Commonwealth of Massachusetts
Department of Energy Resources

Response to Comments on:
225 C.M.R. 14.00, Renewable Energy Portfolio Standard - Class I

225 C.M.R. 15.00, Renewable Energy Portfolio Standard - Class II

December 4, 2020

Regulatory Authority:

M.G.L. c. 25A, §§ 11F Renewable Energy Portfolio Standard for retail electricity suppliers
Executive Order No. 562 To Reduce Unnecessary Regulatory Burden

I. INTRODUCTION

The Massachusetts Department of Energy Resources' ("Department") Renewable Energy Portfolio Standard – Class I (225 CMR 14.00) and Renewable Energy Portfolio Standard – Class II (225 CMR 15.00) aim to increase the amount of renewable electric energy consumed within the Commonwealth by requiring retail electricity suppliers (both regulated distribution utilities and competitive suppliers) to obtain a percentage of the electricity they serve to their customers from qualifying renewable energy facilities.

In 1997, the Massachusetts Legislature passed *An Act Relative to Restructuring the Electric Utility Industry*. This law granted the Department the authority to design and implement the Renewable Energy Portfolio Standard ("RPS"). In 2002, the Department promulgated 225 CMR 14.00 and in 2003 implemented the RPS. A rulemaking in 2007 addressed changes to biomass emissions and import provisions. In 2008, *An Act Relative to Green Communities* ("Green Communities Act" or "GCA") expanded the RPS and created the Class I and Class II framework as well as the framework for the Solar Carve-Out ("SREC") program. Rulemakings in 2009 and 2010 incorporated the new GCA requirements. In 2012, the Department reviewed eligibility for biomass Generation Units and implemented changes that included, but were not limited to, sustainable forestry, lifecycle greenhouse gas emissions reductions, and overall efficiency. In 2013 and 2014, the Department revised the RPS – Class I and RPS - Class II regulations to incorporate requirements from *An Act Relative to Competitively Priced Electricity* to change the size limitations for small hydroelectric Generation Units, as well as the administration of the RPS Class I SREC program. In 2013 and 2014, two rulemakings respectively extended the SREC program and implemented its successor program, the Solar Carve-Out II ("SREC II"). In 2016, an emergency rulemaking extended the SREC II program while the Department developed a successor tariff program.

II. PROCEDURAL HISTORY AND THE PUBLIC REVIEW PROCESS

On April 5, 2019, the Department filed draft regulations to amend portions of the RPS – Class I and RPS Class – II regulations. The proposed amendments revised the RPS Class – I and RPS – Class II regulations to address policy-related changes, including changes required to implement Section 12 of Chapter 227 of the Acts of 2018, now codified at M.G.L. c. 25A, § 11F.

Unofficial versions of each of the draft regulations are posted on the Department website at https://www.mass.gov/service-details/rps-class-i-ii-rulemaking. Official copies of the regulations may be obtained by contacting the Secretary of State's office at regs@sec.state.ma.us.

On April 11, 2019, the Department filed a Notice of Public Review of the proposed revisions to 225 CMR 14.00 Renewable Energy Portfolio Standard – Class I regulation and 225 CMR 15.00 Renewable Energy Portfolio Standard – Class II.[1]

During the review process, the Department hosted four public hearings on the draft regulations, as follows:

Monday, May 13, 2019	Boston
Thursday, May 16, 2019	Amherst
Friday, May 17, 2019	Gardner
Wednesday June 5, 2019	Springfield

The deadline for public comments on the proposed regulations ("RPS Class I and II Comments") was July 26, 2019.[2]

On November 13, 2019, the Department released a set of questions to stakeholders regarding the frequency of compliance reporting for retail electric suppliers participating in the RPS Class I and Class II programs. The deadline for public comments on the frequency of compliance reporting ("Frequency Comments") was December 4, 2019.

III. PROPOSED CHANGES

The Department proposed changes to the RPS - Class I regulations in the following areas:

1) Minimum Standard Revisions
2) Eligibility Criteria and Ongoing Generator Compliance Requirements
   a) General Eligibility Criteria
   b) Woody Biomass
   c) Small Hydroelectric
   d) RPS Class I Solar Carve-out (SREC I) Renewable Generation Units
   e) Import Generation Units
3) Compliance Procedures for Retail Electricity Suppliers
   a) Financial Security Posting
   b) Alternative Compliance Payment (ACP) Rate Cap
4) Other Administrative Changes

The Department proposed changes to the RPS - Class II regulations in the following areas:

1) Eligibility Criteria and Ongoing Generator Compliance Requirements
   a) General Eligibility Criteria
   b) Woody Biomass
   c) Small Hydroelectric
   d) Import Generation Units
2) Compliance Procedures for Retail Electricity Suppliers
   a) Increase RPS Class II Waste-to-Energy Minimum Standard
   b) Increase Class II Waste-to-Energy ACP Rate
   c) ACP Rate Caps

[1] Acting under the statutory authority in M.G.L. Ch. 25A § 17, the notice was filed with the Secretary of State for the Commonwealth and published in the *Massachusetts Register*.

[2] Public comments were originally due to the Department on May 24, 2019. However, at the request of stakeholders the Department extended the deadline.

3) Other Administrative Changes

Many of the proposed changes were consistent between the RPS – Class I and RPS – Class II regulations.

Following the receipt of comments, the Department undertook additional analysis related to proposed changes for biomass generation units. Within this document the Department references two reports that are being published contemporaneously with this Response to Comments:

> *Renewable Energy Portfolio Standard Technical Analysis of Biomass:* This report evaluated the potential impact of the proposed changes to the Massachusetts Class I and Class II RPS regulations on the future operations and development of biomass generation units in the region. It also includes an analysis of the potential impact the proposed changes would have on lifecycle greenhouse gas emissions.
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> *Renewable Energy Portfolio Standard- Forest Impact Assessment*: This report examined the impact on Massachusetts' and the region's forests from the removal of woody biomass fuel for participation in the RPS. It also evaluates the lifecycle greenhouse gas emissions from the participating Generation Units.

IV. PUBLIC STAKEHOLDER COMMENTS AND DEPARTMENT RESPONSE

The Department received over 2,500 comments on the proposed regulation and related guidelines. This Response to Comments provides responses to common topics raised by commenters and the Department's rationale for the regulatory or guideline changes.[3] The below comment summaries are organized into topic areas. The first topic area covers comments specific to the Class I regulations; the second topic area covers comments specific to the Class II regulations; and the third topic area covers comments that apply to both the Class I and II regulations. Although the document may not directly respond to all comments received, all comments were considered and are posted on our website here: https://www.mass.gov/service-details/rps-class-i-ii-rulemaking.

V. 225 CMR 14.00 RENEWABLE ENERGY PORTFOLIO STANDARD – CLASS I

A. Alternative Compliance Payments

Comment: Some commenters stated that the Alternative Compliance Payments (ACP) should not continue to escalate based on the Consumer Price Index. Some commenters stated that capping the ACP at $70 would send the "wrong message" to energy suppliers about the importance of reducing greenhouse gas emissions. Other commenters requested that the Department lower the cap to align with regional ACP rates, stating that it would provide better ratepayer protections. Other commenters stated that the ACP should be lowered because the cost to develop renewables resources has declined, and high REC prices are not needed given the lower development costs for renewable energy generation resources in today's market.

Response: The proposed regulatory changes are being revised in the final regulation. The Department determined that it is appropriate to further amend the proposed regulations and create a phased approach to reduction in the cap on ACP. The Department has determined that the ACP will be $60 in Compliance Year 2021, decline to $50 in Compliance Year 2022, and $40 in Compliance Year 2023. This further amendment will provide better protection to ratepayers while continuing to support renewable resources.

[3] The primary purpose of this document is to provide responses to topics raised by commenters that apply to the proposed regulations. As some topics and comments addressed both the regulations and associated Department guidelines, in certain circumstances the Department has included both comments about guideline issues, and responses to those comments.

In addition, this change will align the Massachusetts RPS - Class I ACP with Connecticut's RPS - Class I ACP. Aligning with Connecticut's RPS - Class I ACP provides regional consistency between the two largest REC markets in New England, while maintaining necessary value to support Massachusetts' efforts to reduce greenhouse gas emissions.

B. Definitions

Comment: A commenter stated that the types of gas that are "Eligible Biogas Fuel" should be listed in the definition.

Response: The proposed regulatory changes are being retained in the final regulation. While the Department strives to provide guidance and clarity regarding the types of fuels that are eligible under the RPS - Class I program, biogas fuels is a developing area of the market, and the range of potentially eligible biogas fuels is not currently known. The Department is concerned that an overly prescriptive definition could have unintended consequences, including exclusion of an otherwise eligible fuel. The Department believes the definition is clear as currently proposed and will evaluate potentially eligible fuels on a case by case basis.

C. Solar Renewable Energy Certificate Carve Out I & II

Comment: There were commenters both in support of and in opposition to limiting SREC I eligibility to 40 quarters. Commenters opposing the limit stated that SREC I project investments assumed generation of SRECs until the Solar Carve-Out program concludes in 2023. Some commenters further stated that the rule change would create regulatory uncertainty in the market and result in solar projects being considered risky investments. Other commenters supported the decision to limit SREC I eligibility to 40 quarters, citing realization of ratepayer savings.

Response: The proposed regulatory changes are being retained in the final regulation. The Department proposed limiting SREC I eligibility to 40 quarters, consistent with SREC II eligibility, in order to transition SREC systems to RPS Class I RECs sooner, which is projected to reduce ratepayer costs by approximately $115 M from 2020–2023. Based on the Department's historical experience with the Solar Carve Out Program(s) and support levels for project development, the reduction in ratepayer costs realized by this change outweighs any potential uncertainty in the market that some commenters suggest would be created by this regulatory change.

VI. 225 CMR 15.00 RENEWABLE ENERGY PORTFOLIO STANDARD – CLASS II

A. Alternative Compliance Payments

Comment: Most RPS – Class II ACP commenters supported capping the RPS – Class II ACP rate for Renewable Generation Minimum Standard, though some requested that the ACP be lowered $10–$20/MWh to align more closely with regional prices and current market conditions, stating that limited data or analysis supported capping it at 50% of the RPS – Class I ACP.

Response: The proposed regulatory changes are being revised in the final regulation. The Department determined that, given the proposed change to the RPS – Class I ACP, revisions to the language to cap the RPS – Class II ACP at a fixed dollar amount of $35 was appropriate. After evaluating the market and the cost to the program, the Department determined that an ACP capped at $35 will appropriately balance the value of the environmental attributes of renewable energy and ensure there is ratepayer protection against cost.

Comment: There were commenters both in support of and in opposition to the proposed increase to the RPS – Class II ACP for Waste-to-Energy facilities. Some commenters that opposed the proposed increase stated that increasing the ACP may increase costs of compliance, because Waste Energy Certificates will trade near the ACP rate. Some commenters stated that costs to maintain Waste-to-Energy facilities should be paid by the communities that benefit from them. Some commenters proposed that if the RPS – Class I ACP is lowered to $40, then the ACP for Waste-to-Energy should be lowered to 20% to 25% of the RPS – Class I ACP. Other commenters supported increasing the ACP, while opposing the sunset provision that causes the ACP to revert to $11.50 in 2026. Additionally, some commenters proposed the Department allow an exemption to retail suppliers that already have load secured under competitive energy contracts.

Response: The Department has determined that delaying the increase in the RPS – Class II ACP for Waste-to-Energy to start in 2021 to align the increase with the first full compliance year best serves the purposes of the RPS program. The other proposed regulatory changes are being retained in the final regulation. Utilization of Waste-to-Energy facilities is consistent with the draft *Solid Waste Master Plan*.[4] Waste-to-Energy facilities are important near-term infrastructure for the Commonwealth's management of solid waste. Supporting these facilities in the near-term to ensure operation will avoid potential costly alternatives for waste disposal. The Department retained the sunset provision in order to protect ratepayers from the long-term cost exposure of the facilities and to set a clear point when the future of Waste-to-Energy facilities should be further evaluated as a waste management solution.

B. Minimum Standard

Comment: There were commenters both in support of and in opposition to the proposed increase to the minimum standard for Waste-to-Energy facilities to 3.7%. Some commenters that opposed increasing the minimum standard stated concerns that the market could be manipulated, harming retail consumers. Some commenters that supported the increase to the minimum standard recommended removal of the sunset provision, which causes the minimum standard to revert back to 3.5% in 2026. Some commenters also supported the provision for periodic reviews of the minimum standard. Finally, some commenters proposed the Department allow an exemption to retail suppliers that already have load secured under competitive energy contracts.

Response: The Department has determined that delaying the increase to the minimum standard for Waste-to-Energy to start in 2021, to align the increase with the first full compliance year best serves the purposes of the RPS program. Otherwise the proposed regulatory changes are being retained in the final regulation. In recent years, the retail load has declined, and the Department proposed the increase to the minimum standard to realign the obligation to ensure that all certificates can enter the market. The Department does not believe an exemption would be beneficial because the increase to the minimum standard is in place for only a short period of time and offering an exemption would be counterproductive to the goals underlying the proposed change.

C. General Comments

Comment: Some commenters were in opposition to changes to RPS – Class II Waste-to-Energy and recommended the Department delay any such changes until after the 2020–2030 *Solid Waste Master Plan* has been adopted. Some commenters also stated that Waste-to-Energy systems are not renewable energy and should not be eligible for the RPS, citing potential health impacts from burning trash, including

[4] https://www.mass.gov/guides/solid-waste-master-plan#-the-draft-2030-solid-waste-master-plan-

increased toxic and greenhouse gas emissions. Some commenters noted that incinerators in Massachusetts are disproportionately located in Environmental Justice communities.

Response: The proposed regulatory changes are being retained in the final regulation. Waste-to-Energy is an eligible RPS Class II resource pursuant to M.G.L. c. 25A, § 11F(d) and the Department lacks the requisite authority to declare otherwise eligible resources ineligible. In addition, utilization of Waste-to-Energy facilities is consistent with the draft *Solid Waste Master Plan*. Waste-to-Energy facilities are important infrastructure for the Commonwealth's management of solid waste. Supporting these facilities in the near-term to ensure operation will avoid potential costly alternatives for waste disposal.

VII. 225 CMR 14.00 and 225 CMR 15.00 Combined

A. Biomass - Lifecycle Greenhouse Gas Emissions

Comment: Some commenters were in opposition to changing the lifecycle greenhouse gas emission reduction recovery period from 20 years to 30 years and stated that the regulations should be based on the *Manomet* study.[5] Some commenters stated that the Department should not treat biomass as carbon neutral and should consider broader lifecycle greenhouse gas emissions, including cutting/transportation of biomass. Some commenters cited the UMass Lowell study,[6] which determined that biomass has higher emissions than coal on a lifecycle basis. Some commenters stated that increasing the use of biomass does not align with Global Warming Solutions Act ("GWSA") emission reduction goals and suggested that other sources of clean energy such as solar and wind should be prioritized.

Response: The proposed regulatory changes are being revised in the final regulation. The Department will modify the final regulations to require the 50% reduction in lifecycle greenhouse gas emissions must be recovered over a 20-year period, rather than the proposed 30-year period. The *Technical Analysis of Biomass* found that 50% reduction of lifecycle greenhouse gas emissions is achievable over a 20-year period. Also, based on historical use of Forest Derived Thinnings, as defined in 225 CMR 14.02 and 225 CMR 15.02, the regulations can still support improved forest management by allowing additional Thinnings into the program while maintaining 50% reduction in lifecycle greenhouse gas emissions over 20 years. The Department notes that, since 2012, the Department has not treated woody biomass as carbon neutral, and instead has utilized the underlying principles of the *Manomet* study to assess the lifecycle greenhouse gas emissions analysis. The underlying principles of the *Manomet* study includes the following three factors: 1) Biomass Debt: Burning biomass is not carbon neutral and the carbon dioxide emitted must be made up for over time through carbon sequestration of forests that are sustainably managed; 2) Feedstock Characteristic: Not all biomass has the same carbon profile and therefore must be accounted for separately; and 3) Sustainable Forestry: In order for carbon to be sequestered, forests must be managed sustainably. The proposed regulations maintain the carbon accounting based on the principles established in the *Manomet* study, have a carbon debt associated with the carbon dioxide emitted during combustion, tailors the carbon profile based on feedstock source, and requires forests to be managed sustainably. The Department did not find the UMass Lowell study useful in evaluating proposed changes to these regulations because it was based on European markets. The supply chain for forest products in the Northeastern United States is different from that in Europe because the feedstocks are not sourced from tree plantations and are predominantly a byproduct of harvesting practices. Additionally, feedstocks are a wood chip rather than a

[5] The Manomet study was commissioned by the Department in 2010 and examined the use of forest biomass for generating energy in Massachusetts. The report is available at https://www.mass.gov/doc/manometbiomassreportfullhirezpdf/download.

[6] John D Sterman et al 2018 Environ. Res. Lett. 13 015007

manufactured pellet and the material is predominantly sourced from within the region, resulting in less emissions from transportation of biomass than in Europe.

Comment: Some commenters were in opposition to the removal of the definition of Lifecycle Greenhouse Gas Emissions from the regulations. They stated that the definition provided clarity on what should be included in emissions calculations. Some commenters recommended reinserting the definition and retaining the requirement to consult with MassDEP, an expert agency on emissions.

Response: The proposed regulatory changes are being retained in the final regulation, but the Department will provide clarity on the accounting of lifecycle greenhouse gas emissions in accompanying guidelines. The Department has consulted with MassDEP on the greenhouse gas emissions calculations within the guidelines, and the regulations retain the reference to MassDEP, where necessary, with respect to calculation of lifecycle greenhouse gas. Finally, striking the definition removes an inconsistency with 225 CMR 16.00, the APS regulation, which was promulgated in 2017.

Comment: Some commenters stated that the *Overall Efficiency and Greenhouse Gas Analysis Guideline* from 2012 does not account for the aggregate quantity of emissions related to the full fuel lifecycle because it uses a single year analysis. Some commenters recommended retaining the multi-year analysis in the tool and changing the eligibility requirements to be based on the multi-year analysis.

Response: The proposed changes are being retained in the final Guideline. After extensive stakeholder engagement in 2010–2012, the Department developed the *Overall Efficiency and Greenhouse Gas Analysis Guideline*. This Guideline provided analysis that is referred to as single-year and multi-year analysis. Since 2012, the regulatory requirement has used the single-year analysis to determine whether a facility is achieving a 50% reduction in lifecycle greenhouse gas emissions. The Department maintains that the single-year analysis is the appropriate method because it is based on actual generation and feedstocks used during the compliance year (or time period) in question and assesses the reductions from this fuel over multiple years. Conversely, the multi-year analysis is not an accurate method because it estimates greenhouse gas impacts based on assumed electricity production and feedstock eligibility requirements. Specifically, multi-year analysis assumes that the plant will generate the same amount of energy and utilize the same feedstock supplies in year 1 as it does in the remaining years, out to year 20. Market conditions for feedstocks and generation production are too variable to reliably assume that generation/feedstocks used in year 1 will continue to be used every year for 20 years. Also, by capping the multi-year approach at a defined time, it limits the potential lifecycle greenhouse gas reductions associated with fuel burned in later years.

Comment: Some commenters stated concerns that the Department's proposed changes eliminating the overall efficiency requirement and changes to the methodology for the lifecycle greenhouse gas emissions analysis may lead to increases in carbon dioxide emissions.

Response: The proposed regulatory changes are being retained in the final regulation. The Technical Analysis of Biomass calculated that the proposed changes would lead to greater lifecycle greenhouse gas emission reductions over a 20- or 30-year period, compared to existing 2012 regulations.

Comment: A commenter was in opposition to using new natural gas generation as a benchmark as it is effectively prohibited within Massachusetts, and benchmarking against next-generation natural gas technology that are more efficient than those in Massachusetts is not applicable.

Response: The proposed regulatory changes are being retained in the final regulation. The Department has reviewed forecasts from the Independent System Operator for New England ("ISO-NE"), which project

that natural gas is likely to remain the fuel used by marginal generation units in the majority of hours in New England in the foreseeable future. Thus, the Department has determined that it is reasonable to take a conservative approach to compare against the most efficient natural gas generation units, as opposed to the average natural gas unit, to assess whether the requirement for at least 50% lifecycle greenhouse gas emission reduction is achievable.

Comment: Some commenters requested that the Department not remove the accounting block assigning fossil fuel-related greenhouse gas emissions for the harvesting, processing, and transportation of wood fuel in the *Overall Efficiency and Greenhouse Gas Analysis Guideline*. Some commenters were concerned that removing this feature would prevent the analysis from accurately capturing the full lifecycle greenhouse gas emissions profile.

Response: The proposed changes are being retained in the final Guideline. The "fuel processing stack emissions" field in the *Overall Efficiency and Greenhouse Gas Analysis Guideline* from 2012 was inserted to account for additional lifecycle greenhouse gas emissions from the manufacturing of energy-intensive products, such as bio-oil. It was not intended to be used to account for lifecycle greenhouse gas emissions associated with the harvesting, processing or transportation of green chips or pellets because these emissions were considered in the determination of the carbon density of biomass in the *Manomet* study.[7] Similarly, any green chip or passively dried chip would have no additional stack emissions from processing, as the materials were never processed. For actively dried, processed chips which are, the energy used to dry the chip would be offset by the increased efficiency of the boiler, similar to pellet manufacturing as highlighted in the *Manomet* study. The Department will clarify in the *Guideline on Eligible Biomass Fuel For Renewable Generation Units* that if a bio-oil product is used, the lifecycle greenhouse gas emissions must be calculated on a case-by-case basis, in consultation with MassDEP, to accurately capture the increase amount of energy required to produce the fuel.

Comment: Some commenters requested that the Department revise the half-lives used in the *Overall Efficiency and Greenhouse Gas Analysis Guideline*. Some commenters stated that the decay rate for Forest Derived Residues was too high and should be lowered to better represent the feedstock.

Response: The proposed changes are being revised in the final Guideline. The Department determined to have separate decay rates for Forest Derived Residue and Non-Forest Derived Residue in the Guideline. In the proposed *Overall Efficiency and Greenhouse Gas Analysis Guideline* (2019 version), the decay rate for residues was an average based on the decay rate of Forest Derived Residue and Non-Forest Derived Residue. These decay rates were established in the 2012 Guideline following extensive stakeholder engagement in 2010–2012. Given that the tool has separate decay rates, the feedstocks can be categorized, and the decay rates had been vetted through stakeholder process, it is appropriate to use the specific decay rates from the *Overall Efficiency and Greenhouse Gas Analysis Guideline* for Forest Derived and Non-Forest Derived Residues rather than averaging them together.

Comment: Some commenters were concerned that the current *Overall Efficiency and Greenhouse Gas Analysis Guideline* did not clearly state the decay rate for Forest Salvage. Some commenters stated that it is complicated to calculate the greenhouse gas emissions of Forest Salvage and recommended that the *Overall Efficiency and Greenhouse Gas Analysis Guideline* be modified to include a separate designation.

Response: The proposed changes are being revised in the final Guideline. The Department determined that it was appropriate to revise the *Overall Efficiency and Greenhouse Gas Analysis Guideline* to have a

[7] The *Manomet* study states, "the increased efficiencies in boiler combustion achieved with pellets approximately offsets most of the increased emissions from plant operations and additional transport of pellets from the plant to their final destination."

separate designation for Forest Salvage to provide greater clarity on how the tool was accounting for the feedstock. The current *Overall Efficiency and Greenhouse Gas Analysis Guideline* has treated Forest Salvage as a Residue. Given that the Department is now proposing to have separate decay rates for Forest Derived Residue and Non-Forest Derived Residue, it is appropriate to assign the lower decay rate of Forest Derived Residue to Forest Salvage.

Comment: Some commenters were in opposition to allowing past over-compliance to be used in the probationary period when the required reduction of greenhouse gas emissions has not been met and suggest removing this provision. Some commenters supported the reduction of the probationary period from five years to one year.

Response: The proposed regulatory changes are being revised in the final regulation. The Department determined that it was appropriate to remove the probationary status provision in its entirety. The Department verifies every quarter, before any RECs are minted, whether a Generation Unit has met the greenhouse gas requirements. Therefore, a facility could never be placed in a Percent Under-compliance designation that would require a probationary period. In addition to removing the probationary status provision, the Department added a provision to the revocation sections which allows the Department to disqualify the Statement of Qualification for a Generation Unit if it has not generated RECs within a 12-month period.

B. Biomass - Overall Efficiency

Comment: Some commenters were in opposition to reducing the overall efficiency requirement to 50%. Some commenters opined that reduction to a 50% overall efficiency requirement was arbitrary and that it would increase greenhouse gas emissions. Some commenters stated that a 60% efficiency was necessary for most facilities to show an appropriate reduction in net greenhouse gas emissions. Additionally, some commenters shared that since no electric-only plant could achieve a 50% overall efficiency requirement, the minimum threshold should be increased. Some commenters suggested that the Department look to the United Kingdom (UK), which has moved to a 70% efficiency requirement for subsidies for combined heat and power (CHP) systems and noted that Massachusetts has over 200 CHP installations, offering great potential. Other commenters were in opposition to having the 50% overall efficiency requirement because it would be extremely difficult to achieve. Some commenters suggested that sustainable forestry could be promoted by reducing the minimum efficiency for biomass facilities using >5% forest thinnings and residues. Some commenters stated that eliminating the overall efficiency requirement would allow a market for wood rotting in municipal lots to be used, rather than causing municipalities to pay large amounts of money to dispose of that wood.

Response: The proposed regulatory changes are being revised in the final regulation. The Department determined that it was appropriate to increase the overall efficiency requirement to 60%. Having a fixed requirement maintains the intent of the proposed regulations, which was to eliminate the sliding scale to improve administrative efficiencies. The Department reviewed the UK information included in the comments, and determined that it was not an appropriate comparison point, because the UK efficiency requirement includes natural gas CHP, which are not eligible to participate in the RPS in Massachusetts. Of the 200 CHP systems in Massachusetts, only 2 systems are participating in the RPS by utilizing an Eligible Biomass Woody Fuel.

Comment: The Department received comments in opposition to and in support of the proposed elimination of the overall efficiency requirement for Generation Units that utilize 95% or more Non-Forest Derived Residues and Forest Salvage feedstocks. Some commenters were in opposition to eliminating the overall efficiency, stating that they did not believe the proposed changes are based on credible science. Some

commenters stated that eliminating the overall efficiency requirement will increase greenhouse gas emissions. Commenters argued it is illogical to base efficiency requirements solely on the fuel burned because feedstock supplies will change over time. Additionally, some commenters that opposed the change stated that Forest Salvage was never studied in the *Manomet* study and should not be considered a preferred source of biomass that would result in eliminating the overall efficiency requirement. Other commenters opined that the proposed changes would promote sustainable forestry and supported the inclusion of Forest Salvage because dead trees do not absorb carbon and should be removed to allow for regeneration. Some commenters supporting the changes stated that eliminating the overall efficiency will create a market for this wood to be utilized, rather than rotting in lots or causing municipalities to pay large amounts of money to dispose of the wood. Some commenters supporting the changes stated that the *Manomet* study confirmed that there is a carbon emission profile difference between whole trees versus wood residues and the use of wood residues is highly preferable compared to leaving the material to decompose in forests and landfills.

Response: The proposed regulatory changes are being revised in the final regulation. The *Technical Analysis of Biomass* supports a conclusion that there is greater potential for lifecycle greenhouse gas emissions reductions if the waiver of the overall efficiency requirement for facilities that source 95% or more of its feedstock from Non-Forest Derived Residue is adopted. As the appropriate calculation for carbon emissions of Forest Salvage is an evolving topic, the Department has determined that removing Forest Salvage as an eligible feedstock to waive the overall efficiency requirement was appropriate.

C. Biomass - Forest Sustainability

Comment: Some commenters opposed removing metrics for sustainable forestry from the *Guideline on Eligible Biomass Fuel for Renewable Generation Units*. Some commenters stated that the proposed changes lack the specificity of the existing guideline, including prohibitions of the removal of stumps, harvesting of old growth forests, leaving downed woody material, etc. Some commenters suggested retaining and strengthening (in consultation with forest ecologists and wildlife biologists) the forest protections, consistent with current ecological and climate science. Additionally, some commenters were in opposition to the definition of Sustainable Forestry in the regulations because the definition is from 1998 and was drafted before the issues of impacts on biodiversity from climate change were fully understood.

Response: The proposed regulatory and Guideline provisions are being retained. The definition in the regulations for Sustainable Forestry is broad enough to support benefits of biodiversity. Regarding the metrics in the *Guideline on Eligible Biomass Fuel for Renewable Generation Units*, the proposed requirements are more stringent than the requirements they are replacing. For all forest-derived wood harvested in Massachusetts, a public forester, which is an employee of the Department of Conservation and Recreation ("DCR") is required to verify sustainability criteria are met, adding additional oversight that previously had not been required. Since the DCR is the government's regulatory body charged with managing forests, it is an appropriate entity to verify whether harvests are consistent with state standards. Additionally, the forestry industry has licensure programs that involve rigorous requirements be met in order to attain a professional license. If a licensed forester is found to be non-compliant when attesting to a harvest meeting the sustainable forest management requirement, the individual risks losing their professional license. In addition, tracking methods have been maintained utilizing the Massachusetts Biomass Registry and the Department continues to assess methods for improvement. As highlighted in the Biomass Retention and Harvesting Guidelines for the Northeast, 1/4 to 1/3 of residues need to be retained for forest health.[8] Also, regional standards in the Guideline are appropriate since facilities across ISO-NE

[8] Forest Stewards Guild, Forest Biomass Retention and Harvesting Guidelines for the Northeast, May 2010, available at https://foreststewardsguild.org/wp-content/uploads/2019/06/FG_Biomass_Guidelines_NE.pdf

are eligible to participate. Using the proposed definition will also align with 225 CMR 16.00, the APS regulation, which was promulgated in 2017.

Comment: Some commenters were in opposition to the removal of the hard limit that only 30% of the residues and thinnings harvested can be used for Eligible Biomass Woody Fuel, arguing that this limit is necessary to stop intensive harvesting from happening.

Response: The proposed regulatory provisions are being retained in the final regulation. Forest Derived Residues and Forest Derived Thinnings, as defined in 225 CMR 14.02 and 225 CMR 15.02, are byproducts of normal harvesting and land management practices. The price of saw timber is typically above $100/ton, which is significantly higher than forest residues/mill waste that is typically around $30–$40/ton.[9] The RPS is not set up to incentivize unreasonable intensive harvesting solely to provide material for the RPS. Accordingly, a hard limit is unnecessary. This reasoning also applies to thinnings, as the definition for Forest Derived Thinnings restricts its eligibility to only materials that cannot be sold as saw timber. Therefore, restricting the amount of residues and thinnings from harvest operations should not have an impact on sustainable forestry.

Comment: Some commenters opposed the removal of an advisory panel for Eligible Biomass Woody Fuel and requested that the panel be reinstated.

Response: The proposed regulatory changes are being retained in the final regulation. Since 2012, when the regulations were last revised, the advisory panel has not been formed and the Department did not receive a stakeholder request for panel formation. Rather than creating an advisory panel, the Department will provide public information on tracking biomass feedstock supplies by publishing an RPS Biomass Tracking Report on or before July 1st on an annual basis and will accept public comments on the report.

Comment: Some commenters opposed the removal of the forest impact assessment, the annual compliance reporting, and the quarterly reporting. Some commenters also opposed changing the start date for the forest impact assessment to 2020. Some commenters opposed the removal of language in the forest impact assessment that required the assessment of lifecycle greenhouse gas emissions and stated that the Department struck language that would require the report to be made public.

Response: The proposed regulatory changes are being retained in the final regulation. To clarify, the Department has not removed the requirement for a Forest Impact Assessment and reports are due in the year stated in the regulations. These reports will be available to the public. Changing the date to 2020 is appropriate because it aligns with the original regulations which required a report every 5 years beginning in 2015. The Department determined that an assessment of lifecycle greenhouse gas emissions in the report is not necessary because an assessment of lifecycle greenhouse gas emission reductions already occurs every quarter for each facility as a part of the quarterly reporting requirements noted in 225 CMR 14.05(8)(c) and the *Overall Efficiency and Greenhouse Gas Analysis Guideline*. The Department has added new language to the revised regulations which explicitly state that RECs are unable to be minted if the regulatory requirement of lifecycle greenhouse gas emissions reductions is not achieved in the calendar quarter.[10] The quarterly and annual reporting requirements are still in place; they were moved from the regulations to the *Guideline on Eligible Biomass Fuel for Renewable Generation Units*.

[9] New Hampshire Timberland Owners Association (NHTOA), Market Pulse, 4th Quarter 2017

[10] 225 CMR 14.05(1)(a)7.d.i.

D. Biomass - Definitions

Comment: Some commenters opposed the removal of land-clearing material as an eligible feedstock, stating that the material is a byproduct that would otherwise be landfilled. Other commenters supported the removal of land-clearing material, stating that converting forests to development will permanently remove the ecosystem services provided by the land, and therefore should not be incentivized.

Response: The proposed regulatory changes are being retained in the final regulation. If non-agricultural land clearing remained eligible, it would incentivize permanent conversion of forest lands to development, eliminating the land's ability to sequester carbon.

Comment: Some commenters challenged the legitimacy of treating "land use change- agricultural" wood, categorized under Non-Forest Derived Residues, as low or zero-carbon. Commenters requested that the *Overall Efficiency and Greenhouse Gas Analysis Guideline* be revised to reflect that trees will not grow back. Other commenters stated that the definition of agricultural wood waste as a Non-forest Derived Residue could allow plantation trees to be considered an "agricultural product." Some commenters recommended the Department clarify that only true orchard residues are allowed.

Response: The proposed changes are being retained in the final regulation and Guideline. The definition of Non-Forest Derived Residue and proposed carbon profile assumptions for "land use change-agricultural" are unchanged from 2012 regulations. Additionally, as this feedstock is limited and providing revenue to active farms, it helps maintain working land instead of converting that land to development and permanently limiting the land's ability to sequester carbon. Finally, plantation trees are not considered an agricultural product and the Department will propose revisions to corresponding guidelines to clarify this matter.

Comment: Some commenters opposed changes to the definition of Forest Derived Residue and stated that collaterally damaged feedstocks should not be treated as residue, citing the *Manomet* study. Some commenters stated that expanding the definition to include collaterally damaged trees would not accurately represent the carbon profile of the residue in the *Overall Efficiency and Greenhouse Gas Analysis Guideline*. Some commenters recommended striking collaterally damaged feedstocks from being eligible as a Forest Derived Residue. Other commenters stated that the definition of Forest Derived Residues should not be limited to byproducts and should be broadened. Some commenters stated that if there is no pulpwood market, the commenters would benefit from access to other markets, such as biomass energy facilities.

Response: The proposed regulatory changes are being retained in the final regulation. The *Manomet* study did not use a Timber Products Output methodology because that methodology overstates the volume of breakage and residual stand damage. The *Manomet* study did not explicitly state that breakage and residual stand damage should not be treated as a residual. Collaterally damaged wood, as defined in the proposed regulations, is a byproduct of harvesting operations and is appropriately treated as a residual. Additionally, the Department determined that expanding the definition to include wood that is not a byproduct is not appropriate, as there are greenhouse gas impacts with using whole trees harvested solely for the purpose of generating electricity. In addition, the proposed regulatory provisions are consistent with the definition of Forest Derived Residue in 225 CMR 16.00, the APS regulation, which was promulgated in 2017.

Comment: Some commenters opposed revisions to the definition of Non-Forest Derived Residues, stating that the changes will divert non-forest derived material away from recycling industry and for use in manufacturing products, such as particleboard. Commenters stated that mills will choose to grind wood solely for fuel to be used for the RPS.

Response: The proposed regulatory changes are being retained in the final regulation. Based on historical data over a 5-year period, Non-Forest Derived Residue feedstock categories represented ~896,000 green tons. The *Technical Analysis of Biomass* estimates that there is ~ 3,824,657 green tons/year of Non-Forest Derived Residues. This demonstrates that there is sufficient supply of low-grade wood for use to produce other products, such as particleboard. Further, the price of saw timber is typically above $100/ton, which is significantly higher than forest residues/mill waste, which are typically around $30–$40/ton.[11] The use of saw timber mill waste to meet the eligibility requirements of the RPS is not in the financial interest of the mill operators, and is therefore unlikely.

Comment: Some commenters generally supported changing the definition for Forest Derived Thinnings from 12 foot saw logs to 8 foot saw logs. A commenter recommended the Department consider eliminating Forest Derived Thinnings as an eligible feedstock in the RPS program, recognizing that near term greenhouse gas reductions must be achieved.

Response: The proposed regulatory changes are being retained in the final regulation. Based on the *Technical Analysis of Biomass*, the current regulations allow for up to 35% of the feedstock to be sourced from Forest Derived Thinnings while still achieving the requirement for 50% reduction of lifecycle greenhouse gas over 20 years. In practice, the *Forest Impact Assessment* showed that only 11% of Forest Derived Thinnings has been utilized as feedstock in the RPS program over the 5-year period assessed. Reducing the size of Forest Derived Thinnings from 12 foot logs to 8 foot logs will further constrain the feedstock's eligibility while still recognizing the value Forest Derived Thinnings offer in silviculture practices to manage forest resources.

Comment: Some commenters opposed the removal of the words "major threat" from the definition of Forest Salvage, stating that any tree "damaged" could be removed without limitation if declared an injurious agent. Some commenters recommended that the Department revert to the existing definition of Forest Salvage.

Response: The proposed regulatory changes are being revised in the final regulation. After review and consultation with DCR, the Department has revised the definition to allow Forest Salvage to be eligible if it is harvested in Massachusetts through a DCR-approved cutting plan. This change will allow a greater amount of Forest Salvage to qualify for the RPS while maintaining protective measures to avoid overharvesting.

Comment: A commenter stated that the definition of Clean Wood is too restrictive. Other commenters noted that removing "non-treated pallets" from the definition could potentially allow treated pesticide pallets, construction, and demolition material as an eligible fuel.

Response: The proposed regulatory changes are being retained in the final regulation. After consulting with the Massachusetts Department of Environmental Protection ("MassDEP"), the definition of Clean Wood was adopted to exclude construction and demolition debris and treated pallets, from eligibility in the RPS. This definition aligns with 225 CMR 16.00, the APS regulations promulgated in 2017), which restricts Eligible Biomass Woody Fuel to feedstocks that are Clean Wood, as defined by MassDEP.

Comment: Some commenters stated concerns that the proposed inclusion of wood waste as a Non-Forest Derived Residue would increase the pool of eligible fuel.

[11] New Hampshire Timberland Owners Association (NHTOA), Market Pulse, 4th Quarter 2017.

Response: The proposed regulatory changes are being retained in the final regulation. The definition of wood waste has been minimally expanded to allow certain wood, such as timber mats, that has reached the end of its useful life and are Clean Wood, to be an eligible feedstock. The Department will monitor, through its quarterly review process, to ensure regulations are interpreted correctly and implemented properly.

E. Biomass - General

Comment: Some commenters opposing the proposed regulatory changes related to biomass stated that the proposed changes would allow out-of-state biomass energy plants to access the Massachusetts REC market. Some commenters also stated that Generation Units in New Hampshire and Maine would requalify or that the incentives would result in new biomass plants being constructed. Some commenters also stated that biomass plants in New York could flood the REC market.

Response: The proposed regulatory changes are being retained in the final regulation. In response to comments received, the Department performed additional analysis, as contained in the *Technical Analysis of Biomass*, regarding proposed biomass changes in the regulation. This analysis considered, among other things, the dynamics of REC markets, available biomass feedstock, and infrastructure at existing Generation Units. The analysis predicts that, under the proposed changes, a small percentage of the biomass Generation Units would potentially participate in the market, approximately 248 GWh (in 2025) in the Base Case, and approximately 166 GWh (in 2024) and 634 GWh (in 2025) in the Low Cost Case. The Massachusetts RPS operates within a regional REC marketplace. The Department's view is that an effort by Massachusetts to unilaterally exclude facilities in other New England states or adjoining ISO regions from participating in the Massachusetts RPS, provided such facilities meet all program requirements, would undermine the RPS program.

Comment: Some commenters stated concerns that burning wood causes negative health impacts from air pollution such as particulate matter, ozone, and other outdoor air pollutants. Some commenters also stated that the Department removed requirements for air permits from MassDEP and the commenters suggested revising the emissions control standards to be at least as stringent as those required in the 2011 air permits for the Palmer plant. Some commenters stated that the U.S. Environmental Protection Agency ("EPA") has lowered the annual PM2.5 standard and urged the Department to both adopt the former EPA standard as well as a spatial approach to assess emissions, rather than state-wide particulate emissions limit. Some commenters stated that the Department should exclude emitting facilities located in or proximate to Environmental Justice communities from REC eligibility.

Response: The proposed regulatory changes are being retained in the final regulation. The regulations require valid air permits meeting all applicable standards to be obtained from MassDEP, and all Generation Units using an Eligible Biomass Fuel must demonstrate, to the satisfaction of the Department, that the emission rates for each Generation Unit are consistent with rates prescribed by MassDEP for comparably fueled Generation Units in the Commonwealth. The Department defers to MassDEP on all air permitting requirements, as proposed in the regulations.

Comment: Some commenters recommended that when Generation Units are co-firing, the eligible portion of generation from feedstock should be allowed to generate RECs. Some commenters opposed removal of the definition of Co-mingled Biomass Woody Fuel and argued that Generation Units should be allowed to burn materials other than Clean Wood. Other commenters opposed co-fired systems generating RECs.

Response: The proposed regulatory changes are being retained in the final regulation. The Department has removed the definition of Co-mingled Biomass Woody Fuel because there are adequate processes in place to track Eligible Biomass Woody Fuel. While this definition has been removed, the regulations still

allow for co-firing with ineligible fuel, and ensure RECs are generated only from use of eligible feedstocks. No RECs are issued for electricity generated from ineligible fuel.

Comment: Some commenters opposed reducing the time between proposed regulatory changes and the effective date from two years to one year. These commenters recommended retaining a two-year period.

Response: The proposed regulatory changes are being retained in the final regulation. The Department determined that one year is sufficient for Generation Units to implement and comply with the proposed changes. In addition, elongating the period may result in increased emissions.

Comment: Some commenters opposed including drying fuel (for use in other facilities) in overall efficiency. Some commenters stated that such inclusion undermines the accounting of lifecycle emissions, and that fuel drying is not considered "useful."

Response: The proposed regulatory changes are being retained in the final regulation. The requirement that drying fuel be used offsite prevents the fuel from being double-counted in overall efficiency calculations, while also encouraging renewable energy use to offset fossil fuels that may otherwise be used to dry and/or refine the fuel.

Comment: Some commenters opposed the Department having authority to make a "unilateral decision to offer exceptions to the regulations."

Response: The comment refers to a provision in section 9 of the *Guideline on Eligible Biomass Fuel for Renewable Generation Units* allowing limited exceptions "from any provision of this Guideline for good cause, so long as the exception is consistent with the requirements set out in G.L. c. 25A, § 11F and regulations promulgated thereunder". The Department does not interpret this provision to authorize "exceptions to the regulations" based on the Department's "unilateral decision", but rather that it applies solely to limited circumstances where an exception to the Guideline would be both appropriate and consistent with the requirements of both Ch. 25A § 11F and the *Guideline* itself.

F. Biogas

Comment: Some commenters requested that the Department update the *Overall Efficiency and Greenhouse Gas Analysis Guideline* so that it can assess the greenhouse gas accounting for biogas. Some commenters stated the *Guideline* should define the method for verifying whether biogas fuel has met the requirement of 50% reduction in lifecycle greenhouse gas emissions and requested the Department shorten the lifecycle period to 10 years. Some commenters stated that environmental requirements should be set for each technology to ensure that only the best, most "environmentally-friendly" projects are incentivized. Some commenters also stated that the Department should specify that biomass gasification must undergo greenhouse gas accounting like conventional combustion and should add a rigorous lifecycle element to the carbon calculator to ensure that the energy-intensive nature of biomass gasification is properly accounted.

Response: The proposed changes are being retained in the final *Guideline*. The Department has reviewed the comments and has determined that the proposed methodology—to verify biogas on a case-by-case basis in consultation with the MassDEP—is the most appropriate methodology. This allows flexibility that is required to appropriately assess the variations in the feedstocks.

G. Eligible Liquid Biofuel

Comment: Some commenters requested that the Department explicitly prohibit liquid biofuels derived from construction and demolition waste. Some commenters stated that deleting the limitations on derivative waste feedstocks could increase the availability of eligible fuels.

Response: The proposed regulatory changes are being retained in the final regulation. Any wood used for Eligible Liquid Biofuel must be Eligible Biomass Woody Fuel, which requires the biomass to be Clean Wood. Therefore, construction and demolition feedstocks are already explicitly not allowed. The changes to the definition align with 225 CMR 16.00, the APS regulation promulgated in 2017, and are more stringent than the previous requirements. The Department maintains review and approval of all feedstocks and will continue to evaluate proposed inclusions from biofuel manufacturers in consultation with MassDEP.

Comment: Some commenters were concerned that the definition of Eligible Liquid Fuel placed the decision on eligibility with the Department rather than with MassDEP. These commenters stated that MassDEP is better qualified than the Department to make determinations regarding the disposition of hazardous waste.

Response: The proposed regulatory changes are being retained in the final regulation. The Department has consulted with MassDEP on the development of the regulations, including the definition of Eligible Liquid Biofuel. In addition, the Department will continue to consult with MassDEP where further analysis may be required to determine if regulatory requirements are achieved.

Comment: Some commenters requested that the definition of Dedicated Energy Crops not be removed as it could result in the deforestation of carbon-rich lands.

Response: The proposed regulatory changes are being retained in the final regulation. After consultation with MassDEP, the Department has determined that removal of the definition of Dedicated Energy Crops is appropriate to ensure that virgin feedstocks are not eligible for the RPS. Wood purposefully grown to produce fuel remains ineligible because definitions of Forest Derived Residues and Non-Forest Derived Residues intentionally and explicitly do not allow tree plantations to be eligible. The Department will reiterate this interpretation of the regulations in the appropriate corresponding guideline(s).

Comment: Some commenters requested that the Department not change the definition of Eligible Liquid Biofuel, as the new definition could allow black liquor to qualify.

Response: The proposed regulatory changes are being retained in the final regulation. Under the proposed regulations, black liquor is not an Eligible Biomass Fuel.

Comment: A commenter requested that the requirement to be certified under the EPA's Renewable Fuel Standard ("RFS") in the definition of Eligible Liquid Biofuel be removed because the EPA allows only wood from a plantation to be eligible for the RFS. The RPS program should allow wood from sustainably managed forests to be eligible as a liquid biofuel.

Response: The proposed regulatory provisions are being retained in the final regulation. Only Forest Derived Residue or Forest Derived Thinning from plantations are eligible in the RPS. Whole trees harvested solely to sell to market are not considered a byproduct and are not eligible in the RPS. Additionally, Manufactured Biomass Fuel is defined to include bio-oil. Wood from forests may be eligible to participate in the RPS program as a bio-oil, if all of the program requirements for Eligible Biomass Woody Fuel are met. These requirements include, but are not limited to, sustainable forest management, overall efficiency and lifecycle greenhouse gas emission reductions.

Comment: Some commenters stated that the proposed *Guideline on Eligible Biomass Fuel for Renewable Generation Units* is not correctly accounting for the greenhouse gas emissions related to the generation of Eligible Liquid Biofuels. Some commenters stated that the Department should not rely on the EPA RFS program because it is controversial. A commenter requested that the Department clarify that it intends to

use only the Clean Air Act definition of advanced biofuels, and not to incorporate any other EPA standards for such fuels, EPA accounting methods, or EPA determination that specific fuels qualify. Other commenters shared that they were concerned about using the EPA RFS program as a method to assess the lifecycle greenhouse gas emission reductions from bio-oil that may be manufactured from woody biomass. Some commenters stated that the regulations were unclear as to whether MassDEP would be consulted regarding lifecycle greenhouse gas emission reductions.

Response: The proposed changes are being revised in the final Guideline. The Department determined that it was not appropriate to use the EPA RFS program as a means to verify the lifecycle greenhouse gas emission reductions for Eligible Liquid Biofuel for the RPS. The EPA RFS program utilizes a lifecycle greenhouse gas accounting methodology that assumes that either gasoline or diesel is the fuel that would be displaced. Under the RPS, the marginal unit that will be displaced is most likely a natural gas generation facility, which has a different greenhouse gas emission profile than gasoline or diesel. The guideline will be adjusted to assess the lifecycle greenhouse gas emissions reductions from Eligible Liquid Biofuel on a case-by-case basis, in consultation with MassDEP. Regarding the lifecycle greenhouse gas emission reductions associated with bio-oil produced from Eligible Biomass Woody Fuel, the regulations always required that if a bio-oil was created using an Eligible Biomass Woody Fuel, then the *Overall Efficiency and Greenhouse Gas Analysis Guideline* was required to be used to verify the lifecycle greenhouse gas emission reductions, not the EPA RFS program. However, since the *Overall Efficiency and Greenhouse Gas Analysis Guideline* has removed the entry for Biomass Fuel Processing Stack Emissions, which was used to capture the additional emissions from processing bio-oil, the Department will modify the *Guidelines* to require all bio-oil, including bio-oil created from Eligible Biomass Woody Fuel, to be reviewed on a case-by-case basis, in consultation with MassDEP. Finally, it is notable that the proposed regulatory provisions limit eligibility for liquid biofuels to only organic waste feedstocks. This provision was crafted in consultation with MassDEP and is a more stringent requirement than EPA's standards relating to advanced biofuels. This provision will be maintained.

H. Importers

Comment: Some commenters opposed removing the requirement to commit capacity to ISO-NE due to concerns about the impact of double-counting and transparency of certificates. Commenters stated that the change conflicts with language from the *Green Communities Act*. Some commenters also opposed removal of the requirement that qualified Generation Units in adjacent grid systems acquire purchase contracts, transmission rights, and North American Electric Reliability Corporation tags. Other commenters supported the proposed changes to remove the requirement to commit capacity to ISO-NE, provided the changes will not cause significant market uncertainty and disruption. Some commenters stated that the *Green Communities Act* does not specify that a generator must commit capacity to ISO-NE. Some commenters also stated that the proposed changes to remove the requirement to commit capacity to ISO-NE was beneficial because it removes onerous and unnecessary requirements on generators.

Response: The proposed regulatory changes are being retained in the final regulation. New England states and neighboring states/provinces use robust methodologies and tracking systems to ensure the accurate tracking of attributes for the purposes of RPS compliance and greenhouse gas accounting. The Department has reviewed imports and found no evidence of either intentional or inadvertent double-counting. With respect to RPS capacity commitment obligations, it is impractical to assess this occurrence given the different market structure in the NY Independent System Operator region as compared to the ISO-NE region. The Department has reviewed relevant provisions of the GCA and determined that the proposed changes are appropriate and consistent with the GCA.

I. Low Impact Hydropower Institute Certification

Comment: Some commenters were in opposition to the proposed changes that remove the requirement to have Low Impact Hydropower Institute ("LIHI") certification and recertification. Some commenters stated that recertification for LIHI should be maintained because it was the only regular opportunity for non-regulatory stakeholders to offer suggestions to minimize and mitigate impacts on a public resource under Federal Energy Regulatory Commission jurisdiction, such as a river. Some commenters stated that these short-term actions will undercut long-term purposes of the RPS as over 65% of recertified projects require additional environmental actions. Some commenters were also concerned that projects could abandon their LIHI certification as soon as projects are approved for RPS.

Response: The proposed regulatory changes are being revised in the final regulation. The Department determined it was appropriate to strike the proposed language and revert to current regulatory requirements. The Department agrees with the concern that Generation Units could immediately withdraw from LIHI. As some commenters noted, LIHI certification is an important mechanism to ensure environmental impacts are minimized and over 65% of recertifications require additional measures to protect the environment.

Comment: Some commenters questioned the decision to make LIHI the responsible certification agency and stated that voluntary recertification may be desirable if recertification rates dropped. To help mitigate timing issues, some commenters suggested that if LIHI does not provide a certification within 180 days, the Department should review applications directly.

Response: The proposed regulatory provisions are being retained in the final regulation. The Department determined that LIHI is the most appropriate entity to provide certification.

Comment: Some commenters requested the Department reconsider the eligibility of large dams, the proposed changes to LIHI certification, and the proposed changes to expand eligibility into Canada as the RPS may act as an economic incentive for those dams.

Response: The proposed regulatory changes are being retained in the final regulation. The Department is maintaining the proposed change as only dams under 30MW are allowed in RPS - Class I and under 7.5 MW are allowed in RPS - Class II. Large dams, such as those in Canada referenced by the commenters, are not eligible.

J. Financial Security

Comment: Some commenters opposed the requirement for Load Serving Entities ("LSE") to post a financial security bond. Opposing commenters stated that the Department lacks explicit statutory authority to require suppliers to post a financial security. In addition, some commenters stated that the requirement is inconsistent with Executive Order 562, as it will increase costs borne by ratepayers. Some commenters state that competitive suppliers already file annual financial forms with the Massachusetts Department of Public Utilities and should not be required to post an additional security. In response to stakeholder questions issued by the Department regarding potential changes to the compliance cycle, some commenters stated that requiring quarterly compliance would be administratively burdensome and increase costs to ratepayers. Some commenters stated that a preferred alternative would be to increase the financial security to equal 10% of the amount of the ACP needed to satisfy its projected annual obligation.

Response: The proposed regulatory changes are being retained in the final regulation. The Department requested stakeholder feedback on further amendments to 225 C.M.R. 14.00 and 225 C.M.R. 15.00 to identify potential cases of non-compliance by LSE earlier in each compliance year, to limit risks of significant non-compliance and related effects on the Commonwealth meeting its Global Warming Solution

Act requirements, and to change the current annual compliance cycle for RPS - Class I and RPS - Class II to a more frequent compliance cycle. The Department also requested alternative proposals to protect against potential impacts of noncompliance.

The Department agreed with commenters that, at this time, the quarterly compliance requirement would be administratively burdensome, and determined not to adopt it. The Department acknowledges that the State of Connecticut has proposed to increase its financial security requirements to cover 100% of the CT RPS obligation.[12] The Department intends to convene a working group in the coming year to further assess increasing financial security requirements.

The Department disagrees with commenters regarding statutory authority and consistency with Executive Order 562. The Department understands the language of M.G.L. c. 25A as granting the Department broad authority to promulgate regulations that set compliance obligations for LSE. Ensuring compliance by requiring a financial security is consistent with both the specific legislative mandate in regard to the RPS and the broad mission of the agency and its general authority. In particular, the Department proposed these financial security obligations in direct response to significant LSE non-compliance in recent compliance years.[13] Based on recent LSE non-compliance, consistent with EO 562, there is demonstrated need for the agency to intervene. The benefit to the Commonwealth's ratepayers outweighs the burden imposed by the requirement. The Commonwealth's ratepayers would otherwise not receive the environmental benefits that the RPS obligation is designed to produce. In addition, requiring bonding is a practice used in other states to ensure compliance with requirements under their respective RPS programs.

[12] Connecticut Department of Energy and Environmental Protection- Public Utilities Regulatory Authority Docket 19-10-26 Notice of 6-5-20

[13] For example, over $90m in ACP was not paid by LSEs in CY18 due to non-compliance.