if that can last another day. But, it just doesn't. Fear is really bad. Anxiety is really bad, because you're waiting for them to turn it out. You know they're going to do it and there's nothing you can do about it."

"It's very hard [for my son] if he's in the heat and there's no air. He can't breathe half of the time anyway. With the temperature change like that, he really can't breathe. I have to buy bags of cough drops, just so he can breathe and Vicks vapor rub all the time."

"I think there should be a special type of assistance if you have any person with a disability in your home, and you don't have to name what disability, but just a disability. It shouldn't have to be only if your doctor is seeing you, if she schedules and fills out the paperwork. You can show any type of proof that you have a disability. That should be able to move the electric company back a little bit. Because if you have to wait for your doctor and if your doctor doesn't fill it out, it's really bad. We have been diagnosed with a disorder. We already have paperwork. But, the problem is that the energy people are saying that you have to get this paper filled out and sometimes the doctors don't want to fill it out. You should be able just to show the paperwork that you have, "Hey, I have this," or your disability card, something. The system needs to change to account for these lag times."

"It was a few years ago. But it seems like it was yesterday."

"It wasn't just a couple days, this was weeks. So it's something that you want to go outside, you want to go to somebody else's house that has lights and it's a very claustrophobic feeling to deal with that night after night after night."

"And it's very hard because you have to choose between expensive medications that you have to have for your chronic illness, if you have them or pay the heat bill."

"You know, for me too is medicine because I'm a diabetic. So my insulin has to remain in the refrigerator. So like I said, thank God I have not lost power."

"And sometimes I get depressed about it, because I'm used to paying my bills on time."

"I suffered a lot last year with my heart, all kinds of new medical stuff had happened. And I don't want to go through that again. And that was all because of stress. All of it. Stress just pretty much almost killed me. And I don't want to go through that again."

"Sometimes I got to figure out if I got to pay the bills or get my medication or not even so much my medication, but food on the table."

"It's anxiety inducing. It just is. It makes me sick... I'm considering then just living in the dark for some months."

"I feel like they take advantage of me because of my mental health..."

"We're all collectively going through trauma from this pandemic and then adding in all of the other trauma we've all dealt with in our lives on a scale. But it's still enough that we have anxiety. Yeah. Like these little things that set me off, put me over the edge. I'm like, "Great. And now I don't have power, and I have three kids, and I have to figure out how to get water to my animals."

"We all need help at some point in our life. I don't care who you are, whether it's financially, whether it's emotionally, we all need help. At some point in our life there's going to become a time. But some people just too proud."

"All people really want to do is make enough money to comfortably make ends meet and then also be doing something every day where they have an enjoyable life."

SOCIAL DYNAMICS

"I'm grateful and thankful to God and to my landlords because it's a husband and wife, I call them mom and pop landlord, because you don't have too many of those left. And why I say that, ever since the beginning of talking to my landlord and they was like, "Be upfront, be honest," different questions like, "Do you have moments you're late for rent? Were you able to pay? Make arrangements?" I said, "Yes." They were just, they understood me because they were genuine, and I was genuine."

ACKNOWLEDGEMENTS

This report summarizes a study completed as a project in the *Clinic in Climate Justice, Law, and Public Health*, a course offered jointly between Vermont Law School, Yale School of Public Health, and the Yale School of the Environment. The team would like to thank Operation Fuel (Tonya Anderson, Logan Carruba, Shante Forbes, Gannon Long, Kiana Stokes, Brenda Watson) and staff members from associated Fuel Banks for their collaboration, advice, and feedback throughout the project. We extend our gratitude to Dr. Laura Bozzi for her guidance and help throughout the last few months, and our classmates in the *Clinic in Climate Justice, Law, and Public Health* for their constructive feedback. We acknowledge the support of the SNF Fund for the Integration of Theory and Practice and the Yale Center on Climate Change and Health. Thank you to our participants for sharing your stories.

ENDNOTES

1. Jessel S, Sawyer S, Hernández D. Energy, poverty, and health in climate change: a comprehensive review of an emerging literature. *Front Public Health*. 2019;7:357-357.
2. Hernández D. Understanding 'energy insecurity' and why it matters to health. *Social Science & Medicine*. 2016;167:1-10.
3. APPRISE. *Meeting the Energy Needs of Low-Income Households in Connecticut*. Prepared for Operation Fuel. <https://operationfuel.org/wp-content/uploads/2017/03/CT-Operation-Fuel-Study-FINAL-Report-12-31-16.pdf> 2016.
4. EIA (Energy Information Administration). *State Electricity Profiles*. <https://www.eia.gov/electricity/state/> 2021.
5. Sears J, Badger L. *Mapping Household Energy & Transportation Affordability in Connecticut*. <https://www.veic.org/Media/Default/documents/resources/reports/Mapping-Household-Energy-and-Transportation-Affordability-Report-Oct-2020.pdf>: VEIC;2020.
6. Phaneuf KM. PURA imposes maximum \$30M fine on Eversource (May 6, 2021). *Connecticut Mirror*. 2021;<https://ctmirror.org/2021/05/06/pura-imposes-maximum-30m-fine-on-eversource/>.
7. Latina J. Gov. Lamont signs 'Take Back the Grid Act' into law, will grade utility companies on performance (October 7, 2020) *WTNH*. 2020;<https://www.wtnh.com/news/politics/gov-lamont-signs-take-back-the-grid-bill-which-will-grade-utility-companies-on-performance-basis/>.
8. Malo S. Maximum \$30 mln fines for Conn. utilities over poor Isaias response (July 15, 2021). *Reuters*. 2021;<https://www.reuters.com/legal/litigation/maximum-30-mln-fines-conn-utilities-over-poor-isaias-response-2021-07-15/>.
9. Picchi A. Why are gas prices so high - and why they might come down." (March 15, 2022) *CBS News*. 2022;<https://www.cbsnews.com/news/gas-prices-high-expensive-come-down-cbs-news-explains/>.
10. Stuart C. Connecticut raid of energy funds draws court challenge (May 15, 2018) *Courthouse News*. 2018;<https://www.courhousenews.com/connecticut-raid-of-energy-funds-draws-court-challenge/>.
11. CONN. GEN. STAT. § 16-262c(b)(1).