



Exploring Climate Solutions Webinar Series

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Special series:

Equity and Environmental Justice in Climate Solutions

Energy Justice

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October 8, 2020



Today we use more energy than ever before!



Problem:

From morning till night, and even while we sleep, our human demand for energy is ever increasing.

As a society we have never been this connected or dependant on electronics for our daily needs.

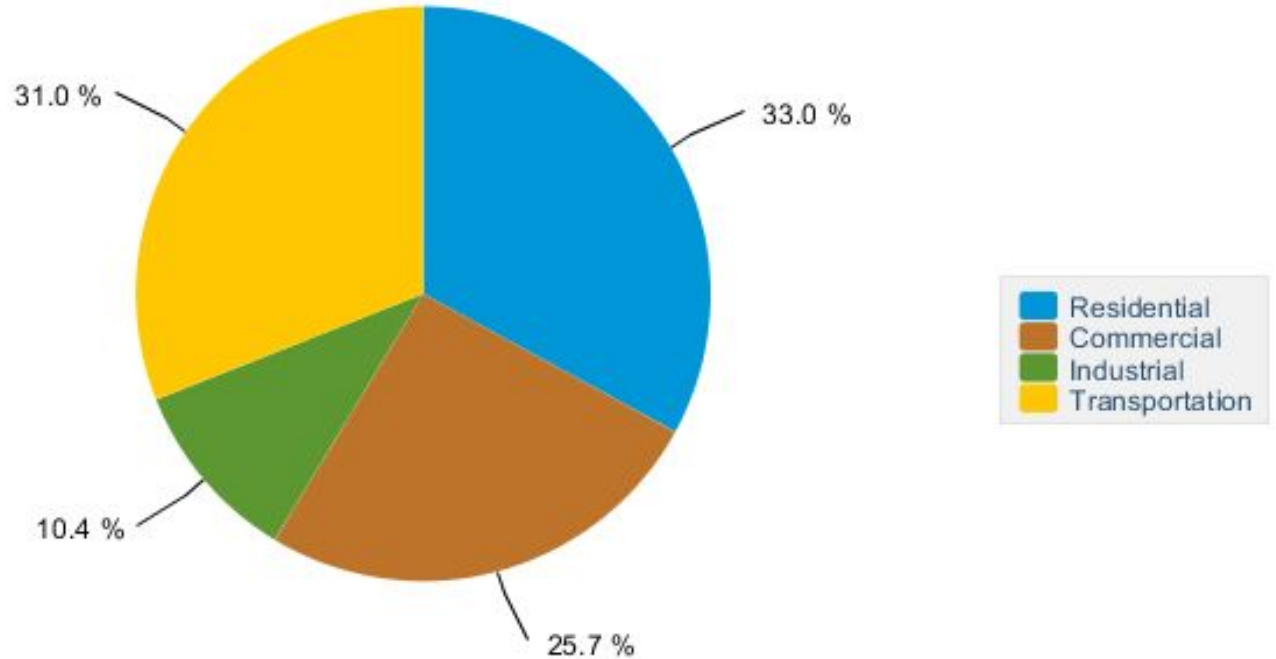
We have never had to make changes as rapidly as we need to make them now.

Connecticut Energy Consumption by End-Use Sector, 2018

Residential Usage is more than 33.% of CT's overall Energy Consumption.

Residential energy use should NOT be overlooked as major source of Greenhouse gas Emissions, Air and Water Pollution.

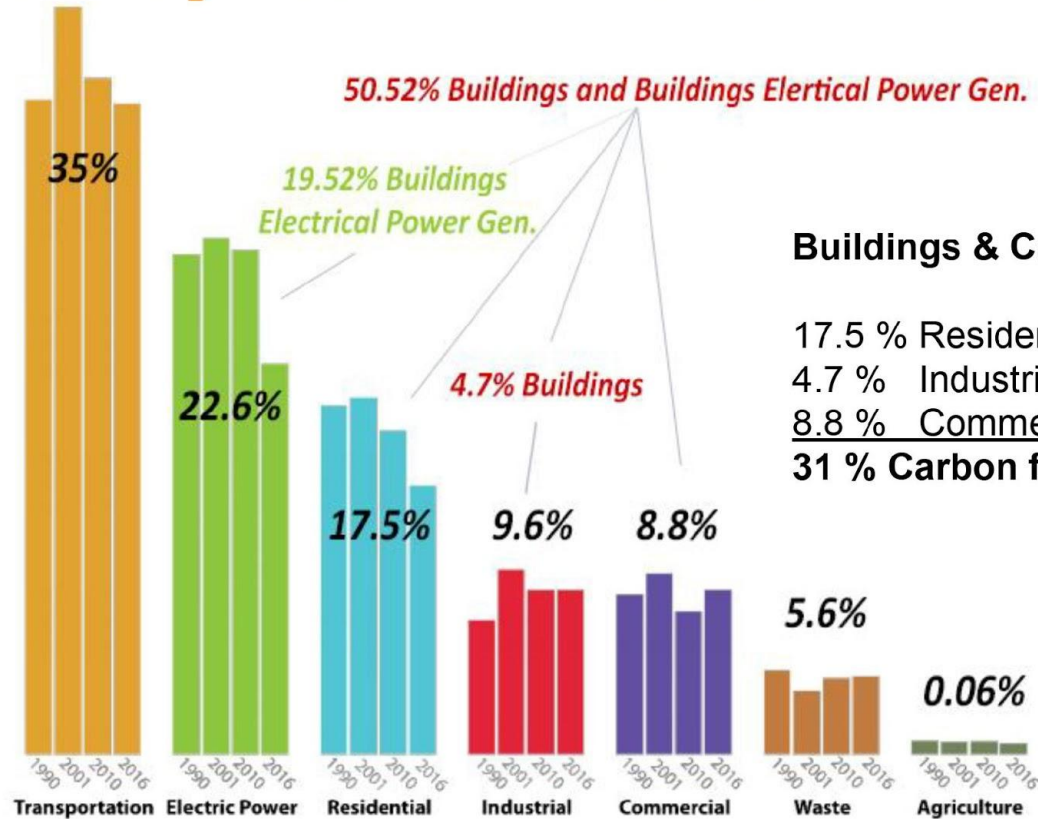
This contributes to our overall energy Demand and Energy burdens.



Source: Energy Information Administration, State Energy Data System

Carbon Emissions by Sector - Historical

Data source GC3
Connecticut 2016



Buildings & Carbon

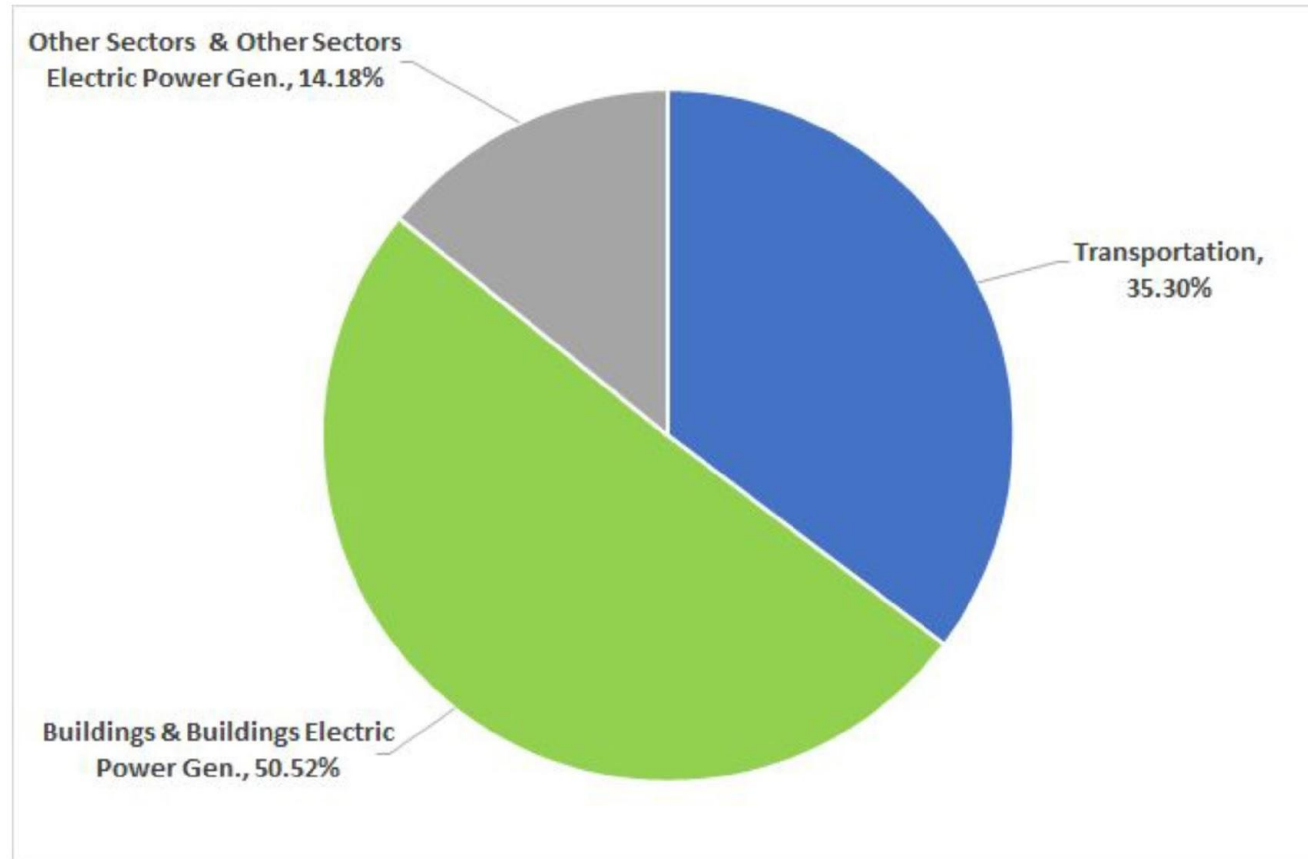
17.5 % Residential

4.7 % Industrial

8.8 % Commercial

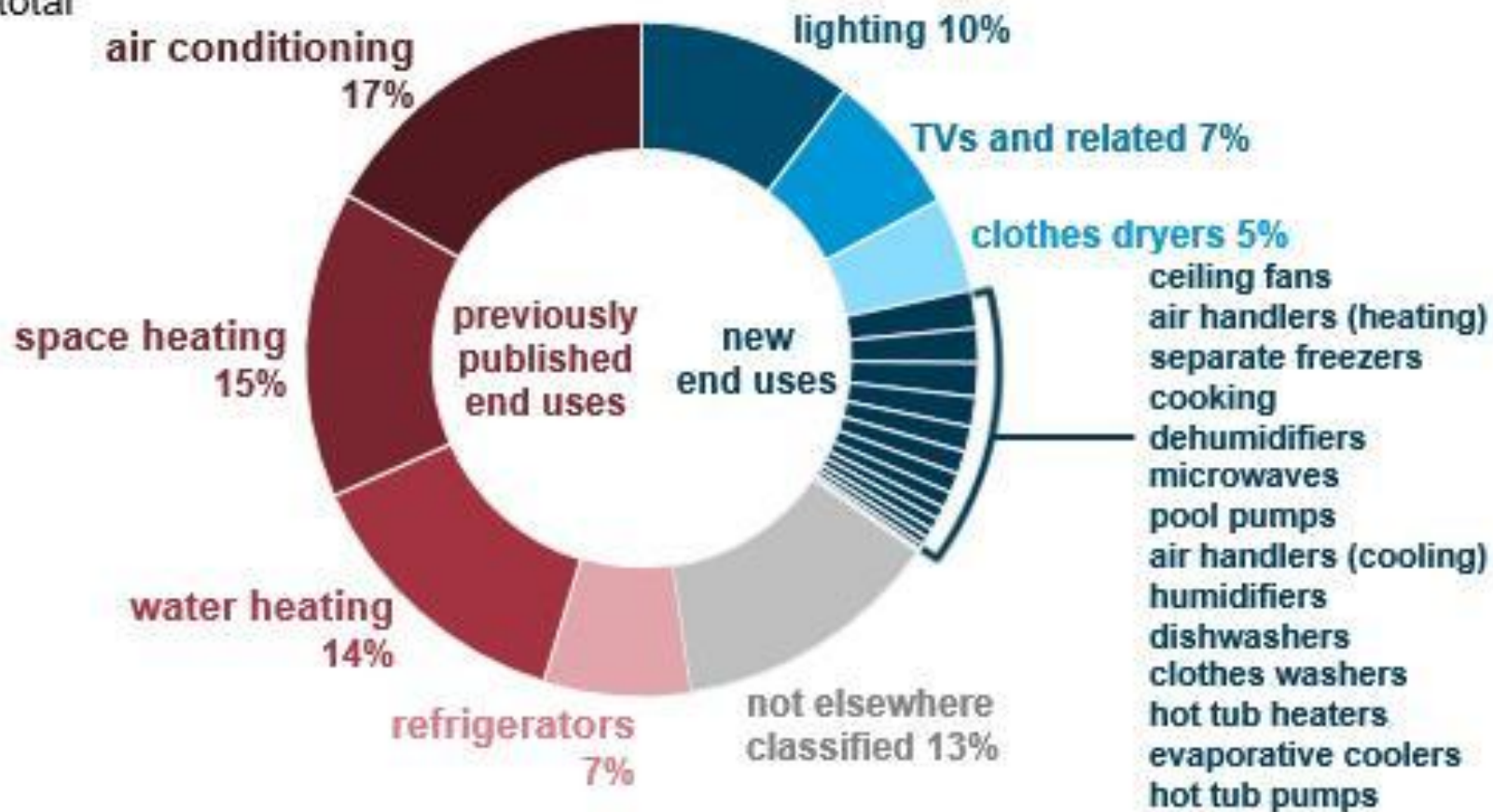
31 % Carbon from Buildings

Carbon Emissions by Sector 2014 - Summary



Residential electricity consumption by end use, 2015

percent of total

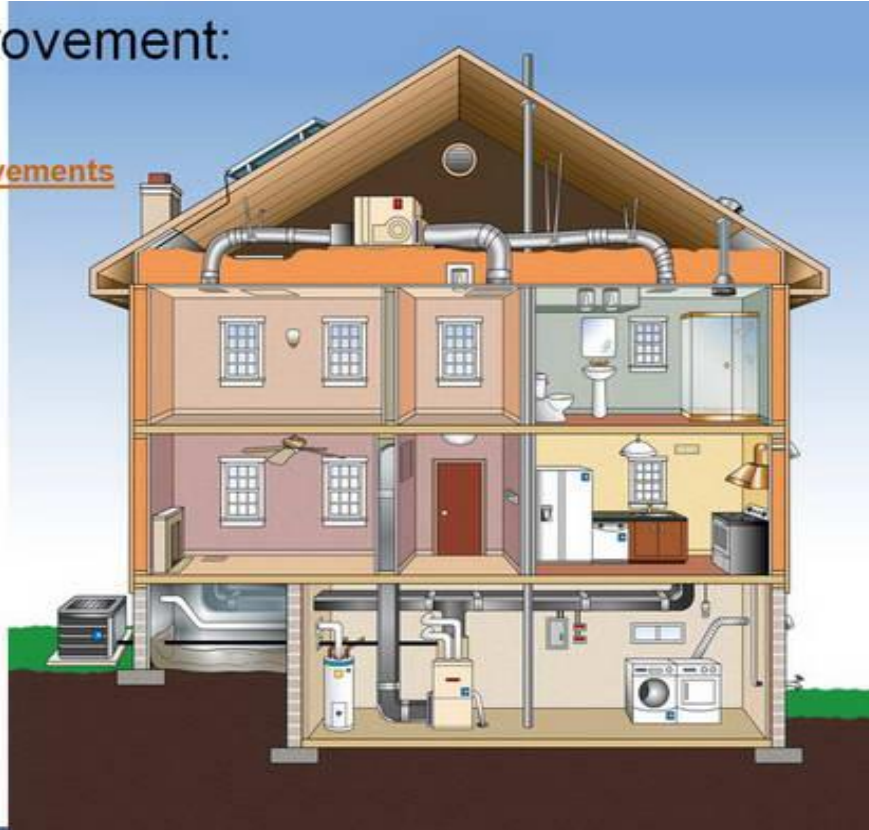


Thermal Improvements - lower energy waste

After Improvement:

Identified Improvements

- Air leaks
- Insulation
- Duct Repair
- Airflow
- Furnace
- A/C
- Hot Water
- Venting
- Appliances
- Lighting
- Windows
- Solar/Wind
- Geothermal

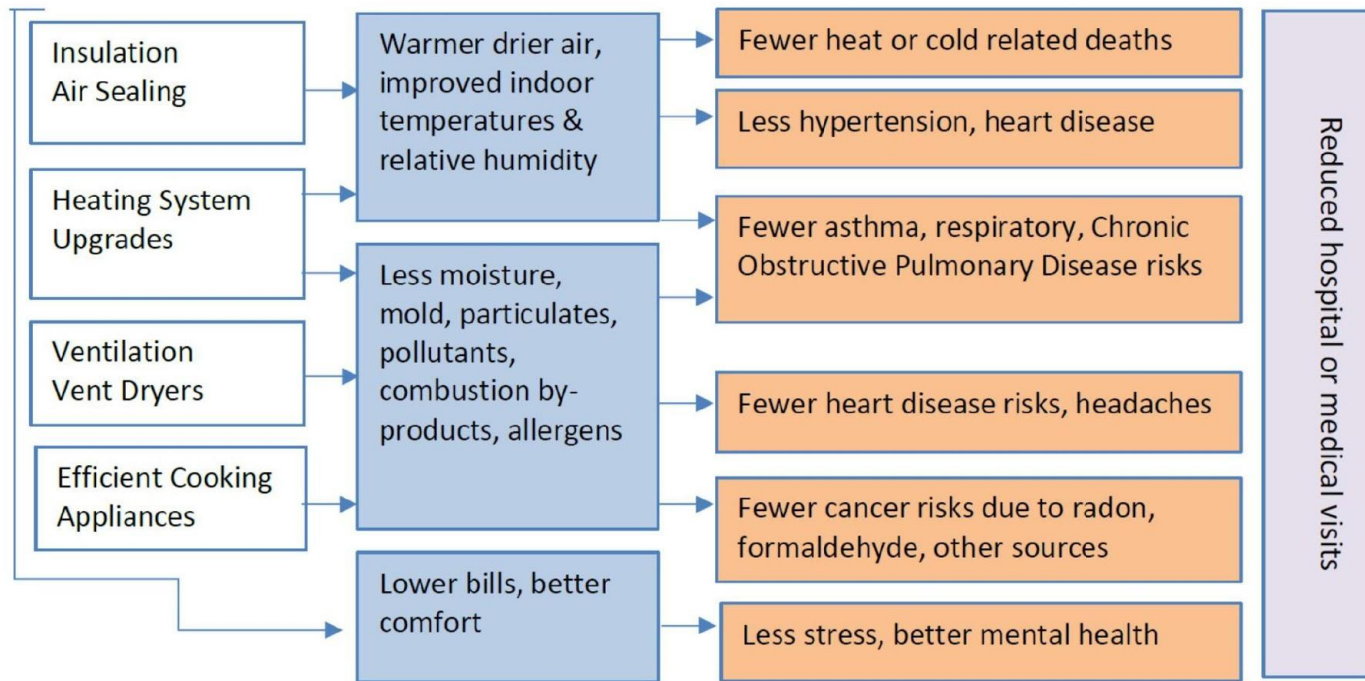


Thermal improvements are like your hat and boots, gloves and coat, they lower demand for heating fuels by ensuring the building Shell is tight and insulated, and your heating/cooling system is the right size.

Because you lose less hot or cool air, you use less energy to heat and cool lowering our Peak Demand.

How does it Save and improve lives?

Figure ES1: Occupant Health and Indoor Environmental Benefits of Residential EE



Equity in Planning or Lack of Equity

Equity is a tricky word...

- ❑ There is a clear need to continue to view issues through the lens of equity.
- ❑ **Energy is connected to EVERYTHING.** It impacts our quality of life, ability to work, be warm, have access to information, use our phones, and on and on.....

Some people have real problems related to energy affordability, housing, and even our health outcomes are impacted by our collective energy choices.

The **Affordability Gap in Connecticut** is getting wider every year

Over 400K CT ratepayers can't afford Electricity

- ❑ ***230,000 Eversource (ES) residential customers** were behind on their electric bills, This is **20% of the residential customer base**. *As of May 1, 2018 for Eversource
The total ES delinquent balance was **over \$130 million**.
- ❑ 70,000 electric service disconnects occurred through October 2018.
That is almost twice the number that occurred for all of 2014 and 2015.
- ❑ At UI, ***23,000 customers** were behind on their bills.
They collectively owed a whopping **\$56 million**. *As of May 1, 2018
- ❑ UI = 55,000 accounts terminated in 2017, an astounding and troubling **almost 20% of their residential customer base**.

EQUITY- If you can't afford to keep your Lights on...

- You probably can't afford upgrades to your housing.
- You may be renting and unable to fix your housing.
- You may have other pressing problems such as food insecurity, health issues, lack of access to employment, lack of transportation, mental health concerns.
- You may live in an area where health hazards are common and go unaddressed.

Barrier to Weatherization in CT

- 2015 EE contractors raised concerns to DEEP and the EEB about the lack of capacity to serve Low income households due to high indoor health barrier rates.
- Contractors noted a 15% - 50% barrier to the blower door rate.
- **Barriers to blower door often resulted in no EE upgrades in LMI housing.**
- Due to barriers to the blower door, and lack of processes for referral to remediation and landlord barriers, low income housing was underserved.

Barriers to EE in CT - Yales Study findings

- [2016 Yale completed a health and safety barriers to weatherization study.](#)
- **Health and safety barriers included Asbestos, Vermiculite, High Co, Gas leaks, Mold, Knob and Tube, Pests, and HVAC failures, and lack of access to oil or electricity at the time of the visit.**
- **The indoor health hazards barrier rates were almost double in low income areas.**
- Findings indicate this is due to lack of resources to fix housing issues, absentee landlords, lack of information, lack of funds, and lack of community support for low income residents.

Yale findings cont.

- ALM, Vermiculite, Mold, high co, and Gas leaks were the top health barriers to weatherization. These were densely found in urban areas, low income areas, and housing built pre 1950. [*](#)
- There is no state level standard tracking of health hazards in housing .
- Codes differ from town to town making enforcement difficult.
- There is no definition of “weatherization”, resulting in false reporting of weatherization services to LMI ratepayers.

How we classify “need” differs - Yale cont.

- Yale found that some programs use 80% of state median income while others use 60% of state median income to define “need for support”.
- Programs offer different supports – no standards of support are defined for removing barriers.
- Lack of funding resources to remediate the issues which are identified.
- 2016 was the start of tracking barriers in housing through Energize CT- data on barrier has not been released since 2016.

Health Barriers are higher in LMI areas

- More likely because – lack of resources to fix housing issues, high percentage of rental properties,
- 1 - 4-unit housing in LMI areas, these 1- 4 units are underserved due to lengthy application processes requiring all units to sign off and landlord sign off.
- ALM and Mold, knob and tube can be found in concentrated areas such as West Hartford and Bridgeport.*

1. 5 Million pilot by Energize CT

- Energize CT ran a pilot and worked to remove barriers to weatherization and then ensure customers had full efficiency services post remediation.
- This pilot ran well, and many homes were served.
- Resources were expended and the program has since halted.

Green Bank GHHI

- There was a GHHI pilot study which included DOH, DSS, GB, DEEP and the utilities. Status on this does not transparently or regularly confer with the Energy Efficiency board work.
- Green Bank was offering ability to use 20% of loan to remediate barriers to EE. Status unknown, but many LMI customers could not qualify with debt to income ratios and credit score requirements. They may not be able to pay back the loans during the pandemic or related to other financial strains.

Why indoor health barriers - matters to climate

- Residential energy use is 33% of CT energy use, we can reduce this by up to 30% with thermal boundary upgrades.
- Our laws state we must weatherize 80% of housing, if 30-50% have barriers we can't meet that goal.
- Equity requires that we plan for those vulnerable populations, this includes LMI and LMI housing, and [homes with barriers](#).

What we need to do

- Create a health & safety fund and a prioritization plan based on how it affects our health, and our ability to meet the climate goals.
- Ensure we have funds that are available to remove barriers in LMI housing and that they are truly accessible to those in need.
- Define what it means to be “in need” 80% or 60% and use a census tract?
- Expand the voices at the table when we are making state plans.

Create a formal plan

- Create a formal transparent plan to address the health barriers to WX.
- Hold entities accountable for reporting use of funds, grants, and require reporting on LMI served in all programs that use ratepayer funds or tax \$\$\$.
- Ensure Equity discussions are kept at the front of the planning needs not at the back of the bus.
- Require transparency in how we serve multi unit housing 1- 4 units and rental properties.

What is equity?

Equity starts by recognizing that there are disparities and inequities in living conditions. Some communities lack resources, lack political power, lack access to higher education, or have poor health outcomes. These examples place low-income communities and many communities of color at greater risk while limiting their capacity to adapt.

Equity based Planning takes these disparities into account.

Inclusion is Equity based

Moreover, equity is also about communities having a meaningful opportunity to participate, and requires that community perspectives and viewpoints be considered into adaptation and mitigation decision-making and planning.

Participation should occur prior to finalization and implementation of plans.

Participation input should be collected regularly: prior, during post changes.

Equity and Climate Action

Equity as it relates to climate action, is the assurance of environmental justice, and equitable access to resources, including basic necessities such as safe shelter, water, food, heat, and light, as well as opportunities for safe employment to support oneself and one's family, equal access to community supports such as public education, public transportation, healthcare and mental health care.

Why does equity matter?

Climate change poses the greatest threat to those communities that are the least responsible – particularly low-income populations and communities of color. These communities already experience disparities in health outcomes, inequities in living conditions, and lack of political power. Such disparities place low-income communities and many communities of color at greater risk and limit capacity to adapt.

Examples of how equity relates to climate change:

- **Energy:** An equitable approach to energy equity would include larger investments in expansion of energy demand reduction: such as insulation upgrades for LMI communities, and efficiency upgrades to keep energy costs affordable and lower air pollution. Solar expansion would include community solar projects that benefit all residents, including residents of low-income housing and public housing vs only those who own homes.
- **Green Industry:** An equitable approach to green industry development would include a workforce development component, to strengthen the capacity of low-income communities and communities of color to participate.

Examples: (cont.)

- **Tax Policy:** It would be wrong to allocate tax funds or ratepayer resources to high income communities, or businesses, while denying access to low income communities and minority owned businesses.
- **Indoor Health Barriers:** It would be wrong to deny supports to remove indoor health barriers from low and moderate income communities, while affording supports to high income communities. (Income Eligible crumbling foundation supports vs lead and asbestos-like material removal supports.)
- **Transportation:** It would be wrong to invest in the expansion of personal electric vehicle (EV) infrastructure which can only be purchased by affluent households, vs expanded public transportation which is accessible to all communities and also lowers carbon emissions.

The areas of focus should include necessary resources or basic necessities for all humans:

- Safe Air
- Safe Water
- Safe Food
- Safe Shelter
- Affordable Access to energy for heating and lighting
- Opportunity to earn a decent living wage
- Equal Access to education for our youth
- Workforce training, adult education, continued education such as college or secondary education options
- Access to safe accessible transportation
- Many of our people don't have all of their basic needs met in our state

Some of the key principles that flow from an equity lens include:

- Inclusion in all aspects of the process -- must be inclusive, offering opportunities for meaningful participation in the planning and budgeting.
- The goals of any climate action plan must include racial and economic justice.
- The benefits of a transition must be distributed equitably.
- No community should be left behind: any plan must include pollution reduction in legacy communities, benefits at the community level, access to affordable energy, health monitoring, infrastructure that can withstand floods and storms, accessible housing for people who have been displaced, maintaining and protecting water resources, and jobs.
- Plans must assess cumulative impacts in order to understand which communities are most vulnerable to climate change.

To learn more about Equity and Climate action visit www.encyclopediaforall.org

Contextual Equity:

Assessing the vulnerabilities of communities across Connecticut to climate change, due to the legacy of racial and income inequality and other factors.

Connecticut has an unfortunate expanding affordability gap. When it comes to energy and transportation, for example, the state's low-income population is stuck in a state of disparity with over 400,000 households unable to pay their electric bills and keep their heat on.

It is critical to identify the special patterns of vulnerability to climate change stresses to provide guidance on strategies that will work and on indicators that can be used to measure vulnerability and performance over time.

Low-income communities are busy struggling to survive and often work more than one job, or have other pressing responsibilities. Many low-income families are dealing with serious medical issues, housing displacement, or lack of safe affordable housing, and are impacted by general lack of resources.

Creating a Culture of Sustainable Thinkers™

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References and support data

Additional planning support links and reports can be located at www.encyforall.org & [Solve Climate Change 2030](#)

<https://encyforall.org/wordpress/2020/04/07/an-affordable-way-forward-energy-efficiency/>

https://encyforall.org/wordpress/wp-content/uploads/2019/02/EE-Health_2-18-2019_Flyer.pdf

https://encyforall.org/wordpress/wp-content/uploads/2017/04/EE-2_13-Slides-2.pdf

<https://encyforall.org/wordpress/wp-content/uploads/2017/04/h1801.pdf>

<https://encyforall.org/wordpress/wp-content/uploads/2017/03/Efficiency-First.pdf>

<https://encyforall.org/wordpress/wp-content/uploads/2017/04/h1801.pdf>

Green and Healthy Homes Initiative

<https://www.greenandhealthyhomes.org/wp-content/uploads/GHHI-Weatherization-Health-and-Safety-Report1.pdf>

Environmental Defense Fund https://www.edf.org/sites/default/files/documents/lee_national_summary.pdf

Energy-Plus-Health Playbook

<https://e4thefuture.org/groundbreaking-energy-plus-health-playbook-released/>

Save Energy Saves Lives - Physicians for Health ACEEE

<https://encyforall.org/wordpress/wp-content/uploads/2017/04/h1801.pdf>