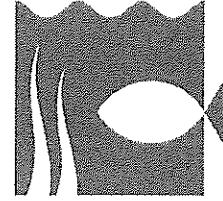


**Connecticut Fund  
for the Environment**



**Save the Sound**  
A program of  
Connecticut Fund for the Environment

**Testimony of Connecticut Fund for the Environment  
Before the Committee on Energy and Technology**

*In support of*

**S.B. No. 630, AN ACT CONCERNING CLEAN AND RENEWABLE ENERGY  
OPPORTUNITIES AND USE OF RENEWABLE ENERGY SOURCES**

*In opposition to*

**S.B. No. 106, AN ACT CONCERNING ZERO-CARBON ELECTRIC GENERATING  
FACILITIES AND ACHIEVING CONNECTICUT'S GREENHOUSE GAS  
EMISSIONS MANDATED LEVELS.**

*In opposition to*

**S.B. No. 412, AN ACT RESTRICTING THE USE OF INCENTIVES  
FOR THE DEVELOPMENT OF SOLAR ARRAYS ON AGRICULTURAL LAND**

Submitted by Claire Coleman  
Climate & Energy Attorney  
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*Connecticut Fund for the Environment (CFE) is a non-profit environmental organization with over 5,500 members statewide. 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 Senators Winfield and Formica, Representative Reed, and members of the Energy and Technology Committee:

**A. S.B. No. 630, AN ACT CONCERNING CLEAN AND RENEWABLE ENERGY  
OPPORTUNITIES AND USE OF RENEWABLE ENERGY SOURCES**

Connecticut Fund for the Environment (CFE) submits this testimony in support of Proposed S.B. No. 630, An Act Concerning Clean and Renewable Energy Opportunities and Use of Renewable Energy Sources. This Bill would require Connecticut to update and extend its Renewable Portfolio Standard (RPS). Connecticut's RPS was first established in 1998, and has been updated from time to time since its first enactment. While Connecticut's RPS statute initially made the state a national leader in transitioning away from dirty fossil fuels toward the use of more clean energy, Connecticut is now starting to lag behind its neighboring states.

Connecticut's RPS currently does not set any increase in standards beyond 2020, and the 2020 standard is not as stringent as neighboring states like New York and Vermont.

Setting higher renewable portfolio standards for years after 2020 is critical to meeting many of Connecticut's environmental, energy, and economic goals. As the Department of Energy and Environmental Protection (DEEP) acknowledged, "The RPS is designed to achieve multiple objectives: (1) diversify the state's energy resource mix to promote reliability; (2) provide a hedge against volatile fossil fuel prices; (3) improve environmental conditions by reducing GHG and air emissions; (4) create clean energy jobs and economic development; (5) minimize the overall cost of renewable energy to Connecticut's electric ratepayers; and (6) enhance the quality of life in the state."<sup>1</sup>

Replacing fossil fuels with renewable energy is a key component of any strategy for combatting climate change. Connecticut has made strong commitments to reducing greenhouse gas (GHG) emissions responsible for global warming and must adopt additional policies if it is to have any chance of making good on those commitments. Connecticut is feeling the impacts of climate change already, as rising sea levels increase damage from coastal storms and flooding.<sup>2</sup> Connecticut leaders have a responsibility to continue to mandate growth in renewable energy sources and stop contributing to global warming through reliance on dirty fossil fuels.

A recent study released by Abt Associates on the positive impacts of the Regional Greenhouse Gas Initiative (RGGI) demonstrates how critical carbon reductions are to our health and economy.<sup>3</sup> The study shows that from 2009-2014, the carbon reductions from RGGI resulted in \$5.7 billion in saved health care costs in the Northeast,<sup>4</sup> and in Connecticut an estimated 421 asthma attacks were avoided and up to 34 lives spared.<sup>5</sup> Compliance with a higher RPS will also reduce emissions of harmful pollutants like nitrogen oxides, sulfur dioxide, and mercury, which are linked to acid rain, smog, respiratory illness, and water contamination.

Importantly, the RPS is not just good for our environment and our health. It is also good for Connecticut's economic growth. The RPS helps drive investments in renewables by guaranteeing that there is a market for that energy as well as by helping those renewables become more competitive with fossil fuel-based energy that currently has a market advantage. This competition drives further development and deployment that in turn enables cost reductions in renewable technologies. Solar is a prime example of this effect. As numerous policies and

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<sup>1</sup> DEEP, 2014 Progress Report, available at [http://www.ct.gov/deep/lib/deep/climatechange/ct\\_progress\\_report\\_2014.pdf](http://www.ct.gov/deep/lib/deep/climatechange/ct_progress_report_2014.pdf).

<sup>2</sup> Environmental Protection Agency, What Climate Change Means for Connecticut (Aug. 2016), available at <https://www3.epa.gov/climatechange/Downloads/impacts-adaptation/climate-change-CT.pdf>.

<sup>3</sup> Abt Associates, *Analysis of the Public Health Impacts of the Regional Greenhouse Gas Initiative, 2009-2014*, (Jan. 2017), <http://abtassociates.com/AbtAssociates/files/7e/7e38e795-aba2-4756-ab72-ba7ae7f53f16.pdf>. RGGI states include Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island and Vermont.

<sup>4</sup>*Id.*

<sup>5</sup> Abt Associates, *Analysis of the Public Health Impacts of the Regional Greenhouse Gas Initiative, 2009-2014, Appendix E* (Jan. 2017), available at <http://abtassociates.com/AbtAssociates/files/d0/d0c73dbb-4921-4cd5-a4d5-b1f587ccb99d.pdf>.

programs in Connecticut and elsewhere have driven the deployment of more photovoltaic installations, the cost of solar energy has declined significantly.<sup>6</sup>

Connecticut also needs to continue to encourage the in-state deployment of RPS-eligible, renewable energy sources. Generating our own renewable energy from solar and wind rather than buying it from neighboring states brings additional benefits to Connecticut – lower air pollution, and more jobs. Establishing policies to allow for unrestricted development of shared solar and use of virtual net metering would foster growth of in-state renewable energy generation and provide support for more job growth in Connecticut. Installation of renewable energy facilities primarily utilizes local workers, so investment dollars are kept in our communities.<sup>7</sup> According to the Solar Foundation’s 2015 jobs census, there were 1,951 solar jobs in Connecticut in 2015.<sup>8</sup> A January 2017 report by U.S. Department of Energy and BW Research Partnership estimates that there are 36,875 energy efficiency and solar jobs in Connecticut.<sup>9</sup> Continued proliferation of renewables in Connecticut will mean more employment opportunities and economic growth.

CFE strongly supports including three main components in S.B. 630.

First, the bill should extend the RPS to require electric suppliers to gradually increase the amount of energy they supply from Class I renewable energy sources as follows: at least 35% Class I renewable energy sources by 2025; at least 50% Class I Renewable Energy Sources by 2030; and at least 80% from Class I Renewable Energy Sources by 2040. Adoption of these increased standards would keep Connecticut’s renewable mandates on a pace similar to our neighboring states.

Second, the bill should also increase the alternative compliance payment (ACP) levied on utilities that do not meet the Class I Renewables RPS requirement to six and seven-tenths cents per kilowatt hour (or sixty-seven dollars per MWh) for 2017, and require an annual adjustment according to the previous year’s Consumer Price Index. Currently, all of Connecticut’s neighboring states (*e.g.*, Maine, Massachusetts, and Rhode Island) have higher ACP rates for Class I renewables,<sup>10</sup> which makes it harder for Connecticut to compete for Class I Renewable Energy Credits (RECs) sold in a regional market.<sup>11</sup> Raising Connecticut’s ACP rate for Class I

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<sup>6</sup> Galen Barbos and Naim Darghouth, Lawrence Berkeley National Laboratory, *Tracking the Sun IX, The Installed Price of Residential and Non-Residential Photovoltaic Systems in the United States* (Aug. 2017), [https://emp.lbl.gov/sites/all/files/tracking\\_the\\_sun\\_ix\\_report\\_0.pdf](https://emp.lbl.gov/sites/all/files/tracking_the_sun_ix_report_0.pdf).

<sup>7</sup> Union of Concerned Scientists, *How Renewable Electricity Standards Deliver Economic Benefits* (May 2013), available at <http://awea.files.cms-plus.com/FileDownloads/pdfs/UCS%20Renewable-Electricity-Standards-Deliver-Economic-Benefits.pdf>.

<sup>8</sup> The Solar Foundation, *2015 National and State Solar Jobs Census*, [www.thesolarfoundation.org/solar-jobs-census/](http://www.thesolarfoundation.org/solar-jobs-census/); <http://www.thesolarfoundation.org/solar-jobs-census/solar-jobs-compendium-CT/>.

<sup>9</sup> U.S. Department of Energy and BW Research Partnership, *U.S. Energy and Employment Report* (Jan. 2017), available at [https://www.energy.gov/sites/prod/files/2017/01/f34/2017%20US%20Energy%20and%20Jobs%20Report\\_0.pdf](https://www.energy.gov/sites/prod/files/2017/01/f34/2017%20US%20Energy%20and%20Jobs%20Report_0.pdf).

<sup>10</sup> See DSIRE: Database of State Incentives for Renewables & Efficiency, *Renewables Portfolio Standard*, available at <http://programs.dsircusa.org/system/program?type=38&>.

<sup>11</sup> DEEP, *Restructuring Connecticut’s Renewable Portfolio Standard* (2013), [http://www.ct.gov/deep/lib/deep/energy/rps/rps\\_final.pdf](http://www.ct.gov/deep/lib/deep/energy/rps/rps_final.pdf).

renewables to sixty-seven dollars per MWh will both encourage compliance with the RPS and allow Connecticut to fairly compete in the regional market for Class I RECs.

Third, the bill should transfer ACP funds to support green energy programs at the Connecticut Green Bank. Prior to 2013, the ACP funds were transferred to the state's Clean Energy Fund (now known as the Connecticut Green Bank) for the development of Class I resources. In 2013, the law was amended to rebate these payments to ratepayers instead.<sup>12</sup> CFE believes that the ACP funds would have more impact if they were directed back to support green energy development, which could then leverage the limited funds collected from the ACP to raise greater sums of private investment in clean energy. While the amount each ratepayer individually receives from the ACP refund is very small (CFE estimates under three dollars in 2014), the aggregate value of the ACP funds (\$7,860,956 in 2014) invested in green energy investment programs like the Green Bank would leverage this money for greater impact on our renewable economy. Directing the funds to clean energy programs that have a proven track record of creating jobs and growing deployment of renewables while reducing CO2 emissions is the smartest investment Connecticut can make.

In conclusion, CFE supports S.B. 630, which would strengthen Connecticut's Renewable Portfolio Standards. We urge the Committee to raise the bill with language that would (1) extend the RPS with increasing requirements for Class I renewables through 2040; (2) increase the ACP to sixty-seven dollars per MWh; and (3) redirect the ACP funds to green energy programs that have proven to be a good investment like those of the Connecticut Green Bank.

We understand that you as our elected leaders are faced with very difficult choices given the state's economic circumstances. However, we also believe that by setting strong renewable standards you are not only helping combat climate change but are investing in Connecticut's future in a way that will help ensure long-term economic and environmental health for our residents.

**B. S.B. No. 106, AN ACT CONCERNING ZERO-CARBON ELECTRIC GENERATING FACILITIES AND ACHIEVING CONNECTICUT'S GREENHOUSE GAS EMISSIONS MANDATED LEVELS.**

CFE submits this testimony in opposition to proposed S.B. No. 106, An Act Concerning Zero-Carbon Electric Generating Facilities and Achieving Connecticut's Greenhouse Gas Emission Mandated Levels. Though not apparent from the title of the bill, CFE's understanding is that this bill is intended to provide some form of subsidies for Dominion's Millstone Nuclear Power Station in Waterford, Connecticut ("Millstone"). CFE opposes any attempt by Dominion to redefine nuclear plants that produce large amounts of highly radioactive waste as renewable energy, and to compete against renewable technologies. There is no reason for Connecticut's taxpayers to prop up an energy source from the past when there is so much promise in safer, renewable energies of the future.

Dominion is essentially asking the legislature to assume that without subsidies, Millstone will retire prematurely. But the fact that Millstone is not as price competitive as natural gas does

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<sup>12</sup> See Public Act 13-303.

not mean that Millstone will shut down tomorrow, or even prior to its licenses terminating in 2035 and 2045. Before contemplating any bail out or adjustment to how Dominion competes in the energy market place, the legislature should require that Millstone be transparent in its operation costs by opening its books for independent analysis.

Most critically, in no circumstance should Millstone be allowed to compete against renewables. Renewable technologies are in a dramatic expansion phase and pitting Millstone against them would chill growth in these clean, job creating industries, while making it more difficult for Connecticut to achieve the ramp up in renewable energy essential to meeting our ultimate greenhouse gas emission reduction goals. Rather than subsidizing an outdated technology that has safety and environmental risks, Connecticut's leaders should be investing in Connecticut's clean energy economy by facilitating the development of more solar and wind power and further development of advanced storage and smart grid technologies. Rapid deployment and expansion of energy storage and smart grid technologies will help the state transition to a modernized grid that is powered primarily by renewable sources of energy. These technologies, coupled with an increase in clean distributed generation like shared solar and microgrids, will improve grid resiliency and security.

In conclusion, CFE opposes S.B. No. 106, and urges the legislature to not pit the promise of our state's renewable energy future against Millstone's diminished bottom-line.

#### **C. S.B. No. 412, AN ACT RESTRICTING THE USE OF INCENTIVES FOR THE DEVELOPMENT OF SOLAR ARRAYS ON AGRICULTURAL LAND**

CFE opposes proposed S.B. No. 412, An Act Restricting the Use of Incentives for the Development of Solar Arrays on Agricultural Land. This bill proposes to "restrict the use of incentives for the development of solar arrays on agricultural land to protect farmland against large-scale solar development." While CFE strongly supports protecting important lands like prime farmland and forests from unnecessary development, legislation making the siting of solar more restrictive is premature and unnecessary.

Developing robust in-state clean energy resources through the proliferation of solar energy is critical to achieve the state's greenhouse gas reduction targets under the Global Warming Solution Act while also meeting the state's electric demand. CFE agrees that Connecticut should prioritize solar projects on sites like rooftops, brownfields, and parking lots that would not compromise farmland or forests. Rooftops and brownfields both represent enormous opportunities for solar development. According to the National Renewable Energy Laboratories, Connecticut (along with many other states) has the technical potential to generate half the electricity we use from rooftop solar alone.<sup>13</sup> Similarly, Connecticut should expand financing and incentives for siting clean energy projects on landfills and other contaminated

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<sup>13</sup> Pieter Gagnon, Robert Margolis, Jennifer Melius, Caleb Phillips, and Ryan Elmore, National Renewable Energy Laboratory, *Rooftop Solar Photovoltaic Technical Potential in the United States: A Detailed Assessment*, January 2016, available at <http://www.nrel.gov/docs/fy16osti/65298.pdf>.

sites, which can have lower development costs and faster development timelines, while protecting open space.<sup>14</sup>

While it is clear that Connecticut does not have to choose between solar and farmland, S.B. 412 risks unnecessarily pitting the two against each other. In light of the current administrative processes and policy review taking place at the Department of Energy and Environmental Protection (DEEP), legislation restricting the siting of solar is premature. DEEP has recognized the need to support the development of solar in ways that do not risk farm land or open space. Earlier this year, DEEP started a dialog with municipalities, environmentalists, industry, and other stakeholders to gather and evaluate information that decision-making entities need to ensure wise siting of renewable infrastructure. DEEP held a workshop on siting grid-connected clean energy facilities in Connecticut on January 10, 2017 that included a panel of experts focusing on harmonizing renewable energy development with Connecticut's environmental, agricultural, and land use policy goals.<sup>15</sup> DEEP also accepted written public on siting clean energy that will be considered for incorporation into Connecticut's Comprehensive Energy Strategy.<sup>16</sup> Finally, DEEP's recent determination that it would not accept any of the Shared Clean Energy Facilities (SCEF) proposals submitted earlier this year, and clarification in its revised request for proposal that it would not accept new proposals located on prime farmland, demonstrates DEEP's commitment to address environmental concerns regarding site optimization for state-procured renewable projects.<sup>17</sup>

The legislature should allow DEEP to continue to develop and implement best practices to harmonize public policy goals of protecting agriculture with the siting of clean energy through the Comprehensive Energy Strategy. S.B. 412 should not be considered at this time.

Thank you for your time and consideration in this testimony.

Respectfully submitted,

/s/ Claire Coleman  
Claire Coleman  
Climate & Energy Attorney  
Connecticut Fund for the Environment  
ccoleman@ctenvironment.org  
(203) 787-0646 ext. 122

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<sup>14</sup> Environmental Protection Agency, *Re-Powering America's Land: Potential Advantages of Reusing Potentially Contaminated Land for renewable Energy* (April 2015), available at [https://www.epa.gov/sites/production/files/2015-04/documents/contaminated\\_land\\_resuse\\_factsheet.pdf](https://www.epa.gov/sites/production/files/2015-04/documents/contaminated_land_resuse_factsheet.pdf).

<sup>15</sup> DEEP, Workshop on Siting Grid-Connected Clean Energy Facilities in Connecticut, Agenda Available at <https://www.clba.org/images/resources/renewablesitingworkshopdraftagenda.pdf>.

<sup>16</sup> DEEP Notice of Workshop and Opportunity for Public Comment, Dec. 21, 2016, available at [http://www.dpuc.state.ct.us/DEEP/energy.nsf/c6c6d525f7cdd1168525797d0047c5bf/f3cc5ed3306df22a85258090006ec264/\\$FILE/Notice%20of%20Workshop%20-%20Siting%20of%20Renewable%20Energy%20-%2001-10-17.pdf](http://www.dpuc.state.ct.us/DEEP/energy.nsf/c6c6d525f7cdd1168525797d0047c5bf/f3cc5ed3306df22a85258090006ec264/$FILE/Notice%20of%20Workshop%20-%20Siting%20of%20Renewable%20Energy%20-%2001-10-17.pdf).

<sup>17</sup> DEEP, Final Determination on Implementation of the Shared Clean Energy Facilities Pilot Program Pursuant to Public Act 15-113, [http://www.dpuc.state.ct.us/DEEP/energy.nsf/c6c6d525f7cdd1168525797d0047c5bf/6c755371a83ccd3c852580ba004c3a00/\\$FILE/2017.02.01\\_FINAL%20Final%20Determination.pdf](http://www.dpuc.state.ct.us/DEEP/energy.nsf/c6c6d525f7cdd1168525797d0047c5bf/6c755371a83ccd3c852580ba004c3a00/$FILE/2017.02.01_FINAL%20Final%20Determination.pdf).