January 24, 2024

Internal Revenue Service

P.O. Box 7604 Ben Franklin Station Washington, DC 20044

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Dear Deputy Commissioner Douglas O'Donnell,

Aries Clean Technologies, LLC (Aries) is a biosolid management company that receives biosolids from water resource recovery facilities (WRRFs) either directly or through aggregator intermediaries and thermochemically decomposes those biosolids into hydrogen and other gases, which it then uses to produce renewable co-heat and power for internal consumption, directly offsetting fossil fuel production. Aries tracks the amount of hydrogen that it produces and the carbon intensity of its process. Further, Aries has a very small footprint, allowing us to site and operate in metropolitan areas – our first plant is located 11 miles from Manhattan – greatly reducing truck traffic. As a producer of hydrogen from waste biomass and potential future applicant/recipient of 45V tax credits, Aries offers the following comments on the proposed rules:

Clean Energy Incrementality: The requirement that clean power to support a clean hydrogen producer needs to be sourced from clean power production assets that have gone into operation no earlier than 3 years prior to the hydrogen production asset is stifling to the clean hydrogen production industry and unnecessary. Demand for clean electricity continues to grow in the United States and is mandated/targeted throughout the United States. State public utility commissions, regulated utilities, independent power producers and local distributed energy producers are all seeking to address the supply side of clean energy. Requiring incrementality stifles their ability to transact their clean energy resources by making clean energy prohibitively expensive, prohibiting future development. Certain locations in the United States have limited renewable energy capacity due to uneconomic solar, wind and biomass resources and that capacity may already be built out. Incrementality limits an existing power producers' ability to redirect its generation to a lucrative new demand pull. This locks them into existing supply arrangements stifling their ability to fund and build new clean energy production assets in locations where renewable energy resources are economically advantageous. If, due incrementality, renewable resource dynamics don't allow new clean energy production to be built in a given area, new hydrogen production won't be built in that area. This would be the case, even though hydrogen production in that location would be optimally suited to serve market demand.

Clean Energy Regionality: The requirement that clean power to support a clean hydrogen producer needs to be sourced from the same region as the hydrogen producer is stifling to the industry and unnecessary. Similar to comments about incrementality, demand for clean electricity continues to grow in the United States and requiring regional production stifles their ability to build new clean energy resources in the most optimal way possible. Certain locations in the United States have optimal renewable energy capacity due to economic solar, wind and biomass resources. Unfortunately, those locations are not where historic or new hydrogen demand are located and transporting hydrogen is an uneconomic value proposition. The nation has no infrastructure for transporting hydrogen other than a single fully subscribed pipeline system that stretches from Louisiana to East Texas, and the likelihood of building additional interstate hydrogen transportation infrastructure is a "pipe dream". What the nation does have, however, is the ability to economically transmit electrons anywhere in the country from optimal clean energy production and expand that system to facilitate the clean energy revolution. Creating a rule that would minimize our nations' ability to take advantage of its positive renewable energy dynamics and positive hydrogen production/demand dynamics would be counterintuitive to the intent of the Inflation Reduction Act. If hydrogen demand and economics dictate optimal production in a given region then rulemaking should not functionally prohibit it because of lack of clean energy in that region when we have a national electrical grid system. Let's take advantage of what we have, not tie our hands behind our backs.

Clean Energy Time Matching: The requirement that delivered clean power will need to match demand on an hourly basis after 2028 is stifling to the industry and unnecessary. The most economic clean energy production in the United States is primarily intermittent given our nations' advantageous solar and wind resources. Not allowing a hydrogen producer to account for this intermittency in its power sourcing arrangements will mean ceasing production when the sun is not shining, or the wind is not blowing. Stranded capacity is not an acceptable business metric to building economic hydrogen production assets. Annual accounting works in all other industries and should be maintained until such a time as the electrical grid can demonstrate 24-hour balance clean energy production given growth in non-intermittent clean energy resources.

Biomass Gasification GREET Pathway: Current GREET pathways recognize biomass gasification of corn stover or logging residue with no significant market value with potential CCS and treats that material as carbon neutral for the purpose of greenhouse gas emission calculations. Biosolids have comparability to corn stover and logging residue and as such should be treated the same, carbon neutral for the purpose of greenhouse gas emissions calculation. Corn stover and logging residue, in relation to handling and transportation, are normally left in the field or forest, and so the GHG emissions associated with gathering and transportation under the GREET model are added to the hydrogen production assets carbon intensity calculations. That is not the case with biosolids. Biosolids are normally gathered, dewatered and transported to a landfill, composter, land applier or incinerator for final

processing or disposal. In every case where an Aries plant would be sited, the nearest such source of disposal is hundreds of miles away, meaning that dozens of trucks every week would be taken off the road. As such GHG emissions associated with biosolid transportation to the hydrogen production asset, to the extent they are less than what would otherwise be done for final processing or disposal of the biosolid, should not be added to the hydrogen production assets carbon intensity calculation. The GREET model should be updated to add biosolids to the biomass gasification GREET Pathway per the GHG emissions parameters delineated above.

Aries looks forward to working with the IRS and other federal agencies to ensure the final implementation of the 45V tax credit program. Thank you for your work and consideration of our comments.

Kind regards,

Aries Clean Technologies, LLC