Advancing the Clean Energy Future

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Testimony on Net Metering and Solar Task Force Report, S.1992

Joint Committee on Telecommunications, Utilities, and Energy

June 2, 2015

Dear Chairs Golden and Downing, and Members of the Committee:

Acadia Center is a non-profit, research and advocacy organization committed to advancing the clean energy future. Acadia Center supports many of the bills listed for discussion today, including H.2852/S.1770, filed by Representatives Calter and Mark and Senator Eldridge; H.2911/S.1787, filed by Representative Smizik and Senator Petrucelli; S.1784, filed by Senators Pacheco, Tarr and Wolf; and S.1799, filed by Senator Wolf. However, this testimony relates to broader reforms for solar policy for Massachusetts and is best considered under the report filed by the Net Metering and Solar Task Force, listed as S.1992. Acadia Center is filing separate testimony today specifically addressing energy storage issues.

In the last year and a half, Acadia Center has issued three reports that help frame the context for any solar policy reforms, EnergyVision,[1] UtilityVision,[2] and a Value of Solar Study for Massachusetts.[3] The combined recommendations of these reports show the way to a clean energy future that benefits consumers and the environment.

Since the Net Metering and Solar Task Force issued their report on April 30th, Acadia Center has engaged extensively with a range of colleagues to determine the best way to move forward with the high-level agreement contained in that report. **Acadia Center strongly supports the recommendations made as the result of those discussions, the "Next Generation Solar Policy Framework for Massachusetts."** This framework, attached to this testimony along with a one-page summary, provides a roadmap to accomplish a range of shared goals, including:

- Full and fair compensation for solar generation that includes a fair compensation mechanism for use of the distribution grid;
- Continued expansion of solar investment to meet our energy and environmental needs, at more reasonable per-unit costs;
- Access to solar resources for all citizens and communities;

[1] http://acadiacenter.org/document/energyvision/
[2] http://acadiacenter.org/document/utilityvision/
[3] http://acadiacenter.org/document/value-of-solar-massachusetts/

- Utility regulation that enables energy efficiency, solar PV, electric vehicles, storage, and other clean distributed energy resources, and appropriately protects low-income customers and vulnerable populations; and
- More vibrant communities and a better Commonwealth, both economically and environmentally.

As of today, 44 organizations have endorsed this framework, including sustainable energy and environmental advocates, solar developers, public health organizations, community groups, and others. This testimony first describes important background that has informed Acadia Center's perspective in discussions on solar policy, and then describes the basics of the "Next Generation Solar Policy Framework for Massachusetts."

EnergyVision, UtilityVision, and Value of Solar in Massachusetts

In 2014, Acadia Center (previously incorporated as ENE/Environment Northeast) released "EnergyVision," laying out a pathway to a modern, sustainable, low-carbon economic and environmental future. This report called for four parallel sets of actions to create a cleaner and more affordable energy system, with deep reductions in greenhouse gases:

- **Electrify Transportation and Building Heating** - substitution of no-/low-carbon electricity in place of fossil fuels;
- **Modernize the Electric Grid** - reform of utility regulatory structures that shape state and regional power grids in order to support electrification, smart energy management, and consumer control;
- **Clean our Electricity Supply** - significant increases in renewable electricity generation; and
- **Maximize Energy Efficiency** – procure all energy efficiency investments that are less expensive than supply.

One central insight of EnergyVision is that electric vehicles and efficient electric heating with air source heat pumps are technologies that are market-ready now and offer both consumer benefits and deep emissions reductions. If gasoline powered vehicles and heating with fossil fuels in the Northeast were converted to electricity overnight, it would result in a 50% reduction in GHG emissions. As we continue to clean our electric generation, a path to our long-term emissions reduction requirements opens up clearly. Another key piece of EnergyVision is recognition of the changing economics of distributed energy resources. These trends enable vast new arrays of options for consumers, both within their home and with community energy, that promote consumer control and keep energy expenditures within our communities and our Commonwealth.

Achieving this EnergyVision requires significant reforms across a range of areas, but perhaps the most challenging area is enabling grid modernization beyond investment in certain technologies by utilities. We need to design a modern energy system that benefits consumers, empowers all of us to control our energy use and costs, enables consumer-friendly, clean energy technologies to flourish, establishes fair and non-burdensome rates, and ensures that low-income and vulnerable consumers are treated fairly. In February 2015, Acadia Center released a report called "UtilityVision," to give an outline to policymakers to create that modern energy system, with the following recommendations:

- **Strategic Planning for a Consumer-Focused Power Grid** – more robust planning processes for utilities with updated cost-benefit calculations to reflect the public interest and a consumer stakeholder council to provide meaningful input;
- **Align Utility Incentives with Consumer and Environmental Goals** – new planning processes should allow regulators to use grid planning to set rates, adopt performance incentives and other mechanisms to ensure that utility incentives are aligned with public policies, and provide additional regulatory guidance to the utilities;
- **Improve How Consumers Pay for the Power They Consume** – electricity rates should be designed to empower consumers to make smart energy and economic decisions, avoiding fixed charges that limit customer control and transitioning to new rate structures that better align with the drivers of electric system costs; and
- **Improve How Consumers Are Compensated for the Power They Produce** – in the short term, credit values for distributed generation can be adjusted and, in the long term, the retail rates avoided by generation will be better designed and better metering infrastructure will enable more granular options.

In order to justify major public policy investments for energy, the costs and benefits must be understood and rigorously evaluated. Solar is no different in this regard. Over the last several years, numerous jurisdictions across the country and in New England have done detailed studies of the costs and benefits of distributed solar. A well-done study includes costs and benefits to the electric system, including avoided energy costs; avoided capacity costs; avoided transmission and distribution (T&D) costs; market price suppression effects or "DRIPE" for energy and capacity; reduced T&D line losses; avoided marginal reserve capacity; avoided fuel price hedging costs; avoided environmental compliance costs; and any solar integration costs, as well as societal impacts, including net social cost of CO_2, NOx, and SO_2 emissions; economic development values; and other measurable environmental and social values.

Most relevantly, the Maine PUC completed a value of solar analysis this past March. In April, Acadia Center released a value of solar study for Massachusetts, quantifying a wide range of values for ratepayers and society. **This study demonstrated that distributed solar PV provides between 22 and 28 cents per kWh of benefits for ratepayers and between 6 and 7 cents of additional environmental social benefits.**

Next Generation Solar Policy Framework for Massachusetts

This larger context informs our thinking about reforms to solar policy can be made. With these principles and policy goals in mind, Acadia Center began discussions with a range of colleagues after April 30th about the best way to implement the high level agreement contained in the Task Force Report. These discussions turned into a set of recommendations called the "Next Generation Solar Policy Framework for Massachusetts." The framework, endorsed by 44 organizations, can be summarized in seven steps:

- 1) Suspend and then eliminate the caps on net metering, which undermine solar development without providing benefits to ratepayers.
- 2) Preserve net metering and virtual net metering as the primary rate mechanisms to compensate solar producers.

- 3) Initiate a study by DOER of the benefits and costs that solar PV production offers to the energy grid and to society as a whole to determine appropriate compensation to solar projects.
- 4) Modify compensation through rates (e.g., net metering) to provide for a new "energy system benefit credit" and a "distribution system benefit credit" based upon the long-run values shown in the study. These changes should be phased in based on availability of appropriate and cost-effective metering and billing mechanisms, and the right of individuals to produce clean electricity for their own consumption must be respected. The credits for generation and transmission would remain the same as current policy.
- 5) Reform the solar carve-out programs within the Renewable Portfolio Standard by instituting a new "adjustable block" mechanism, which provides open-access long-term contracting to meet our solar goals more cost-effectively.
- 6) Avoid unnecessary minimum bills and increases in fixed charges that unfairly penalize low-income and low energy-use customers and take us further away from a utility regulatory structure that works for solar, energy efficiency, electric vehicles, storage, and other clean local energy resources.
- 7) Grandfather existing solar projects under the policy structures in place when the projects qualified for those policies in order to maintain the trust of those who made significant investments on that basis.

This framework shares a good deal in common with ideas put forward by other stakeholders. For example, these recommendations fit squarely within the higher level policy recommendations put forward by the Massachusetts Solar Coalition. However, policy details will be quite important and will eventually be determined by either the legislature or by executive agencies. The best example of this is rate reform at the Department of Public Utilities. There are many different rate design options being proposed by utilities across the country that would discourage energy efficiency investment and disproportionately impact low-income ratepayers. The General Court and Baker Administration should rule out these undesirable options and the Next Generation Solar Policy Framework for Massachusetts lays out reforms that will continue to promote solar, provide full and fair compensation for all parties, and avoid these negative side effects.

Sincerely,

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