



SIERRA CLUB

Connecticut Chapter
P.O. Box 270595
West Hartford, Connecticut 06127
connecticut.sierraclub.org

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Connecticut Energy Efficiency Board
c/o Department of Energy and Environmental Protection
10 Franklin Square
New Britain, CT 06051
via email: ExecutiveSecretaryCTEEB@theenergygroup.biz

Dear Energy Efficiency Board Members,

On behalf of the Sierra Club and our more than 40,000 members and supporters in Connecticut, thank you for the opportunity to provide public comment on the draft 2022-2024 Conservation and Load Management (CLM) Plan.

The Sierra Club is committed to solving the climate crisis with just and equitable solutions that will result in a healthy world for everyone. The climate emergency is happening now: record breaking temperatures and heat related deaths in the Pacific Northwest, “ice quakes” in Alaska, wildfires, and here in Connecticut, more extreme storms, historic droughts, warmer temperatures, flooding events, and sea level rise. The science is clear, we need to be undertaking an all-out effort to decarbonize our economy to avoid the worst future impacts of the climate crisis. Energy efficiency is a key component of this effort, and the CLM plan is one of the best tools that Connecticut has to advance climate policy while achieving its core function of increasing energy efficiency.

As currently drafted, however, the CLM Plan does not take the urgent action necessary to meet the climate crisis head on. It does not adequately support the state’s decarbonization goals or its strategic electrification goals. Nor does it do enough to address equity. The plan as drafted is largely business as usual.

That’s why Sierra Club Connecticut urges the Energy Efficiency Board to send the draft CLM Plan back to the utilities for redrafting to strengthen the decarbonization and equity components of the plan so that it:

- Stops subsidizing new fossil fuel appliances and heating systems now.
- Invests only in zero-emission electric appliances and zero-emission heat pump space and hot water heating.
- Includes achievable numeric goals to reach underserved and energy burdened households, resources to support those goals, and accountability measures for ensuring they are met.

Below, we explore these 3 recommendations for strengthening the CLM Plan further. These recommended changes to the CLM Plan will ensure that funding is used effectively for energy efficiency measures that also help achieve Connecticut’s climate and equity goals, rather than digging us further into a climate hole.

Phone: (860) 578-4750 -- Email: Connecticut.chapter@sierraclub.org

Stop subsidizing new fossil fuel appliances and heating systems now

In recognition of the need to address climate-destroying greenhouse gases, Connecticut enacted the Global Warming Solutions Act (GWSA) mandating a reduction of greenhouse gas emissions by 45% by 2030 and 80% by 2050 below 2001 levels. Connecticut must now focus on critically needed strategies, to meet the decarbonization requirements of the GWSA. “Natural Gas Policy and Public Health in Connecticut: A Yale Center on Climate Change and Health Issue Brief” finds that “to meet the state’s greenhouse gas emissions reduction goals, even efficient appliances powered by natural gas must be replaced by electric alternatives.” It is unacceptable to continue to invest ratepayer funds in any fossil fuel equipment.

Residents of Connecticut also want more to be done. The [vast majority](#) of Connecticut residents believe climate change is a threat to our future and that more should be done to limit climate destroying emissions and transition to clean energy sources for electricity, transportation and buildings.

In addition to climate concerns, it is also critically important to consider the health and environmental justice concerns with the continued use of gas equipment and appliances. Connecticut has some of the worst ozone pollution in the nation, and high rates of asthma disproportionately borne by environmental justice communities. Asthma Capitals 2019¹, ranked New Haven (#11) and Hartford (#13) among the 100 largest U.S. cities where it is most challenging to live with asthma.

Gas-fired appliances inside homes emit dangerous pollutants like carbon monoxide, nitrogen oxides, particulate matter, and formaldehyde; exposure to these air pollutants increase rates of acute and chronic health effects including respiratory illness, cardiovascular diseases, and premature death. A 2020 UCLA study found that after cooking for one hour with a gas stove and oven, peak levels of nitrogen dioxide (NO₂) inside the kitchen are so high they exceed both state and national outdoor acute air-quality standards in more than 90 percent of the homes modeled.² In May 2021, the Harvard T. H. Chan School of Public Health published a study³ in Environmental Research Letters in May 2021; the study shows that in Connecticut air pollution from burning fuels in buildings led to an estimated 318 early deaths and \$3.567 billion in health impact costs in 2017. Of the total, nitrogen oxides (NO_x) and volatile organic compounds (VOCs)—two of the pollutants associated with burning gas specifically — cost the state an estimated \$309 million and \$104 million in health impact costs, respectively.⁴

The cost of fossil fuel subsidies goes far beyond the equipment and appliances themselves; the cost includes human health costs, compliance with the GWSA, environmental costs to communities where fracking is happening, and the growing cost of recovering from climate change driven storms and natural disasters. All told, sinking residents’ hard-earned money into more gas is a terrible investment. Specific areas of the CLM Plan that must be revised to stop subsidizing fossil fuels include:

Retail Products and HVAC and Water Heating Systems - Beginning with the 2022-2024 CLM Plan, appliances and equipment run on fossil fuels should be ineligible for incentives or rebates. All consumers have electricity and with the help of the EnergizeCT program can adopt

¹ <https://www.aafa.org/media/2426/aafa-2019-asthma-capitals-report.pdf>

² <https://coeh.ph.ucla.edu/effects-of-residential-gas-appliances-on-indoor-and-outdoor-air-quality-and-public-health-in-california/>

³ <https://iopscience.iop.org/article/10.1088/1748-9326/abe74c>

⁴ <https://rmi.org/health-air-quality-impacts-of-buildings-emissions#CT>

zero-emission technologies. The draft Plan provides no details on the types of appliances and equipment that are eligible for incentives and/or rebates. Data on previous year(s) number and dollar amount of incentives and rebates is also not readily available. This information should be included in the Plan and on the website.

New construction - Building net-zero all-electric means both a huge reduction in carbon pollution, and a significant decrease in energy bills for families across the state, and should be the only option for subsidies in the program. The draft Plan says the companies “plan to heavily promote sustainable building practices.” CLM funds should only be available for net-zero all-electric new construction. The draft Plan suggests an emphasis on net-zero but does not require and has no specificity on what an emphasis means.

Invest only in zero-emission electric appliances and zero-emission heat pump space and hot water heating

As noted above, transitioning homes from fossil fuel heating systems to clean electric alternatives is key to meeting our climate targets and has other important health and environmental justice benefits.

The Governor’s Council on Climate Change in its 2018 report “Building a Low-Carbon Future” named “increasing deployment of RTTs such as cold-climate air- and ground-source heat pumps and heat pump water heaters” as a “primary means to achieve deep economy-wide reductions.” The report illustrated that to meet the 2030 statutorily mandated emission reduction under the GWSA at least 9% of commercial and 11% of residential thermal load must be served by zero-emission heat pumps.

Heat pumps for space and water heating are incredibly efficient. Heat pump space heaters and heat pump water heaters consume 3 to 5 times less energy than an equivalent gas appliance because heat pumps transfer heat, rather than creating it through combustion.

Even in cold climates, heat pumps are a better option. RMI reports that “Cold climates are seeing a resurgent attention on heat pumps, due in part to technological advances that have finally allowed heat pumps to perform in cold temperatures. The key feature allowing sub-freezing performance is an advance in variable speed inverter-driven compressor technology,⁵ which wasn’t available in mainstream offerings just 10 years ago.⁶ Leading products are now capable of performing well below -10°F⁷ and operating at more than double the efficiency of resistance or gas systems below zero. These aren’t just manufacturer claims: heat pumps have been successfully field tested in Minnesota⁸ (which has some of the coldest winters in the Continental United States) and as far north as the Arctic Circle.⁹ Other advances in heat pump controls have allowed for a more seamless integration of backup electric resistance systems, which can provide an extra layer of security in extremely cold climates.”

Heat pumps and other advanced zero-emission electric appliances are readily available. We don't have to exacerbate climate change, pollute the air, or put our communities at risk with gas appliances and

⁵ http://cchrc.org/media/ASHP_Tech_Assessment.pdf

⁶ <https://www.pickhvac.com/faq/air-conditioner-inverter-the-secret-to-skyrocket-your-efficiency/>

⁷ <https://neea.org/img/documents/CSA-EXP07-Interim-Testing-Report.pdf>

⁸ <https://www.mncee.org/cold-climate-air-source-heat-pumps>

⁹ <http://cchrc.org/cold-climate-air-source-heat-pumps/>

costly gas pipelines. Recent polling finds that Americans across party lines strongly support rebates for clean electric appliances that cut reliance on fossil fuels.¹⁰

Sierra Club Connecticut urges the draft plan be revised to be more specific and ambitious in deploying zero-emission heat pumps by incentivizing only zero-emission heat pumps for hot water and space heating:

Heat pump hot water and space heating - The draft Plan says the companies will “prioritize increasing deployment of RTTs such as cold-climate air- and ground-source heat pumps and heat pump water heaters” in both the commercial and residential areas. It does not elaborate on hot water heaters, but goes on to say that the heat pump pilot will be extended and that “the Companies will determine if it is cost effective to transition the pilot to a full-fledged program during the upcoming term.” This is confusing and will not achieve the kind of swift deployment of heat pumps that is needed. Incentives and rebates should end for fossil fuel fired hot water heaters, furnaces and boilers; only zero-emission heat pump equipment should be subsidized by the CLM Plan.

Include achievable numeric goals to reach underserved and energy burdened households, resources to support those goals, and accountability measures for ensuring they are met

Sierra Club applauds the inclusion of equity as a priority for the 2022-2024 CLM Plan, as well as the work already done to address health and safety barriers that prevent up to 30% of low- to moderate-income households from accessing the full range of energy saving offerings of the Energize CT program.

DEEP has made equitable energy efficiency a priority. DEEP’s Vision for Equitable Energy Efficiency¹¹ is that equitable energy efficiency programs will:

- Alleviate high energy burdens for low-income and underserved households
- Recognize and remediate past harm by prioritizing historically under-resourced communities
- Mitigate and eliminate barriers to low- to moderate-income participation in energy efficiency programs
- Drive accessible and transparent process to incorporate residents’ priorities and lived experiences into program design and decision-making
- Ensure equitable access to the benefits of energy efficiency

Nationwide, low-income households experience higher energy burdens, spend a larger percentage of their income on water and electricity, and face frequent shutoffs. As a result, when a heat wave or storm strikes, these families have a harder time preparing and recovering. In Connecticut, statewide energy burden is 3.7%. Neighborhoods in some Connecticut cities have rates of energy burden of 10% or higher, considered severe energy burden. The October 2020 “Mapping Household Energy & Transportation Affordability in Connecticut” report illustrates clusters of highly burdened tracts in Hartford, Waterbury, New Haven and Bridgeport.¹²

¹⁰ https://www.huffpost.com/entry/home-carbon-footprint-fixes_n_60f079fde4b00ef8761a4f0f

¹¹ <https://portal.ct.gov/DEEP/Energy/Conservation-and-Load-Management/Equitable-Energy-Efficiency>

¹² <https://www.veic.org/Media/Default/documents/resources/reports/Mapping-Household-Energy-and-Transportation-Affordability-Report-Oct-2020.pdf>

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Achieving equity in alignment with DEEP's vision will not only close the energy gap, it will improve lives. To do that, the CLM plan must do more than declare equity a priority, it must have:

Strong Metrics - The Plan must include robust metrics for equity. This should include measurable goals, resources to achieve those goals, and accountability for achieving them. This should also include measures to address the clusters identified in the above mentioned report. Equity also demands that more resources be directed to low income energy burdened households. As it stands, the program is aiming for proportionality, and not equity.

Finally, Sierra Club Connecticut is encouraged by the development to engage a Diversity, Equity and Inclusion consultant to help address equity in energy efficiency. We urge development of a more transparent, equitable and publicly accessible process in general, but especially for developing, approving and implementing the CLM Plan, and for the delivery of services.

We urge that the draft 2022-2024 CLM Plan be reworked to incorporate these recommendations.

Sincerely,

Samantha Dynowski, State Director
Sierra Club Connecticut