ENSYN
CORPORATION

Sent via email to: thermal.doer@state.ma.us

August 1, 2017

The Honorable Judith F. Judson
Commissioner, Massachusetts Department of Energy Resources
100 Cambridge St., Suite 1020
Boston, MA 02114

Re: APS COMMENTS

Dear Commissioner Judson:

On behalf of Ensyn Corporation and its predecessor company and affiliates (collectively, "Ensyn"), thank you for the opportunity to provide comments on the proposed changes to 225 CMR 16.00 to allow renewable thermal technologies to be eligible to receive Alternative Energy Credits ("AECs"), which was filed with the Secretary of State's office on June 2, 2017. We support the sections of the draft Alternative Energy Portfolio Standard regulations ("Regulations") of the Massachusetts Department of Energy Resources that pertain to Ensyn's technology. The Regulations will help level the playing field by allowing renewable thermal energy to secure AECs and help make our renewable, low-carbon option more affordable to potential users in the Commonwealth.

BACKGROUND ON TECHNOLOGY

Ensyn utilizes a patented fast pyrolysis process to convert sustainably sourced woody biomass into biocrude, which we have branded as "Renewable Fuel Oil" or "RFO" for use in heating and cooling applications. Biocrude can be used for space heating and cooling, electricity production and as feedstock to a refinery to produce gasoline and diesel. We envision that in Massachusetts it will be used as a replacement for fossil fuel in commercial and institutional boilers.

Ensyn was founded in the 1980s to develop a scalable technology that could efficiently convert wood to oil. Its original goal was to develop a replacement for oil in boilers, reciprocating engines, and vehicles. Over the years Ensyn has commercialized its technology in two major business areas; manufacturing of food products and heavy oil upgrading. This was done through exclusive licensing transactions.

Since 2005, Ensyn has built its own 160 ton/day commercial facility outside Ottawa, Canada and entered into a joint venture with Honeywell UOP ("UOP") known as Envergent Technologies LLC. For nearly 100 years, UOP has been the leading international supplier and licensor for the petroleum refining, gas processing, petrochemical production and other major manufacturing industries. Today, more than 60 percent of the world's gasoline and 85 percent of biodegradable detergents are made using UOP technology. Our joint venture with UOP not only helps enable biocrude to be co-processed in a refinery to produce gasoline, but also provides a Fortune 500 partner that can guarantee the performance of the equipment that produces the biocrude.

Ensyn's 160 ton/day facility in Renfrew, Canada is currently capable of producing approximately 3.2M gallons per year (gpy) of biocrude. In addition to its Renfrew facility, Ensyn is actively developing additional commercial plants located in the United States and Canada. The biocrude produced in these facilities will be used to replace fossil fuels in boilers or co-processed with petroleum in refineries.

COMMENTS ON DRAFT RULES 225 CMR 16.00

Please accept the following comments on the Regulations and the Guidelines on Biomass, Biogas, and Biofuels for Eligible Renewable Thermal Generation Units ("Guidelines"):

1. Definition of "Bio-oil" and GHG Reduction – Both the Regulations and the Guidelines use the term "bio-oil," but it is not defined therein. The term "bio-oil" is used in the definition of "Manufactured Biomass Fuel" in the Regulations and is referenced under Section 5 (Greenhouse Gas Reduction), on page 4 of 11, of the Guidelines. In this section of the Guidelines, "Eligible Liquid Biofuel and bio-oil" are required to meet the same standards as advanced biofuels regarding greenhouse gas (GHG) reductions under the Federal Renewable Fuel Standard (RFS) program.
    a. Ensyn RFO clearly does not meet the definition of "Eligible Liquid Biofuel," as its fuel source is woody biomass, rather than organic waste feedstock, such as waste grease oils. Therefore, we respectfully recommend that "bio-oil" be defined to ensure that there is no question whether Ensyn RFO qualifies for AECs.
    b. Ensyn RFO currently qualifies to generate a D7 RIN under the RFS program and, therefore, demonstrates at least a 60% GHG reduction. We would welcome RIN qualification under the RFS program as the method for demonstration of adequate GHG reduction under the Regulations and Guidelines.
2. Definition of Licensed Forester – In Section 3 (Biomass Sustainability) of the Guidelines, on page 3 of 11, it states that "a licensed forester is considered someone who is certified by the Society of American Foresters and has a valid forestry license and/or certification issued by the Commonwealth of Massachusetts, or other comparable state." We expect that some of the Ensyn RFO that will be used in Massachusetts may come from a facility in Canada. We believe that limiting license foresters to parties with forestry licenses and certifications issued by "Massachusetts, or other comparable state" may be unnecessarily restrictive. We, therefore, respectfully request that in this language the term "or other comparable state" be replaced with "or other state or jurisdiction within or outside of the United States."

We appreciate your hard work on the Regulations and thank you for the opportunity to provide these comments. We are available should you have any questions.

Sincerely yours,

Raymond T. Pirraglia
EVP & General Counsel

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