



Connecticut Fund
for the Environment

Save the Sound®

**Testimony of Connecticut Fund for the Environment
Before the Committee on the Environment**

In Support of,
H.B. 5002, AAC THE DEVELOPMENT OF A GREEN NEW DEAL

In Support of,
**HB 6242, AN ACT PROHIBITING SURCHARGES FROM BEING LEVIED ON
UTILITY CUSTOMERS TO SUBSIDIZE INTERSTATE NATURAL GAS PIPELINE
CAPACITY**

In Support of,
**HB 6240, AN ACT REQUIRING THE STATE BUILDING CODE TO HAVE
REQUIREMENTS TO IMPROVE ENERGY EFFICIENCY**

In Support of,
HB 5789, AAC THE LEAD BY EXAMPLE PROGRAM

In Support of,
**H.B. 7016, AAC THE CONSERVATION AND LOAD MANAGEMENT PLAN AND THE
INSTALLATION OF HEAT PUMPS**

In Support of,
**HB 6237, AN ACT REQUIRING A STUDY OF ENERGY STORAGE PROJECTS AND
DISTRIBUTED GENERATION IN THE STATE**

In Support of With Modifications,
**HB 7114, AAC MUNICIPAL COMPETITIVE PROCUREMENT OF ELECTRICITY,
NATURAL GAS, RENEWABLE ENERGY AND OTHER ENERGY-RELATED
PRODUCTS BY NONPROFIT ENERGY BUYING CONSORTIA**

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Connecticut Fund for the Environment (CFE) is a non-profit environmental organization with thousands of members and over 15,000 activists. The mission of CFE, and its bi-state program Save the Sound, is to protect and improve the land, air, and water of Connecticut and Long Island Sound. We use legal and scientific expertise and bring people together to achieve results that benefit our environment for current and future generations.

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

I. H.B. 5002 AAC THE DEVELOPMENT OF A GREEN NEW DEAL (SUPPORT)

CFE strongly supports H.B. 5002, An Act Concerning the Development of a Green New Deal, and respectfully requests that the Committee fully draft and support Green New Deal legislation that propels a comprehensive path toward a rapid transition to an economy free of fossil-fuels. The primary focus of the Green New Deal must be to ensure that Connecticut can meet the mandate in Public Act 18-80 to reduce economy-wide GHG-emissions 45% from 2001 levels by 2030,¹ and transitions to a zero-carbon, 100% renewable economy by 2045.

An outline of proposals that CFE believes will help transition Connecticut to zero carbon renewable energy, while creating jobs and addressing economic and racial inequities, is attached to the end of this testimony.

Most critically, CFE supports including the following in H.B. 5002, the Green New Deal:

- **Supporting & Expanding Energy Efficiency.** Energy efficiency creates more savings than any other single fuel source. By reducing demand for energy, energy efficiency relieves pressure on the electrical grid, reduces our dependence on fossil fuels, and lowers families' bills, helping reduce the energy burden that falls disproportionately on lower-income families. Saving energy also grows Connecticut's job force. A 2017 federal report found that the design, manufacture, and installation of energy efficiency products and services accounted for nearly 34,000 Connecticut jobs.² The Connecticut Energy Efficiency Board (EEB) estimated that as a result of the two-year legislative diversion of approximately \$117 million³ in ratepayer funding for electric efficiency, Connecticut ratepayers will suffer lost bill savings of approximately \$275 million, 1.6 million additional gallons of oil will be burned annually, and approximately 13,000 homes, including 5,600 low-income households, will lose access to efficiency improvements. They also estimated that thousands of jobs will be lost, and efficiency projects worth over \$30 million will be canceled annually in 2018 and 2019.⁴ The Green New Deal should include the restoration of Connecticut's award winning C&LM energy efficiency programs and Clean Energy funds that were diverted from fiscal years 2018

¹ Governor's Council on Climate Change, *Building a Low Carbon Future for Connecticut: Achieving a 45% GHG Reduction by 2030* (released Dec. 18, 2018), at 28, available at https://www.ct.gov/deep/lib/deep/climatechange/publications/building_a_low_carbon_future_for_ct_gc3_recommendations.pdf (analysis suggest that we need to put approximately 500,000 zero emission vehicles (ZEVs) on the road by 2030 to meet these targets).

² <https://www.energy.gov/sites/prod/files/2017/01/f34/2017%20US%20Energy%20and%20Jobs%20Report%20State%20Charts%2020.pdf>.

³ The budget passed in October 2017, June Special Session Public Act 17-2, An Act Concerning the State Budget for the Biennium Ending June 30, 2019, imposed a major fund diversion on the Connecticut Energy Efficiency Fund (CEEF) – a sweep totaling \$127 million over the two-year state budget cycle. In 2018 the legislature restored \$10 million of these funds.

⁴ Connecticut Energy Efficiency Board, 2017 Annual Legislative Report, Executive Summary, available at <https://www.energizect.com/sites/default/files/Final-2017-Annual-Legislative-Report-WEB-2-20-18.pdf>.

and 2019, full-funding for these programs in the upcoming 2020/21 budget cycle, and the inclusion of explicit protections of ratepayer funds from future budget sweeps. Connecticut's Lead By Example program should also be expanded, as discussed below.

- **Transitioning to 100% Renewable Energy.** Slashing air pollution and slowing climate change are possible—if we end our dependence on fossil fuels and instead build a clean energy future. Renewable energy sources such as wind and solar have zero fuel costs, which can save families money on their energy bills. Rapidly increasing use of solar and offshore wind and ensuring clean energy's benefits are accessible for low and middle income families, including instituting a mandate to procure no less than 2000 MWs of off-shore wind by 2030, and expanding Connecticut's residential, commercial, and shared solar programs. Ensuring local, distributed solar continues to grow in Connecticut by amending Section 7 of PA 18-50 is also critical.
- **Coastal Resilience & Green Infrastructure.** When Hurricane Irene and Superstorm Sandy hit in 2011 and 2012, the vulnerabilities of our region's coastal communities were exposed. Upgrading coastal infrastructure to prepare for storms and sea level rise, including use of marshes, dunes, and rain gardens to prevent flooding and buffer waves, are critical strategies to ensure Connecticut has healthy and safe shorelines.
- **Clean Transportation.** Transportation accounts for 38 percent of Connecticut's greenhouse gas emissions, more than electricity generation, and heating and cooling buildings. Making it easier for residents and businesses to adopt zero-emission vehicles through sustainable funding of the zero emission vehicle rebate program, state electric fleet and bus mandates (at least 50% light duty zero emission vehicles and 30% of the state's transit buses should be electric by 2030), and EV-ready building codes, as well as investing in Connecticut's bus and rail systems, are critical components of the Green New Deal.
- **Green Workforce Development.** Generating high-quality employment for tens of thousands of Connecticut residents through a solar jobs training program, infrastructure investments, and community workforce agreements that would hire from disadvantaged communities to help deploy clean, reliable energy for the state. Programs and funding should also be established to provide transition benefits for those affected by the economy shifting away from fossil fuels, including job training, education, and opportunities in clean energy, energy efficiency and climate resilient infrastructure jobs.

II. HB 6242, AN ACT PROHIBITING SURCHARGES FROM BEING LEVIED ON UTILITY CUSTOMERS TO SUBSIDIZE INTERSTATE NATURAL GAS PIPELINE CAPACITY (SUPPORT).

CFE supports HB 6242, which protects ratepayers from making stranded investments and helps ensure Connecticut meets our newly adopted climate law to reduce our economy-wide greenhouse gas emissions by 45% below 2001 levels by 2030 under Public Act 18-82. Leaks associated with natural gas production and distribution release large amounts of methane, a pollutant that is 87-times more potent than carbon dioxide at trapping heat in the Earth's

atmosphere over a 20-year span.⁵ According to a study published by the National Academy of Sciences, methane leakage can have as much as double the climate effect of natural gas.⁶ This bill, which stops the needless expansion of interstate natural gas pipeline capacity, helps advance the state's climate goals.

New interstate gas pipelines would cost consumers billions of dollars to build, operate and maintain, bring no proven net benefits and carry a very high risk of creating substantial future stranded costs as renewable technologies come to dominate generation. As a 2017 Synapse report found, the Access Northeast Pipeline alone could cost as much as \$6.6 billion - more than double the \$3.2 billion proponent's claim - because of anticipated cost overruns, operational and maintenance costs, depreciation and return on equity investment. The Synapse report found that state energy efficiency programs, renewable portfolio standards, and greenhouse gas emission reduction targets throughout the New England states will soon result in current pipelines running under capacity. Since current pipeline capacity is sufficient to meet both Connecticut's and the region's needs, there is no justification for imposing billions of dollars of transmission fees on ratepayers.⁷

Synapse Energy Economics also reviewed ISO-NE's draft fuel security analysis and found that ISO's modeling is based on some flawed assumptions.⁸ These assumptions include extreme scenarios such as record-breaking cold weather, complete shutdown of major regional power producing facilities such as Millstone, extreme gas and electric demand increases. Most importantly, the reference case used in the draft report underestimates the growth of renewable energy and increases in energy efficiency, which can minimize system stress and help maintain reliability. The Synapse analysis found that using reasonable assumptions about demand and supply resources show minimal grid operation concerns and no rolling blackouts. It found that "[w]ithout any expansion of gas supply infrastructure, New England can dramatically reduce operational issues and improve reliability with current regional programs that add more renewables and electricity imports, combined with ensuring that LNG and fuel oil are delivered in a timely manner."⁹

It is in Connecticut consumers' best interest for the state to embrace alternative strategies – including aggressive energy-efficiency measures, removal of barriers to scaling up renewables and deployment of targeted distributed energy resources – as superior options to investing in new

⁵ Sierra Club, *The Gas Rush: Locking America Into Another Fossil Fuel for Decades*, https://content.sierraclub.org/sites/content.sierraclub.org.naturalgas/files/1466-Gas-Rush-Report_04_web.pdf.

⁶ Dana Caulton et al., "Toward a Better Understanding and Quantification of Methane Emissions from Shale Gas Development," Proceedings of the National Academy of Sciences 111(17): 6237-6242, (April 2014), <http://www.pnas.org/content/111/17/6237.abstract>.

⁷ Synapse Energy Economics, Inc., *New England's Shrinking Need for Natural Gas* (Feb. 7, 2017) available at <http://www.synapse-energy.com/sites/default/files/New-Englands-Shrinking-Need-for-Natural-Gas-16-109.pdf> (finding that New England's use of natural gas will decrease by 41 percent from 2015 levels by 2030 due to state requirements for energy efficiency, renewable energy and emissions caps).

⁸ Synapse Energy Economics, *Understanding ISO New England's Operational Fuel Security Analysis*, May 2018, <http://www.synapse-energy.com/project/understanding-iso-new-englands-operational-fuel-security-analysis>. See also Synapse Energy Economics, *Working Toward a Clean, Reliable Electric Grid*, Feb. 2018, <http://www.synapse-energy.com/sites/default/files/Working-Toward-a-Clean-Reliable-Electric-Grid.pdf>.

⁹ *Id.*

gas pipelines. For these reasons, CFE requests that the committee passes H.B. 6242 out of committee.

III. HB 6240, AN ACT REQUIRING THE STATE BUILDING CODE TO HAVE REQUIREMENTS TO IMPROVE ENERGY EFFICIENCY (SUPPORT).

CFE supports improving Connecticut's state building code to include requirements for energy efficiency as proposed in H.B. 6240. Improving energy usage in buildings is a critical strategy to reduce climate change and improve air quality, in addition to addressing the energy affordability gap. Instituting energy efficiency requirements in Connecticut's building code is a highly effective way to cut energy use across the state.

IV. HB 5789, AAC THE LEAD BY EXAMPLE PROGRAM (SUPPORT).

CFE supports H.B. 5789, which proposes to set new targets, create new tools and develop new funding and savings metrics for the Lead by Example program. Reducing energy use in Connecticut's state and local government buildings is a critical strategy to reducing our GHG emissions and our state debt. CFE supports Connecticut state government facilities account for 15-20% of the electricity and natural gas consumed by the state's commercial and industrial sector,¹⁰ which costs the state about \$80-90 million annually.¹¹ Implementing efficiency measures could reduce costs by 30%, or about \$24 million annually, saving taxpayers money, and reducing emissions.¹² The existing Lead by Example program should be improved with strengthened annual savings targets and predictable funding to foster in-state job creation and economic development while reducing the state's substantial energy costs.

V. H.B. 7016, AAC THE CONSERVATION AND LOAD MANAGEMENT PLAN AND THE INSTALLATION OF HEAT PUMPS (SUPPORT).

CFE supports adding installation of heat pumps to the programs included in the Conservation and Load Management plan under Section 16-245m, as proposed by H.B. 7016. Connecticut's residential and commercial building sector is heavily reliant on fossil fuels (natural gas and oil or propane) to heat our homes and businesses. According to the Governor's Council on Climate Change December 2018 report, heating, ventilation, and air conditioning comprise roughly 60 percent of all building energy consumption, and over 80 percent of Connecticut households and commercial and industrial buildings are heated with fossil fuels. Non-electric thermal loads in residential, commercial, and industrial buildings contribute approximately 30 percent of total GHG emissions in Connecticut.¹³ This is costly for consumers and bad for Connecticut's environment and climate. According to Acadia Center's EnergyVision 2030 analysis, heat

¹⁰ https://www.ct.gov/deep/lib/deep/energy/lbe/LBE_LegReport_2018.pdf.

¹¹ In fiscal year 2018, the state spend over \$90 million.

https://www.ct.gov/deep/lib/deep/energy/lbe/LBE_LegReport_2018.pdf.

¹² DEEP, Leading By Example: Improving Energy Management at State Facilities, 2018, page 3, available at https://www.ct.gov/deep/lib/deep/energy/lbe/LBE_LegReport_2018.pdf.

¹³ Governor's Council on Climate Change, Building a Low Carbon Future for Connecticut: Achieving a 45% GHG Reduction by 2030 (released Dec. 18, 2018), available at https://www.ct.gov/deep/lib/deep/climatechange/publications/building_a_low_carbon_future_for_ct_gc3_recommendations.pdf (hereinafter GC3 Recommendations).

pumps cut emissions 60-70% compared to fossil heat.¹⁴ Transitioning the building sector to cheaper renewable thermal technologies is important to reducing the energy burden in Connecticut and addressing climate change.

In concert with building energy efficiency measures, Connecticut must accelerate decarbonizing building energy end-uses through increasing deployment of renewable thermal technologies (RTTs) such as heat pumps. One obstacle to high RTT penetration is higher upfront capital and installation costs (despite longer term savings). Integrating heat pump strategies and incentives into the CL&M Plan is strategic because Connecticut's energy efficiency programs have already proven their effectiveness in overcoming similar barriers for efficient technologies, such as LED lighting. The programs would accelerate the transition away from fossil fuel heat to zero emission heating.

VI. HB 6237, AN ACT REQUIRING A STUDY OF ENERGY STORAGE PROJECTS AND DISTRIBUTED GENERATION IN THE STATE (SUPPORT).

CFE supports a legislative study of energy storage projects and distributed generation (DG), evaluating how Connecticut could deploy energy storage strategies that enable a shift toward carbon-free transportation and greater penetration of renewables on the electric grid. PURA is currently exploring opportunities for energy storage in its grid modernization docket, Dkt. 17-12-03 (KCB) PURA Investigation into Distribution System Planning of the Electric Distribution Companies. To complement PURA's investigation, the legislative study could look at incentive programs that would support energy storage projects for distributed generation systems. For example, the state of California created the Self-Generation Incentive Program (SGIP) that provides incentives to support existing, new, and emerging DG resources with rebates for DG systems installed on the customer's side of the meter. 25% of SGIP funds goes to energy storage projects in disadvantaged communities.¹⁵ Likewise, the study should require a value of distributed generation and energy storage analysis that follows best practices for conducting cost/benefit analysis, which include (but are not limited to) analysis and quantification of a broad range of costs and benefits (short-term and long-term, direct and societal), including granular assessments accounting for location on the distribution grid. This is important to assessing whether distributed generation imposes any net costs on non-participating ratepayers, and whether reforms to net metering are appropriate.

¹⁴ Acadia Center, EnergyVision 2030, <http://2030.acadiacenter.org/>.

¹⁵ See California CPUC Decision 17-10-004.

VII. HB 7114, AN ACT CONCERNING MUNICIPAL COMPETITIVE PROCUREMENT OF ELECTRICITY, NATURAL GAS, RENEWABLE ENERGY AND OTHER ENERGY-RELATED PRODUCTS BY NONPROFIT ENERGY BUYING CONSORTIA (SUPPORT WITH MODIFICATIONS)

CFE supports, with modifications, H.B. 7114, which would allow municipalities and state agencies to form electricity buying consortiums. CFE supports expanding this proposal to also allow a municipality, including their residents and businesses, to use the power of community purchasing to choose their electricity provider. Known as Community Choice Aggregation (CCA), these aggregate purchasing structures can result in cleaner, cheaper electricity for the town's ratepayers, as compared to the utility's standard offering. For example, Newton, MA recently signed a contract where ratepayers will purchase 60% of their electricity from renewable sources (46% more than the 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 is free to opt out. CCA is not currently authorized in Connecticut. All of our neighboring states allow for CCA including Massachusetts,¹⁷ New York,¹⁸ and Rhode Island,¹⁹ as well as several other states. Connecticut should authorize the establishment of CCA, which has the proven ability to provide competitive electricity rates, reduce GHG emissions, and rapidly green our electric grid.

Thank you for your time and consideration of this testimony.

Respectfully submitted,

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¹⁶ <https://newton.wickedlocal.com/news/20180402/newton-power-choice-plan-moves-forward>

¹⁷ https://www.massclimateaction.org/community_aggregation

¹⁸ <https://www.nyserda.ny.gov/All-Programs/Programs/Clean-Energy-Communities/Clean-Energy-Communities-Program-High-Impact-Action-Toolkits/Community-Choice-Aggregation>

¹⁹ <http://leanenergyus.org/cca-by-state/rhode-island/>

A Connecticut Green New Deal

Primary Goals:

- Rapidly transition to an economy with net-zero greenhouse gas emissions
- Create tens of thousands of good quality, high-wage green jobs
- Prioritize green strategies that will also increase racial and economic justice, and address historical inequities

Proposed Areas of Action:

- **Renewable Energy Production**
 - Increase the Renewable Portfolio Standard (RPS) requirement to 100% no later than 2045
 - Mandate a rapid expansion of offshore wind, with procurements of at least 2000 MW by 2030
 - Expand solar production by raising annual caps on shared solar and commercial & industrial installations
 - Solar Assistance Program: build upon the current Green Bank program targeting low and moderate income households
 - Support expansion of clean/renewable fuel cells by authorizing a larger share of the RPS to be met by fuel cells that use renewable gas from anaerobic digesters, landfills, etc.
- **Energy Efficient Buildings**
 - Rapidly expand energy efficiency programs by protecting and increasing funding
 - Update and expand the Lead By Example program for government facilities
 - Support electrification of heating and hot water by creating new incentive programs for heat pump technologies
 - Ensure that building codes are continuously aligned with the most recent International Energy Conservation Code standards
- **Clean and Accessible Transportation**
 - Lower barriers to personal and business adoption of electric vehicles (EVs)
 - Establish a sustainable and dedicated funding source for CHEAPR incentives
 - Establish EV-ready building codes so people can charge at home and at work
 - Expand the network of charging infrastructure
 - Set a state fleet target of 50% zero-emission vehicles (ZEVs) by 2030
 - Expand and electrify mass transit
 - State transit bus fleet target of 30% zero-emission buses (ZEBs) by 2030
 - Extend bus routes to provide greater geographic coverage, and expand inter-city services
 - Upgrade and extend rail lines and increase service levels
 - Reduce impacts from freight shipping
 - Repair but don't expand existing highway infrastructure
 - Regulate heavy trucks
 - Shift freight from trucks to rail

- **Workforce Development and Job Pipelines**
 - A mandatory Climate Labor Agreement, providing basic labor rights and standards for all publicly-supported, climate-related employment
 - Encourage community workforce agreements that provide significant proportions of hiring from disadvantaged communities
 - Create a solar jobs program modeled after the targeted training and job pipeline programs in Illinois's Future Energy Jobs Act
 - Provide transition benefits for those affected by the economy shifting away from fossil fuels, including job training, education, and opportunities in clean energy, energy efficiency and climate resilient infrastructure jobs

- **“Buy Fair” and “Buy Local” Procurement Policies**
 - Implement state procurement guidelines that support in-state companies with fair labor practices and recruitment of workers from disadvantaged communities
 - Implement state procurement guidelines that emphasize sourcing and disposal in ways that have the lowest possible carbon impact

- **Resiliency and Infrastructure Investment**
 - Upgrade coastal infrastructure to prepare for sea level rise
 - Emphasize “living shoreline” measures, including extensive deployment of the natural systems (green infrastructure) that protect our coastal and inland communities from flooding and the pollution caused by increased storm events.
 - Protect critical infrastructure that cannot be moved (e.g. coastal sewage treatment plants and electrical substations)
 - Prioritize storm sewer separation efforts
 - Increase bridge and culvert openings to reduce flood impacts
 - Develop plans for systematic retreat from low-lying areas
 - Intentionally invest in urban and rural impoverished areas that are at-risk
 - Establish a network of microgrids to enhance the resilience of the state’s power infrastructure

- **Sustainable Agriculture and Forestry**
 - Promote low-energy-intensive practices
 - Encourage management practices that draw carbon from the atmosphere and store it in plants and the soil

- **Financing**
 - Establish a CT Infrastructure Bank
 - Expand CT Green Bank’s mission to include some environmental and resiliency projects
 - Explore new creative financing mechanisms, e.g. low-interest residential and commercial loans for elevating structures in flood-prone areas that provide “on-bill repayment” through property insurance payments that direct flood insurance savings toward repayment of the loan
 - Create municipal stormwater authorities to allow towns to rapidly upgrade stormwater infrastructure and management activities

- **Municipal Engagement**

- Engage municipalities in Green New Deal by requiring plans of conservation and development (POCDs) to incorporate and plan for state mandates for GHG reduction, energy efficiency, adoption of EVs, and procurement of renewable power, as well as incorporating projects to make streets safer and cleaner through bike and pedestrian infrastructure improvements.