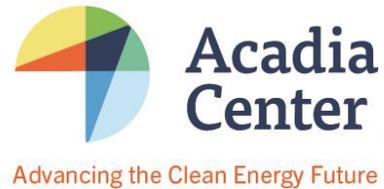


Testimony of William E. Dornbos

Senior Attorney & Advocacy Director

Acadia Center

Public Hearing, March 1, 2018



Before the Energy & Technology Committee

Honorable Chair Rep. Reed, Co-Chairs Sen. Winfield and Sen. Formica, Vice Chairs Sen. Doyle, Sen. Hwang, and Rep. Slap, Ranking Member Rep. Ackert, and Committee Members:

Acadia Center appreciates this opportunity to provide written testimony to the Energy and Technology Committee regarding Senate Bill No. 9, An Act Concerning Connecticut's Energy Future (also known as Governor's Bill No. 9). Acadia Center is a nonprofit research and advocacy organization committed to advancing the clean energy future. Acadia Center is at the forefront of efforts to build clean, low carbon, and consumer-friendly economies.

Senate Bill No. 9, An Act Concerning Connecticut's Energy Future.

Position: Acadia Center opposes this bill, as currently drafted, because it will not advance Connecticut's energy efficiency and clean energy markets.

As described in more detail below, Acadia Center has significant concerns with S.B. 9's provisions on energy efficiency (Sections 6, 7, and 8), on net metering and distributed solar (Sections 4 and 5), and on increased ratepayer funding for the Connecticut Green Bank (Section 9). Acadia Center supports the provision in S.B. 9 (Section 1) that increases Connecticut's Class I renewables target to 40% by 2030.

Acadia Center's overall perspective on S.B. 9 grows out of its recent report on Connecticut's clean energy progress, Connecticut: Pathway to 2030. Among its key findings: Connecticut needs to increase substantially both its energy efficiency savings results and its deployment of in-state distributed solar to keep pace with clean energy markets in leading Northeastern states. A copy of the report is attached to this testimony.¹

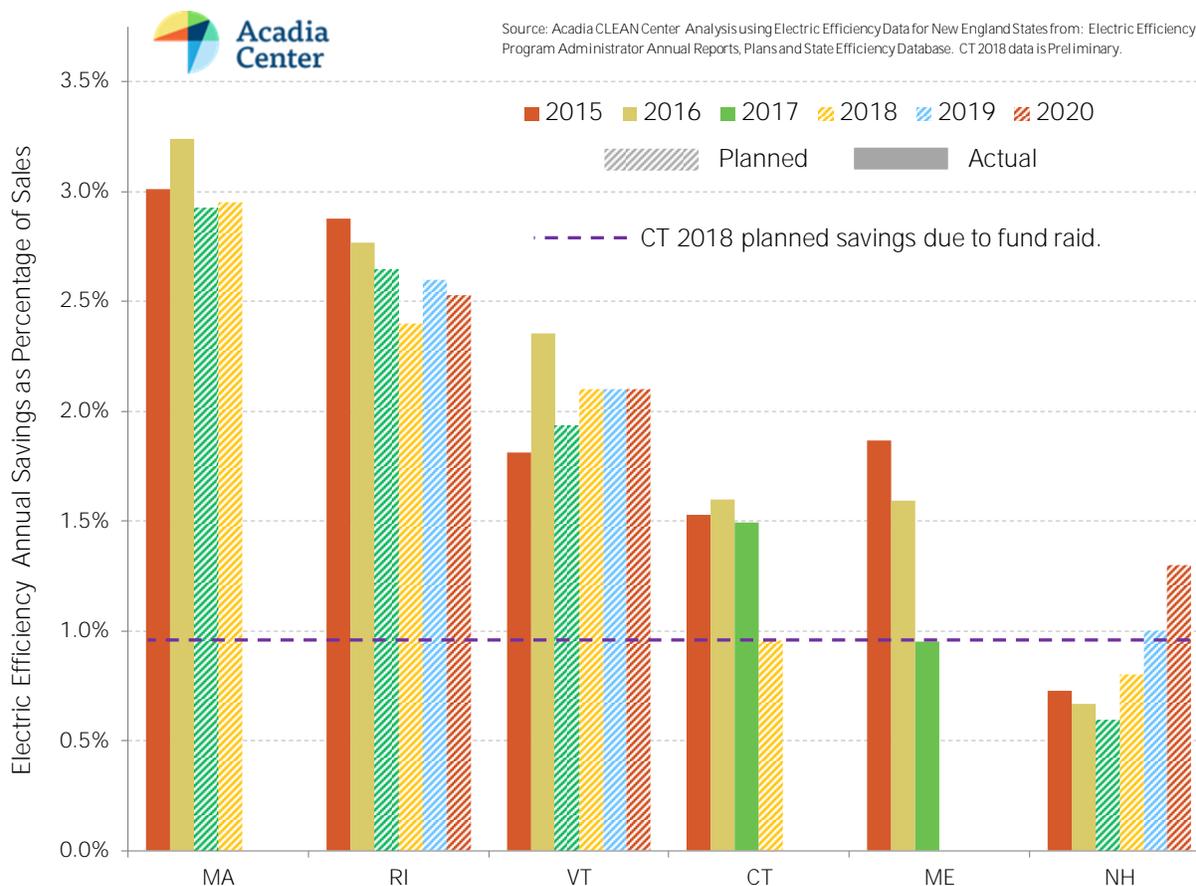
Energy Efficiency

Energy efficiency is at a critical moment in Connecticut. Despite good progress made over the last two decades through Connecticut's high-quality energy efficiency programs – officially named the Conservation and Load Management (“C&LM”) programs² – Connecticut now risks falling behind nearly all other states in New England on efficiency. Two factors have driven this disappointing reality. First, most states in the region have committed to, and implemented, more ambitious energy savings targets than Connecticut. Second, the two-year legislative diversion of \$127 million in C&LM ratepayer funding for electric efficiency will decrease energy savings substantially in our state. The following chart illustrates these two points.

¹ It is also available online at: <http://2030.acadiacenter.org/full-reports/>.

² Acadia Center is familiar with the C&LM programs through its appointment to Connecticut's Energy Efficiency Board (“EEB”), which advises and assists the electric and natural gas utilities with the design, performance, administration, and evaluation of those programs. The EEB also has statutory responsibility for reviewing and approving the C&LM plans that direct Connecticut's roughly \$250 million annual investment in cost-effective energy efficiency (pre-fund raid amount). William Dornbos currently serves as Acadia Center's representative on the EEB and also its elected Vice Chair, although he is not testifying in that capacity today.

Electric Efficiency Savings Levels in New England



Massachusetts, Rhode Island, and Vermont have been procuring significantly more electric efficiency savings than Connecticut for several years now. Due to the current C&LM fund raid, Acadia Center estimates that 2018 will see a major drop in Connecticut's electric efficiency performance – a drop sufficient to place our state at, or close to, the bottom of the New England region, as shown above. To put it another way, Connecticut will be paying for a greater amount of costly energy waste than likely any other state in the region over the next two years, and S.B. 9 will not correct this.

This drastic loss of efficiency savings has serious repercussions for Connecticut's consumers, economy, and environment. First, it makes power more expensive. Connecticut residents, businesses, and municipalities will pay approximately \$275 million in higher utility bills if the full two years of the C&LM fund raid are not undone.³ Second, Connecticut's economy will lose ground. Because the C&LM programs produce \$7 in economic growth for every \$1 they spend on cost-effective energy efficiency, Connecticut will sacrifice an economic boost of approximately \$889 million – again, if the C&LM fund raid remains in place.⁴ Third,

³ See Connecticut Energy Efficiency Board, 2017 Annual Legislative Report, Executive Summary (available online at: <https://www.energizect.com/sites/default/files/Final-2017-Annual-Legislative-Report-WEB-2-20-18.pdf>.)

⁴ See *id.*

Connecticut will suffer increased local air pollution, as an additional 1.6 million gallons of oil will be burned annually.⁵

There are many other fund raid economic and environmental harms that could be identified here, such as approximately 5,600 low-income households losing access to energy efficiency services,⁶ but the larger point is that the Conservation and Load Management programs serve as the state's virtual power plant of energy efficiency. As strategically organized through the three-year C&LM plan, they are, collectively, the only Connecticut entity that can capture energy efficiency savings at meaningful scale and with a comprehensive, coordinated approach across all major market segments. There is no superior alternative to acquiring energy efficiency as a scaled-up energy resource in our state.

This context leads Acadia Center to ask whether S.B. 9's energy efficiency provisions – in particular, Sections 6, 7, and 8 – will help bring Connecticut's energy efficiency market back up to scale as soon as possible. The preliminary answer is no, for several reasons.

First, S.B. 9 does not seek to restore diverted C&LM ratepayer funds – easily the single most important action the General Assembly could take this year to put Connecticut's energy future back on track. That must be remedied through the appropriate legislative vehicle.

Second, Acadia Center notes that S.B. 9 does not increase funding for energy efficiency; the increase of the conservation adjustment mechanism in Section 7 is offset by the repeal of the existing statutory assessment in Section 24. This means the bill does not give Connecticut a real chance to achieve the performance of leading states in the region. Acadia Center's review of S.B. 9 has, in fact, determined that it will likely make Connecticut's energy efficiency savings more expensive overall by adding new costs for contracting, consulting, and redundant program administration and evaluation that do not currently exist and are not currently paid for by ratepayers.

Third, Acadia Center also has specific concerns about the new RFP procurement mechanism addressed in Sections 7 and 8. As proposed, that mechanism appears to be unworkable. It is not placed within the current planning approach for the C&LM programs, which use a three-year planning cycle that relies on program continuity and unified planning guided by the Energy Efficiency Board, the entity representing all major ratepayer interests in energy efficiency. Annual discretionary RFPs of varying amount, scope, or focus issued by DEEP outside of the normal C&LM planning process will disrupt that process, cause costly reworkings of existing C&LM plans, and create program uncertainty that will make business planning for the energy efficiency industry difficult.

The RFP procurement mechanism in Sections 7 and 8 also appears to be vulnerable to poor results and abuse. S.B. 9 does not propose objective performance, reporting, and evaluation criteria for winning bidders. It also does not establish protections against the well-known "cream-skimming" problem – the practice of pursuing only the easiest, cheapest energy efficiency measures for a contracted project in order to maximize near-term profits at the expense of future energy savings. The scope of the proposed RFP mechanism is also massive – 25 MW would be about half of the current annual C&LM funding for electric efficiency – and so the downside risks are also significant.

⁵ *See id.*

⁶ *See id.*

Compounding these concerns is the new unaccountable authority S.B. 9 would give to the Department of Energy and Environmental Protection (“DEEP”) to conduct the energy efficiency RFP procurement. DEEP would have sole authority over preparing RFPs, issuing RFPs, evaluating RFP bidders, and deciding on winning RFP bids. Because DEEP would be both the energy efficiency regulator (as they currently are, an abnormal situation that is unlike any other state in the region) and the sole manager of RFP ratepayer funds, there is potential for unfair RFP processes or suboptimal RFP outcomes. Placing more unaccountable authority with DEEP over energy efficiency funding, planning, and programs also means that energy efficiency would have increased vulnerability to disruption by future gubernatorial administrations.

Most importantly, the RFP procurement mechanism is not necessary for protecting C&LM funds against future legislative diversions. Consolidating existing funding into a variable conservation adjustment mechanism (“CAM”), as proposed in S.B. 9, with the addition of unambiguous statutory savings targets, is the better solution to raid-proofing ratepayer funding of energy efficiency. A CAM is applied through an annual regulatory decision and can only be used for cost-effective energy efficiency.

This issue of regulatory decision making raises a broader concern for Acadia Center, which is the need to unify regulatory oversight of ratepayer spending in Connecticut. Responsibility for reviewing and approving C&LM plans should be returned to the Public Utilities Regulatory Authority (“PURA”), which is well suited for vetting ratepayer-funded proposals through transparent, formal proceedings based on evidence and under oath. Presently, DEEP is both the developer of energy efficiency policy and the regulator of the state’s energy efficiency plans – meaning it regulates its own ideas and relies heavily on informal and inconsistent processes. All other states in New England give final review and approval authority for energy efficiency plans to their public utilities commissions.

Finally, regarding Section 6, which proposes a minimum annual reduction target of 1.6 MMBtu for the state’s energy consumption effective from 2020 to 2025, Acadia Center has modifications to suggest. While the concept of a minimum annual savings target has merit, Acadia Center recommends that the current language be altered to specify electric and natural gas savings targets in their respective units, to have the target first apply in 2019, to make clear that the minimum works as a floor that does not undercut, or cap, the state’s all cost-effective mandate, and to specify a responsible state agency. The use of an MMBtu unit for energy savings is not recommended because it can undervalue electric efficiency savings. One MMBtu of electric savings from efficiency saves two to three MMBTUs of natural gas burned at a powerplant, but with an improperly designed metric it would be counted as equal to a single MMBtu of natural gas burned in a home heating system. Electric efficiency should be prioritized and given full value by setting electric-only targets.

Distributed Solar

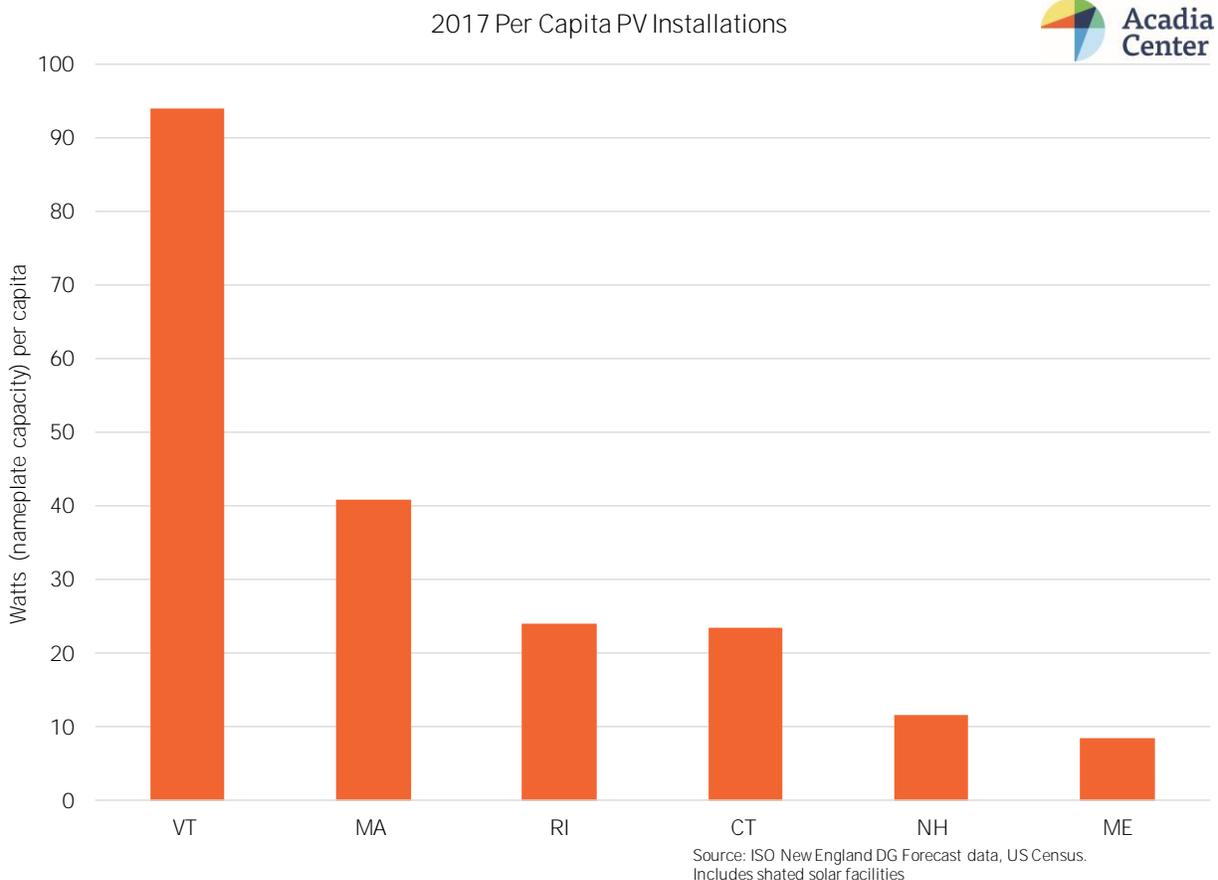
Distributed solar, which includes rooftop and other small-scale solar, is a key part of Connecticut’s important and growing clean energy market. The industry currently employs about 2,170 people in Connecticut – 11% more than in 2015.⁷ Distributed solar also gives Connecticut residents and businesses another way to control their energy use and reduce high energy costs.

Yet Connecticut can do much more to take advantage of distributed solar’s economic and environmental benefits. Connecticut lags neighboring states in its deployment.⁸ Vermont is currently installing four times

⁷ <http://www.thesolarfoundation.org/wp-content/uploads/2018/02/Solar-Jobs-By-State-1.pdf>

⁸ See Acadia Center, Connecticut: Pathway to 2030 (attached to this testimony; online at: <http://2030.acadiacenter.org/full-reports/>).

more distributed solar per person than Connecticut, and Massachusetts nearly two times more per person.⁹ Rhode Island surpassed Connecticut in solar per person installed in 2017 for the first time, leaving our state in fourth place in New England.

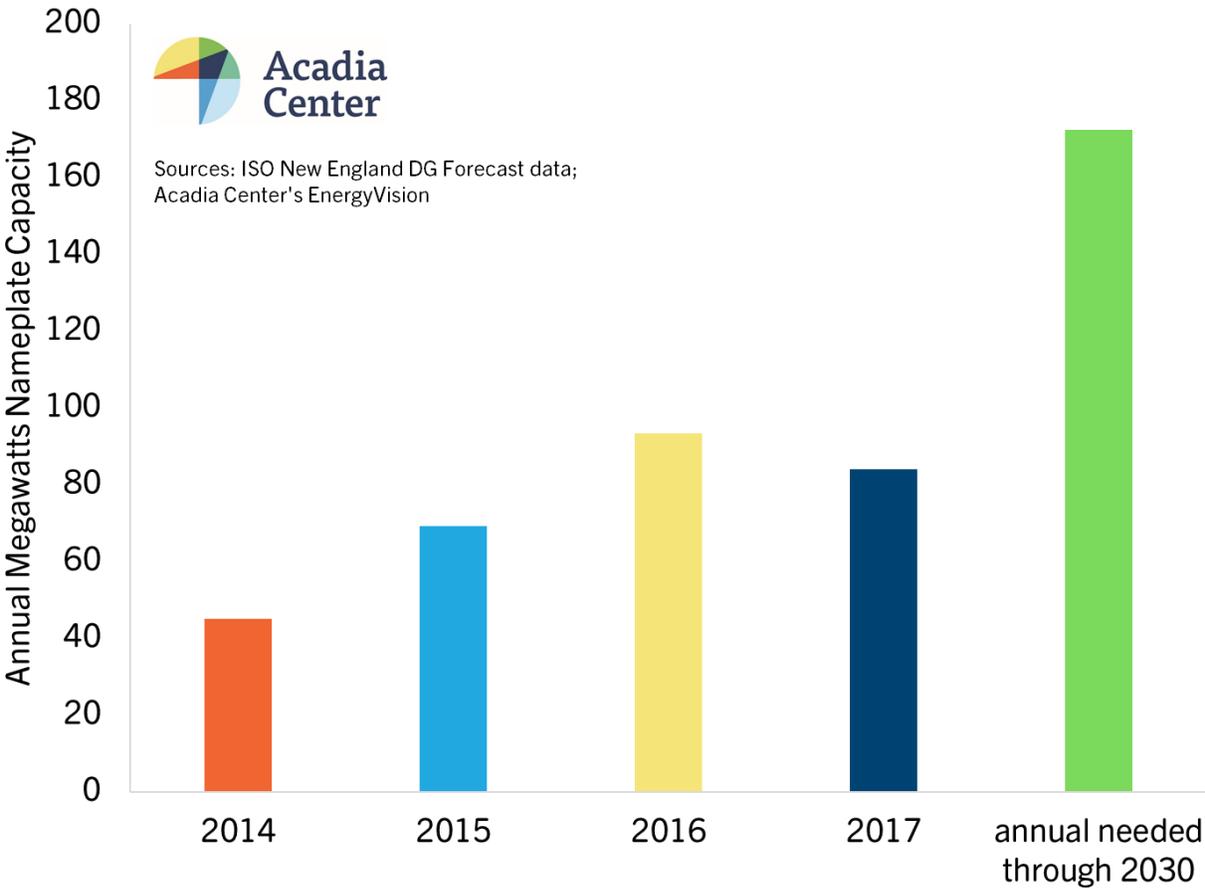


This lower deployment rate will not allow Connecticut to meet its climate commitments, as Acadia Center has recently modeled through its EnergyVision 2030 project.¹⁰ Connecticut will need to more than double its current rate of distributed solar installations to stay on track through 2030, which the following chart shows (on the next page).

⁹ See *id.*

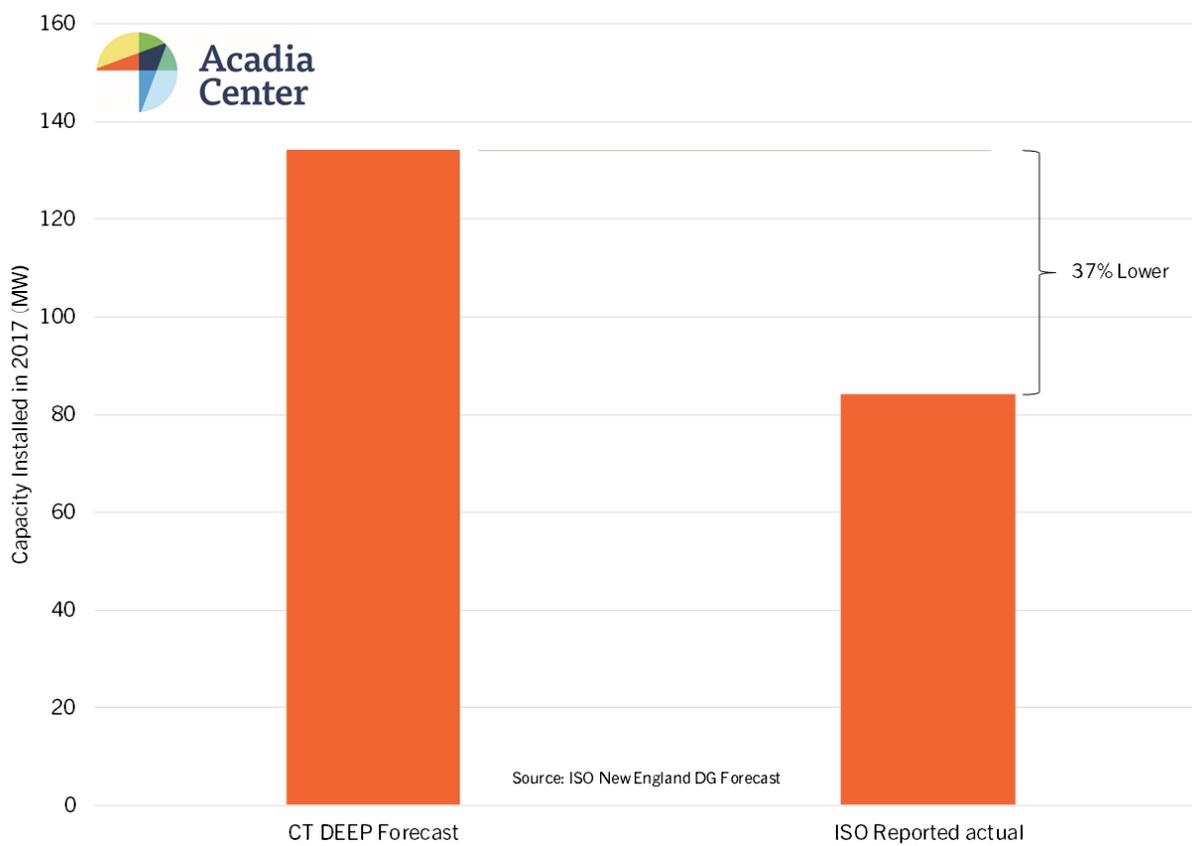
¹⁰ See Acadia Center, Connecticut: Pathway to 2030 (attached to this testimony; online at: <http://2030.acadiacenter.org/full-reports/>).

CT Annual Distributed Solar Installations



An emerging concern for Acadia Center is the decrease in the actual deployment rate from 2016 to 2017 (the yellow and blue columns, respectively, in the chart above), which may signal a real change in trend and the beginning of a slowdown in deployment – a move in the wrong direction for our state. The actual deployment results from 2017 are further concerning when compared against forecasted solar deployment for that year, as illustrated in the following chart (on the next page).

2017 Forecasted and Actual Solar PV Additions in CT



This chart shows that actual solar deployment fell significantly below DEEP's 2017 forecast for the industry, declining by 37% or roughly 50 MW. Although one year of data should not be overinterpreted, the information in the two charts above strongly suggests that Connecticut needs to increase support for its in-state solar industry, not decrease it.

Based on Acadia Center's review, S.B. 9's provisions regarding distributed solar and net metering – Sections 4 and 5 – will not help this situation. Section 4 specifically proposes to end net metering, which is the policy that allows customers to reduce the electricity they purchase from utilities when they consume the energy from their solar panels on-site. By ending net metering, S.B. 9 would:

- *End the Right to Consume Rooftop Solar Power*– S.B. 9 would require solar customers to sell all the power they generate back to the utilities, preventing them from consuming the electricity generated on their own roofs.
- *End the Right to Store Energy*– By preventing customers from consuming the power they generate on-site, S.B. 9 would prevent customers from charging batteries to store their own power.
- *End the Development of a Clean, Efficient, Cost-Effective Grid*– Distributed solar and energy storage are key pieces to the modern grid. Limiting this transition keeps energy costs high and restricts customer choice and control.

- *Increase Metering and Billing Costs* – S.B. 9 would require two utility-grade meters, one to measure electricity generated and one to measure electricity consumed, increasing metering and billing costs for customers.

Acadia Center opposes ending net metering and S.B. 9's replacement, the two-meter approach. Sometimes referred to as "buy-all, credit-all", the two-meter approach bills a customer's gross consumption and credits a customer's gross production at separate rates. This is in contrast to net metering, where a customer can reduce the amount of energy purchased from the grid when the energy is produced and consumed directly on-site. This lowers the customer's bill at the retail rate for self-generated electricity. The two-meter approach has numerous conceptual and practical flaws and should not be adopted. The only state in the country that has adopted this counterproductive two-meter approach is the Maine Public Utilities Commission under Governor Paul LePage.¹¹

Since the two-meter approach was first proposed by DEEP through its draft Comprehensive Energy Strategy ("CES"), Acadia Center, along with many allies, has sought to find an intermediate approach that would reform net metering, but not end it. This group developed a document, "Joint Principles on Net Metering Reform in Connecticut", to help further the discussion with DEEP. A copy is attached to this testimony. As noted in the "Joint Principles", smart reforms of net metering are available that maintain customer rights and benefits while also addressing any perceived cost-shifting. Acadia Center believes that net metering credit values could be altered and refined through a proceeding before PURA. It should also be possible to address solar incentive reforms through a new Connecticut program modeled after the Solar Massachusetts Renewable Target solar incentive program (commonly known as the SMART program).

It should be noted that DEEP's technical work underlying its final CES recommendations has important analytical gaps. Intermediate options for net metering reform and/or solar incentive reform, such as those described in the "Joint Principles", were not analyzed, for instance.¹² Key benefits of distributed solar also were not included, such as avoided transmission and distribution costs.¹³

Green Bank

Section 9 of S.B. 9 doubles ratepayer funding for the Connecticut Green Bank for seven years starting in 2019. Since its creation in 2011, the Green Bank has received approximately \$28 million annually through a one mill per kilowatt hour charge on sales to electric ratepayers. Section 9 would increase that to roughly \$56 million annually.

While Acadia Center takes no position on the proposed funding increase itself, it does recommend that the General Assembly give PURA regulatory oversight of any electric ratepayer funding provided to the Green Bank. This proposal goes hand-in-hand with Acadia Center's recommendation (made previously in the energy efficiency section) to return oversight of the Conservation and Load Management plans to PURA.

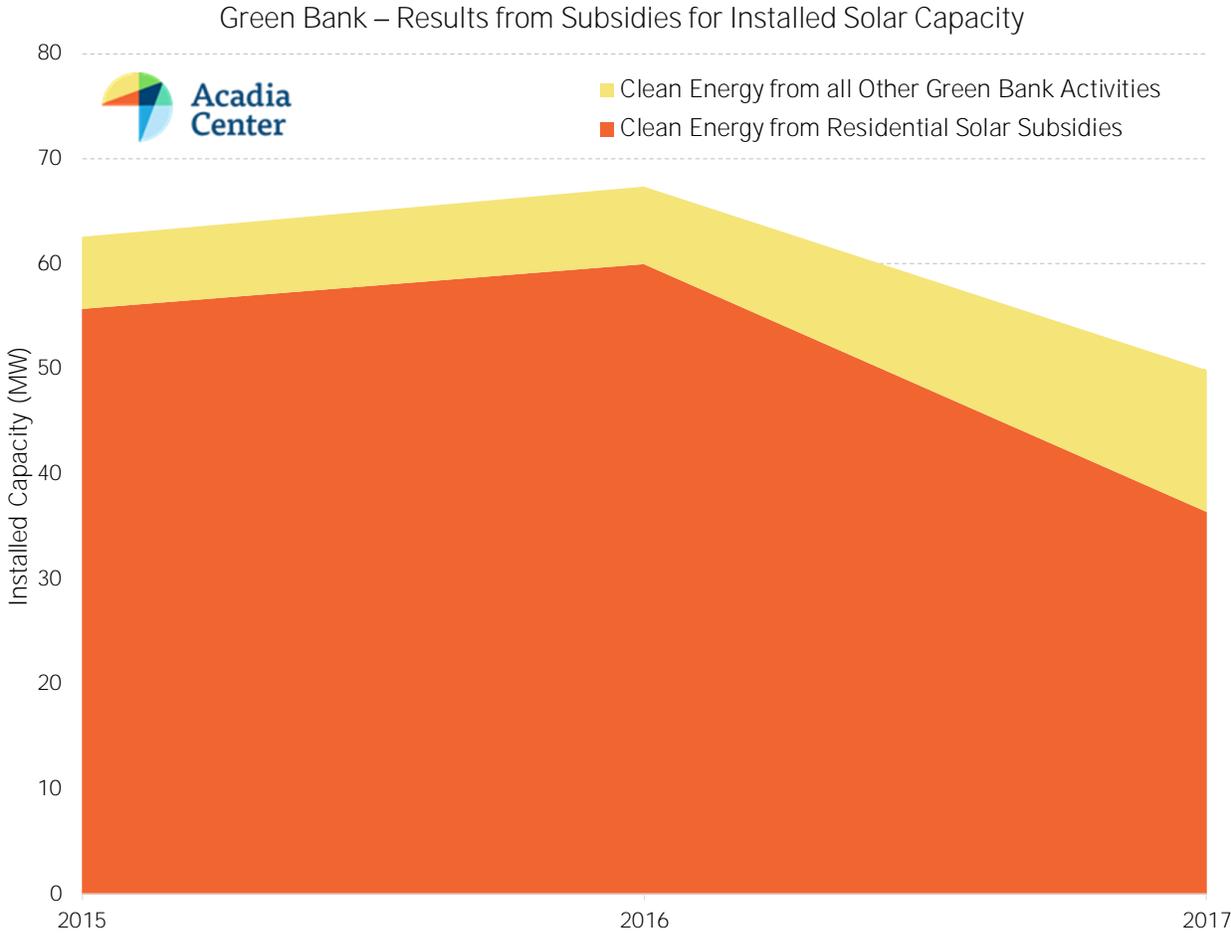
¹¹ The implementation of this policy has been delayed until 2018 because of uncertainty over who would bear the cost of additional utility expenses and the policy is still facing a judicial challenge: <https://www.utilitydive.com/news/maine-net-metering-battle-heads-to-court/512771/>. In addition, a bill to change this policy was passed by the Maine Legislature in 2017, but the House narrowly failed to override Governor LePage's veto: <https://www.utilitydive.com/news/maine-lawmakers-fail-to-override-governors-veto-of-solar-bill/448550/>.

¹² See CT DEEP, Comprehensive Energy Strategy Distributed Generation Cost Analysis, p. 1 (available online: http://www.ct.gov/deep/lib/deep/energy/ces/distributed_generation_cost_analysis.pdf.)

¹³ See *id.*, p. 16.

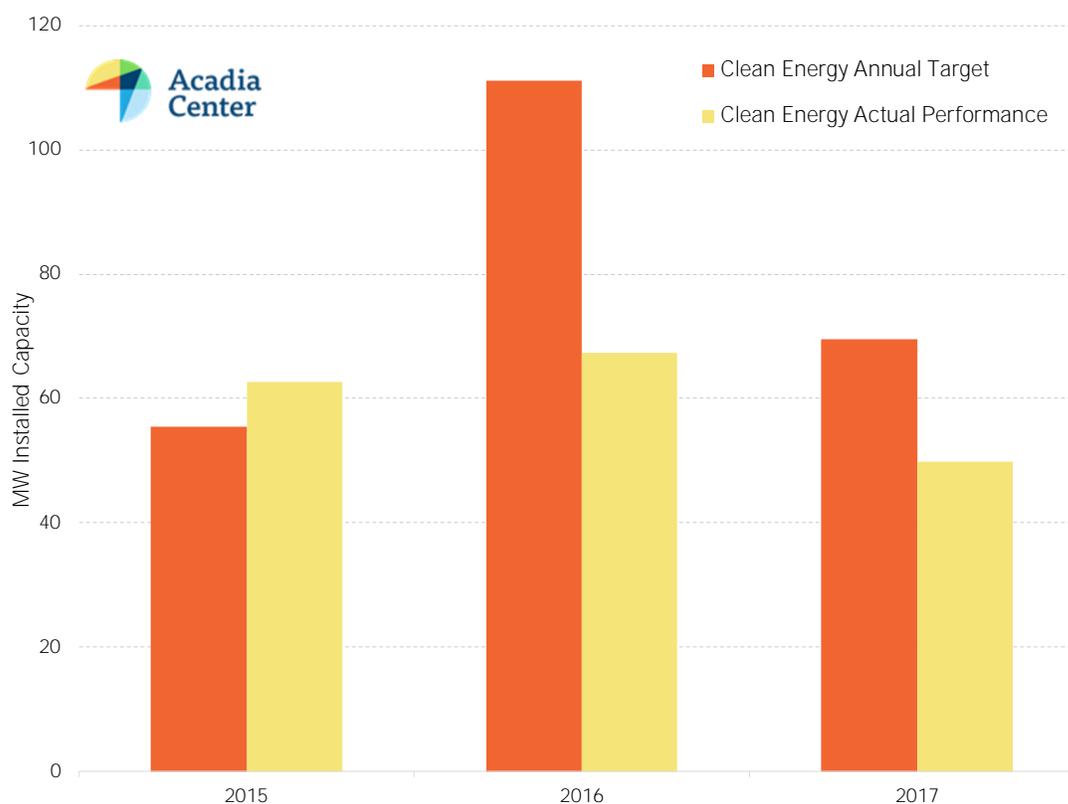
These two changes would ensure that all major ratepayer funding streams in Connecticut – for the electric and natural gas distribution utilities, for the C&LM programs for electric and natural gas efficiency, and for the Green Bank – are receiving proper regulatory vetting through the institution, PURA, created for that purpose.

At present, the incentives provided by the Green Bank receive no regulatory scrutiny. Most of the Green Bank’s clean energy results continue to be achieved through traditional production incentives, or subsidies, paid to residential solar customers, as the chart below demonstrates.



The next chart shows that the Green Bank’s clean energy programs have not been achieving annual installation targets for the last two years (see chart on next page).

Green Bank – Clean Energy Annual Targets v. Actual Performance



These performance results suggest that regulatory oversight by PURA is needed to ensure that ratepayer funding is being deployed with maximum impact. It should also be noted that there has not been any demonstrated analysis of what level of additional clean energy would be produced by the additional \$28 million in annual spending, nor any analysis of what could be achieved by spending \$28 million per year on other alternatives.

Renewable Portfolio Standard

Acadia Center strongly supports Section 1 of S.B. 9, which increases the Class I renewables target of Connecticut’s Renewable Portfolio Standard (“RPS”) to 40% by 2030. This is an important and necessary policy reform that will be crucial to putting Connecticut back on track to meet its final greenhouse gas emissions target in 2050. It would also align Connecticut’s grid-scale renewables market with those of regional leaders, like Rhode Island and New York.¹⁴ Acadia Center’s emissions modeling has found that a Class I target in the 40-50% range would be sufficient for meeting climate commitments. Increasing the Class I target to 50% would be preferable, however, to accelerate grid-scale clean energy deployment in the near-term with a strong, long-term signal to the market. Acadia Center also recommends that an offshore wind procurement mandate be added to S.B. 9 to make sure Connecticut does not miss out on the immense economic development opportunity presented by this massive renewable resource in nearby federal waters.

For more information:

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¹⁴ See Acadia Center, Connecticut: Pathway to 2030 (attached to this testimony; online at: <http://2030.acadiacenter.org/full-reports/>).



Connecticut: Pathway to 2030

EnergyVision 2030 describes in detail how seven Northeast states can be on a pathway towards a reliable, consumer-oriented clean energy future that meets a goal to reduce climate pollution at least 45% from 1990 levels by 2030. Reducing climate pollution 45% by 2030 is needed to keep Connecticut on track for an 80% reduction from 2001 levels required by 2050 under the Global Warming Solutions Act. Using a data-driven approach, EnergyVision 2030 sets technology-specific targets in four key clean energy markets—grid modernization, electric generation, buildings, and transportation—and proposes supporting policies to achieve those goals.

Connecticut is achieving respectable middle of the road performance in many areas, but it also significantly trails leading states. The summary tables below detail policies that can be used to reach the clean energy benchmarks presented in EnergyVision 2030. They show Connecticut’s current levels of implementation for specific policies and technologies in each of the four key areas compared to the best practice levels needed to meet emissions targets.

While some states like Massachusetts and Rhode Island are clear leaders in individual areas, a more uniform and consistent approach is needed across all Northeast states, including Connecticut. EnergyVision 2030 shows that a goal to reduce greenhouse gas emissions by 45% can be achieved if all states adopt the best practices of each leading state.



Electric Generation

Solar and wind power are emerging as cost-effective alternatives to traditional fossil-fueled generation sources. Across the United States, solar prices have dropped dramatically and installed capacity has grown exponentially. New York and New England have vast untapped solar and on- and off-shore wind resources. Harnessing this clean, low-cost generation is critical to meeting the 2030 emissions target. Connecticut’s progress toward this goal is represented below.

Policy	Best Practice Status	Connecticut Current Status	2030 Recommendations
Renewable Portfolio Standard (RPS)	New York – 50% by 2030 ¹ Rhode Island – 38.5% by 2035	Class I 20% by 2020 and total 28% by 2020	42% by 2030, primarily wind and solar
Distributed Solar Annual Installation Rate	Vermont – 118 watts per capita (2016) Massachusetts – 56 watts per capita (2016)	26 watts per capita (2016)	48 watts per capita through 2030



Transportation

Transportation is the largest source of emissions in the Northeast and traditionally the most difficult emissions sector to address, but rapidly evolving technology offers deep reduction potential. Electric vehicles (EVs) and innovations in mobility options can help improve transportation efficiency and reduce emissions. In cities and towns of all sizes and in the state's more rural areas, increased transit options like buses, trains, and carpools can grow. See how much Connecticut needs to do in this area to meet emissions targets below.

Policy	Best Practice Status	Connecticut Current Status	2030 Recommendations
EV Sales Annual Growth	Vermont – 42% (average, 2013–2016) Massachusetts – 41% (average, 2013–2016)	38% (average, 2013–2016)	40% annually through 2030
EV Incentive Level Stable Funding Source?	Connecticut – up to \$3000 Colorado – \$5000	Up to \$3000 (\$5000 for fuel cell vehicles) No	Market levels needed to achieve growth targets Yes
California ZEV Standard Adoption	Several states have adopted	Yes	Yes
EV Chargers DC Fast Chargers per 1000 Miles of Highway L2 Chargers per Billion VMT	Massachusetts – 17 Vermont – 18	9 9	
EV Charging Rate/Demand Management Program	New York – EV time of use rates and demand management program pilots	Limited – Utilities offer opt-in whole-house time of use rates	Easy to understand time-varying rates for energy supply, transmission and distribution
Annual Transit Trips per Capita (Buses, Trains, and Subways)	New York – 195	12	
Percentage of Workers 16+ Carpooling	Maine – 10.6%	8.3%	
Emissions Pricing for Transportation Fuel	California – \$13/ton	No	Yes – market-based price



Grid Modernization

To take full advantage of opportunities to benefit consumers and advance emissions-reducing technologies, the rules and regulations governing the electric grid need to be comprehensively updated. The present grid was designed at a time when centralized power generators exclusively controlled a one-way flow of electricity to consumers. A modern grid needs to accommodate greater consumer control and two-way flows of power. Grid modernization will provide the backbone that supports the carbon-cutting changes in all sectors. See how grid modernization processes in Connecticut are progressing below.

Policy	Best Practice Status	Connecticut Current Status
Distribution System Planning to Consider Clean Local Alternatives to Infrastructure	<p>Rhode Island – System Reliability Procurement Plan and Power Sector Transformation</p> <p>New York – Reforming the Energy Vision (REV) proceeding</p> <p>Vermont – Renewable Energy, Efficiency, Transmission, and Vermont’s Energy Future Act</p>	No
Regulatory Proceeding or Other Process Underway to Align Utility Business Models	<p>New York – REV proceeding</p> <p>Rhode Island – Power Sector Transformation</p>	No
Regulatory Proceeding Underway to Modernize Grid	<p>New York – REV proceeding</p> <p>Rhode Island – Power Sector Transformation</p>	Limited: Small number of utility-proposed pilot projects.
<p>Consumer-Friendly Rate Design</p> <p>Limited Reliance on Fixed Charges</p> <p>Easy to Understand Time-Varying Rates for Energy Supply, Transmission and Distribution (T&D)</p>	<p>Several states have utilities with residential fixed charges in the \$5 to \$10 range</p> <p>Green Mountain Power (VT) offers three options for highly differentiated bundled residential rates.</p> <p>Several New York utilities offer residential rates with differentiated energy and transmission/distribution components.</p> <p>United Illuminating (CT) offers a residential rate with differentiated transmission and energy components.</p>	<p>Fixed Charges UI: \$10.04 Eversource: \$19.25 (Active rate case could modify this)</p> <p>Statute limiting costs that can be included in fixed charge.</p> <p>Time-Varying Rates UI: Supply and transmission Eversource: Supply</p>
Shared Solar or Virtual Net Metering	New York, Massachusetts, and Vermont	Limited shared solar pilots; VNM capped at low amount.
Distributed Generation Compensation	Monetary crediting, with initial reforms to align credit structures with value	<p>Retail rate up to net-zero production in a year.</p> <p>Production in excess of this compensated at the average wholesale price.</p>
Storage Mandate	California – 1325 MW by 2020	No



Buildings

Buildings offer significant energy efficiency investment opportunities that can be combined with clean heating technologies to provide deep emissions reductions. The Northeast is a national leader in investing in energy efficiency. Massachusetts filled a record 3.3% of its electricity needs with cost effective energy efficiency installed in 2016 alone, more than double Connecticut. Recent legislative budget sweeps of efficiency funding will cause Connecticut to fall farther behind in the next two years. Not only is efficiency the lowest cost and cleanest energy choice, it provides enormous economic gains, creates jobs, and saves consumers money. Increasing investments in efficiency has made nearly \$500 million of expensive transmission line upgrades no longer necessary in New England. More information about current efficiency efforts in Connecticut below.

Policy	Best Practice Status	Connecticut Current Status	2030 Recommendations
Electric Energy Efficiency Annual Savings Level	Massachusetts – 2.9% (2017 plan)	1.4% (2017 plan) ²	3.0% ³
Natural Gas Energy Efficiency Annual Savings Level	Massachusetts – 1.2% (2016)	0.7% (2016)	1.2%
Residential Heat Pump Conversion Rate	Maine – 0.8% (2016)	0.1% (2015)	1.0% through 2030
Fossil Fuel or Carbon-based Incentive Funding for Heat Pumps	Massachusetts – MassCEC’s \$30 million Clean Heating and Cooling program	No	Yes

Conclusion

Connecticut’s progress toward a clean energy future has been mixed so far. To build a low-carbon energy system, the state must excel across all policy areas. To reach EnergyVision 2030 goals, the state should strengthen efforts to modernize the grid through current regulatory proceedings and proposed legislation; expand the Renewable Portfolio Standard; avoid creating new barriers to adoption of solar PV; adopt all cost-effective energy efficiency savings levels; avoid new investments in fossil fuel infrastructure; increase support for switching to heat pumps; and continue to incentivize and remove barriers to purchasing and using electric vehicles. If Connecticut follows these policy recommendations, it will be on its way to a clean energy future.

References

- 1 Eligible resources vary by state. New York’s Clean Energy Standard includes large-scale hydro, which is not included in the EnergyVision 2030 recommended minimum target.
- 2 Connecticut’s energy efficiency programs suffered a setback in 2017 when the General Assembly diverted \$127 million in future energy efficiency funds and additional RGGI funds for unrelated budget purposes. This will likely reduce annual savings in 2018 and 2019 to levels below 1.0%.
- 3 EnergyVision 2030 calls for an average of 2.5% annual electric savings through 2030. Because Massachusetts and other states have demonstrated that savings of 3% or more are currently achievable and lower total electric costs, Acadia Center is currently recommending that states aim for higher near-term levels.

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Joint Principles on Net Metering Reform in Connecticut

Endorsed by:

Acadia Center

Ashford Clean Energy Task Force

Citizens Campaign for the Environment

Clean Water Action

Connecticut Fund for the Environment

Connecticut League of Conservation Voters

Connecticut Roundtable on Climate and Jobs

ConnPIRG

Eastern Connecticut Green Action

Efficiency for All

Energy Efficiencies Solutions

Environment Connecticut

Joel Gordes, Energy Security Strategist

Natural Resources Defense Council

Northeast Clean Energy Council

People's Action for Clean Energy

Portland Clean Energy Task Force

The Alliance for Solar Choice

The Nature Conservancy

Sierra Club

Vote Solar

The endorsing organizations would like to express our concerns with the customer-sited solar proposals in the Department of Energy and Environmental Protection's 2017 draft Comprehensive Energy Strategy (CES). We represent a diverse group of interests in Connecticut, including clean energy businesses, clean energy and environmental public interest groups, labor unions, and consumer advocates, all who oppose the proposed changes to net metering in the draft CES, particularly changes that would require two utility meters for residents and small businesses who install solar, one to measure gross generation from the solar unit and another to measure gross consumption on-site ("two-meter proposal"). Other solutions, described below, are possible to balance concerns about cost while respecting key rate design and public policy principles. We are happy to work with Connecticut policymakers on these important issues.

The two-meter proposal, sometimes referred to as "buy-all, credit-all", bills a customer's gross consumption and credits a customer's gross production at separate rates. This is in contrast to net metering, where a customer can reduce the amount of energy purchased from the grid when the energy is produced and consumed directly on-site. This lowers the customer's bill at the retail rate for self-generated electricity. The two-meter proposal has numerous conceptual and practical flaws and should not be adopted. The only state in the country that has adopted this counterproductive two-meter approach is the Maine Public Utilities Commission under Governor Paul LePage.¹ These flaws include:

- **Price discrimination against clean distributed generation** – Clean distributed generation consumed directly on-site should be treated the same as reductions in demand from energy efficiency investment or conservation;
- **Violation of the right to generate, store, and consume your own clean energy** – Customers should have the choice to be independent and the ability to use their own energy;

¹ The implementation of this policy has been delayed until 2018 because of uncertainty over who would bear the cost of additional utility expenses and the policy is still facing a judicial challenge:

<https://www.utilitydive.com/news/maine-net-metering-battle-heads-to-court/512771/>.

In addition, a bill to change this policy was passed by the Maine Legislature in 2017, but the House narrowly failed to override Governor LePage's veto: <https://www.utilitydive.com/news/maine-lawmakers-fail-to-override-governors-veto-of-solar-bill/448550/>.

- **Imperils future of smart homes with storage and energy management** – Integration of clean distributed generation, storage, electric vehicle charging, and smart appliances is most efficiently done jointly through one meter that measures imports from and exports to the grid; and
- **Higher metering and billing costs** - Requirement for two utility meters increases metering and billing costs.

However, current policies can be substantially improved going forward. Numerous other reforms are possible to make solar incentive programs more cost-effective and improve the fairness and accuracy of compensation for distributed generation. Productive reforms must be consistent with key principles for rate design, as well as relevant policy goals.

In the short term with existing metering, these reforms include:

- Implementing monetary crediting and removing system benefit charges from net metering credit value;
- Changes to rate design that send better price signals to customers, such as reflecting temporal cost causation, and address any proven and material cross-subsidies, in either direction, as shown by an independent and publicly scrutinized analysis; and
- Continuing to improve the cost-effectiveness of the solar incentive programs and adjusting the overall mix of solar installations between rooftop, stand-alone distributed generation, and utility-scale projects.

With additional analysis and improved metering, further reforms will be possible in the medium- and long-terms, including:

- Moving to more granular netting periods (e.g., from monthly to time-of-use netting) when there is more granular pricing; and
- Value-based credits for exports, taking into account long-run benefits and costs.

The endorsing organizations look forward to continuing to work with the Department of Energy and Environmental Protection and the Connecticut General Assembly to find a path forward that promotes continued growth of solar and addresses key concerns about current policies.