

Department of Energy and Environmental Protection

RE: Climate Pollution Reduction Grant Greenhouse Gas Reduction Measures

December 18, 2023

The purpose of these comments is to encourage the Department of Energy and Environmental Protection (DEEP) to consider another option in its development of a Priority Climate Action Plan and a grant application to implement that plan with funding from the EPA Climate Pollution Reduction Grant (CPRG) Program, designated by the federal Inflation Reduction Act (2022).

My proposed option is implementation-ready, will provide immediate reductions in greenhouse gases, and will primarily benefit low-income disadvantaged communities.

The State should provide grants to CT cities and towns to conduct gas powered leaf blower buy back programs.

FACTS:

1. US EPA and US PIRG have both documented that gas powered leaf blowers emit greenhouse gases as well as other toxic emissions including human carcinogens;
2. The persons most exposed to the toxic emissions are the low-income disadvantaged landscape employees;
3. In 2010 DEEP conducted a lawn and garden buy back program and found that **the most cost-efficient reduction in emissions** was the purchase of gas powered leaf blowers and string trimmers.
4. Other State and local governments have conducted buy backs of gas powered leaf blowers overwhelming participation. A buy-back program provides a partial subsidy. Hence, the recipient of the subsidy must complement the funding source to purchase a battery operated leaf blower.
5. Battery operated leaf blowers are quieter than gas powered leaf blowers and produce less low frequency noise. Low frequency noise travels for longer distances and penetrates window, walls and doors.

1. Greenhouse gas and toxic emissions from gas powered leaf blowers

US PIRG, and others, published a report titled [“Lawn Care goes Electric”](#) in October 2023. Table A-1 depicts the tons of emissions from this equipment for the State of Connecticut.

Table A-1. Emissions from lawn and garden equipment by state, 2020

State	Nitrogen oxides (tons)	Volatile organic compounds (tons)	Carbon dioxide (tons)	Methane (tons)	PM _{2.5} primary (tons)	1,3-Butadiene (lbs.)	Benzene (lbs.)	Formaldehyde (lbs.)
Connecticut	872	4,144	337,890	254	284	41,604	235,033	74,690

NOx, CO2 and Methane are the top 3 greenhouse gases targeted under the Kyoto Protocol. Four of the listed compounds are carcinogens (PM2.5, 1,3-Butadiene, Benzene, Formaldehyde); and NOx and VOCs combine to form ground level ozone (lung issues).

According to the report authors, 85% of the PM2.5 and 51% of the VOC emissions are attributable to 2-stroke engines (i.e., gas-powered leaf blowers). "Engine type – Across all types of equipment, two-stroke engines were responsible for 85% of all fine particulate emissions from gasoline-powered equipment in the lawn and garden sector in 2020, along with 51% of all VOC emissions." (see page 14).

NB: Fairfield and Hartford counties are called out in a number of tables as top emitting counties.

A [US EPA Region 1 study](#) measured the emissions for gasoline powered lawn and garden equipment (GLGE) including gas powered leaf blowers. The study found that; “GLGE is an important source of toxic and carcinogenic exhaust and fine particulate matter. Improved reporting and monitoring of localized GLGE emissions should be implemented. Medical and scientific organizations should increase public awareness of GLGE and GLME and identify GLGE as an important local source of dangerous air pollutants. Communities and environmental, public health, and other government agencies should create policies and programs to protect the public from GLGE air pollutants and promote non-polluting alternatives.”

2. The persons most exposed to the toxic emissions are the low-income disadvantaged landscape employees

It is becoming more widely recognized that the individuals most adversely affected by gas-powered leaf blowers are the landscaper employees. These employees are more often than not minimum wage employees, who will use gas powered leaf blowers and string trimmers throughout their workday. Landscapers that have made the switch to battery operated equipment have been surprised that their employees have reacted positively to the change.

[Class, Race and Leaf Blowers \(Oct 2023\)](#)
[Landscaper Workers Health is At Risk in Montgomery County \(April 2023\)](#)

3. DEEP has experience conducting a buy back program for lawn and garden equipment

DEEP conducted a buyback of lawn and garden equipment in 2010 - 2012. Keep in mind, that this program allowed for the purchase of new gas powered equipment. It was a change out of old for new -- but it still had measurable environmental benefits. Imagine a buy back exchange of old gas powered equipment for battery operated equipment. See [Connecticut Lawn Equipment Exchange Fund \(LEEF\)](#).

In any event, the biggest bang for the buck was buying back old gas-powered leaf blower and string trimmers.

"The cost-effectiveness of exchanges within specific equipment categories varied similarly to that across all categories. Broad trends, however, suggested **that exchanges involving smaller pieces of equipment (e.g., leaf blowers and trimmers) outperformed larger machines (e.g., ride-on mowers) in terms of cost effectiveness**, while exchanges involving larger machines contributed more in terms of the absolute amount of emissions reduced. "

Attachment 9 shows that the top ten exchanges ranked by cost effectiveness per ton were primarily gas powered leaf blowers and string trimmers.

Equip. category	RECALCULATED_2-25	
	THC+NOx (tons)	Cost Effectiveness (\$/ton)
Leaf blower	1.122462179	\$ 181.74
Leaf blower	0.777089201	\$ 262.51
Leaf blower	0.777089201	\$ 262.51
Trimmer	0.800286435	\$ 269.85
Leaf blower	0.610415184	\$ 283.02
Leaf blower	0.925443216	\$ 381.18
Trimmer	0.491932831	\$ 414.67
Trimmer	0.491932831	\$ 414.67
Brushcutter	0.379344507	\$ 809.80
Leaf blower	0.197255342	\$ 892.85

4. Other State and local governments have conducted successful buy backs of gas-powered leaf blowers.

Here are just a few links to successful buy back programs.

[Bedford, NY buy back program;](#)

[Utah leaf blower exchange;](#)

[Hyattsville, MD exchange;](#)

[South Coast Air Quality Management District;](#)

[California Air Resources Board;](#)

In closing, you will find support for this proposed option in the US PIRG reports' recommendations for local and State Governments:

To improve the quality of the air we breathe and protect the climate, states and cities should take concrete steps to encourage a transition from gasoline-powered lawn equipment to cleaner electric options.

Local and state governments, along with major institutions, should **lead by example** by adopting electric lawn equipment for their own facilities.

Local and state governments should create **financial incentives** to encourage the purchase of electric lawn equipment. In 2023, for example, Colorado adopted legislation that will provide a 30% discount on electric lawn mowers, leaf blowers, trimmers and snow blowers.¹⁰ In addition to rebates and tax credits, governments should consider loan programs to help commercial landscapers afford the upfront cost of electric equipment.

To meet the particular needs of **commercial landscapers**, opportunities for education, training and technical support should be provided.

Local and state governments should consider policies that **phase out** sales of gasoline-powered lawn equipment over time, and/or **restrict the use** of the noisiest and most polluting equipment in certain circumstances. California, for example, will require that most small off-road engines sold, including those in lawn equipment, be zero emission starting in 2024.¹¹

Vincent Giordano
Ridgefield CT


<https://ridgefieldcalm.org/>

DEEP ClimateChange

From: [REDACTED]
Sent: Tuesday, December 19, 2023 7:25 AM
To: DEEP ClimateChange
Cc: [REDACTED]
Subject: Re: More Comments Climate Pollution Reduction Grant Greenhouse Gas Reduction Measures
Attachments: Eversource-CT-RRES-Aggregated-Average-Data-by-Town.xlsx

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In addition to the document that I sent yesterday, I offer these additional comments:

EV chargers

According to the US Dept of Energy, CT has 736 public chargers. See <https://afdc.energy.gov/stations#/find/nearest?fuel=ELEC>. In addition, in 2023 DEEP and Eversource awarded grants for a few hundred more public chargers. For example, Ridgefield was awarded grants to add 6 additional charging locations. There is also utility incentives for folks to obtain chargers and needed electrical upgrades for chargers, as well as incentives for charging management programs. Therefore, I'm not confident that more EV chargers will translate directly into more EV sales. You may wish to target the EV charger concept to help municipal fleets convert to EV technology, or perhaps public housing parking lots to support a secondary market for used EVs.

Solar Power

We have found that solar power installations are the gateway to residents making other energy efficient upgrades. People that have installed solar panels are much more likely to purchase EVs and energy efficient appliances, install air source heat pumps, geothermal, or battery technologies. In addition, CT has a terrific requirement that prior to adding solar panels, one must have a home energy inspection. This inspection provides immediate reductions in energy use with LED lighting and some weatherization. Therefore, the more the State reduces barriers to solar panel installations, the greater the slip stream effect for other energy efficient technology adoption. Attached is a town by town report on residential solar power production in CT. No idea if CT is on target with respect to solar installation goals.

Community Solar

Community Solar projects would have a great benefit to the EJ community and could be placed on municipal buildings as well as closed brownfields. For example, CT could provide grants to municipalities to upgrade roofing insulation at schools and work with companies such as Energea (CT based company) to crowdsource funding for solar panel installations for community solar purposes. Energea has a US portfolio of solar installations and has experience with community solar projects. <https://www.energea.com/>

Weatherization

We all know that the most cost-effective means to reduce fossil fuel use is upgrading the building envelope. Grant money to upgrade town buildings and schools would have year 1 benefits in fossil fuel reductions. The same is true for public housing buildings.

Combining Ideas:

If the goal is to reduce fossil fuel use in a cost-effective manner, and to include disadvantaged communities in the solution; then consider this idea:

Focus on public housing

1. improve weatherization at public housing;
2. add solar panel installations or connect to community solar;
3. install heat pump technology at public housing;
4. install EV charger infrastructure for secondary EV car market at public housing

Vincent Giordano

DEEP ClimateChange

From: Lynne Bonnett [REDACTED]
Sent: Tuesday, December 19, 2023 9:43 AM
To: DEEP ClimateChange
Subject: commentary by Michael Uhl re GHG reduction for disadvantaged communities
Attachments: Correspondence regarding PURA Dockets (Uhl).pdf

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EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

As promised last evening I have attached Michael Uhl's excellent commentary with his permission. Michael is the technical lead for I HEART MY HOME. He offers specific issues that need to be addressed, how to address them and what metrics could be used for quality assurance.

I think you will find it very interesting and well thought out. He prepared these comments as responses to several PURA dockets. Since PURA is part of DEEP perhaps you have already seen these comments. However, I think we would all benefit from a better understanding of how our programs that are designed to help disadvantaged communities are and / or are not working in CT. Michael clearly outlines issues followed by solutions and metrics - I don't think that some of them would cost a lot of money - they are the "low hanging fruit" so to speak.

Personally, as much as I would love to see small multifamily owner occupied homes (2-4 units) equitably share solar without barriers, I honestly lost hope several years ago that we in New Haven would ever see such opportunities here for low to moderate income renters. It is truly shameful. (The current SCEF program benefits the developers with a pittance given to the LMI resident.)

Thanks again and best wishes on your applications.

Sincerely
Lynne Bonnett
New Haven Energy Task Force

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Lynne Bonnett

Mr. Jeffrey R. Gaudiosi, Esq.
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Comments by Michael S. Uhl

Regarding:

- Docket No. 22-08-02RE01 – Annual Residential Renewable energy Solutions Program Review – Year 2 – Contractor Education and Enforcement
- Docket No. 22-08-08 – Application of the United Illuminating Company to Amend Its Rate Schedule
- Docket 22-08-05 ANNUAL ENERGY STORAGE SOLUTIONS PROGRAM REVIEW – YEAR 2
- Docket No. 17-12-03RE09 – PURA Investigation into Distribution System Planning of the Electric Distribution Companies – Clean and Renewable energy Resource Analysis and Program Reviews
- Docket 17-12-03Re08 – PURA Investigation into Distribution System Planning of the Electric Distribution Companies – Resilience and Reliability Standards and Programs
- Docket No. 17-12-03Re03 – PURA Investigation into Distribution System Planning of the electric Distribution Companies – Electric Storage

January 17, 2023

Please accept the following comments on my behalf.

I serve as the technical lead to "[I Heart My Home CT](#)", a cost-free, one-on-one home energy counseling service to all residents of Connecticut. We currently serve over 480 residents and 760 units (and growing), of which 44 percent (%) are low-income. We identify, analyze, and coordinate solutions for renters, owners, and landlords to make homes more energy-efficient and deploy clean energy and sustainability practices at those properties to ensure a transition to an inclusive, equitable energy future.

This proceeding covers many broad topics, while requiring deep, technical subject matter knowledge to truly understand the implications. The far-reaching implications feel significant. I categorized my comments with regard to Table 2: Suggested Priority Outcomes of Staff Concept Paper 3 of Docket No. 21-05-15 – PURA Investigation Into a Performance-Based Regulation Framework for the Electric Distribution Companies ("Docket") proceedings. My intention is to share insight into existing mechanisms, as experienced by our state residents, and opportunities for improvement to reach outcomes. Then I will suggest some options for metrics for consideration.

Table 2: Suggested Priority Outcomes

Goals	Priority Outcomes
Enhance EDC Performance	1. Efficient Business Operations
	2. Comprehensive and Transparent System Planning
	3. Distribution System Utilization
	4. Reliable and Resilient Electric Service
Advance Public Policy	5. Social Equity
	6. GHG Reduction
Improve Customer Empowerment and Satisfaction	7. Customer Empowerment
	8. Quality Customer Service
Ensure Reasonable, Equitable, and Affordable Rates	9. Affordable Service

Reliable and Resilient Electric Service

- Battery storage programs
 - Residents purchase products for their homes to receive a meaningful service. Sometimes, residents can afford these services, thanks to creative programs arranged by state, Utility, and funding organizations. When the residents do not receive the service because of Utility action, potentially considered acceptable in the program, we need to reconsider. Should regulators permit the Utility action? The following is one of these cases.

One community member of Westport was an early adopter of backup power with electric batteries at his home, primarily for many outages each year, purchased in 2019. In 2020, the resident enrolled two Tesla Powerwalls in ConnectedSolutions, without any upfront incentive. From 4-7pm in the summer, Monday through Friday, Eversource would export 5-6kW from his batteries on his property, leaving the battery no more than 20% full. If he had a power outage that was not expected to affect the whole state, he found he didn't have enough electricity to run the appliances he wanted to run. Then, there was a five day outage. The storm was predicted by weather stations. Eversource continued to take power, up to the day before the storm, leaving him with too little electricity for the outage. This happened more than once. He contacted Eversource Tech Support. They promised not to take electricity before a predicted storm, but they continued to do so. The Tesla Powerwall app had a "stormwatch" toggle that worked, but then it stopped working to prevent the withdrawal of his energy prior and during storms. The owner felt that he had no control over when and how much electricity was being taken. Eventually he had to turn off the power to the house in order to stop Eversource from taking the electricity...something he was not comfortable doing. After three years of operating this way, the batteries have a high degradation rate. The Powerwall shuts down when it

drains to 10% capacity, so being left with 20% isn't that great. The resident canceled his participation in ConnectedSolutions.

In short, the owner purchased batteries for backup power. He did not receive the service of maintaining operation during an outage. He was consistently told that ConnectedSolutions and the Utilities would not draw his electrical energy before and during storms. **The Utility “got its power” and avoided major costs for managing its distribution system, but failed to improve reliability for this customer. The program was marketed nationally as a success. Yet this customer was left in the dark.**

- If PURA were ever to consider sunsetting the ConnectedSolutions program, such as noted in the DEEP comments for Docket No. 22-08-05¹, then a few considerations would be very important for customers, including
 - Any ConnectedSolutions customers could automatically be enrolled in Energy Storage Solutions (ESS) with their existing eligible technology, through opt-out basis
 - Any technology that does not immediately meet the current list of eligible manufacturers will have their first five (5) year period of participation paused until properly enrolled in ESS. This avoids the customer losing a year of eligible payments at the higher tier of incentives. **The customer should not receive the financial penalty for trusting the Utilities, PURA, DEEP, and CT Green Bank** to appropriately and seamlessly manage incentives, while the customer pays the upfront costs to deploy the technology.
 - Any rebates, for which the customer would have been eligible at original date of implementation and with any newly eligible technology, should be considered for reimbursement, at the completion of one successful year in the ESS program. The rebate amount should be an amount greater than 50 percent of the rebate value and less than 100 percent of the rebate (minus the tax credit amount potentially utilized without the rebate).
- The Utilities, by treating the entire state of Connecticut as the same, will lead grid reliability and resiliency programs to failure. Overly centralized planning is what helped to get us into this problem; it's not the way to get us out of it. My concern is that the failure will be felt most by residents. **Only with richer data transparency, flexibility to accommodate local distribution resilience needs, and an emphasis on decentralized power, local communities and residents can feel the successes of smarter regulation and Utility service delivery.**
- Metrics to consider for evaluating these localized concerns include the following, which are calculated **regardless of the cause of outage**, beyond IEEE 1366. Regulatory filings require many of these without Major Event Days (MEDs), per IEEE 1366, but the calculation and data should be provided for all events (including storms). More details on [each metric can be found here²](#) and the updated framework [here³](#).

1

[https://www.dpuc.state.ct.us/dockcurr.nsf/8e6fc37a54110e3e852576190052b64d/f99458bddcebbbbb085258927004bb52d/\\$FILE/2023%20C&LM%20Plan%20Cover%20Letter%20to%20DEEP.pdf](https://www.dpuc.state.ct.us/dockcurr.nsf/8e6fc37a54110e3e852576190052b64d/f99458bddcebbbbb085258927004bb52d/$FILE/2023%20C&LM%20Plan%20Cover%20Letter%20to%20DEEP.pdf)

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https://drive.google.com/open?id=1tNH45pxgXYVcMbgVfYSuRIIdELaHzcSt&authuser=system.smart.llc%40gmail.com&usp=drive_fs

³ <https://peer.gbci.org/sites/default/files/resources/PEER-v2-Rating-System.pdf>

$$\text{SAIDI} = \frac{\sum (\text{Restoration time for interruptions, mins} * \text{Number of customers interrupted})}{\text{Total number of customers served}}$$

$$\text{SAIFI} = \frac{\sum (\text{Number of customers interrupted})}{\text{Total number of customers served}}$$

$$\text{CELID-5} = \frac{\text{Number of customers experiencing interruptions} > 5 \text{ hours}}{\text{Total number of customers served}}$$

$$\text{ASAI} = \frac{(\text{CS} * \text{H}) - \sum (\text{RT} * \text{CI})}{\text{CS} * \text{H}}$$

$$\text{MAIFI} = \frac{\sum (\text{IDO}_M * \text{CI})}{\text{CS}}$$

$$\text{CEMMI-5} = \frac{\text{Number of customers experiencing} > 5 \text{ momentary interruptions}}{\text{Total number of customers served}}$$

$$\text{AIFI} = \frac{\sum (\text{Number of interruptions} * \text{Number of customers interrupted})}{\text{Total number of customers served}}$$

Quality Customer Service & Affordable Service

- Utility weatherization programs misalignment
 - Over the last decade I have coached many residents with low incomes who have enrolled in weatherization programs including Home Energy Solutions-Income Eligible (HES-IE) and Weatherization Assistance Program (WAP) to receive direct install measures, like blower-door assisted airsealing. Some customers' homes can receive a Comprehensive Bonus to fund Add-On energy efficiency measures (Add-Ons), such as attic insulation, wall insulation, heat pump water heaters, triple-pane windows, advanced duct sealing, etc. A customer receives an energy improvement, at no cost, from a licensed contractor that is approved by the Utilities. The customer expects that the selected product is the best option for them and that it is aligned with the Utility programs. Unfortunately, the products that are selected by Utility-paid contractors are not required to align.
 - If a "hybrid" heat pump water heater (HPWH) is identified as an Add-On measure with HES-IE, there is an EnergySTAR requirement for the equipment specification. Meanwhile, Utilities and regulators want automated demand response (ADR) programs to: increase enrollment across all residential customers; enhance flexible, dispatchable load; and increase grid-enabled smart technology that can inform customers about their usage. These two programs are related. Yet, a HES-IE HPWH can be installed that does not need to match the ADR criteria. The HPWHs installed today will exist for the next 10-15 years in homes. For HES-IE customers, often with the least capability to make a replacement with their own funds and could potentially benefit the most from utility bill incentives via ADR programs, the Utilities and its contractors are essentially locking in the inability to access ADR for the next decade and

significantly minimizing the potential value. The Utilities have run their own HPWH studies and evaluations. They identified a single product brand that was suitable to operate with EnergyHub, the selected statewide Distributed Energy Resource Management System (DERMS) platform. The program is reported to have had less success because the energy use is so low from these hybrid water heaters that it requires many more devices to equal the same impact as old, inefficient electric water heaters. **Rather than accelerate deployment of grid-interactive-compliant technologies to reach this scale by aligning HES-IE funds for appropriate equipment, Utilities have chosen to keep programs siloed, pay to install inferior equipment for low-income residents, and lock in lower enrollment potential for residential ADR. This needs to be rectified.**

- Let me focus on another significant area of challenges with HES-IE customers: health and safety barriers (H&S). In a recent data review from 2017 to 2019, of the total low-income homes visited in Connecticut, 23% were barred from installing weatherization.⁴ I have known several residents that received a HES-IE weatherization visit, only to be denied services because of potential mold, previous drywall spotting from dampness, or other identifiers. Every trained BPI Analyst knows that we do not want residents having blower-door tests with mold. Any resident knows (or more accurately, generally fears) the costs of actual mold remediation, which can be prohibitive. Therefore, the labeling of mold in a house can be like a scarlet letter. Two main reasons that customers are constrained in their ability to manage mold in a basement are a) portable dehumidifiers may not have automatic means to discharge condensate, whether into a sink, sump pump, or drain, and b) the house is not weatherized, especially at the basement rim joist, where moist air can enter easily during the summer months. The latter situation is particularly difficult for HES-IE customers because the mold can't be stopped without the rim joist being weatherized and the rim joist can't be weatherized until the mold is remediated.

I know of multiple customers who were using electric resistance, oil-fired, or propane hot water tanks in their basements. The HES-IE program commonly qualifies these existing product situations as suitable for funded Add-On measure replacements with hybrid (i.e. heat pump) water heaters. The extra benefit of a hybrid water heater is it acts like a dehumidifier throughout the year when operating in "heat pump only" mode, which also happens to be the lowest operating cost mode. Yet, with the H&S barrier still present, the Utility and Wx contractor are not willing to proceed with the Add-On measure because the Core Measures have not all been completed first. Clearly, the resident is in a chicken-and-egg scenario of "which one do we resolve first?"

If the Utilities can be flexible in implementing Add-On measures for hybrid water heaters, set in "heat pump only" mode, then residents could receive HES-IE benefits, remediate the H&S barrier that originally prevented them from Core Measures services, and later (after the hybrid water heater has some time to

⁴ 11/18/2020 Eversource and United Illuminating presentation at Connecticut Weatherization Barriers Workshop, (<https://portal.ct.gov/-/media/DEEP/energy/ConserLoadMgmt/Weatherization-Barriers-Workshop-1-Slides.pdf>)

dehumidify), resume addressing Core Measures with their HES-IE. Everyone wins. Even with the start of the Weatherization Barrier Remediation Program, Operator (WxBRPO), we cannot assume this new program will solve all H&S barriers. Rather, we want the braided programs to utilize the opportunities within their control more flexibly and harmoniously for the residents' benefit. We do not want the WxBRPO to utilize its limited federal funding for expenses that HES-IE programs are incentivized to deploy more rapidly. Our program has helped several residents to continue making progress and successfully remediate mold conditions and technician concerns through this electrification approach. Yet, contractors and the Utilities are not standardizing this approach as the default, but rather something that an energy concierge service needs to actively advocate and explain in each situation.

- Another concern about the misalignment of HES-IE programs is within the Comprehensive Bonus and the Fuel Switching evaluation. Prior to my day-to-day involvement with residents, I did not realize how many customers enrolled in HES-IE were not receiving the comprehensive suite of Add-Ons eligible for their home. We often received explanations from weatherization (Wx) contractors stating, "We don't do that scope," or "It takes too long to get quotes from subcontractors", or "the customer could never afford the copayment," or "We are just chasing air leakage now", or "we don't have time to test for duct leakage", or "no subcontractors will sign our Memorandum of Understanding (MOU)." Even though these HES-IE contractors were designated by the utilities to identify, submit for approval, and manage subcontractors, most HES-IE residents were not receiving anything more than airsealing and insulation. As a result, most HES-IE customers could not be eligible for the Comprehensive Bonus, the additional rebate dollars available to fund projects of three (3) or more upgrades in a single package. If a Wx contractor has gone so far as to propose three or more Add-Ons, including HVAC, then a HES-IE customer has a real opportunity to benefit. Yet, in many circumstances, the Utilities deny this through their own calculations, using the incentive qualification tool (IQT). The IQT determines how much energy savings is generated from each project and then attributes a financial value to the project, based on fuel costs. Usually, inefficient homes can save lots of money and energy, so they can qualify for more funding, especially when Comprehensive projects allow access to a 30 percent (%) increase in the funding. We know of residents that were eligible for most Add-Ons, but were required to pay approx \$17,000 as copayment. Why could this be? All the Add-Ons were heavily rebated normally, the residents used expensive oil for heating and hot water, had single-pane windows, and the quotes were competitive. We planned to increase insulation in walls, attic, and basement ceiling. We planned to install a hybrid water heater and triple-pane windows. Yet, the Utility stated that since the customer is switching to a high efficiency heat pump, the Utility must calculate all the savings based on efficiency to this new fuel. When we removed the air-source heat pump (ASHP) or mini-split heat pump (MSHP) from the IQT, suddenly all the Add-Ons can be funded at zero (\$0) copayment to the customer. Later, we could resubmit the ASHP conversion from

heating oil and the customer still had zero (\$0) copayment. To reach the same ends, why does one process require \$17,000 of copayment when another requires \$0 copayment? Why introduce months of delays, add administrative tasks, and complicate reaching our state climate and intended affordability goals for HES-IE customers?

- [“Residential heating and cooling account for 51% of household energy use and 40% of household energy bills in the US. Inefficient gas and electric resistance furnaces and air conditioners \(ACs\) account for more than 80% of all products currently in use. Heat pumps, which can provide both cooling and heating services, are up to four times more efficient than traditional equipment and have the potential to save consumers money on their energy bills and reduce greenhouse gas emissions.”](#)⁵ The [study by CLASP shows](#), across the country, how “over a ten-year period, the program [to only replace air conditioners with heat pumps] will save Americans more than \$27 billion on their energy bills and deliver \$80 billion in additional societal benefits.”⁶ In CT, our programs like HES-IE, which largely take control of the product selection, contractor management, and funding from the resident, should similarly only permit the installation of heat pumps as a replacement for air conditioning systems. A simple metric to track is “how many air conditioners were installed through the HES and HES-IE programs?” with a desired result of zero.
- Metrics to consider for a scorecard of HES-IE programs include
 - Percent of grid-interactive devices deployed at homes with low-moderate-income residents. A suitable standard, by product type, to determine compliance with grid-enabled technology include those contained in Title 24 Appendix JA13 or noted by NEEA in the latest HPWH version to have a CTA-2045 Compliant Communication Port (also called EcoPort), such that the product can be utilized with the Utilities’ DERMS without any other equipment, via WiFi. Another suitable option could be OpenADR 2.0 Profile A or B. [The NEEA specification is available here.](#)⁷ Further recommendations can be reviewed in the [2021 report by Northeast Energy Efficiency Partnership \(NEEP\) here.](#)⁸
 - Average copayment for HES-IE projects receiving Comprehensive Bonus
 - Average copayment for HES-IE projects receiving a Comprehensive Bonus and including electrified equipment (HPWH, ASHPs, MSHPs)
 - Percentage of HES-IE projects where the Wx technician identifies viable electrification opportunities, but no electrified equipment was included in the IQT.

5

<https://www.clasp.ngo/updates/a-heat-pump-incentive-program-could-rapidly-transform-the-us-residential-market-and-lower-consumers-energy-bills-by-27-billion/>

6

<https://www.clasp.ngo/research/all/3h-hybrid-heat-homes-an-incentive-program-to-electrify-space-heating-and-reduce-energy-bills-in-american-homes/#>

⁷ <https://neea.org/img/documents/advanced-water-heating-specification-v8.0.pdf>

⁸ https://neep.org/sites/default/files/media-files/grid_final_formatted.pdf

Customer Empowerment

- One consistent area of misalignment and difficulty to achieve state goals includes data transparency and accessibility for customers. In New York, [Arizona](#)⁹, Texas, California, and Vermont, [standard protocols are followed for sharing customer-level energy data](#)¹⁰ in a way that a computer can read and use it, [such as HPXML](#)¹¹. Obviously, other industries share sensitive data with individuals daily, such as through medical portals for appointments and test results in standardized formats. Energy data can be easily protected and encrypted such that payment information (such as a credit card account) is not included. Many homeowners participating in Utility programs, like **HES-IE customers, are not even receiving the standardized results of the Home Energy Report, and are certainly not receiving the information in the Energy Data Sheet (EDS) that confirms all the data collected by the Wx technician during the site visit.** This data is appropriate to allow the customer to access, keep as a record, share with contractors, and comment on inaccuracies.

We found that Wx technicians have, at times, incorrectly described homes. In some cases, customers using heating oil were characterized as heating with gas, just because the customer had a gas stove and gas account number. This meant a difference of approximately \$15,000 in copayments for their HES-IE projects. When we helped correct the simple mistake, the customer had no copayment and the projects proceeded as fully funded Add-On measures. In other cases, HES-IE customers were given the record of the current conditions of their home by their Wx Contractor and they then used it to make a home management plan for the future. When working with these customers, we found this energy data helped subsequent contractors prepare for site visits, refine Manual J calculations, and prepare their proposals faster. Having this data can also allow the resident to see for themselves whether other Add-On measures are suitable to complete, but were not suggested or offered by the Wx Technician for whatever reason, which, as discussed previously, is not uncommon. Smarter use of data protocols helps reduce errors, increase speed of decisions, enable better analysis of opportunities, deploy more energy efficiency projects, and ultimately lead to more satisfied customers and contractors.

- A minimum viable option for residents includes an online platform that gives users secure access to individual energy usage data that can be downloaded in standard file formats, including HPXML, [Green Button](#)¹², and CSV. The platform must have, at minimum, the following features and content
 - User authentication for secure access
 - Annual energy usage data for at least three previous years
 - Energy usage data by day or a shorter interval
 - Energy usage data for the above interval for at least one previous year
 - Energy usage data in standardized machine-readable format

9

<https://betterbuildingssolutioncenter.energy.gov/sites/default/files/attachments/Improving%20Arizona%20Home%20Performance%20-%20Case%20Study.pdf>

10

https://www.energystar.gov/campaign/improvements/professionals/resources_library/hpxml_guide/guide/adoption

¹¹ <https://www.hpxmlonline.com/overview/>

¹² <https://www.greenbuttonalliance.org/about-cmd>

- Infographics showing variations in energy consumption and electricity bills over one year
 - Infographics showing historical trends in annual energy consumption and electricity bills
 - Infographics comparing energy consumption and electricity bills for defined intervals from different years
 - The platform gives users options to estimate the financial and environmental benefits of energy conservation and high-efficiency electric appliances.
 - The platform enables users to authorize third parties, on an opt-out basis, to access their energy consumption data directly from the cities or utility web portal. The third parties can access the online platform and also access energy usage data authorized by the user in standardized machine-readable formats
 - Comply with industry standards for energy data privacy, including NAESB [REQ.21 - Energy Services Provider Interface Model Business Practices](#).¹³ Published by NAESB in January 2020, version 3.3 of the Green Button standard includes the structure and definitions for Personally Identifiable Information (PII); revised structure and definitions for Energy Usage Information (EUI); updated security requirements; and a simplified customer authorization process.
- Beyond individual customers, many other stakeholders need access to data about energy use. With the passage of the Inflation Reduction Act (IRA), the state, Utilities, and contractors will need access to monthly and daily consumption data to calibrate models to [BPI-2400¹⁴](#) to [qualify projects for some of the rebates](#)¹⁵. BPI-2400 serves to define a standardized process and set of requirements in order to calculate energy savings for whole-house energy retrofits. This standard can be applied to single-family detached dwellings and some small multi-family dwellings as defined by the standard. [In one set of projects, the study found that BPI-2400 energy bill calibrated models boosted realization rates from 61% to 91%.](#)¹⁶ In more concrete terms, without BPI-2400, energy models predicted 100 MBTU in savings but only 61 MBTU were actually saved. After applying the BPI-2400 standard, for every 100 MBTU of predicted savings, 91 Mbtus were actually saved. **The technology exists to use data to make reliable analyses for residents and contractors to agree on an advantageous set of home energy improvement projects. We need Utilities to provide access to the data that sharpens accuracy and increases trust in the planned upgrades.**
 - The conversations about PBR are not only about addressing today's problems. We also need to provide the infrastructure to meet the future needs that are not prioritized yet by residents and contractors, especially given the gulf of data not available to them. For example, customers cannot get a clear analysis from any Utility about the economic benefit and potential of shifting their rate structure to Time of Use (TOU). Electricity and gas consumption at homes is often a very static cost that is unrelated to momentary

¹³ https://naesb.org/retail_standards.asp

¹⁴

<https://www.bpi.org/sites/default/files/ANSI-BPI-2400-S-2015%20Standard%20Practice%20for%20Standardized%20Qualification%20of%20Whole-House%20Energy%20Savings%20Predictions%20by%20Calibration%20to%20Energy%20Use%20History.pdf>

¹⁵ <https://snuggpro.com/blog/item/bpi-2400-in-the-context-of-the-homes-rebate-program>

¹⁶ <https://psdconsulting.com/wp-content/uploads/2015/04/NYSERDA-HPwES-RR-Study-Rev1-012115.pdf>

- demand. This is nearly the opposite of gasoline prices that are promoted and accessible on most street corners in large signs, changing every day. The electric grid needs to become more flexible, including its pricing. Yet asking customers to adopt TOU rates today is more similar to Russian roulette. The customer can keep doing the same activities, but it's just as likely to blow up in their face. Instead, the process could be exceptional. Imagine if: a) the customer had the data transparency and access to their utility bill history and b) could share it with a third-party software provider or contractor, which could c) complete analyses of all the historic hours using electricity in peak and non-peak hours, d) provides a quantified estimate of costs or benefits to switching, and e) suggests quantifiable behaviors and/or additional Add-Ons to provide more economic benefit. These Add-Ons could be expanded to include electric vehicle (EV) chargers, enrollment with demand response aggregators or third-party retail choice providers, and more. Clearly, without the data, contractors and Utilities cannot serve the large and growing residential demands for products and services, or enable rational decision-making to consider flexible, time-dependent pricing of electricity.
- Third-party solution providers need data access and transparency too. In the [recent CES Technical Meeting 5 - Active Demand Response](#),¹⁷ several successful solution providers from across the country noted how “most residential use cases and many newer technologies have no opportunities to participate despite technical capability” (slide 60). We must remove barriers so the data is available quickly for solution providers to act directly with residential customers and so the correct equipment gets installed today (not 10-15 years from now when the equipment will be replaced again). To create economic opportunity for these solution providers to enter the state market, they also need equal consideration and data access that the Utilities currently have as the incumbent monopsony. **Without making the data available, Utilities can hide the true market potential for more flexible, affordable, and trusted solutions to reach customers.** With [FERC Order 2222](#), which directs entities toward aggregation services, we are further encouraged to monitor progress. Enabling this data access is also related to Social Equity, largely as it relates to the time availability of LMI residents to access, identify, acquire, share, analyze, and act on the data. We need to look no further than the customer experience between [ConnectedSolutions](#) and [Energy Storage Solutions](#). Currently, these two programs compete with each other, where some battery providers are not eligible in both, and customers do not receive up-front rebates in both. I know many customers who had signed contracts and confirmed financing for one battery system and either needed to a) scrap the project, b) completely redesign their project with additional costs, or c) proceed anyway and forgo the up-front battery rebate.
 - We need to show the data so the broad market of solutions can show up to supply solutions for the hidden, pent-up demand by residents. Without the data, we must assume no reasonable person will opt-in for variable pricing when they cannot control their electricity consumption reliably and automatically via an app.
 - Another example of absent data is with the Community Partnership Initiative (CPI) and the [CT Municipal Energy Dashboard](#)¹⁸. The goals in Round 1 had to be established based on a percentage increase over an average of data from several years prior, as the

¹⁷ https://portal.ct.gov/-/media/DEEP/energy/ConserLoadMgmt/Master-Slide-Deck_TM-5_DR.pdf

¹⁸ https://www.ctenergydashboard.com/CEC/CEC_Report.aspx?home=1

- data from the most recent years was unavailable. For the four participation targets determined by the Utilities, data for one of the years that factored into goal calculations was a cut and paste copy of the data listed for the previous year. Similarly, data for sixteen towns was shown as zero in the 2021 results, so municipalities cannot be clear on the results of their efforts or surrounding towns. Additionally, the municipal data lumps together related, but independent, technologies, such as air conditioning, gas incentives, furnaces, and heat pumps, into a single category for both HES and HES-IE customers. If a municipality or service providers do not see the quarterly results, if not monthly, of the HES or HES-IE activity in their areas, how can they know how well their residents are being served, how resilient the homes are to extreme weather, or how much more affordable bills might be. This relevant data is important to municipalities, regulators, and those in positions like the Energy Efficiency Board, who are trying to learn from recent history to inform and act in their organizations.
- Finally, data transparency is important for the agreements that residents make between each other, whether for the sale and purchase of a home or the renting of an apartment.

GHG Reduction

- I have worked with a few landlords who primarily sought our guidance to maximize the solar photovoltaic (PV) production at their small, multi-family home (2-4 units) to benefit society and make their housing more affordable. From their initial research, they intuitively understood that their roof space was more productive than appropriate for one apartment and one meter, but they did not understand how they could provide solar to all the tenants in a way that shared the energy efficiency, savings, and clean energy. I shared their concerns, yet willingly helped to explore a way within Connecticut's legislation. In one recent effort, we failed to reach the goal of sharing clean energy and battery storage for residents, including those aging with health and mobility concerns and those of low-income, because of the barriers of PURA submetering requirements and reviews in a time-limited incentive eligibility period. The owners of the home purchased the house with the intention to electrify and add solar PV in a reasonable transition period. The owners started pursuing solar and battery storage by soliciting input from energy concierge programs, friends, and multiple bids from contractors by June 2021. The owners also encouraged neighbors to install PV. After selecting a PV installer, the interconnection approval request started, but it never seemed to materialize. Finally, a response from the Utility required submetering of the installation, similar to Docket No.10-11-0710-11-07, even though our application was a "single-family" home. After multiple reviews with the State Building Inspector and local building code and permit offices, the owners agreed to combine meters to a master meter with revenue-grade submeters, suitable to fulfill NEC 210.25. Since the owners never intended to charge the tenants for electricity by consumption, but rather only to "include electric" in their rent, the submeters were simply to meet compliance, not practical use. With my help, the owners submitted a PURA application "as described in the General Statutes of Connecticut (Conn. Gen. Stat.) § 16-19ff" for Class I Renewable Energy Sources. Upon submission in early Sept 2022, they were told the review process would take no longer than 60 days, both in the application and by a PURA Rate Specialist. Later, after multiple efforts to check on progress, the office suggested 90-120 days as more reasonable for this application. After the 60 day time period, the owners were simply given the bad news from their solar PV installer: the project could not proceed as planned. The delays by the Utilities, State Building Inspector, and PURA

were too long, such that a) the net-metering tariff (and the related upfront rebate) of the original proposal would not be available because the system was not energized by the end of 2022, b) the most affordable battery manufacturer was determined not eligible for Energy Storage Solutions and therefore also not eligible for the upfront rebates, and c) due to the recent Federal Bank interest rate hikes, the financing rates for the loan would escalate significantly after January 1, 2023. Ultimately, the owners were committed to solar PV, but could not affordably make batteries fit right now and chose a simpler design, albeit one that did not share clean energy and affordable rates with every tenant. On the 73rd day after the PURA submission, we received a request for clarification on the application from a PURA Staff Attorney, after the redesign. After the meeting, we received clarification that any project that tried a similar approach could proceed with “limited approval”, such that approval could be granted quickly by directing it to a specific attorney. This experience highlights the vast amount of time and resources required for owner-occupants or arms-length landlords to consider including clean energy for their home(s). Additionally, there may be many homeowners, landlords, PV installers, building officials, or Utility representatives who will never know that PURA is interested to welcome and streamline these applications for submetering, *if the application can be sent to the right person with the right clarification*. Even with reasonable incentives for residential investment, such as a) bonus incentives for LMI residents to receive battery storage access or solar PV, or b) standard options like Modified Accelerated Cost Recovery System (MACRS) depreciation, or c) renewed 30% tax credits on solar PV and storage, the time delays can eliminate the possibility to use them for owner-occupants and landlords. Clearly, tenants have almost no viable option for reasonable clean energy onsite or resilient backup power, based on the administrative structures and soft costs, especially given the extremely limited impact and access of the state’s Shared Clean Energy Facilities (SCEF). More clearly, clean energy demand will continue to be limited in Connecticut, not because residents do not want or cannot pay for it, but rather because bureaucracy at many levels is restricting progress

- One of the factors that would help GHG reduction is a focus on the most inefficient homes. Empowering customers, the EDCs, and state agencies to use existing data to identify (to the property owner, to the utility, and to state agencies) the most inefficient homes (annual KWH per square foot and annual CCF per square foot) would allow directed response and substantially increase the speed of GHG reduction.
 - Metrics to consider include
 - Interconnection queue wait time since PV installer submittal
 - Number of single-family projects with multiple units
 - Number of projects approved using [SolarAPP+](#)
 - Annual kWh per square foot (electric) and annual CCF per square foot (gas) for the most inefficient homes (possibly top 2-10 percent)
 - Cost to ratepayers for delays in interconnection and converting these to an associated levied fines to Utilities, with a multiplier
 - Creating a scorecard related to customer generation satisfaction, quantified via survey for customers looking to interconnect. Categories of questions response timelines from the utility, ease of enrollment processes, timeline from application to interconnect to when system is energized, and number of applications to interconnect in a given time period compared to the number of facilities that interconnect within that same time period.

- Potential to further define a metric specific to the average days to interconnect DG systems and associated interconnection costs. Subset groupings could be <150kW, 151-500kW, >500kW.
- Creating a reporting metric for Interconnection, with a focus on social equity. Required reporting data could include the number of customers in EJ communities who have interconnected systems vs the number of customers in non-EJ communities who have interconnected systems, reporting on interconnection timelines for customers in EJ communities vs customers in non-EJ communities. Similar to above, tracking interconnection costs for customers in EJ communities compared to those not located in EJ communities

Distribution System Utilization

- EDCs as Distribution Network Integrator and Operator (DNIO), or Distribution System Operator (DSO)
 - Our transformational future looks clean, healthy, affordable, resilient, inclusive, creative, and interoperable. In context of the PBR language, [“The solution being implemented by a few countries and U.S. states is to change the role of the utility itself—moving to a DSO model. A DSO operates the grid like a marketplace, ensuring access to the services and creating outcomes that benefit customers and society. Essentially, the DSO will shift the utility away from its monopolistic roots toward more of a platform-operator role.”](#)
 - A platform-operator needs to spend more attention on welcoming competitive opportunities for multiple solution providers within similar categories, as well as space for new categories of solutions to incubate. The technologies available today will not be the only technologies available or services needed in a few years. The Utilities, in the 2022-2024 Electric and Natural Gas Conservation and Load Management Plan (C&LM Plan), continue to refer to singular focused pilot programs (Abode Energy Management and Sealed) for narrow aspects of CT, despite those programs having broader and more robust solutions offered in nearby states and sufficiently suitable throughout the state. For example, in CT, Abode is not permitted to mention regional groups like NEEP or use heat pump comparison tools that are readily available with Eversource in Massachusetts. Both of these enhance the education and understanding of residents that are considering the new technology, contractor proposals, and the incentives offered. Solution providers need consistency to make investments into markets, not start-stop pilot programs that are centrally controlled. While Utilities are still promoting single-vendor pilots, we could acknowledge the inherent value of welcoming a marketplace of competition. Even when the C&LM Plan required the Utilities to take specific actions regarding these pilots and alternatives, the required actions were ignored. There are more energy concierge providers that could competitively serve in these capacities, but we need regulators to encourage the decentralized control of market management instead of allowing Utilities to continue choosing the winners through singular vendor selection. Residents and businesses want an opportunity to choose competitive options.
 - Another area where choice matters to residents and businesses includes community choice power, sometimes called community choice aggregation (Community Choice). Massachusetts, New Hampshire, Rhode Island, and New York all participate in some

form of Community Choice, with many New Hampshire municipalities and the City of Boston being the most notable recent aggregation groups. **Community Choice is enabling markets for innovative, responsive services to residents that are not currently experienced in CT.** No municipality wants a requirement to adopt Community Choice, but the experience of nearby states shows that many local governments choose to pursue it when their residents are given the choice between the status quo and reaping the benefits of local, resilient power.

- I suggest reading commentaries on PBR, PIMs, and future utility roles, including
 - [PIMs for Progress \(Rocky Mountain Institute\)](#)
 - [How Will a Transition to a Distribution System Operator Model Impact the Distribution Grid? \(S&C Electric\)](#)
 - [Performance Excellence in Electricity Renewal \(PEER, USGBC\)](#) Rating v2 and associated Outcomes and Metrics
 - [An Electricity System Structure for the 21st Century](#) (Lorenzo Kristov, PhD)

Sincerely, Michael Uhl [New Haven, CT]*

*My dearest thanks to the many helpful suggestions of friends and colleagues to improve and refine my comments above.

December 18, 2023

Connecticut Department of Energy & Environmental Protection:

Thank you for giving the Conservation Law Foundation (CLF) the opportunity to submit comment on DEEP's development of a Priority Climate Action Plan (plan) and accompanying implementation grant application to secure funding from the Environmental Protection Agency's (EPA) Climate Pollution Reduction Grant (CPRG) Program. Founded in 1966, CLF is a member-supported non-profit advocacy organization working to protect public health and the environment and build healthy communities in Connecticut and throughout New England. Through its Zero Waste Project, CLF aims to protect communities and our environment from the toxic and unjust dangers of unsustainable waste practices and to advocate for waste reduction, diversion, and recycling. Thank you for including food scrap diversion in the state's plan. **The community benefits to including this implementation-ready greenhouse gas (GHG) reduction measure in the plan are huge; and they impact not only climate, but public health and community resiliency.**

As a planning grant recipient from the EPA, Connecticut is designing a plan that incorporates a variety of measures to reduce GHG emissions from across its economy in six key sectors; significantly, waste management is among the eligible sectors.¹ Connecticut's Comprehensive Materials Management Strategy aims to reduce GHG emissions by diverting 60% of the materials from disposal by 2024.² Removing food scraps from the waste stream is one of the best ways Connecticut can achieve this goal. Presently, food scraps make up about 22% of Connecticut's waste.³ Whether food scraps are trucked out of state for landfilling (where they produce 58% of the methane emitted from landfills⁴) or whether they are incinerated, the result is the same: harmful GHG emissions, rising costs for trash disposal, and increased food insecurity for Connecticut's most vulnerable residents.

According to the EPA, wasted food is the single most common material landfilled and incinerated in the United States, comprising 24% and 22% of landfilled and combusted municipal solid waste, respectively.⁵ Meanwhile, the **cost of trash disposal is skyrocketing** in Connecticut. At the same time, the number of people lacking access to food has been increasing in the state. In fact, **food insecurity**

¹ *About CPRG Planning Grant Information*, EPA (Dec. 8, 2023), available at <https://www.epa.gov/inflation-reduction-act/about-cprg-planning-grant-information>.

² *Comprehensive Materials Management Strategy*, DEEP (Mar. 29, 2023), available at <https://portal.ct.gov/DEEP/Waste-Management-and-Disposal/Solid-Waste-Management-Plan/Comprehensive-Materials-Management-Strategy>.

³ *Creating a Connecticut Food Waste Prevention and Food Recovery Roadmap*, DEEP (July 18, 2023), available at <https://portal.ct.gov/DEEP/Reduce-Reuse-Recycle/Waste-Reduction/Food-Waste-Prevention-and-Food-Recovery-Roadmap>.

⁴ *Quantifying Methane Emissions from Landfilled Food Waste*, EPA (Oct. 2023), available at https://www.epa.gov/system/files/documents/2023-10/food-waste-landfill-methane-10-8-23-final_508-compliant.pdf.

⁵ *From Field to Bin: The Environmental Impacts of U.S. Food Waste Management Pathways*, EPA (Oct. 2023), available at https://www.epa.gov/system/files/documents/2023-10/part2_wf-pathways_report_formatted_no-appendices_508-compliant.pdf.

nearly doubled in 2022,⁶ disproportionately impacting the state's most vulnerable residents including over 83,000 children across the state.⁷ In addition to households with children, Black and Latino adults,⁸ and people with disabilities experience much higher rates of food insecurity in the state.⁹

The EPA's new wasted food scale outlines best practices to prevent and reduce food waste. DEEP should **adopt the wasted food scale** as a model for food scrap diversion in the state. After reducing waste by source reduction, the wasted food scale directs us to donate excess food to help fight food insecurity. In Connecticut, a network of food rescue and mutual aid organizations are already moving excess food from restaurants and retailers into the hands of people in need. Next the wasted food scale directs us to divert food scraps to feed animals. Similarly, innovators in Connecticut are developing models for converting food scraps into animal feed. As a last option, the wasted food scale directs us to compost or send food scraps to anaerobic digesters. Across Connecticut, local food scraps haulers and composting facilities, as well as anaerobic digestion facilities are already doing the work of collecting and managing food waste sustainably. Connecticut **municipalities are eager to divert food scraps** from the trash. Many have created pilot programs that residents are eager to participate in; others lack only the funds and technical assistance to create food scrap diversion programs for their communities.

While so many people are already working incredibly hard to divert food scraps from the waste, certainly **more diversion infrastructure, technical assistance, and enforcement mechanisms are needed** in Connecticut. These are precisely the sort of implementation-ready programs that the EPA is looking for in a state's climate action plan. Furthermore, because the EPA is centering environmental justice principles in the CPRG program, the agency is asking states to identify how their plans will address the needs of low-income and disadvantaged communities (LIDAC). Since food security is a huge concern for Connecticut's most vulnerable residents, **including food scrap diversion in the state's plan will allow the state to achieve the goal of supporting LIDAC while reducing GHG emissions.**

At all costs, we need to keep food scraps out of landfills, incinerators, and wastewater. With the CPRG program, Connecticut now has an opportunity to secure the funds it needs to fully divert all food from its waste stream.

Thanks for taking the time to consider my comments.

Sincerely,
Mara Shulman
Senior Attorney

⁶ Mark Abraham, *DataHaven survey finds food insecurity nearly doubles in Connecticut in 2022*, DATAHAVEN (Sept. 16, 2022), available at <https://www.ctdatahaven.org/blog/datahaven-survey-finds-food-insecurity-nearly-doubled-connecticut-2022>.

⁷ *Food Insecurity in Connecticut*, CONNECTICUT FOOD SHARE (May 18, 2023), available at <https://ctfoodshare.org/about-us/hunger-in-connecticut/>.

⁸ *Id.*

⁹ Kelly Davila, *Food Insecurity & Health Outcomes: CRCOG Region*, DATAHAVEN (Sept. 19, 2023), available at <https://crcog.org/wp-content/uploads/2023/09/Data-Haven-CRCOGHHS091923.pdf>.

DEEP ClimateChange

From: Denise Rodosevich [REDACTED]
Sent: Tuesday, December 19, 2023 12:14 PM
To: DEEP ClimateChange
Subject: State of Connecticut Climate Pollution Reduction Grant

You don't often get email from drodosev@gmail.com. [Learn why this is important](#)

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Hello.

Thank you for your presentation last night. I would like to add the following comments/suggestions:

For several of the measures you propose, it was noted that implementation of the measures would reduce the emission of things like VOCs, particulates, hydrocarbons, and toxic emissions. While these are absolutely good things, I suggest you take a hard look at those industries and activities that are subject to DEEP Air Bureau permitting to determine whether they are complying with their permits, or whether, in fact, they are emitting particulates, VOCs, hydrocarbons, and toxic emissions, but no enforcement action by DEEP is being taken (for whatever reason -- lack of staff -- politics?). If that is the case, it would be sad and ironic indeed for DEEP to use grant money to control such emissions while allowing for permit violators to continue such emissions.

I would also ask that you think about and see if it can fit in with what you are proposing, the role conservation has relative to reducing climate pollution. Can either a new proposal be added for this or can it be incorporated into several of the other proposals? For example, using grant money to (a) educate on how much GHG emissions can be reduced by the average citizen, (b) incentivize citizens, restaurants, institutions, etc. to compost and plant native trees, (c) create local plans for shared trips to stores and town services, (d) create GHG emission calculators for the average consumer to input miles driven to the grocery store, for example, to see how many pounds of GHG emissions were generated each time.

Thank you.

- Denise Rodosevich
(Amston, CT)
[REDACTED]

DEEP ClimateChange

From: BenitezOu, Ashley
Sent: Tuesday, January 23, 2024 12:54 PM
To: DEEP ClimateChange
Subject: FW: Request for Public Comment – Greenhouse Gas Reduction Actions in Priority Climate Action Plan

From: Ed Mone [REDACTED]
Sent: Tuesday, December 26, 2023 8:38 AM
To: Christine O'Neill [REDACTED]
Cc: Van Ness, Ethan [REDACTED]
Subject: RE: Request for Public Comment – Greenhouse Gas Reduction Actions in Priority Climate Action Plan

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I would favor greater emphasis on a plan that would encourage use of hydrogen as an alternate fuel source. This should include a means by which hydrogen can be extracted from the air.

Edmond V Mone
First Selectman
Town of THOMASTON

[REDACTED]

DEEP ClimateChange

From: Michael S Uhl [REDACTED]
Sent: Wednesday, January 10, 2024 10:03 AM
To: DEEP ClimateChange
Subject: Re: Correction: Survey and Request for Public Comment (CLOSES 1/12) – Greenhouse Gas Reduction Actions in Priority Climate Action Plan

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Thanks! I appreciate the willingness to be flexible in making comments. I acknowledge how it can make it harder to aggregate results cohesively, so I apologize for the separate attention to this matter.

In general, I support utilizing the Climate Pollution Reduction Grant to largely expand and strengthen interests and projects that the state has expressed over multiple years, including public-processes like GC3. A highly simplified impression of the Plan, based on the [provided slides](#), is to fund areas CT already wanted to do.

I agree and support the use of the funds for:

- Transportation areas, including
 - **School Bus Electrification**
 - **Transit Bus Electrification**
 - **Electric Vehicle Incentives**, IF it includes minimum performance expectations of EVs and the EV market access, such as bidirectional power flow, minimum range, and federal tax credit eligibility. While the transition to EVs is massively important, we do not want to incentivize purchasing the lowest tier of EVs that ultimately have low market value to users, the utility grid, and public health when the same dollars can be applied to push mass adoption of higher quality products and drive cost efficiencies that result in more low-income residents accessing the products sooner.
 - **Deploy Electric Vehicle Chargers Statewide**, IF these are chargers prioritized in environmental justice communities and there are performance requirements for the third-party provider for reliability and uptime for users, AND the deployed technology is suitable for bidirectional values with, at least the NACS standard ([based on market adoption](#)).
 - **Reduce Idling from CT DOT Crash Unit Trucks**
 - **Expand Ride Share Program**
- Residential & Commercial
 - **Support Adoption of Res and Com Heat pumps**, IF it is not funding provided to the Utility Companies, EnergizeCT, the Utility Company affiliates, or any solutions that were not competitively developed and procured, or engaging a public stakeholder process.
 - **Expand REPS**, IF commitments for increased funding includes performance requirements to receive the funding, such as greater public data transparency, site visit

data sharing and documentation with customers, and faster execution timelines (shorter than the current ~140 days).

- **Expand EE programs**
- **Networked Geothermal Systems**
- **Energy Storage and Demand Response**
- Waste and Materials
 - **Food Scrap Diversion**
- Agriculture/Natural and Working Lands
 - **Plant Trees in Urban Areas**

I do not support Hydrogen for Port operations and storage. The technology is not cost effective or technologically sufficient, making it too early for use in storing hydrogen for seasonal energy demand shifting. Additionally, much higher value and energy efficient options like Form Energy batteries are available. Connecticut should not prioritize it and instead redirect the funds to the other programs above.

On Tue, Jan 9, 2024 at 12:05 PM DEEP ClimateChange <DEEP.ClimateChange@ct.gov> wrote:

Dear Michael,

Thanks for your feedback.

If it is easier for you to send comments via email, please do so.

Here are the 14 actions that were included in the [request for public comments](#):

https://portal.ct.gov/-/media/DEEP/climatechange/CPRG/PCAP_Actions_121823.pdf

Best,

Office of Climate Planning

Connecticut Department of Energy & Environmental Protection
79 Elm Street, Hartford, CT 06106-5127

[Climate Change \(ct.gov\)](#)



Comments on the December 18th, 2023, Connecticut Climate Pollution Reduction Grant meeting.
Comments Submitted by Cary Lynch, Climate and Energy Policy Manager, The Nature Conservancy in Connecticut.

Thank you for the opportunity to comment on the Climate Pollution Reduction Grant (CPRG). Nathan Frohling from our office will also be making comments on behalf of TNC to cover other aspects we wanted to convey.

Currently, Connecticut is not on track to meet its emission targets. To achieve long-term sector-wide emission reduction goals, it is imperative that a planning process that identifies cost-effective and equitable strategies be done by the state with a wide variety of stakeholders. While several sector-specific plans to reduce emissions have been done in the last decade, there is no comprehensive pathway that connects all these plans and will achieve efficient and effective results. An economy-wide, multiple sector decarbonization plan could also be the basis for accountability in which progress could be measured and needed adjustments made through time.

Our motivation at TNC is to look at what is necessary to overcome the odds and put in place what is needed to help ensure Connecticut reaches its statutory carbon-reduction commitments. This is core to our collective and urgent commitment to the climate crisis. We need an ambitious and rigorous plan to navigate current challenges, chart a course of action, and identify decision points along the way. A concrete plan will make it much more feasible for the State to stay on course and enable us to better hold decision-makers and policymakers accountable.

To this end, we are pleased that Connecticut DEEP is pursuing the CPRG and believe that an enhanced, robust decarbonization pathway plan is key for Connecticut to realize its climate goals. The Priority Action Plan and the Comprehensive Action Plan are opportunities for CT to prepare a sector-wide decarbonization plan that incorporates community and stakeholder voices. We are hopeful that these plans will be utilized to compliment and/or enhance other state actions like the Comprehensive Energy Plan, the Governor's Council on Climate Change reports, Conservation and Load Management Plan, and the Integrated Resource Plan.

While we appreciate the depth and breadth of measures that DEEP has put forth as priority actions, we believe that there are still many other measures that are missing, particularly in the electric sector. As we move toward sector-wide electrification, more emphasis should be placed on the electric sector. We would suggest additional measures such as: removing solar program caps to promote load reduction, pursuing transmission upgrades to reduce curtailment and congestion costs, pairing storage with solar whenever and where ever possible, and exploring nuclear advancements that minimize environmental impacts while increasing system reliability.

The Priority Action Plan and the Comprehensive Action Plan must make bold decisions at the pace and scale necessary to have meaningful impact. We are hopeful that such actions will be taken by the state to reduce emissions while also setting the stage for long-term deep decarbonization and climate mitigation.

Thank you for the opportunity to present comments today.