Connecticut Fund for the Environment

Save the Sound®

Testimony of Connecticut Fund for the Environment/Save the Sound

Before the Committee on Energy & Technology

In Support of,

S.B. No. 10 AN ACT CONCERNING CERTAIN RECOMMENDATIONS REGARDING CLIMATE CHANGE.

In Support of,

H.B. No. 5351 (RAISED) AN ACT CONCERNING CERTAIN PROGRAMS AND TO INCENTIVIZE AND IMPLEMENT ELECTRIC ENERGY STORAGE RESOURCES.

In Support of,

H.B. No. 5350 (RAISED) AN ACT CONCERNING NATURAL GAS INFRASTRUCTURE.

In Support of,

H.B. No. 5008 AN ACT CONCERNING THE ESTABLISHMENT OF HIGH PERFORMANCE GREEN BUILDING STANDARDS FOR VOLUNTARY ADOPTION BY MUNICIPALITIES.

In Support of,

H.B. No. 5348 (RAISED) AN ACT CONCERNING THE STUDY OF COMMUNITY CHOICE AGGREGATION.

In Opposition to,

H.B. No. 5347 (RAISED) AN ACT CONCERNING A VOLUMETRIC SURCHARGE STUDY BY THE DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT.

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Connecticut Fund for the Environment/Save the Sound is a nonprofit organization representing over 4,200 member households and 10,000 activists statewide. Our mission is to protect and improve the land, air, and water of Connecticut and the entire Long Island Sound region. We use legal and scientific expertise and bring citizens together to achieve results that benefit our environment for current and future generations.

Co-Chairs Arconti and Needleman, Vice-Chairs Lesser and Allie-Brennan, Ranking Members Formica and Ferraro, and members of the Energy & Technology Committee:

Connecticut Fund for the Environment/Save the Sound is pleased to offer this testimony on the following bills.

I. S.B. No. 10, AN ACT CONCERNING CERTAIN RECOMMENDATIONS REGARDING CLIMATE CHANGE. (SUPPORT)

CFE/STS supports Senate Bill 10, which (1) requires the Commissioner of the Department of Energy and Environmental Protection (DEEP) to evaluate the environmental, energy and air quality impacts of adopting California's vehicle emissions standards for medium and heavy duty vehicles, and authorizes the Commissioner to adopt such standards to meet Connecticut's air quality standards or greenhouse gas reduction requirements, (2) establishes a state target of achieving zero greenhouse gas emissions from the electricity sector by 2040, and (3) authorizes the procurement of up to 300 GW of active and passive demand response measures and energy storage systems.

All of these measures reaffirm Connecticut's commitment to reducing our greenhouse gas reduction emissions, provide clean air and a healthy environment to our citizens, and ensure that we are building upon the successful programs that Connecticut has already adopted.

The zero carbon electricity target, clean vehicle standards, and efficiency investments goals set forth in this legislation are essential to enabling Connecticut to meet its greenhouse gas reduction obligations. Many jurisdictions at the national level and the subnational level, including within the United States, as well as major companies, have already set, or are working on establishing, zero-emissions targets.[1]

[1] See Edmond, Charlotte, "Zero by 2050: How the World's Economy Has Planned to Battle Climate Change." World Economic Forum (July 24, 2019). Available at < https://www.weforum.org/agenda/2019/07/zero-emissions-target-climate-change-impact/>.

As we work to achieve our zero-carbon electricity goal, there is likely to be increasing electricity demand due to the need to expand the beneficial electrification the state's transportation and building sectors in order to achieve our GHG reduction targets pursuant to the Global Warming Solutions Act.[2] The transportation sector accounts for 38% of the state's greenhouse emissions, while the commercial and residential sectors together account for 26%. Addressing these sectors through electrification with clean, renewable energy will be key to our success. One recent study has estimated that throughout New England, as the region works to meet its individual and collective greenhouse gas reduction goals, electricity demand is likely to double by 2050.[3] Accordingly, the state's drive towards a clean, renewable energy grid must include increased investment in energy efficiency, as well as improved integration of distributed energy resources and load management. The provisions in this bill authorizing increased procurements of efficiency and battery storage resources ensure that the appropriate investments will be made.

The need to take action in order to mitigate the worst impacts of climate change becomes more obvious every day.

- July 2019 was the hottest month on record globally since temperature records began and is in line with the general trend of warming that we are experiencing - with the last five years being sequentially the hottest on record.
- Hurricanes have been hitting the U.S. especially hard, with 2018's near back-to-back Hurricanes Michael and Florence responsible for $49 billion in damages.
- 2018's Western wildfire season was the most expensive ever, with total damages of at least $24 billion.

It's clear that while climate change is a global issue, communities feel the impacts of climate change locally. Sea level rise along Connecticut's coast is projected to be as high as 20 inches (nearly two feet) by 2050. With over 600 miles of coastline and more than two million people living in shoreline communities, Connecticut's residents and communities are particularly vulnerable to the impacts of weather and climate events. As a result, communities in Connecticut should expect the frequency and intensity of coastal flooding to increase in coming decades due to accelerating trends in coastal erosion extreme precipitation, as well as storms.

[2] Governor's Council on Climate Change, Building a Low Carbon Future for Connecticut: Achieving a 45% GHG Reduction by 2030 (December 18, 2018).

[3] Jurgen Weiss, J. Michal Hagerty, et al, Achieving 80% GHG Reduction in New England by 2050, at 8 (Brattle Group September 2019).

In Connecticut, Hurricane Irene in 2011 caused power outages affecting 754,000 customers and over $1 billion in damage, while 2012's Hurricane Sandy 2012 caused power outages affecting more than 600,000 customers and inflicted almost $2 billion in statewide damages. And these were relatively modest storms. We are long overdue for category 2 or 3 storm on the scale of Hurricane Carol in 1954 or the Hurricane of 1938.

These events inflict real costs. The question then becomes how to balance and temper the needed investments in adaptation with investments in mitigation that will reduce adaptation costs. The less we invest in mitigation, the more expensive our adaptation costs will be. Without strong mitigation action, the costs and uncertainty of the needed adaptation investments will rise, while at the same time we will be dealing with the inevitable adverse consequences of climate change and the toll that such consequences will take on our citizens.

And investment in mitigation brings with it localized public health benefits as a result of fewer polluting emissions as we transition to a clean electricity grid and expand the beneficial electrification of our transportation and building sectors.

We must continue to lead in asserting our right to protect our citizens from the pressing climate issues that we face, despite diminishing support from the federal government.

SB 10 reaffirms Connecticut's longstanding commitment to addressing climate change by updating the state's climate targets, ensuring that our vehicles are taking advantage of the best pollution reduction technologies, and expanding our investments in energy efficiency and storage solutions.

II. H.B. No. 5351, AN ACT CONCERNING CERTAIN PROGRAMS AND TO INCENTIVIZE AND IMPLEMENT ELECTRIC ENERGY STORAGE RESOURCES. (SUPPORT)

CFE/STS supports House Bill 5351, which establishes a state goal of deploying 1,000 MW of energy storage by the end of 2030, directs PURA to develop a program and associated funding mechanisms to support electric energy storage systems connected to the electric distribution system, and authorizes DEEP to solicit proposals for demonstration projects for energy storage connected to Class I renewable energy resources.

Energy storage will play a critical role in the transition to a zero carbon economy. Storage plays an important role in ameliorating the intermittency of solar and wind energy sources, in lowering energy demand on the distribution grid during peak times, and providing for a more resilient energy system. PURA is currently exploring these issues as part of its Grid Modernization Docket focused specially on battery storage.[4] The results of that docket will inform the activities contemplated as part of this bill and, together, provide a framework for appropriately scaling energy storage solutions in Connecticut.

III. H.B. No. 5350, AN ACT CONCERNING NATURAL GAS INFRASTRUCTURE. (SUPPORT)

CFE/STS supports House Bill 5350, which authorizes DEEP to solicit proposals from anaerobic digestion facilities to produce biogas of a quality suitable for injection into the state's existing natural gas distribution system, (2) directs the Public Utility Regulatory Authority (PURA) to initiate a docket to evaluate the pace of the existing schedule for the repair and replacement of aging infrastructure to mitigate methane emissions, (3) directs PURA to determine the appropriate hurdle rate, up to a maximum of 25 years, for evaluating the cost-benefit of connecting new customers to the natural gas distribution system, and (4) repeals the gas pipeline tax.

At its core, this bill provides for a review of the existing natural gas expansion program, an evaluation of how it has performed, and a determination of the appropriate time horizon by which to judge the cost-effectiveness of new customer hook-ups. It also appropropriately focus natural gas infrastructure investment on fixing methane leaks in the existing distribution system.[5] And, finally, it relieves Connecticut residents of the burden of financing new and unneeded interstate gas pipelines –investments which are doomed to obsolescence, leaving Connecticut gas customers with the stranded costs of the investment.

According to a study by Synapse Energy Economics, Inc., New England's use of natural gas for electric generation is expected to decrease by 27 percent by 2023, compared to 2015 levels.[6] And by 2030, natural gas-fired electric generation is estimated to be 41 percent lower than in 2015.[7] Existing laws in Connecticut and throughout the New England region—renewable portfolio standards, energy efficiency resource

[4] PURA Docket No. 17-12-03RE03.
[5] In 2017, natural gas leakage accounted for approximately 240,000 metric tons of carbon dioxide equivalent greenhouse gas emissions. DEEP, 2017 Connecticut Greenhouse Gas Emissions Inventory,
[6] Knight, Pat, et al., *New England's Shrinking Need for Natural Gas: An Analysis of Policy Impacts on Natural Gas Use in New England's Electric Sector* iii (February 7, 2017)
[7] *Id.*

standards, long-term requirements for additional hydropower and wind power, and carbon dioxide (CO2) emissions caps—will all lead to a significant reduction in the need for natural gas-fired generation in our region. This decrease in overall gas use will help alleviate the capacity constraints of existing pipelines and reduce the need for new pipeline infrastructure.

IV. H.B. No. 5008, AN ACT CONCERNING THE ESTABLISHMENT OF HIGH PERFORMANCE GREEN BUILDING STANDARDS FOR VOLUNTARY ADOPTION BY MUNICIPALITIES.

CFE/STS supports House Bill 5008, which directs DEEP to develop high performance green building standards for residential and commercial buildings, and allows municipalities to voluntary adopt such building standards for use within their jurisdictions.

Residential and commercial buildings in Connecticut account for 26% of the state's greenhouse gas emissions. Improving the energy efficiency of our building stock, as well as ensuring that they are benefitting from renewable energy sources and are capable of supporting electric vehicle charging is an important part of meeting our greenhouse reduction targets.

Our neighboring states of Massachusetts and New York have already developed and are implementing successful municipal stretch code programs.[8] Recognizing the significant cost savings achievable though high performance building standards, Connecticut has already adopted high performance standards for buildings undergoing construction or renovations using public funds. This proposal allows local governments to adopt similar standards that will help to reduce energy costs for their residents, while also improving the value of the town's building stock. Green buildings have been shown to provide a host of environmental and economic benefits, including asset value, operating costs, and workplace productivity and health.[9]

Green buildings also provide opportunities to enhance the housing market. A 2010 study of the Dutch housing market (where residential energy certification has been in place since 2008), indicates that sellers view the energy certification as an opportunity to differentiate their property, particularly in those areas

[88] https://newbuildings.org/code_policy/utility-programs-stretch-codes/stretch-codes/.

[9] See World Green Building Council**,** *The Business Case for Green Building: A Review of the Costs and Benefits for Developers, Investors and Occupants* (March 6, 2013). Available at < https://www.worldgbc.org/news-media/business-case-green-building-review-costs-and-benefits-developers-investors-and-occupants**>.**

where the market conditions are toughest.[10] The study also found that energy efficient homes received a price premium along the spectrum of results, with the most efficient homes receiving a premium of 12.1 percent over the least efficient homes and homes receiving the second lowest rating commanding a 1.8 percent premium over the lowest rated homes.[11]

A 2009 study of the housing market in Portland, Oregon and Seattle, Washington, found an average sales price premium of 3 percent to 5 percent (Portland) and 9.9 percent (Seattle) for energy certified homes.[12] Moreover, the homes in Portland sold an average of 18 days faster than non-certified homes.[13]

Finally, a 2008 study by the Australian government of home sales in 2006 found that homes sold for a 1.9 percent premium for each point on the ten-point Australian Energy Efficiency Rating system.[14]

These findings support the results of a consumer survey conducted by the U.S. Green Building Council and McGraw Hill Construction. Among the results of that 2008 survey were that 70 percent of homebuyers are more inclined to buy a green home over a conventional home in a down market and that improving the energy and environmental performance of their home was the leading reason that homeowners invested in home improvements.[15]

V. H.B. No. 5348, AN ACT CONCERNING THE STUDY OF COMMUNITY CHOICE AGGREGATION. (SUPPORT)

CFE supports House Bill 5348, which directs DEEP to conduct a study of community choice aggregation (CCA) programs. These aggregate purchasing structures can result in cleaner, cheaper electricity for a

[10] RICS Research, "On the Economics of EU Energy Labels in the Housing Market," June 2010, p. 17.
[11] RICS Research, "On the Economics of EU Energy Labels in the Housing Market," June 2010, p. 21
[12] Lawrence Berkeley National Laboratory, "The Value of Energy Performance and Green Attributes in Buildings: A Review of Existing Literature and Recommendations for Future Research." September 7, 2011.
[13] Lawrence Berkeley National Laboratory, "The Value of Energy Performance and Green Attributes in Buildings: A Review of Existing Literature and Recommendations for Future Research." September 7, 2011. The certified homes in Seattle sold slightly more slowly than comparable non-certified homes, but they did command a substantial price premium.
[14] Lawrence Berkeley National Laboratory, "The Value of Energy Performance and Green Attributes in Buildings: A Review of Existing Literature and Recommendations for Future Research." September 7, 2011.
[15] "Home Buyers Increasingly Thinking about Buying Green" (July 24, 2008). 42 percent of respondents cited this as their primary reason, compared to 34 percent who cited improving comfort and 24 percent who cited improving appearance

town's ratepayers, as compared to the utility's standard offering. For example, Newton, MA signed a contract where ratepayers will purchase 60% of their electricity from renewable sources (46% more than their current utility standard offering), while at the same time reducing their cost by about $0.02/kwh.[16] Through CCA local energy aggregation options, power continues to be delivered by the existing utility and any ratepayer has the ability to opt out. While CCA is not currently authorized in Connecticut, several states across the country, including our neighboring states of Massachusetts, New York, and Rhode Island permit CCA.

Connecticut should explore whether CCA could provide environmental and economic benefits to Connecticut.

VI. H.B. No. 5347, AN ACT CONCERNING A VOLUMETRIC SURCHARGE STUDY BY THE DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT. (OPPOSE)

CFE opposes House Bill 5347, which opens the door to limiting commercial and industrial customers' contribution to the state's award winning energy efficiency programs. Given that commercial and industrial customers benefit enormously from these programs, it makes no sense to limit their contribution to the fund. The EEB 2019 Legislative Report estimated that the 2019 commercial & industrial program savings included:

- Financial Savings: Annual: $37.3 Million; Lifetime: $444.8 Million.
- Energy Savings: Annual: 223.3 Million Kwh; Lifetime: 2.7 Billion Kwh
- Carbon emissions reduced: Annual: 100,399 Tons; Lifetime: 1.2 Million Tons[17]

These funds also support a key industry that provides high-quality jobs to Connecticut residents. A 2019 federal report found that the design, manufacture, and installation of energy efficiency products and services accounted for 35,597 Connecticut jobs.[18] And this sector grew by 2.5 percent over last year.[19]

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[16] https://newton.wickedlocal.com/news/20180402/newton-power-choice-plan-moves-forward
[17] Energy Efficiency Board 2019 Programs and Operations Report (March 1, 2020). Available at < https://www.energizect.com/sites/default/files/Final-2019-Annual-Legislative-Report-WEB02262020_2.pdf>.
[18] 2019 US Energy & Jobs Report: State Charts. Available at <https://static1.squarespace.com/static/5a98cf80ec4eb7c5cd928c61/t/5c7f375515fcc0964aa19491/1551841115357/USEER+Energy+Employment+by+State.pdf>.
[19] *Id.*

Commercial and industrial energy efficiency programs promote economic development, environmental benefits, and energy security through the efficient use of energy. Every $1 dollar contributed generates $7 back into the economy. The Energy & Technology Committee should be considering expanding these programs, not limiting contributions from entities that benefit from them.

Thank you for your time and consideration of this testimony.

Respectfully submitted,

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