

**Testimony of Mark Dunlea  
Green Legal and Education Fund Inc., 100% Renewables Now NYS  
To the Reform Energy Vision Proceeding of the NYS Public Service Commission  
October 27, 2015**

My name is Mark Dunlea and I am Chairperson of the Green Education and Legal Fund<sup>1</sup>. I also serve as co-coordinator of the 100% Renewable Now NYS Campaign, which support a transition to 100% renewables by 2030.

We appreciate the opportunity to address the PSC on the REV proceeding.

Achieving climate change goals requires more investments in renewables while halting the further development of fossil fuels and related infrastructure. REV, the PSC and the Cuomo administration have not yet made an adequate commitment to take the steps needed to avoid catastrophic climate change.

A major concern is the continued reliance by NYS upon market forces to drive the transition to renewable energy. This has been a major obstacle both in New York and the US to the development of off-shore wind<sup>2</sup> and to taking effective action to mitigate climate change. The state's experiment with energy deregulation was a major failure, helping to drive electric rates to among the highest in the country. Pope Francis' recent encyclical spoke out against the role of the market in climate change, saying that the drive for profits is not the best way to protect the planet or its inhabitants.

**New York Needs to Significantly Increase its Goal for Renewables to 100% by 2030**

New York State 2015 State Energy Plan specifies a 50% by 2030 renewable energy goal. We recommend that the goal be amended to 100% clean energy by 2030 (excluding nuclear, natural gas, garbage incineration), or at least net zero greenhouse gas emissions. The state also needs to adopt a goal of keeping increases in global temperatures to below 1.5 degrees centigrade; even that is no assurance that catastrophic climate change will be avoided. To achieve goals needed to avoid catastrophic climate change will require a much stronger commitment to developing renewable energy than currently outlined in the LSR proposal.

We support passage of A7497 / S5527 to amend the State Energy Master Plan to establish a goal of 100% clean energy (zero net carbon emissions) in NYS by 2030. Such a goal would give the state a better chance of avoiding catastrophic climate change that the current goal of reducing greenhouse gas emissions by 80% by 2050 (compared to 1990 levels).

**REV Existing Proposals for LSR and Clean Energy Fund are Too Weak to Meet even its Limited Goal of 50% renewables for electricity by 2030**

New York's expiring Renewable Portfolio Standard and other initiatives fell significantly short of meeting its goal of 30% renewable energy by 2030. In addition to increasing the goals moving forward, New York needs to establish firm goals and mandates for individual utilities, including LIPA, related to renewables. The state needs to more aggressively promote higher goals for energy efficiency, distributive energy and Large Scale Renewables.

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<sup>1</sup> [www.gelfny.org](http://www.gelfny.org)

<sup>2</sup> <http://www.pnas.org/content/112/39/11985.full>

NYS apparently will replace RPS with a combination of LRS and Clean Energy Fund. It still needs goals for individual utilities if it follows this process.

Representatives of the renewable energy industry estimate that the proposed \$1.5 billion in funding over 10 years for LSR is likely to only increase renewables by 3,400 MW. They believe to achieve the limited goal of 50% renewable energy by 2030, the goal for LSR should be at least 9,000 MW. This is assuming significant progress in achieving goals related to distributive renewable energy and energy efficiency / conservation.

### **LSR Should Have a Carve Out for Off-Shore Wind, with a PPA for 5,000 MW by 2025 and 10,000 MW by 2030**

There needs to be a major carve out for off-shore wind. Offshore wind has great potential in New York and it will be necessary to attract offshore wind development to New York in order to meet the state's renewable energy goals. The state should commit to a PPA of 5,000 MW of off-shore wind by 2025 and 10,000 MW by 2030.

Our discussions with state energy officials indicate a weak commitment to off-shore wind by the Cuomo administration, relying upon "market forces" rather than making the major upfront commitments (e.g., PPA) that will enable off-shore wind to develop and reduce costs. NYSERDA's paper shows that a major long-term commitment by NYS to off-shore wind could alone reduce costs by 30%. The new LSR program should be designed, through a carve-out or locational delivery requirement, to attract offshore wind development and the associated supply chain, economic, and jobs benefits. Offshore wind development off Long Island is close to the significant demand for electricity in New York City and Long Island, and the wind resources can produce electricity in the afternoons, the time of peak demand. Offshore wind has been successfully developed in Europe for 20 years and we need to bring that industry to NY.

A study on how New York could get 100% of its power from clean, renewable energy indicates that 40% of it would come for off-shore wind, primarily off of Long Island and NYC.<sup>3</sup> There is also potential in the Great Lakes.

The University of Delaware estimates that there is the potential for 23,000 MW of electricity there. A January 2015 Oceana report<sup>4</sup> found that New York has 11.6 gigawatts of offshore wind potential. That's enough energy to power over 9 million households. They also found that 134 GW of off-shore wind off of the East Coast is possible through a gradual and modest development over the next 20 years.

A March 2015 report from NYSERDA and the University of Delaware, the *New York Offshore Wind Cost Reduction Study*,<sup>5</sup> concluded that OSW could become the most viable option for delivering large-scale renewable electricity generation to New York City and Long Island. The report outlined the key steps necessary for reducing the costs of offshore wind power in New York State. The costs could be reduced by as much as 50% during this time period via the combined actions of: specific actions taken by New York State and/or other states, ongoing technological improvements, and continuing industry advances; according to the new study/report. One of the key conclusions is

<sup>3</sup> <https://web.stanford.edu/group/efmh/jacobson/Articles/I/NewYorkWWSEnPolicy.pdf>

<sup>4</sup> [http://oceana.org/sites/default/files/offshore\\_energy\\_by\\_the\\_numbers\\_report\\_final.pdf](http://oceana.org/sites/default/files/offshore_energy_by_the_numbers_report_final.pdf)

<sup>5</sup> <http://cleantechnica.com/2015/03/18/offshore-wind-power-roadmap-new-york-developed-key-steps-reduce-costs/>

that support of offshore wind energy development at scale, rather than on a project-by-project basis, would have the greatest effect on costs amongst the economical options.

According to the Beyond Coal Campaign of Sierra Club, off shore wind will reduce electricity prices for New Yorkers because it is the only LSR resource at the scale necessary to produce electricity to the New York City and Long Island suburbs during times of peak demand. By producing power when demand is highest, OSW will also defer the need for peaking fossil-fuel plants, which disproportionately harm the surrounding communities with dirty air and water.

Whatever state builds the first major off-shore wind project is likely to attract the infrastructure investment in manufacturing, shipping, ports, and supply chain that will position it to be the center of the off-shore wind built out along the east coast. Groups are calling for the state to make a commitment to purchase at least 5,000 MW of off-shore wind by 2025 to facilitate its development.

NYPA funded studies show that a single OSW project could generate total economic activity of \$1 billion in sales, 8,700 job-years and \$610 million in wages for New York State.<sup>6</sup> A 2014 study by Stony Brook University found that if 2,500 MWs of projects were developed, Long Island would get 58,457 construction and operations phase jobs, as well as approximately \$12.9 billion in local economic output.<sup>7</sup>

A 2012 survey found that 85% of Long Island residents support off-shore wind if it is located at least 12 to 15 miles off shore.

It is well documented that far more jobs are created per unit of energy generation in renewables than fossil fuels. We believe that the transition to 100% renewable energy is also a path to full employment. We hope that the state will help educate residents about the many economic benefits of renewables, including that it can lower costs for electricity compared to continued reliance upon fossil fuels when implemented at economies of scale. We also hope that the state will continue to develop creative solutions to assist local communities and school systems that have been overly reliant on the property tax revenues from power plants.

### **Enact a State Carbon / Greenhouse Gas Tax (A8372 / S6037) To Help Account for the External Cost of Burning Fossil Fuels**

The State should enact a carbon tax. The PSC should support the commissioning of an independent, objective study of a state carbon tax similar to what was done in Oregon and Massachusetts.

Since the state is relying upon market forces to promote renewables and reduce carbon emissions, it is imperative that the state immediately enact a carbon (greenhouse gas) tax to adequately capture the costs and damage imposed upon the state and its residents from the burning of fossil fuels. Without a robust carbon tax there is no possibility that the market can adequately promote the correct energy mixture.

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<sup>6</sup> Economic Impact Assessment: Long Island – New York City Offshore Wind Project. Prepared for NYPA by AWS Truepower and Camion Associates. Contract No. 4500191884. at 10 (November 1, 2010.)

<sup>7</sup> New York Energy and Policy Institute- Stony Brook University, “Offshore Wind Energy and Potential Economic Impacts in Long Island”, 12-13 (Nov. 24, 2014).

The State of Oregon's feasibility study found that a carbon tax should be set at least \$60 per ton to reduce carbon emissions. They concluded that a tax of \$10 per ton would not help Oregon reduce greenhouse gas emissions below 1990 levels. At \$60 per ton, a carbon tax would begin reducing emissions below 1990 levels almost immediately by cut emissions by 26 percent and would raise \$2.35 billion in new taxes. The study's authors dismiss the drag factor at even the highest level — \$150 per ton — as “small.” A \$60 per ton carbon tax would raise the price of gas by about 6 cents. Natural gas prices would rise 18 percent and electric prices would rise 9 percent to 30 percent, depending on regional variability.

The proposed state carbon tax would start at \$35 a ton and then increase in annual increments of \$15 a ton. 60% of the revenues would be rebated to low and moderate income consumers. The remaining forty percent will support the transition to one hundred percent clean energy in the state, to support mass transit to reduce carbon emissions, and to improve climate change adaptation. Such funds shall include payments and subsidies for renewable energy, energy conservation and efficiency measures, improvements in infrastructure, improvements in mass transit capacity, agricultural adaptation measures, protection of low-lying areas including coastlines, and emergency responses to extreme weather events.

"Carbon-based fuel" means coal, natural gas, renewable biomass, petroleum products, and any other product that contains carbon and emits carbon dioxide, methane, nitrous oxide, or other greenhouse gases when combusted, that are used for fuel, heating, cooling, or industrial processes, which processes shall include electricity generation.

A carbon tax is an “upstream” tax on the carbon contents of fossil fuels (coal, oil and natural gas) and biofuels. A carbon tax is the most efficient means to instill crucial price signals that spur carbon-reducing investment. A carbon tax can also be used to recapture some of the costs pushed on to taxpayers and consumers from burning fossil fuels, such as the \$30 billion added annual health costs in NYS to deal with air pollution and fossil fuels and the tens of billions of dollars of damage from climate change (e.g., severe weather)

Unlike cap-and-trade, carbon taxes don't create complex and easily-gamed “carbon markets” with allowances, trading and offsets. An upstream carbon tax levies a tax according to the amount of carbon dioxide emitted by each fossil fuel. The cost of the tax is then passed along to consumers and producers as fossil fuels and energy intensive goods and services become more costly. If the carbon tax is effective, goods and services which are less energy intensive will become more affordable than those which release larger quantities of carbon dioxide into the atmosphere.

Pope Frances has spoken out against the dangers of a market-based cap and trade system such as RGGI in NY. RGGI inadequately prices carbon at only \$5 a ton. A July 2015 report from the Congressional Research Service<sup>8</sup> found that RGGI's pricing impact on carbon emissions was negligible. The report found that the vast majority of CO<sub>2</sub> reductions from RGGI were due to EE and RE gains paid for by the sale of the CO<sub>2</sub> permits rather than from the (extremely weak) price signal.

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<sup>8</sup> <https://www.hsdl.org/?view&did=767983>

Polls<sup>9</sup> show that a plurality (60%) of all Americans, including Republicans, support a carbon tax if the revenues are used for renewable energy. The 100% fee and dividend approach still receives majority support (56%) from all voters but not from Republicans (43%).

The PSC staff white paper on Cost Benefit Analysis is seriously flawed, starting with how it evaluate the external costs related to burning fossil fuels. Why is DPS Staff ignoring the serious climate change costs and other impacts of natural gas? While the paper supports the concept of a full life cycle cost analysis, it largely fails to do this. In general the BCA focuses primarily on monetary costs and benefits. We believe the social and environmental benefits of emission from distributed energy (DER) are considerable and must be considered in a BCA analysis--- even if some benefits cannot be quantified.

The Synapse Energy Economics report prepared specifically to address New York's plans for expansion of DERs, offers some recommendations, including the use of proxies, alternative benchmarks, regulatory judgment and multi-attribute decision analysis.

We agree with the comments submitted by NYU's Institute for Policy Integrity, including: "Given that the main focus of the REV proceeding is promoting societal goals, the benefit-cost analysis conducted under the program should use a societal perspective, including applying a comprehensive version of the Societal Cost Test ("SCT"). Focusing instead on the results of narrowly defined tests such as the Utility Cost Test ("UCT") or the ratepayer Impact Measure ("RIM") would be incomplete and misleading. The UCT focuses on the utility sector, and hence is only an approximation of the net benefits that accrue directly to the supply side of the market, while the RIM focuses on the ratepayer, and thus serves only as an approximation of the net benefits that accrue directly to the demand side.<sup>12</sup> For overall social efficiency, both sides of the market, as well as externalities should be considered at the same time and the benefit-cost analysis should be carried out with the goal of maximizing net social welfare."

### **REV Should Support Increased Public and Community Ownership of Energy**

We were pleased that NYS came out in support of community shared renewables and look forward to additional action to promote its development. We recommend that New York follow the lead of California and Vermont and reduce the minimum number of subscribers from 10 to 2<sup>10</sup> to make it easier for small programs to participate.

We also appreciate REV's support for Community Choice Aggregation and hope the PSC will help promote its adoption statewide. One issue that requires attention is the PSC requirement that the default for CCAs is the low cost option. If the State is truly committed to making a bold transition to renewables, the default option for each CCA effort in the State should reflect this with an energy portfolio of between 50% and 100% renewables (our preference). A low cost option could also be provided, but not as the default.

Other CCA provisions:

<sup>9</sup> <http://closup.umich.edu/issues-in-energy-and-environmental-policy/13/public-views-on-a-carbon-tax-depend-on-the-proposed-use-of-revenue/>

<sup>10</sup> [https://www.communitysolarhub.com/images/uploads/general/Shared-Renewable-Model-Rules-revised\\_082214lp\\_\(1\).pdf](https://www.communitysolarhub.com/images/uploads/general/Shared-Renewable-Model-Rules-revised_082214lp_(1).pdf)

- 1) Ensure access to utility data by CCA, including aggregate, customer, and system data in a timely manner during the CCA energy-planning process. If communities are to be charged at all, that cost should not exceed the cost of pulling the data together for the CCA.
- 2) Ensure that the opt-out provision extends to ALL customers, and not just residential and small commercial. Large customer participation is important to the economics of the CCA and these customers also have much to gain from it.
- 3) Enable CCAs to have access, if they so choose, to the energy efficiency funds collected by the utility from customers within the CCA borders in order to implement energy efficiency programs tailored to community needs. Such programs will be more effective if designed and implemented at the community scale, as opposed to the utility service area scale. Both California and Massachusetts CCA statutes permit CCAs to administer the SBC.

Energy Democracy is a political, economic, social and cultural concept that merges technological energy transition with a strengthening of democracy and public participation. Energy democracy means that community residents are innovators, planners, and decision-makers on how to use and create energy that is local and renewable. Policies, capacity-building, and engagement around green energy solutions must support diverse communities to ensure meaningful innovation so that these solutions can be scaled for more impact. It has become increasingly clear that the transition to an equitable, sustainable energy system can only occur if there is decisive shift in power towards workers, communities and the public.

The transition to a decentralized energy system based on renewables is an opportunity to empower local ownership and control. REV should continue to support the expansion of shared community ownership. The state should also work with the fifty-plus power systems to ensure they incorporate renewable energy into their communities, including supporting DER and conservation measures.

As renewable energy has become cost competitive with other forms of energy – especially for on shore wind and solar – the state should provide up front public financing to expedite the transition. Due to low costs and tax credits, many solar companies employ a model where the homeowner does not need to make an upfront capital investment say to install solar panels, with the companies making a profit on their investment after the initial payback period of 7 years or so. NYPA should employ such a model to rapidly expand the installation of solar, energy conservation and other renewable energy systems across the state. Once the initial investment is paid off, either NYPA or some form of cooperative or public ownership model could take over.

A new paper from Center for American Progress outlines how other states have supported the expansion of community solar.<sup>11</sup> Greater availability of financing and lowered costs have resulted in a strong, growing residential solar market. Unfortunately, the majority of low-income households have not enjoyed these benefits because they face challenges ranging from a lack of information to the inability to benefit from tax credits and difficulty obtaining low-cost financing. Proposals including using brownfield sites for community solar; financing low-cost solar through community development organizations; and incorporating community solar into housing stock rehabilitation.

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<sup>11</sup> <https://www.americanprogress.org/issues/green/report/2014/09/23/97632/state-policies-to-increase-low-income-communities-access-to-solar-power/>

“Community solar power has unique potential to benefit low-income communities for a variety of reasons. First, low-income families are more likely to rent or live in apartments than the average American household. Second, community solar power can be purchased in discrete amounts that are smaller than most multi-kilowatt rooftop solar systems, making the cost to entry more accessible. Furthermore, because community solar programs are constructed on larger scales than most rooftop units, they can secure cheaper prices through bulk panel purchases. Finally, community solar programs can be installed on land that is otherwise unusable or has low property value, as long as it is within reach of a centralized grid and receives adequate sun. This can reduce the property costs necessary for initial investment and support community redevelopment by increasing the productivity of unused land.”

### **The State Needs to Significantly Increase its goal for Energy Efficiency**

CEC points out that the PSC has reduced efficiency goals for utilities statewide to a fraction of a percentage point, just 0.37% for 2016—an astoundingly weak goal in the face of more ambitious goals in nearby states. Massachusetts, Rhode Island, and Vermont have exceeded 2% annual efficiency goals.

The American Council for An Energy Efficiency Economy released a statement in September criticizing NY’s efficiency goals, saying that states with binding targets save more energy and money than states that leave efficiency plans to utilities. New York ranked 9th in the 2015 State Energy Efficiency Scorecard, falling two positions compared to last year. The state scored 32.5 points out of a possible 50, 2.5 points less than it earned in 2014.<sup>12</sup>

The energy-saving goals established by the PSC for 2016 are modest. While the PSC notes that it expects higher savings goals in the future, it offers no specifics. Developing these specifics will be critical. In 2007 New York set the goal of using energy efficiency to reduce electricity consumption by 15% below projected levels by 2015, an average of 1.9% savings per year. While building codes and equipment efficiency standards accounted for part of this goal, a substantial majority of the savings were to come from utility and NYSERDA programs.

In contrast, the 2016 minimum savings targets in the decision are only about 20% of this overall prior goal. The PSC should strive to meet these same goals and work with utilities to steadily ramp up savings to at least the prior goal of 1.9% per year if not higher.

### **REV Needs to Say No to Fossil Fuels, Natural Gas – Halt All Related Infrastructure Investment**

The flip side of having a goal of 50% renewables by 2030 means that the state now has a goal of limiting electricity from non-renewables, including natural gas, to only 50%. The state’s tables in the Energy Plan demonstrates that NY already exceeds that limit of 50% in terms of non-renewables. Thus any further investment in natural gas or fossil fuel infrastructure contradicts such goal.

Achieving climate change goals requires more investments in renewables while halting fossil fuel infrastructure. Yet, the state has been doing the opposite, hindering the urgent need to slash greenhouse gas emissions in the next fifteen years, to prevent runaway global warming

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<sup>12</sup> <http://aceee.org/sites/default/files/pdf/state-sheet/2015/new-york.pdf>

The state should adopt a clear policy to avoid increased reliance upon natural gas and other fossil fuels. Any energy investments should instead be in renewable sources and efficiency. Specifically, we urge the Governor to veto the proposed LNG facility at Pt. Ambrose and reject other gas infrastructure projects that will promote greater dependency on fossil fuels. Proposals for REV that incentivize the use of natural gas or allow the state's Clean Energy Fund and Green Bank to be applied to fossil fuel projects should be revised to support only renewables and energy efficiency.

Methane or natural gas, however, is 72 times more potent at capturing heat in the atmosphere than carbon dioxide over the first 20 years after release. Methane gradually converts to carbon dioxide, so its worst in the short term; the global warming potential over 100 years is about 25 times that of carbon dioxide.

Methane emissions come from many sources, from the well site to delivery through pipelines to final customers. Many of these remain poorly characterized. Reducing emissions is expensive, particularly from pipelines and storage tanks that are frequently 50 to 100 years old, and enforcement of regulations is difficult. Society is better off investing in renewable energy infrastructure.<sup>13</sup>

Any meaningful climate action plan must be based on an accurate GHG inventory that includes the contribution from methane. The IPCC says that methane is of equal importance to carbon dioxide, so it is vital to track actual methane emissions within New York and lifecycle emissions associated with gas used by New Yorkers. The current NYS Greenhouse Gas inventory and forecast report fails to do this.

EDF points out that a recent study<sup>14</sup> from Colorado State University, published 8/18/15 in *Environmental Science and Technology*, revealed methane emissions from natural gas gathering lines emit about one hundred billion cubic feet of natural gas a year, roughly eight times the previous estimates by the U.S. Environmental Protection Agency for the segment. The wasted gas identified in the study is worth about \$300 million, and packs the same 20-year climate impact as 37 coal-fired power plants.

“This means the State’s current plans to expand natural gas use, its support of new natural gas plants and its approval of more storage facilities and more pipelines is extremely problematic because NY failed to include all methane sources in its greenhouse gas inventory. NY also has not adequately dealt with all the leaking methane from pipelines that are over 100 years old, brittle and in danger of rupture.”

Under Governor Cuomo’s leadership, the Public Service Commission has approved over \$300 million to bail out large polluting coal plants and is still considering spending nearly \$150 million to bail out the Cayuga Coal Plant. The PSC is undermining the goals of REV by bailing out dirty, unprofitable coal plants. Unnecessary coal bailouts cost ratepayers hundreds of millions of dollars and continue to expose New Yorkers to harmful air and water pollution, all while taking us years backward in our efforts to cut carbon emissions.

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<sup>13</sup> [http://www.eeb.cornell.edu/howarth/energy\\_and\\_environment.php](http://www.eeb.cornell.edu/howarth/energy_and_environment.php)

<sup>14</sup> [http://blogs.edf.org/energyexchange/2015/08/18/study-reveals-vast-unrecorded-oil-and-gas-industry-methane-emissions/?utm\\_source=email&utm\\_medium=email&utm\\_campaign=methaneext](http://blogs.edf.org/energyexchange/2015/08/18/study-reveals-vast-unrecorded-oil-and-gas-industry-methane-emissions/?utm_source=email&utm_medium=email&utm_campaign=methaneext)