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Samantha Meserve
Department of Energy Resources
100 Cambridge Street, Suite 1020
Boston, MA 02114

Via e-mail: thermal.doer@state.ma.us

Re: Massachusetts Alternative Portfolio Standard (APS) draft regulations (225 CMR 16.00)

Dear Ms. Meserve,

On behalf of Mass Audubon, I submit the following comments on the draft regulations on the Massachusetts Alternative Portfolio Standard (APS) pursuant to Chapter 251 of the Acts of 2014 *An Act Relative to Credit or Thermal Energy Generated With Renewable Fuels*, Chapter 188 of the Acts of 2016, and MGL Ch. 25A S.6 and 11F½. Several guideline documents are also proposed to be utilized in implementing these regulations, including the *Guideline on Biomass, Biogas, and BioFuels (Guideline)*, and these comments therefore also apply to the guidelines.

Climate change is a priority issue affecting the nature of Massachusetts and our communities and infrastructure. Mass Audubon is a strong supporter of the Commonwealth's efforts to address climate change including the Global Warming Solutions Act, the Green Communities Act, the Governor's Executive Order 569, and the proposed Comprehensive Adaptation and Management Plan bill (S.472/H.2147) as well as programs such as the APS supporting financial incentives promoting a transition to renewable energy sources.

Summary Comments:

Mass Audubon commented to the legislature on the APS as it was being enacted into law, and strongly supported provisions requiring that the biomass component of the APS require use of high efficiency equipment, sustainable forestry for any forest-derived fuel, and a strict Greenhouse Gas (GHG) life-cycle accounting provisions. Full and proper implementation of those provisions is essential, including adequate recordkeeping and issuance of periodic reports to the public by the Department of Energy Resources (DOER) demonstrating compliance. We are concerned that as presently written, the proposed regulations and associated guidelines are overly vague in regards to these provisions. We note one significant area of improvement in the

regulations since the previous draft – woody biomass from land clearing operations for development no longer qualifies as eligible fuel.

Allocation of the APS – Emitting and Non-emitting Technologies

Some of the technologies in the APS, e.g. solar thermal and geothermal heat exchange systems, emit negligible amounts of GHG during operation, while other such as systems utilizing woody biomass emit significant amounts of GHG and other pollutants. The proposed regulations include multipliers for units that do not emit GHG emissions on-site, and Mass Audubon supports this. It is unclear, however, how the market will play out in terms of the effectiveness of these multipliers in actually driving allocation of APS credits to non-emitting units. The allocation of APS credits should be distributed across all technologies both to promote diversification of renewable energy system implementation and to ensure that biomass related projects do not dominate the program. Setting a cap on the percentage of the overall program that can be allocated to biomass would also provide a backstop on the upper limit of woody biomass harvesting and burning. It would ensure that those activities are kept within an acceptable limit while waiting for the results of the initial review proposed in 2020. Given the long service life of facilities that will be funded with these credits, it is important to roll the program out in a way that safeguards against unintended consequences of overbuilding of biomass burning facilities. This would also allay, to some degree, concerns about the inadequacies and vagueness of the regulations in regards to forest sustainability and GHG life-cycle emissions accounting.

Forest Sustainability

The proposed definition and reporting provisions for forest sustainability are vague and do not ensure that forest-derived biomass will in fact be utilized only from sites that are truly sustainability maintained over a timeframe that is meaningful in relation to the life-cycle GHG reduction requirement. The definition of Sustainable Forestry Management refers to a “land stewardship ethic,” which although laudable in concept is not an enforceable standard. The *Guideline* further relies on signatures from licensed foresters along with spot checks from DOER (for intermediate sized units) or meter reading audits (for large generators). It is unclear how this translates to any meaningful understanding of what is occurring on the lands where the material originates.

The regulations state that DOER will report on the aggregate use of woody biomass fuel in qualified units annually; will update the *Guideline* in consultation with the Department of Environmental Protection and Department of Conservation and Recreation every two years, and will assess the impact on the region’s forests every five years beginning in 2020 in coordination with a related impact assessment under the Renewable Portfolio Standard (RPS). While these measures are appreciated, they are insufficient. The first round of Forest Impact Assessment under the RPS was scheduled to be conducted in 2015, but has not yet been released. The RPS program also contains biomass fuel sustainability standards that are more explicitly defined (e.g. specific requirements for percentages of harvesting residue to be left on-site to replenish soils). Any updates or revisions to the *Guideline* should only occur following a public comment period, with the data on biomass fuel usage and sources available during that comment period. There

also needs to be an upper limit set on the amount of biomass burning capacity that will be allowed to receive APS credits during each five year phase of review. These units have service lives well beyond five years and once they are in place the associated demand for fuel will continue regardless of how well the system is working, or not, to ensure forest sustainability, efficiency, and reduction in GHG emissions in the actual operations.

Eligible Biomass

Mass Audubon strongly supports the proposed elimination of woody biomass derived from clearing of land for development in the list of eligible fuels. As we previously commented, such material is not sustainable and inevitably contributes to an increase in overall GHG emissions since the site is not able to re-grow into forest. The revised draft regulation added a category for trees removed for conversion of forest land into new or restored agriculture. While we support this provision, there need to be safeguards put into place to ensure that the land will in fact be utilized for agriculture and not converted to development in the near term. The regulations and/or *Guideline* need to specify documentation and recordkeeping provisions for that.

More generally, it is unclear how DOER will track and compile data on the sources of woody biomass over time and prepare public reports with meaningful information about how the program is really working in relation to forest sustainability and GHG emissions. There are numerous places where the tracking system is unclear and where DOER would need substantial staff resources to monitor compliance. DOER will have a Biomass Suppliers List – these suppliers will have to apply for approval and state the anticipated sources of their fuel, then report annually to DOER on the sources in order to remain qualified. However, as a practical matter it will be difficult to assess to what degree material is actually coming from various sources e.g.; forest-derived residues or thinnings; forest salvage, non-forest-residues such as agriculture operations or wood waste from roadside and utility line maintenance, parks, etc. Unless there is a standard and mandatory form tracking all material from source to fuel sale, it will not be possible to track and compile information in a consistent and reliable manner. It is unclear whether such a comprehensive system could be implemented.

GHG Emissions Reduction

The statute requires that APS units reduce life-cycle GHG emissions by at least 50% compared to high-efficiency units using the fuel that is being displaced, or for new construction, compared to high-efficiency natural gas burners. The proposed biomass and forest sustainability requirements do not in fact ensure that this requirement will be met. Concerns include the weaknesses in the forest sustainability and eligible fuel requirements noted above, as well as the likelihood that efficiency standards such as low moisture content in fuel will not be tracked or met. Some of the important parameters applied in the calculations of life-cycle GHG emissions may not match actual fuel usage. For example, the “k-constant” used in comparing the amount of natural decay that would occur in residues if they were not burned in a biomass unit vs. use as biomass fuel assumes that much of that material will be low-diameter material. If, in fact, larger diameter materials such as tree boles or larger branches are used, those would have a much slower rate of natural decay vs. the immediate release when burned in biomass. This could significantly skew the calculated life-cycle GHG emissions vs. actual emissions. Energy used in

drying fuel or converting chips to pellets is not taken adequately into account. The regulations also allow facilities to continue to operate for up to a five year probationary period when under-complying with requirements, and allows facilities to be released from probationary status following only three out of five years of compliance.

The required reduction in GHG life-cycle emissions is central to the purpose of this program in reducing overall GHG emissions statewide in furtherance of the goals and requirements of the Global Warming Solutions Act. The program must have more rigorous means of ensuring compliance.

Program Review

The regulations provide that DOER will complete a review of the program no later than December 31, 2020 including the effectiveness in relation to energy and environmental goals. Given the long service life of the equipment involved and the associated ongoing demand for fuel for biomass facilities funded thereunder, we recommend that DOER establish a cap on the total portion of the APS that may be allocated to biomass equipment prior to the completion of the 2020 review and associated analysis of potential refinements in the program.

Thank you for considering these comments.

Sincerely,



John J. Clarke
Director of Public Policy & Government Relations