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Via Electronic Submittal

February 26, 2024

CC:PA:LPD:PR (REG-117631-23)
Room 5203
Internal Revenue Service
P.O. Box 7604
Ben Franklin Station
Washington, DC. 20044

Re: Covanta Comments on Proposed Regulations Relating to the §45V Credit for the Production of Clean Hydrogen; §48(a)(15) Election to Treat Clean Hydrogen Production Facilities as Energy Property (REG-117631-23).

Covanta appreciates the opportunity to comment on regulations proposed by the U.S. Department of Treasury (Treasury) and Internal Revenue Service (IRS) to implement the §45V credit for the production of clean hydrogen (§45V credit) and the §48(a)(15) election to treat clean hydrogen production facilities as energy property.

About Covanta:

Covanta is the leader in sustainable waste management. Covanta owns or operates 90 facilities across the country including 37 waste-to-energy (WTE) facilities in the United States in public-private partnerships with local governments. WTE technology combusts municipal solid waste (MSW) that would otherwise be put in a landfill into renewable electricity. WTE facilities are subject to stringent federal and state air emissions and environmental requirements.

Processing MSW at WTE facilities reduces one ton of greenhouse gas (GHG) emissions for every ton of waste processed on average. That is why The Intergovernmental Panel on Climate Change (IPCC) recognized WTE as a "key GHG mitigation technology"[1]

This occurs by displacing fossil fuel electric generation, avoiding methane produced by decomposing trash at landfills, and recovering metals for recycling. Covanta's North American WTE facilities produce enough renewable energy to power one million homes and recovers more than 500,000 tons of metal for recycling.

[1] WTE identified as a "key mitigation measure" in IPCC, "Climate Change 2007: Synthesis Report. Contribution of Work Groups I, II, and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change" [Core Writing Team, Pachauri, R.K and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland, 104 pp. Available at: http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_synthesis_report.htm

Electricity production from WTE facilities:

There are over 70 WTE facilities in the United States that produce 2,500 megawatts (MW)[2] of baseload electricity annually, which is equivalent to the energy needed to power well over a million homes. WTE plants in Connecticut, Maryland, Massachusetts, New Jersey, Pennsylvania, and Virginia currently generate Renewable Energy Certificates (RECs) to help meet state renewable energy and climate change objectives.

WTE technology is utilized internationally to sustainably manage waste and generate reliable baseload renewable electricity. There are over 500 WTE facilities in Europe, and worldwide, more than 120-plants have been placed in service over the past decade. Experience globally shows WTE is a proven technology with the potential for growth as a source of baseload renewable electricity, particularly for communities that value managing waste in a sustainable manner.

The 45VH2-GREET should properly account for electricity produced at a WTE facility:

The 45VH2-GREET model provides emissions factors for specific sources of electricity used in the production of clean hydrogen. Residual oil, natural gas, coal, nuclear, logging residue, hydropower, geothermal, wind, and solar are all assigned specific emissions factors. The model does not, however, provide a specific emission factor for electricity generated at a WTE facility to produce clean hydrogen. This omission means that the 45VH2-GREET model fails to accurately reflect the full landscape of energy sources available to produce hydrogen in a clean and GHG-displacing manner and therefore fails to fully implement Congressional intent in the underlying statute.

Electricity produced at WTE facilities yields net negative GHG emissions:

After recycling and composting, MSW is managed primarily two ways in the United States. It is either dumped in a landfill or disposed of sustainably at a WTE facility.

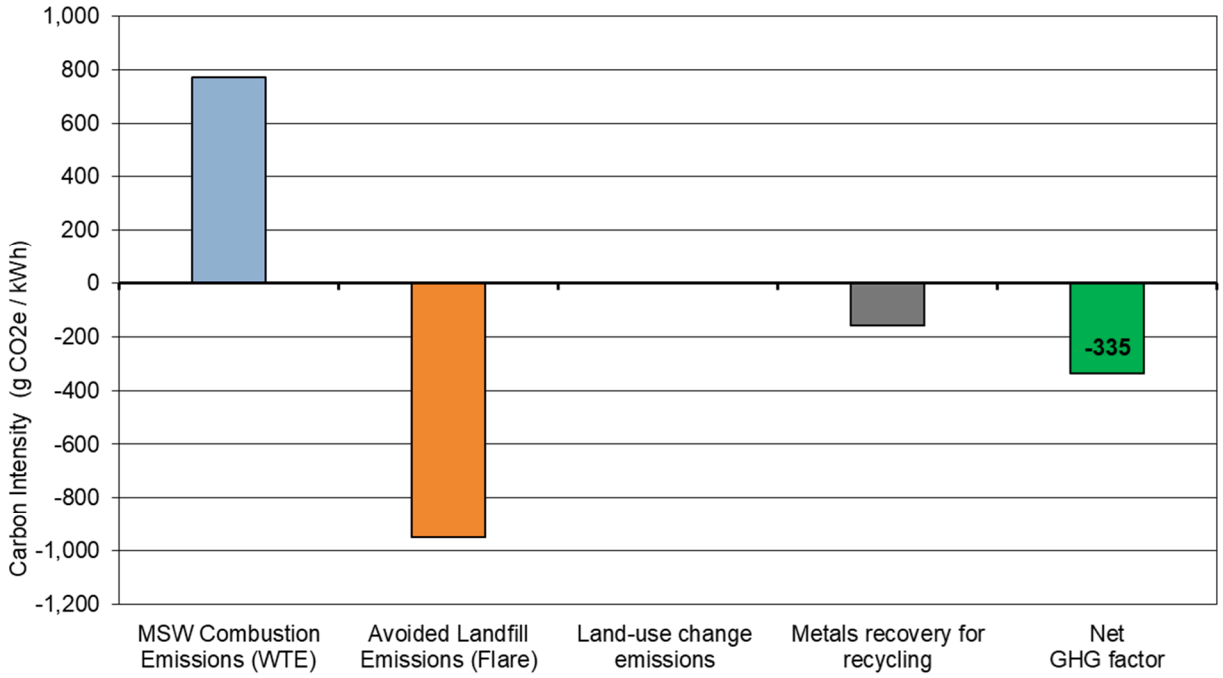
Methane is a particularly potent GHG. According to the U.S. Environmental Protection Agency (EPA), the decay of trash in landfills accounts for 14% of domestic methane emissions. The United Nations Intergovernmental Panel on Climate Change notes that methane is 28-times more potent than carbon dioxide when measured over a 100-year time frame. When more appropriately measured over a 20-year time frame, methane is 84-86 times more potent than carbon dioxide.

At a WTE facility, MSW is combusted to generate renewable baseload electricity and metals are recovered for recycling. While there are carbon dioxide emissions associated with the combustion of MSW, these emissions are more than fully offset by avoided landfill methane emissions. In addition, there are no GHG emissions from land use change associated with WTE facilities, and metals recovered for recycling further reduce net GHG emissions. Overall, every kWh of electricity produced at a WTE facility **reduces** net greenhouse gas emissions by -335 grams of CO_2e when the benefits of avoided landfill methane are considered in a lifecycle analysis, as called for by the Inflation Reduction Act.[3]

[2] Waste-To-Energy Association calculation.

[3] WTE GHG reductions are quantified using a life cycle assessment (LCA) approach that includes GHG reductions from avoided methane emissions from landfills, WTE electrical generation that offsets or displaces fossil-fuel based electrical

Carbon Intensity of WTE Electricity



The 45VH2-GREET model should include electricity generated at a WTE facility as a specific source of power for clean hydrogen production and be assigned a zero-emission factor:

WTE is a proven technology, and experience both domestically and around the world demonstrates that renewable electricity production from WTE has the potential to grow as communities look to sustainably manage waste in a way that reduces harmful GHG emissions, even as we continue to grow recycling and composting. Taxpayers who want to utilize the §45V credit to produce clean hydrogen should have the option of using renewable electricity generated at a WTE facility. Including WTE as a specific source of power in the 45VH2-GREET model will allow clean hydrogen facilities to utilize a reliable source of renewable electricity that yields a net reduction in GHG emissions.

Accounting for electricity production when determining a Provisional Emissions Rate (PER):

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generation, and the recovery of metals for recycling. The GHG reductions associated with these three factors more than offset WTE fossil-based CO_2 emissions from combustion of plastics and other fossil fuel based MSW components.
Landfill inputs: Relative to landfills that flare 100% of collected landfill gas (LFG); LFG collection efficiencies (by cover type) as defined in U.S. EPA's WARM tool (Daily = 50%; Interim = 75%; Long-Term = 82.5%; Final 90%)
WTE inputs: MSW throughput, metal recovery and net electricity generation are based on average Covanta facility operating data. Fossil CO_2 emissions are based on average facility measured CO_2 and biogenic split (40% fossil), tested quarterly.
Other inputs: 100-year GWP methane = 28 (IPCC AR6).

The proposed regulations would allow taxpayers to apply for a PER when utilizing a hydrogen production pathway that either involves the use of a feedstock or a hydrogen production process that is not represented in the current version of the 45VH2-GREET model. Given the importance the source of electricity used to produce clean hydrogen will play in a facility's ability to utilize the §45V credit, taxpayers should also be able to apply for a PER when a source of electricity generation used in a hydrogen production pathway is not accounted for in the current version of the 45VH2-GREET model.

Updated production should be allowed to meet incrementality requirements:

The proposed regulations would allow the use of a facility's uprated production to meet incrementality requirements. WTE facilities represent a long-term investment by a community to sustainably manage waste and generate renewable electricity. Existing WTE facilities have in the past been expanded to meet a community's growing need to sustainably manage waste, and in turn, generate renewable electricity in excess of the facility's original nameplate capacity. Based on this experience and the likelihood that state and local governments will expand WTE facilities in the future, Covanta supports allowing a WTE facility's uprated production to be considered qualifying electricity for purposes of meeting the §45V credit's incrementality requirements.

Incrementality should recognize avoided retirements for WTE facilities:

WTE plants are multipurpose facilities. They give localities the ability to manage post-recycled MSW in a sustainable manner while producing baseload renewable electricity with less than net zero GHG emissions.

WTE facilities generally rely on three streams of revenue to remain economically viable. An important revenue source for a plant are tip fees charged for accepting and sustainably managing the disposal of MSW. A WTE facility will also generate revenue from the sale of electricity and proceeds from the recovery of metals for recycling. In some instances, a facility will contract with appropriate authorities to dispose of specialty items such as used currency, expired pharmaceuticals, and contraband items such as illegal drugs.

WTE facilities face intense competition from landfills. Landfills do not install the expensive environmental remediation infrastructure that is present at a WTE facility, and landfills can charge lower tip fees than a WTE plant for accepting MSW. Pairing a WTE facility's electricity production with a clean hydrogen production plant could help avoid the loss of a WTE facility that is facing closure due to the loss of a contract with a locality to sustainably manage the disposal of MSW. The reliable baseload renewable electricity generated by a WTE plant makes it an attractive electricity source for clean hydrogen production facilities.

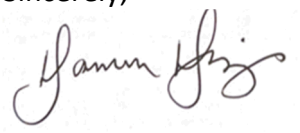
Utilizing an avoided retirements approach to incrementality is warranted in instances where a WTE facility can demonstrate to the IRS it has lost a contract to manage MSW. Avoiding the closure of valuable municipal infrastructure by allowing the use of a WTE facility's electricity to meet the §45V credit's incrementality requirements is an approach consistent with reducing GHG emissions and avoiding induced emissions.

Conclusion:

Covanta appreciates the opportunity to provide comments on Treasury's proposed regulations to implement the §45V credit. WTE technology is a proven technology that both manages MSW in a sustainable manner while generating electricity that yields less than net zero GHG emissions. Electricity generated from WTE facilities should be recognized and incorporated in the final regulatory structure Treasury establishes to administer the §45V credit.

Thank you for your consideration. We stand ready to work constructively with both Treasury and IRS on these issues.

Sincerely,



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