



On behalf of Renewable Energy Group, I am writing in response to the Massachusetts Department of Energy Resources (DOER) comment period for 225 CMR 16.00, proposed Alternative Energy Portfolio Standards (APS). We appreciate this opportunity to provide written comments for the record.

Renewable Energy Group, Inc. (REG) is a leading provider of cleaner, lower carbon intensity products and services. We are an international producer of biomass-based diesel, a developer of renewable chemicals and North America's *largest* producer of advanced biofuel. REG utilizes an integrated procurement, distribution, and logistics network to convert natural fats, oils, greases and sugars into lower carbon intensity products. With 14 active biorefineries, a feedstock processing facility, research and development capabilities and a diverse and growing intellectual property portfolio, REG is committed to being a long-term leader in bio-based fuel and chemicals.

REG appreciates the time and effort that DOER has put into this proposed rulemaking. Massachusetts should be applauded for its efforts to bring lower carbon alternative energy sources into the marketplace.

Section-by-Section Comments

Section 16.02: Definitions

APS Ineligible Energy Sources.

REG supports the goals of the language in this section. Keeping coal, petroleum, oil, natural gas and other high carbon sources of energy out of the program is in keeping with the goal of the APS. However, it appears that DOER has inadvertently created a potential loophole for biofuels created in an existing petroleum refinery – often referred to as co-processing.

While co-processing does produce limited quantities of biofuels, their presence is intermingled with refined petroleum products, making detection and measurement very difficult, unless expensive and time consuming carbon dating is applied on a per batch basis.

We suggest DOER add a section (g) defining co-processed liquid biofuels as ineligible. Since there is no practical way for the state to ensure that only APS eligible material from co-processing is actually shipped and utilized in Massachusetts. Without the ability to measure compliance and progress and the ability to ensure a direct consumer benefits, the material should be prohibited.

REG suggests DOER should adopt language from 40 CFR 80.1401 – Definitions: *Co-processed means that renewable biomass was simultaneously processed with fossil fuels or other non-renewable feedstock in the same unit or units to produce a fuel that is partially derived from renewable biomass.*

Dedicated Energy Crops.

While DOER should be commended for recognizing this new and emerging area, the definition provided is imprecise in areas and potentially contradictory. The phrase 'sequestered significant amounts of

carbon' is vague and is itself not defined (ie. how much is 'significant') and therefore could be subject to litigation. By eliminating forest land and "land that does not have economic potential to support production of any other crop grown for human consumption," DOER has inadvertently eliminated all land (productive and potentially productive) from eligibility.

REG supports using the following language which was derived from several references including USDA and NRCS: "Crops grown for the purpose of producing fuel from plants that do not typically produce food and are grown on low productivity marginal land (i.e. land with environmental limitations which is generally nutrient poor, more erodible, droughty, and/or less productive and cannot be easily cultivated)." This definition could also allow the use of algae based biofuels as it *might* meet both parts of the definition.

Eligible Liquid Biofuel

The newly proposed language is an improvement over earlier drafts, however, the word organic should be dropped as it is confusing and begins to bend the commonly understood definition of the word. Organic has historically been applied to crop production methods. Biodiesel production itself is not a crop production process; instead rendered fats and oils are converted under limited heat and pressure in the presence of a catalyst to methyl esters and glycerin. Pesticides and herbicides are not used and are not present during the process.

REG supports adding 'Used Cooking Oil, Inedible Corn Oil, and the 'oil co-products from crops grown for protein or animal feed' before the last sentence in that section

Section16.05: Eligibility Criteria for APS Alternative Generation Units

1(a) 6 (a) vii Liquid Biofuels

REG supports the language stating units "may co-fire with other fuels, but shall contain at least 10% by volume [of] Eligible Liquid Biofuel."

2(c) Co-Firing Waiver

REG supports the spirit of this section, but believes the wording is overly specific and complicated. For example, the section states a fuel supply plan must be developed "that specifies each and every fuel that it intends to use." The fuel eligibility is spelled out in previous sections, so this language becomes confusing and redundant.

REG supports the following language: *The Generation Unit must provide a fuel supply plan which includes relative proportions of Eligible Liquid Biofuel and heat values (using industry best practices of utilizing HHV measurement). Such plan shall include procedures by which the Unit will document compliance to the satisfaction of the Department.*

5(i) Greenhouse Gas Emission Reduction

While consistent with the DOER's *Guideline on Biomass, Biogas, and Biofuels for APS Renewable Thermal Generation Units*, the language used in both is somewhat confusing and could be interpreted in different ways, including a comparison of unit efficiency. It becomes clearer in reading DOER's *Guideline*

completely, that the 50% reduction in GHG refers to a comparison of the displaced fuel vs the non-displaced fuel. This is consistent with the findings in the federal Clean Air Act Renewable Fuels Standard. REG suggests the language be made clearer by adding after “utilizing the fuel that is being displaced” *compared to the non-displaced petroleum*.

5(j) Cap on the Available Number of Attributes for Generation Units Using Liquid Biofuel

The language provides for a cap “not [to] exceed 20% of the total annual compliance obligation for the Compliance year.” REG believes the number is artificially low and needlessly constrains the overall APS program and will reduce utilization of the APS credits. It is unlikely enough woody biomass suppliers will meet all the eligibility criteria in the draft proposal. If this is true, biofuel suppliers, who can meet the demand today, as well as potential growth in demand, will be capped well below need. If the goal is to incentivize the use of lower carbon fuels, then this cap should be raised. While we would prefer a 50% cap on participation, REG will acquiesce to the recommendations of other organizations, such as the Massachusetts Energy Marketers Association (MEMA), who call for a 40% cap.

5(l) Eligible Liquid Biofuels Suppliers list

While we feel any list is unnecessary given the requirements for the liquid biofuel to meet ASTM D6751 and D396 applicable standards (APS Guideline June 8, 2016), we can understand why the state would want to be able to track suppliers for other compliance purposes. Therefore, we suggest the state list simply match the federal EPA Moderated Tracking System (EMTS) used to track RIN trading.

<https://www.epa.gov/fuels-registration-reporting-and-compliance-help/registered-companies-and-facilities-fuel-programs>

All biofuel companies wishing to manufacture biofuel and sell RINs must be registered by the EPA into the system and are audited for compliance. Therefore, this system is updated daily to add new suppliers. By mirroring EMTS, MA DOER will be saving considerable time and expense versus developing a proprietary list based on similar, if not identical criteria.

The section also lays out a requirement for providers to have a Quality Assurance Program (QAP) in order to be eligible for the list. This requirement is completely unnecessary and we strongly recommend the QAP language be deleted.

The federal QAP program was designed to help ensure integrity in the RIN market. Renewable Identification Numbers (RINs) are the tool with which parties obligated under the Renewable Fuels Standard show compliance. Each RIN is associated with specific amounts of liquid biofuel. Some obligated parties are unable to purchase the actual liquid fuel, so the federal program allows the party, oil companies or fossil fuel importers, to purchase separated RINs for compliance instead of investing in fuel handling.

RINs can be verified using a QAP provider or they can “self-verified” utilizing other 3rd party entities outside of a QAP review. While the data varies depending on the month and amount of biofuel produced, QAP verified RINs have consistently made up roughly 20% of the total D4 RIN market which is the main category for biodiesel.

As proposed by the EPA, the QAP program was never intended to cover all RINs, but was conceived as a tool for small producers to ensure their RINs would be traded on an even footing compared to larger industry providers, like REG, who have the capital and scale to be financially responsible should any RINs be found invalid.

Under the APS proposal, actual real fuel meeting ASTM standards must be purchased and then actually utilized, i.e. burned, in approved equipment. At no time will RINs be an acceptable alternative to the actual consumption of liquid biofuel in approved equipment. A fraudulent RIN, i.e. a RIN that does not represent a set amount of biofuel, can never be utilized for compliance (just as a valid RIN can never be used for compliance) since actual fuel must be delivered and utilized.

Given that RINs are not an APS compliance mechanism and only real fuel will be utilized, a QAP requirement is not necessary. Compliance will come in the form of verifiable actual gallons being burned in approved equipment.

Section 16.08 Compliance Procedures for Retail Electricity Suppliers

Section 3(a) 2&3 Alternative Compliance/Procedures

A compliance alternative for the APS Minimum Standard started at \$20 Mwh for compliance year 2009 and has been adjusted by the CPI (roughly \$22 Mwh today). However, this figure may be too low, undercutting both how much the state could receive in payments and dis-incentivizing actual compliance within the APS. In both cases the residents of Massachusetts are harmed – reduced revenue to the government and abridged carbon reduction.

REG suggests that DOER undertake a comprehensive modeling effort to ensure the rate provides for actual compliance under the APS and maximum revenue per alternative credit to the state. While we agree that future prices should be adjusted for inflation, a new baseline model should be established which accounts for current and future costs for biomass, biofuel and biogas APS generated credits as well as the increased costs to health and the environment associated with higher carbon fuels.

Thank you again for the opportunity to provide written comments to the APS proposal and we look forward to working with DOER as it finalizes and implements 225 CMR 16.00

Sincerely,
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