

May 17, 2013

Via electronic mail
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Barbara Kates-Garnick
Undersecretary for Energy
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, 9th Floor
Boston, MA 02114

Re: Section 41/Energy Policy Review Commission Comments

Dear Energy Undersecretary Kates-Garnick:

The Sierra Club of Massachusetts appreciates the opportunity to comment on the subjects under consideration by the Energy Policy Review Commission pursuant to Section 41 of *An Act Relative to Competitively Priced Electricity* (2012). We support and endorse the letter sent to you by the Conservation Law Foundation and other signatories to that letter and, without repeating what CLF has said, add the following.

In recent years, the traditional foundations of electricity production have been shifting beneath us, and state lawmakers have responded with aggressive, yet thoughtful policies and regulations reflecting the new realities now driving investment in clean, affordable, reliable energy technologies. These include the 1997 Electric Industry Restructuring Act, the 2008 Green Communities Act (GCA), the 2008 Global Warming Solutions Act (GWSA), the Commonwealth's participation in the Regional Greenhouse Gas Initiative (RGGI), and the 2012 Act Relative to Competitively Priced Electricity. The resulting positive impact on the Commonwealth is undeniable:

- **#1 in the US on Energy Efficiency.** Energy efficiency dramatically reduces energy costs by eliminating waste and conserving resources. As utility customers save dollars, they also lessen their environmental impact and reduce the state's dependence on imported fuels. The Green Communities Act has put Massachusetts on track to continue to be the most energy efficient state in the US according to the American Council for an Energy-Efficient Economy. Less energy waste means more money available for consumers and businesses to spend on other needs.
- **64,000 Massachusetts Jobs Created.** The clean energy economy employs a broad variety of workers – for example, blowing insulation into homes, installing high-tech appliances that use less energy, increasing wind energy capacity, designing solar installations, installing geothermal systems, and developing new technologies like advanced batteries that can store electricity for use later. Thanks to the foresight of state lawmakers, clean energy jobs have been growing in Massachusetts during the economic downturn. We can enhance that effort even further by creating thermal RECs for geothermal systems.
- **Rate Relief for Utility Customers.** Ratepayer benefits under the Green Communities Act are projected to be nearly two and a half times greater than the costs of implementing the Act's initiatives — \$2.5 billion in ratepayer benefits by 2015 for an investment of \$1.1 billion. Greater energy efficiency reduces energy bills and the cost of renewable energy has been falling as those technologies grow and mature. Investments in local clean energy also keep more of our energy dollars in Massachusetts, which boosts our economy and makes us more energy independent. And as we experienced during the 2012-2013 winter, depending on

supply constrained import commodities like heating oil in the face of strong demand can result in high prices and strain on the economy.

- **Thriving Clean Energy Sector Grows Massachusetts' Economy.** Leading-edge clean energy policies drive economic development in the state, and as solar panels and wind turbines are going up, private investments are coming into our economy. Massachusetts companies have brought in the 2nd largest concentration of private venture capital in clean energy in the country. Clean energy is taking its place alongside biotech and information technology as a pillar of the Commonwealth's innovation economy fostered by excellence in higher education, a skilled workforce, and strong policy signals which catalyze market growth. Job creation, increased investment and deployment, industry expansion and the creation of new markets are all hallmarks of our burgeoning Massachusetts clean energy economy, so much so that Clean Edge Inc., a West coast clean-tech market authority, ranks Mass as the clean energy leader among states in the U.S.
- **Clean Energy At Scale.** Massachusetts has significantly increased the amount of its electricity coming from clean energy sources. To date, we benefit from over 250MW of solar and 103MW of wind, but renewable energy on a larger scale demands a modern grid. As further megawatts come onto the grid, the state's technology firms will continue investing in product development and innovation to make our grid smarter, more responsive, easier to fix and maintain, more efficient and less expensive to operate, as well as more reliable than ever before. This is an area where Massachusetts could benefit quite significantly – with the integration of telecommunications technology and “big data” processing applications into traditional grid management systems. By leading the way in renewable energy grid integration at scale, Massachusetts businesses will be well-positioned to manage and profit from similar integrations across the globe as other states and countries try to catch up in the years ahead.
- **Reduced Exposure to Market Volatility.** With less of our energy needs being met with imported resources, Massachusetts has become more insulated from and resilient to fossil fuel price volatility, but as a state, we remain at the mercy of commodity markets. The state's continued transition away from finite resources like coal, natural gas, heating oil and petroleum protects us from the inevitable collision of increasing global energy demand and the natural constraints of global supplies. And with less dependence on imports, the state distances itself from the whims and wills of resource-rich political enemies.
- **Benefits Outweigh Costs.** The Green Communities Act and associated clean energy policies bring economic, energy, health and environmental benefits to Massachusetts. These benefits far outweigh the costs for a net gain of jobs, public health and energy security for the state.

It is critically important that these legislative successes be preserved to build on the gains in energy efficiency and clean energy that are making Massachusetts more competitive, creating jobs, strengthening our economy, controlling energy costs and reducing pollution both now and in the long term. It is incumbent upon policymakers to continue to support these efforts in order to provide a more prosperous energy future for the Commonwealth. As the state continues to aggressively pursue energy efficiency investment as well as the expanded development of renewables, Mass must also actively move away from outdated technologies which unnecessarily pollute our environment, impact the health of our children, and ultimately threaten to undermine the fabric of our society by destabilizing our climate.

- **Replace Remaining 1261MW of Coal-fired Capacity not already scheduled for shutdown.** In 2013, atmospheric carbon levels reached 400 parts per million for the first time in three million years. The last time greenhouse gas levels were this high, warmer temperatures were the norm across the globe, ice sheets were at a minimum, and sea levels were 60 to 80 feet higher. With coal emissions as one of the most significant drivers of climate change, the time has come for the state of Massachusetts to be coal-free.

- Temper Overdependence on Natural Gas.** Resource diversification guides any sound portfolio development strategy, and diversification is especially important in the energy sector for the suppression of dramatic price fluctuations. Put more simply, diversification reduces risk. Further investment in generation capacity using natural gas would reduce our fuel diversity and threaten grid reliability with an overdependence on this single resource which has historically displayed disruptive price volatility. Natural gas availability is especially temperamental during New England's cold winters when demand peaks¹. As it is, Massachusetts already relies on natural gas for almost 50% of its energy, which is projected to increase. And while viewed by some as less carbon-intensive than coal or oil, the extraction and transport of natural gas leaks substantial fugitive methane emissions. These emissions all but negate the fuel's carbon advantages over other fossil fuels. Efficiency and renewable energy play vital roles as a means to diversify and decrease the risk of natural gas price volatility.²
- Climate Change Demands Vigilant GHG Reductions.** The fingerprints of climate change, brought on by carbon and other greenhouse gases, were seen in dramatic fashion along the Eastern Seaboard in 2012, and MA was fortunate to avoid the fate of coastal states just to our south. We must stay the course on reducing GHGs, as a matter of global competitiveness and moral obligation, but also out of legal obligation (pursuant to the GWSA). The GWSA's emission reduction parameters require the state to emit 25% less GHGs than 1990 levels by 2020 and no less than 80% below 1990 levels by 2050. Without question, these cuts reflect the scientific consensus on actions needed to stem the flow of carbon into the atmosphere and avert the most damaging effects of climate change. A straightforward strategy to reducing GHGs simply involves the enforcement of tighter EPA power plant rules such as the one-hour SO₂ NAAQS. With the implementation of these sensible rules to protect the environment and public health, Massachusetts can move entirely beyond coal by 2020³.
- Keep More of Our Dollars in Our Communities.** When we use coal, oil and natural gas, many of our hard-earned dollars leave our state and a substantial amount subsequently leaves the country. Based on national figures, at least \$2 per gallon of oil leaves our state each time we fill our oil tank⁴, and \$3 leaves per thousand cubic feet of gas that is piped into our homes and businesses. In 2011, we in Massachusetts spent over \$1.7 billion on natural gas for residences and over \$2.3 billion on oil for residences alone.⁵ These numbers do not even include commercial and industrial buildings. So as we heat our homes and businesses with renewable energy, for example with geothermal heat pumps, we heat up our local economy at the same time. Geothermal pumps can heat a new home or replace an aging oil or gas furnace, whether in a rural, suburban, or urban setting. It is not only possible, but economically and highly rational to invest our energy dollars in our state, our communities, and in our self-sufficiency.
- Accelerate Investment via State Long-term Contracting.** Investment of capital depends upon a balance of risk and reward. A riskier investment implies a lower probability that the reward will be realized so a greater reward must be offered to attract investment. Consumers pay less for safer investments and more for inherently risky ones. Long-term contracting by the state for renewable energy dramatically reduces project development risk, and consequently, the price of renewable electricity. We know we must continue to develop renewable energy projects in the years to come so we should allow the state to enter into longer contracts with renewable energy providers in order to drive costs down and save consumers money. We support CLF's comments on the beneficial effect of the Renewable Portfolio Standard (RPS).

The relatively recent transformative changes in Massachusetts energy policies set the stage well for the Commonwealth to transition away from dependence on dirty, imported energy sources and toward

¹ http://blog.rmi.org/blog_2013_03_19_Breaking_New_Englands_Natural_Gas_Addiction

² <http://emp.lbl.gov/publications/revisiting-long-term-hedge-value-wind-power-era-low-natural-gas-prices>

³ <http://www.mass.gov/eea/docs/eea/energy-policy-commission/eprc-env-may-1-2013.pdf>

⁴ <http://www.eia.gov/oog/info/twip/twip.asp>

⁵ [http://www.eia.gov/state/seds/seds-data-fuel.cfm?sid=US%23PetroleumandFuelEthanol"](http://www.eia.gov/state/seds/seds-data-fuel.cfm?sid=US%23PetroleumandFuelEthanol)

cleaner, cost-effective and locally available resources with demonstrable environmental, public health, jobs and other benefits. And all the Commonwealth's citizens should benefit from the state's burgeoning clean energy sectors, especially the Commonwealth's nation-leading, fuel-reducing, cost-saving energy efficiency programs. Massachusetts is well along the path of finding and exploiting the economic opportunities embedded within the solutions to our energy & environmental challenges, and is the "bully pulpit" for the nation. The Sierra Club welcomes further discussion of the Commonwealth's energy future as it is a bright one, and we look forward to continued interaction with the Commission and interested stakeholders to expand on these policies which have guided our state so adeptly in recent years toward a prosperous clean energy economy.

Sincerely,

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