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Submitted via Federal eRulemaking Portal: <http://www.regulations.gov>

RE: BP America's response to IRS Notice REG-132569-17: "Definition of Energy Property and Rules Applicable to the Energy Credit"

BP America, Inc. ("bp") is pleased to submit a response to REG-132569-17: "Definition of Energy Property and Rules Applicable to the Energy Credit". bp is one of the largest biogas producers in the United States ("US"). Biogas, which can be produced from sources such as landfills, wastewater treatment facilities, livestock farms and food waste, has existing and potential commercial uses that can replace more carbon intensive energy sources while enhancing energy security and reliability.

bp is looking to enable substantial biogas production growth through our existing operating assets and extensive portfolio of biogas development projects across the US. **As proposed, the regulations could have a significant negative effect on our plans to further develop biogas projects and ultimately hinder important efforts to reduce methane emissions and decarbonize the American economy.** In addition, the proposed regulations would put strain on projects currently in our development pipeline for which capital investment decisions have already been made and where prevailing wage jobs and apprenticeship program development are already underway.

Our comment letter focuses on four key areas for which we seek change and/or clarity. These include the following:

1. Although explicitly allowed by Congress in §48(c)(7)(B), the proposed regulations effectively disallow Investment Tax Credits (“ITCs”) for any biogas “cleaning and conditioning equipment,” based on Treasury’s introduction of a non-statutory based “upgrading equipment” carveout and Treasury’s methane content measurement point for ITC qualification. For the regulations to reflect Congressional intent, “cleaning and conditioning” equipment should be characterized as functionally interdependent property; the “upgrading equipment” carveout should be removed; and the standard for determining compliance with the 52% minimum methane content requirement should be rendered fit for purpose to where the intended productive use of the biogas occurs.
2. We believe the following equipment should be included as qualifying biogas energy property in the final regulations in line with §48(c)(7)(B), given the critical importance this equipment plays in enabling raw (untreated) biogas to reach its maximum productive potential:
 - a. Gas Removal Equipment
 - b. Pressure and Temperature Control Equipment
 - c. Moisture Removal Equipment
 - d. Compression Equipment
 - e. Thermal Oxidizer Equipment
 - f. Gas Recycling Equipment
3. Treasury should reconsider the multiple-owner rules. At a minimum, the application of these rules to certain biogas “systems” should reflect the fact that in many cases two different taxpayers own separate and functionally interdependent parts of the system, each of which should be eligible for the ITC. Not recognizing this could have a potential chilling effect on biogas project development.
4. Given that it is commercially common, and often necessary, for two different taxpayers to own separate and functionally interdependent parts of biogas systems, the “original use” concept that has been used previously to assess application of the “80/20” rule should be clarified in the final regulations. We recommend the 80/20 rule apply to taxpayers only to the extent that use of both the new and used property originated with that same taxpayer.

Background on bp and our Biogas Portfolio

bp is transforming into an integrated energy company with a significant footprint in the US. Across nearly every state, bp employs more than

30,000 people and supports more than 275,000 American jobs. Since 2005, bp has invested more than \$145 billion in the US; and in 2022 alone, our operations contributed more than \$70 billion to the US economy. We have a larger economic footprint in the US than anywhere else in the world.

As part of our transformation into an integrated energy company, in December 2022, bp completed its acquisition of Archaea Energy, Inc., the largest producer of renewable natural gas (“RNG”) in the country. Archaea expands bp’s presence in the US biogas industry, enhancing our ability to support customers’ decarbonization goals and progressing our aim to reduce the average lifecycle carbon intensity of energy products sold. Properly cleaned and conditioned biogas (i.e., RNG) can be used beneficially for transportation fuel, home heating fuel, petrochemical processes (e.g., liquified natural gas or sustainable aviation fuel), and for lower-emission natural gas power plants already operating in the US. Archaea is also researching and developing additional uses for the byproducts of cleaned and conditioned biogas, such as clean CO₂ for industrial processes.

Archaea has a significant development pipeline of more than 80 projects and continues to look at opportunities to increase the portfolio through strategic relationships within the public and private sectors.¹ In the near term, we have a goal of bringing around 35 plants online by the end of 2025 with each facility costing between \$14 – \$65 million – depending on plant size – for a total anticipated capital commitment in excess of \$500 million a year over the next several years. Archaea’s current projected development schedule for new facilities in calendar year 2024 alone could result in avoiding approximately 1 million metric tons of CO₂ equivalent greenhouse gas emissions per year, equivalent to CO₂ emissions of almost 226,000 cars, per the Environmental Protection Agency's calculator.

Additionally, bp has separately formed a joint venture, CE bp Renew Co, LLC, with Clean Energy Fuels that has invested nearly \$500 million in various anaerobic digester facilities for methane capture at dairy farms in Idaho, South Dakota, Minnesota and Iowa.

A well-designed biogas ITC will increase the likelihood that the numerous biogas plants in bp’s development portfolio will be constructed by allowing such projects to remain cost competitive. The proposed regulations, as drafted, could materially impact Archaea and CE bp Renew Co LLC’s anticipated US investment to build out dozens of biogas facilities across the US, including in Kentucky, Montana, Colorado,

¹ This development portfolio is in addition to Archaea’s existing portfolio of operating facilities across 32 states.

Alabama, North Carolina, Pennsylvania, Texas, California, Georgia, Virginia, Michigan and Indiana.

Underpinning the construction and operation of these facilities are US jobs. On average, each facility constructed by Archaea and CE bp Renew Co LLC would create an estimated 100 prevailing wage jobs and will develop the next generation of biogas construction workers via various apprenticeship programs. In addition to onsite construction work, each plant will be supported by bp, Archaea and CE bp Renew Co LLC staff including but not limited to: a project management team, site and civil engineering team, facility operational staff, and multiple third-party contractors involved with inspections, site and earthwork construction, mechanical and electrical construction, and commissioning and permitting work.

Qualified Biogas Property – “cleaning and conditioning” equipment (also referred to by the proposed regulations as gas “upgrading” equipment) is qualified energy property under any reasonable reading of §48(c)(7).

We include the statutory language contained in §48(c)(7) below given it is important to compare and contrast what we believe is the clear intent of Congress to include “cleaning and conditioning” equipment as qualifying biogas property. We will reference these statutory provisions throughout this comment letter.

(7) Qualified biogas property

(A) In general the term “qualified biogas property” means property comprising a system which—

(i) converts biomass (as defined in § 45K(c)(3), as in effect on the date of enactment of this paragraph) into a gas which—

(I) consists of not less than 52 percent methane by volume, or

(II) is concentrated by such system into a gas which consists of not less than 52 percent methane, and

(ii) captures such gas for sale or productive use, and not for disposal via combustion.

(B) Inclusion of cleaning and conditioning property: The term “qualified biogas property” includes any property which is part of such system which cleans or conditions such gas.

To reiterate, in §48(c)(7)(B), Congress specifically included in the definition of qualified biogas property “cleaning and conditioning” equipment (alternatively referred to as “gas upgrading” or “upgrading” equipment). Whether intended or not, and as discussed more fully below, Treasury has effectively drafted proposed guidance that would not allow any “cleaning and conditioning” equipment to qualify for the §48(c)(7) ITC.

Prop. Reg. §1.48-9(f) – “cleaning and conditioning” equipment is a functionally interdependent part of the §48(c)(7) “system” and thus qualified energy property.

We commend Treasury for proposing long needed and important clarifications regarding concepts critical to the operation of the §48 ITC regime such as “unit of energy property” and “functionally interdependent” vs. “integral” property. However, we are concerned that this interpretative guidance may have the unintended consequence of denying taxpayers access to ITCs, in contravention of statutory definitions dictating what is to be treated as qualified energy property. In particular, it is imperative that Treasury clarify that “cleaning and conditioning” equipment is functionally interdependent equipment that is eligible for the ITC. Any other interpretation is misaligned with the statutory intent and how similar property is viewed within §48 and other similar contexts.

“Cleaning and conditioning” equipment is “functionally interdependent” with the gas collection system or anaerobic digester under longstanding approaches to defining “functional interdependence.”² Indeed, such cleaning and conditioning equipment would not be placed in service but for the placing in service of such gas collection or digester components.³ Additionally, the upstream biogas equipment, *together with the cleaning and conditioning equipment*, perform the intended function of the biogas property (that is to convert qualified biomass into biogas constituting at a minimum 52% methane that is cleaned and conditioned for ultimate sale and a productive use).⁴ This is what the statute requires in clear and

² See Reg. §1.263(a)-3(e)(3)(i). See also Section 4.04 of Notice 2013-29, IRB 2013-20 and Section 7.01 of Notice 2018-59, IRB 2018-28.

³ For ease of reference in this comment letter we may refer to such gas collection systems, wastewater treatment plants or digesters as “upstream” biogas equipment so as to distinguish it from “downstream” cleaning and conditioning (or so-called “upgrading”) equipment.

⁴ Cf. Prop. Reg. §1.48-9(f)(2)(B) (providing that in the case of qualified biogas property and with respect to components of such property, the term functionally interdependent means that the placing in service of each component is dependent upon the placing in service of each of the other components in order to perform the intended function of the energy property as provided by § 48(c) of the Code and as described in (Prop. Reg. §1.48-9(e)).

unambiguous terms. Respecting both the upstream biogas equipment and the cleaning and conditioning equipment as functionally interdependent but discrete units of energy property is in all respects a natural reading of the statute.

We raise this concern given Treasury's current interpretation that "upgrading" equipment is not functionally interdependent with the landfill gas collection system or anaerobic digester. For all the reasons noted herein, bp believes this logic is flawed insofar as it hinges on the arbitrary distinction between (undefined) "cleaning and conditioning" equipment vs "upgrading" equipment. Moreover, the characterization of so-called "upgrading" equipment (or more appropriately "cleaning and conditioning equipment") as equipment that is not "functionally interdependent" with the upstream gas collection system (or digester) is inconsistent with prior guidance and precedent addressing functionally similar equipment in other energy systems.

For example, in RP1 Fuel Cell LLC et al v. USA⁵, ("RP1") the Federal Court of Claims viewed biogas conditioning equipment that was not necessary to generate electricity but was necessary to make the biogas usable for such application as part of "an integrated system" with the associated power plant. At issue in RP1 was the definition of "qualified fuel cell property" for purposes of the §1603 "grant" program.⁶ The Petitioner, a municipal utility, had included the cost of constructing biogas conditioning equipment to provide fuel to the fuel cell equipment in its §1603 grant application. Treasury declined to provide the grant for this portion of the project cost on the basis that the gas conditioning equipment was not part of the §1603 grant eligible energy property.

The Court of Claims ultimately agreed with the Petitioner based on a plain reading of the relevant statutory definitions and an exhaustive review of longstanding administrative guidance and case law interpreting the §48 rules. As noted, the Court concluded that a broad reading of the §48(c) definition of "qualified fuel cell property" appropriately lent itself to inclusion of the gas cleanup equipment as part of the overall qualifying system that served the intended purpose of converting fuel into electricity.⁷ Contrary to the approach taken by Treasury in the proposed

⁵ 115 AFTR 2d 333-35, 348-49, 355 (Fed. Cl. 2015).

⁶ Very generally, §1603 of the American Recovery and Reinvestment Act of 2009 provided for a cash grant in lieu of the §48 ITC for qualifying property under a time limited Treasury administrated program. In administering the program, Treasury looked at §48 and other portions of the Internal Revenue Code as a critical guidepost.

⁷ For reference, the relevant statutory definition referred to a "fuel cell power plant" as an "integrated system comprised of a fuel cell stack assembly and associated balance of plant components which converts a fuel into electricity using electrochemical means." The Court thusly positioned the legal question at issue as one of unpacking

regulations, the Court in RP1 looked to the intended function of the energy property in question and asked whether the particular piece of property in dispute was necessary to achieving this function.

The treatment of cleaning and conditioning equipment as functionally interdependent was similarly confirmed by Treasury itself within published guidance to taxpayers in the form of a “Section 1603 Grant Program FAQs” document. Within this document, Treasury stated in response to Question 34 that gas conversion equipment was eligible for an ITC-equivalent §1603 grant.⁸ Of note, Treasury focused its analysis on the interdependence between the gas conversion equipment and the broader facility (or system). Moreover, Treasury’s interdependence analysis explicitly acknowledged that different taxpayers may own separate parts of the overall system and still qualify for an ITC-equivalent §1603 grant for property owned by each distinct taxpayer if such property was sufficiently integrated with the broader system.⁹

While these precedents admittedly present unique facts and circumstances, we believe they serve to underscore the importance of adhering to the statutory language in defining qualified energy property for §48 purposes. In stark contrast to this precedent, the proposed regulations deviate from the statutory framework defining “qualified biogas property” as set forth in §48(c)(7) and lose sight of the function of “cleaning and condition” (or “upgrading”) equipment.

Accordingly, we urge Treasury to eliminate the concept of “upgrading equipment,” adopt a broad and technology neutral interpretation of “cleaning and conditioning equipment,” and explicitly provide that such “cleaning and conditioning equipment” is functionally interdependent energy property eligible for the ITC under Prop. Reg. §1.48-9(f)(2). Such an approach would be aligned with the clear language of §48(c)(7) and

this definition into its “three distinct parts: (1.) “integrated system,” (2.) “comprised of a fuel cell stack assembly and associated balance of plant components,” (3.) “which converts a fuel into electricity using electrochemical means.” Based on detailed testimony and stipulated findings of fact, the Court concluded that the gas conditioning equipment was sufficiently integrated with the fuel cell, was clearly an “associated balance of plant” component and critical to the intended function of the entire integrated system (i.e., generation of electricity).

⁸ See Payments for Specified Energy Property in Lieu of Tax Credits Under the American Recovery and Reinvestment Act of 2009, “Frequently Asked Questions And Answers”, available at: <https://home.treasury.gov/system/files/216/A-FAQs0411-general.pdf>.

⁹ See *id.* (“In general, conversion equipment that is owned by the same person and located at the same site as the qualified facility will be treated as an integral part of the facility. In addition, the conversion equipment may be [eligible for a section 1603 grant] ..., even if under different ownership or at a different site, if it is established that the conversion equipment is integrated into the facility.”).

§48 precedent and guidance, as well as eliminate unjustifiable inconsistencies within the proposed regulations itself.¹⁰

Prop. Reg. §1.48-9(e)(11) - “Qualified Biogas Property” must include both upstream gas collection property AND “cleaning and conditioning” equipment, and the “upgrading” equipment carveout must be eliminated.

In defining “qualified biogas property,” the proposed regulations largely echo the statute; however, for reasons that are unclear the proposed regulations concerningly create significant and unnecessary confusion that must be resolved in the final regulations to respect Congressional intent in enacting §48(c)(7).

To start, the proposed regulations state that qualifying biogas energy property includes (but is not limited to) property such as waste feedstock collection systems, landfill gas collection systems, wastewater treatment plants, mixing or pumping equipment and anaerobic digesters. While not explicitly stated in the proposed regulations, this portion of the proposed regulatory definition of “qualified biogas property” appears to provide taxpayers guidance in interpreting subparagraph (A) of §48(c)(7).¹¹

Echoing subparagraph (B) of §48(c)(7), the proposed regulations then also state that included in the definition of “qualified biogas property” is “any property that is part of such system that cleans or conditions such gas.” However, Treasury has not provided examples of what types of equipment are appropriately included in qualified “cleaning and conditioning” equipment, unlike the examples of “upstream” biogas equipment enumerated in the proposed regulations and in the preceding paragraph of this letter. Treasury acknowledges this gap in definitional

¹⁰ The characterization of power conditioning and transfer equipment as “integral” property vis-à-vis, e.g., qualified solar energy or wind energy property under the proposed regulations is not entirely analogous. See Prop. Reg. §1.48-9(f)(3)(ii). While such power conditioning and transfer equipment does ultimately allow the commodity produced by solar or wind energy property (e.g., electricity) to be taken to market via grid connected transmission lines (in a fashion not entirely dissimilar to the productive uses enabled via incorporation of cleaning and conditioning equipment into a biogas system), the statutory definition of qualified wind or solar energy property does not incorporate any language similar to the language of §48(c)(7)(B). Thus, we believe that the treatment of power conditioning and transfer equipment as “integral” under both longstanding IRS guidance (see, e.g., Notice 2018-59) and as now codified in the proposed regulations, is simply an attempt to expand the scope of property eligible for the ITC and to more fully implement Congressional intent. As noted herein, treatment of “cleaning and conditioning” (or “upgrading”) equipment as “integral” property (rather than functionally interdependent property) will in many instances have the exact opposite impact and deny the ITC to taxpayers that under the plain statutory language are entitled to the ITC.

¹¹ In Prop. Reg. §1.48-9(e)(11)(ii), this part of the biogas property system is alternatively referred to as the “biogas production system.”

clarity in the proposed regulations and in fact seeks taxpayer input and guidance for what should constitute qualifying “cleaning and conditioning”.

Cleaning and Conditioning equipment is one and the same as Upgrading Equipment; other interpretations are contrary is contrary to the plain language of §48(c)(7).

Of particular concern, the proposed regulations create a specific disallowance for ITC eligibility for “gas upgrading equipment necessary to concentrate the gas into the appropriate mixture for injection into a pipeline through removal of other gases such as carbon dioxide, nitrogen, or oxygen”.¹² While acknowledging it seeks guidance on what constitutes ITC-eligible cleaning and conditioning equipment, Treasury has created a new concept of “upgrading” equipment that is factually indistinguishable from “cleaning and conditioning” equipment (since the function of upgrading equipment is to clean and condition biogas). Moreover, cleaning and conditioning equipment as defined herein is critical to ensuring that a biogas system is capable of satisfying the 52% methane floor requirement and that such biogas is ultimately captured and put to permissible productive use, as required by the statute. bp believes to deny the ITC for equipment that is necessary to satisfy the clear statutory requirements that govern eligibility for the ITC is wholly inconsistent with Congress’ intent.

Raw vs. Cleaned and Conditioned Biogas

As background, biogas that originates from places such as landfills, wastewater treatment plants, and anaerobic digesters at livestock farms constitutes what is considered “raw” biogas with very limited productive use. This is because raw biogas is generated from the decomposition of organic materials and consists of a mixture of various gases including carbon dioxide (“CO₂”), methane (“CH₄”), oxygen (“O₂”) and other trace gasses such as hydrogen sulfide (“H₂S”), nitrogen (“N₂”), ammonia (“NH₃”) and hydrogen (“H₂”). Such raw, untreated biogas may not constitute a product that consists of 52% methane. This is particularly true for raw biogas originating from a landfill where the methane content varies widely based on numerous factors (e.g., composition of the landfill waste, the location of the landfill site itself, the season in which such raw biogas is being generated, barometric pressure changes caused by weather fronts, the attributes of the biogas collection system and the lifecycle of the landfill operations). For example, raw

¹² See Prop. Reg. §1.48-9(e)(11)(i)

biogas from a landfill collection system can have a methane content between 45% and 65%.¹³

Biogas collected and directly removed from these systems with no further treatment is of limited use due to its high moisture content and corrosive properties. In this state it cannot be safely stored, compressed, blended with other gases, transported, or used as a substitute for natural gas thus limiting its use to on-site or near-site productive uses such as combustion to create heat or generate electricity.¹⁴ In fact, prior to the passage of §48(c)(7), most of the historic productive use of biogas was limited to on-site or near-site combustion, primarily for the generation of electricity or process heat.

For biogas to reach its maximum commercial, productive potential – beyond what can be combusted without cleaning and conditioning at or near a landfill or anaerobic digester site – such gas must be converted into RNG, effectively a substitute for natural gas. Such cleaning and conditioning will remove contaminants like water, siloxanes, CO₂, VOCs, heavy metals, H₂S, oxygen and trace gases. In addition, to be effectively brought to new markets, biogas must be commercially transported from the biogas facilities via truck or pipeline and therefore must meet rigorous, federal safety standards. Again, such raw biogas cannot meet these safety standards, nor reach these markets, without cleaning and conditioning.

We believe the intent of Congress in passing §48(c)(7) was to expand the reach and commercial use of biogas beyond what could be combusted at or near the landfill or anaerobic digester facilities, especially given that RNG is a materially less carbon intensive energy commodity than natural gas or other hydrocarbon-based transportation fuels.¹⁵ This seems especially clear insofar that Congress already provided a tax incentive for raw biogas used to generate electricity at or near a landfill or anaerobic

¹³ U.S. Environmental Protection Agency (EPA), Renewable Natural Gas, <https://www.epa.gov/lmop/renewable-natural-gas> (last updated on Aug. 3, 2023).

¹⁴ Such raw biogas can also be flared to the atmosphere.

¹⁵ The genesis of §48(c)(7) was the Agriculture Environmental Stewardship Act (AESA). The Authors of this bill intended the measure to enable farmers and others to turn organic waste materials into a renewable fuel. The legislation intended to establish the ITC for biogas use other than electricity, including broad use as a substitute for natural gas. The authors of this legislation stated that their intent behind such legislation was to incentivize new and alternative uses of biogas by converting biogas into useful products, such as fuel, fertilizer, thermal heat, feedstock for hydrogen fuel cells, and renewable chemicals. Furthermore, the authors of this legislation supported the inclusion of “cleaning and conditioning” equipment to be included as part of the biogas system in order to maximize the commercial potential of biogas beyond on-site or near-site combustion. The IRA incorporated AESA bill language which amended §48, explicitly including coverage of “cleaning and conditioning equipment” to support the “sale or productive use” of the biogas.

digester under §45(c)(1)(C) and (G).¹⁶ Additionally, for several years prior to the enactment of the Inflation Reduction Act of 2022 (“IRA”) taxpayers have been eligible to claim the ITC in lieu of the §45 production tax credit (“PTC”) for upstream biogas energy property used to generate electricity under the rules of §48(a)(5)(C). However, such incentives were confined to biogas property with the intended function of electricity production and did not incentivize the construction of technologically advanced cleaning and conditioning equipment in the same way that §48(c)(7)(B), as introduced in the IRA, clearly does.

Put another way, why would Congress create a separate incentive for biogas projects that are capable of only generating on-site electricity – or other similarly limited use cases – when it already had incentives in place for biogas projects of that type? Similarly, if Congress sought to extend the life of the PTC (or ITC in lieu of the PTC) for more rudimentary biogas projects, it could have extended the begin construction deadlines already incorporated into §§45 and 48 (as it has previously done on numerous occasions) with no need to define qualified biogas property in the manner that §48(c)(7) does.¹⁷ Instead, we believe a more appropriate interpretation is that Congress understood that next-gen biogas projects and plants incorporating more technologically advanced “cleaning and conditioning” equipment were desirable and sought to incentivize such CAPEX-heavy projects via the new ITC regime for “qualified biogas property.”

Qualified Biogas Cleaning and Conditioning Energy Property

Given the inconsistency between the clear intent of Congress to treat “cleaning and conditioning” equipment as qualifying biogas energy property under §48(c)(7)(B) and Prop. Reg. §1.48-9(e)(11) – where cleaning and conditioning (i.e., “upgrading”) equipment is not considered qualifying biogas energy property – the following types of cleaning and conditioning components listed below should be considered functionally interdependent qualifying biogas energy property. bp believes such treatment is aligned with both Congressional intent and prior Treasury guidance within the context of §48 and §1603 for similar gas cleaning and conditioning equipment.

Landfill Cleaning and Conditioning Equipment

At a LFG collection system, raw biogas, which originates from the decomposition of municipal solid waste, is captured and piped to an

¹⁶ See also §45(d)(3) and (6).

¹⁷ Prior to the IRA, both the PTC and the ITC in lieu of the PTC for electricity producing biogas property was available only for electricity generating biogas projects (as then defined in §§45(d)(3) and (6)) for which construction began prior to January 1, 2022.

adjacent biogas cleaning and conditioning facility to convert the raw biogas into RNG.¹⁸ This raw biogas has a methane content on average of 25 to 60% based on several factors unique to each landfill site and design of the gas collection system. Diagram 1 below and the description of the cleaning and conditioning process shows step-by-step the key components and processes required to convert raw biogas into a beneficial use product.

Step #1 Provide vacuum pressure to satisfy EPA requirements to minimize venting from landfill wellfield. Clean and remove extremely toxic H₂S from the landfill gas (LFG).

Step, #2 Clean and remove CO₂, which is corrosive if not removed, as well as clean and remove the Volatile Organic Compounds (VOCs). VOCs give landfills their odor and can also be toxic. This step also removes the moisture present in biogas to clean and condition the gas for safe transport.

Step #3 Clean and remove N₂ as it has no productive use in the final biogas mixture. At this point, we have cleaned and conditioned the gas to a 97% methane content.

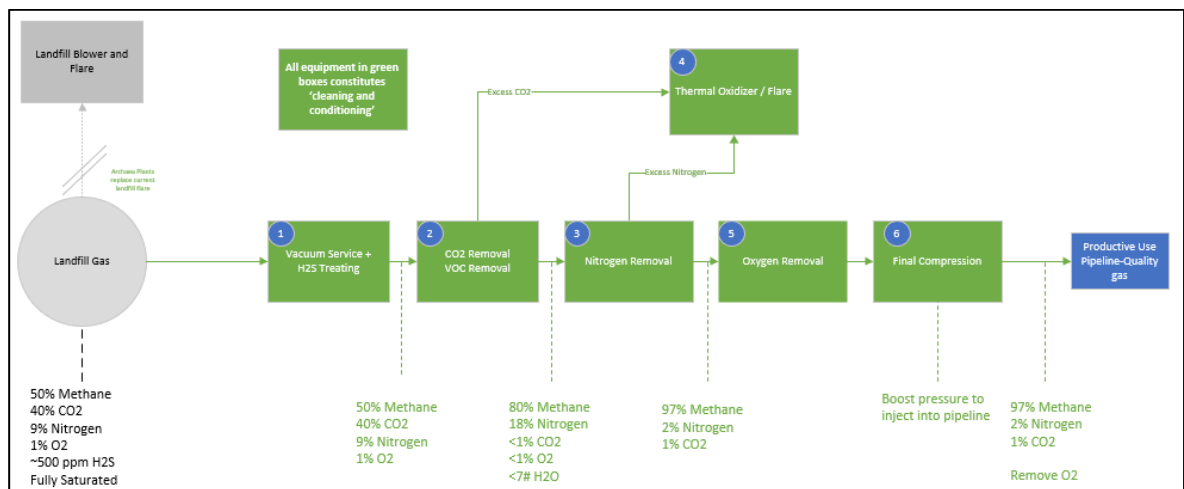
Step #4 The Thermal Oxidizer provides safe destruction of the CO₂, N₂ and VOCs previously cleaned from the main gas stream. This is how we effectively manage and minimize harmful emissions from the site.

Step #5 Clean and remove the oxygen, which is extremely explosive when mixed with methane. This step is required for safe transport to productive users at other locations via pipelines.

Step #6 Compression is a last critical step to condition the gas for productive and beneficial use. Natural gas must meet specific pipeline specifications for cleanliness and conditioning. Typically, that specification includes achieving methane content of >96% or natural gas distribution systems will not allow the gas to enter their system.

¹⁸ If the biogas is not cleaned and conditioned into RNG, it is managed through flaring or potentially combusted for limited use, onsite and low efficiency power generation or process heat use cases.

Diagram 1



Dairy Digester Cleaning and Conditioning Equipment

Dairy digester cleaning and conditioning is performed in a similar set of steps as LFG described above. Manure from dairy farms is collected in a lined lagoon and the solid waste is separated from liquids. The product is sent to a bioreactor where the methane generation begins. Dairy digesters tend to produce lower quantities of gas and so the biogas from several digesters may be combined, cleaned, and conditioned at one central facility. Additionally, because of the lower quantities of gas, we can typically utilize combined steps to clean the biogas of CO₂, N₂, and moisture in one step.

Digesters are typically located in remote areas so the biogas must be made safe for over-the-road trucking via Compressed Natural Gas ("CNG") trailers for delivery to an injection point. This injection point is where dairy digester gas is added to the natural gas pipeline system and can be transported via pipeline to productive users across the country.

Step #1 Provide oxygen to the covered lagoon to allow most of the H₂S to be removed from the gas. H₂S is extremely toxic to humans and negatively affects emissions when the gas is combusted.

Step #2 Pull the gas from the covered lagoon and send it through additional cleaning equipment to remove any remaining H₂S.

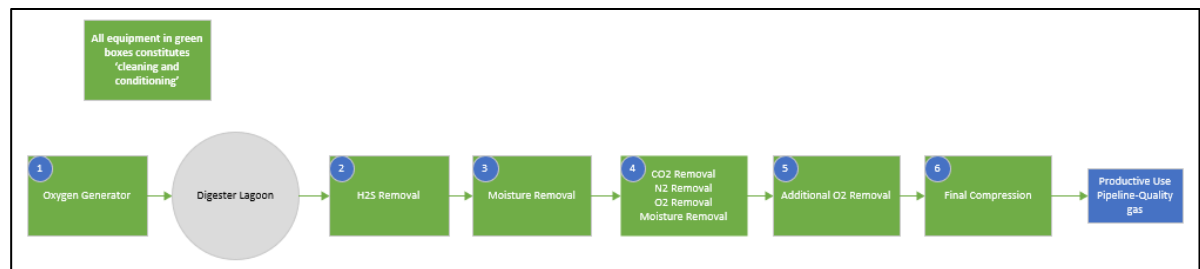
Step #3 Cool the gas to remove moisture. Moisture cannot be present in gas if it is to be transported over the road or via pipeline.

Step #4 Use a combined process to remove CO₂, N₂, O₂, and any remaining moisture. This cleaning and conditioning step ensures the gas meets Federal Regulations for safe transport to productive users.

Step #5 Clean the gas of any remaining oxygen. Oxygen must be removed from the gas as it can create an explosive and flammable mixture.

Step #6 Use compression to boost the pressure of the cleaned gas and conditions it for injection into a pipeline. Pressure is needed to allow the gas to flow from this point to productive users.

Diagram 2



Based on the description of what constitutes cleaning and conditioning within landfill and digester biogas facilities, bp believes the following list of the types of cleaning and conditioning equipment should be included as qualifying biogas cleaning and conditioning energy property:

- Gas Removal Equipment: property used to treat and remove gases such as carbon dioxide, oxygen, nitrogen from the raw gas or any other gas needed to ensure the productive use of the biogas as a transportable, saleable product.
- Pressure and Temperature Control Equipment: property necessary to boost pressure and control temperatures to remove moisture and VOCs.
- Moisture Removal Equipment: property used to remove moisture from the underlying biogas to ensure such product can be productively used as a substitute for natural gas.
- Compression Equipment: property needed to ensure that biogas can be safely transported either via truck, rail or pipeline.
- Thermal Oxidizer Equipment: property needed to safely destroy waste to minimize emissions.

- Gas Recycling Equipment: property used to recycle gas through the system to maximize recovery and minimize fugitive emissions by the system.

52% Methane Requirement – Floor vs. Ceiling and Practical Administration

Treasury proposes to further limit the ability of any cleaning and conditioning equipment to qualify for the biogas ITC under the “methane content requirement” language contained in Prop. Reg. §1.48-9(e)(11)(ii). Under this proposed rule, the 52% methane content requirement is to be tested at the outlet of the landfill gas collection system or the anaerobic digester. Treasury also seeks to limit the qualification of any cleaning and conditioning equipment from qualifying for the ITC if such cleaning and conditioning equipment processes the biogas into a product with anything greater than a 52% methane content.

We do not believe that Congress intended for the 52% minimal methane threshold to be interpreted as a ceiling for what constitutes a system that manufactures ITC eligible qualifying biogas but rather a floor. Specifically, the use by Congress of the “not less than 52% methane” for what constitutes qualifying biogas was intended to limit ITC eligibility for biogas systems that do not generate biogas with this methane content. Such language should not be interpreted to create a ceiling for what could constitute eligible ITC biogas property if taxpayers manufacture biogas that exceeds such methane content through additional cleaning and conditioning. Additionally, and as stated previously, measuring the methane content at the outlet of either the gas collection system or the anaerobic digester may often not yield biogas with a methane content of at least 52%.¹⁹

In fact, a literal reading of the proposed regulations would have the unintended consequence of largely writing out of the statute the concept of ITC qualified “cleaning and conditioning equipment” given that no “cleaning and conditions” occurs at the methane measuring points included in Prop. Reg. §1.48-9(e)(11)(ii)

¹⁹ For example, under certain plant types and process technologies, the methane percentage of biogas may cross the 52% methane threshold within a single process unit that performs several critical functions such as: (i) ensuring overall system stability; (ii) controlling on-site emissions via providing for a system wide “vacuum” pressure seal; and (iii) removal / separation of other non-methane gases. Under the proposed regulations, the third enumerated function of this indicative process unit may arguably be viewed as “tainted” upgrading and it is unclear if this process unit is to be treated as “cleaning and conditioning” equipment or “upgrading” equipment.

In the preamble to the proposed regulations, Treasury – in justifying its distinction between “cleaning and conditioning equipment” vs. “upgrading” equipment – states that:

“... unlike upgrading equipment that is necessary for injection of the biogas into the pipeline, cleaning and conditioning equipment is part of the necessary process to convert biomass into gas that is not less than 52 percent methane and capture gas for sale or productive use.”

Respectfully, this is a distinction without meaning for several reasons. To begin, Treasury offers no operative definition, or indicative examples, of what constitutes “cleaning and conditioning equipment”. As such, taxpayers are left to their own interpretation until such time as further clarifying guidance is provided in distinguishing between these two classes of equipment. Moreover, whether termed “cleaning and conditioning” or “upgrading” equipment, most of the equipment forming part of a biogas plant that is downstream of the upstream gas collection system (or digester or wastewater treatment plant) serves the primary function of converting biomass into 52%+ methane gas and capturing such gas for sale or productive use via the removal of various organic compounds and gases.²⁰

As there is nothing in the statute to suggest that only certain types of cleaning and conditioning equipment are ITC eligible, the final regulations should eliminate the “gas upgrading” equipment concept and provide clarity on the types of cleaning equipment that are allowable. Additionally, in providing regulatory guidance to aid taxpayers in demonstrating compliance with the methane floor requirement, we encourage Treasury to allow taxpayers to satisfy the 52% minimum methane content requirement where the biogas meets its intended productive use. For example, within certain biogas systems, this may be at the outlet of the gas collection system, wastewater treatment system or digester. For other biogas systems, it may not occur until after the biogas has been cleaned and conditioned into RNG. For these reasons, bp believes the taxpayer is best positioned to identify at which point of the system the biogas meets the “at least 52% methane content” standard and can meet its intended productive use.

²⁰ Arguably, the only “upgrading” equipment that is truly “necessary for injection of the biogas into the pipeline” are pressure pumps and similar downstream equipment that do not practically transform the RNG molecule and instead facilitate the introduction of RNG into common carrier pipelines (e.g., “interconnect pipelines”) or otherwise transported to market or offsite storage facilities.

Taxpayers owning discrete but functionally interdependent components of a qualified biogas energy property system should be entitled to claim the ITC for the portion of the system they own.

Prop Reg. §1.48-14(e)(2) would require taxpayers claiming the §48(c)(7) ITC to own a “fractional interest” (undefined) in the entire unit of energy property constituting the qualified biogas energy facility. Under the proposed regulations, no ITC would be allowable if taxpayers owned separate components of a qualified biogas energy system that is considered a single unit of energy property and an integral property. Given that many biogas projects involve multiple owners of discrete parts of the broader biogas “system,” we respectfully request that Treasury revisit this position and eliminate this requirement. In the alternative, and at minimum, we request Treasury clarify that cleaning and conditioning equipment is functionally interdependent and a part of the unit of energy property.

As context, in the landfill-based biogas space, it is common for distinct taxpayers to hold separate ownership interests in the gas collection system (i.e., upstream equipment) and the cleaning and conditioning components of the “system”. Separate ownership of these two discrete components of the overall system is common for numerous reasons, including but not limited to regulatory concerns, financial and capital investment constraints. For example, landfill owners and wastewater treatment plants are often willing to sell their raw biogas to taxpayers owning the cleaning and conditioning equipment but may not want to bear construction or operational risks nor incur CAPEX costs associated with the biogas cleaning and conditioning equipment. Further, a biogas project developer may be unwilling or unable to own even a de minimis fractional ownership in a gas collection system that is inextricably connected to the operations of a landfill or wastewater treatment plant.

There, the final regulations should specifically confirm that separate ownership of discrete but functionally interdependent parts of the broader biogas system does not disqualify taxpayers from eligibility to claim the ITC for a functionally interdependent part of an otherwise qualified biogas energy property and provide a similar rule for equipment that is treated as an integral part. The current proposed approach serves no underlying policy goal, may materially limit investment in otherwise qualifying biogas energy projects and may drive taxpayers to invest in biogas systems through complicated and unnecessary joint ventures or partnerships for the sole purpose of accessing the §48(c)(7) ITC.²¹

²¹ The Preamble to the proposed regulations suggest that Treasury’s primary concern in proposing the ownership rules in Prop. Reg. §1.48-14 was to ensure that a “taxpayer that owns energy property is eligible for the §48 credit only to the extent of the

Such an approach puts form over substance and fails to recognize that there are means other than the formation of partnerships to integrate parts of the system separately owned by different taxpayers. For example, in the landfill biogas space such integration commonly occurs via contract. As such, bp recommends Treasury remove this proposed requirement or, at a minimum, that biogas cleaning and conditioning equipment – that is functionally interdependent with either a landfill gas collection or digester facility – be considered unique pieces of energy property and, therefore, can have separate ownership from other pieces of the qualified biogas property system for purposes of the “multiple owners” rules.

Application of the 80/20 rule should be aligned with longstanding Treasury guidance and the underlying “original use” concepts inherent in the 80/20 rule.

The proposed regulations provide that ITCs can be claimed by taxpayers for property placed in service – assuming such property meets the statutory “beginning of construction” requirements – even though such property contains not more than 20% in value of used components.²² This rule is seemingly aligned with the longstanding “80/20” rule similarly adopted in prior Treasury guidance. While we commend Treasury for codifying the 80/20 rule via the proposed regulations, the scope of its application should be clarified in final regulations to ensure that its application does not extend beyond the underlying interpretation that has historically been afforded by the 80/20 rule.

At its core, the 80/20 rule has always been understood to allow taxpayers to access tax incentives (whether ITC or PTC) in respect of energy property that to some degree benefits from components and equipment that were previously placed in service. Stated differently, the 80/20 rule creates a tax fiction that “original use” of the energy property can be attributed to the taxpayer in circumstances where sufficient “new” investment by the taxpayer can be demonstrated to have occurred.²³

taxpayer’s eligible basis in the energy property.” In the context of biogas property systems, this understandable tax policy is readily achieved by clarifying that cleaning and conditioning equipment is appropriately characterized as a discrete unit of energy property capable of benefitting from the ITC *without regard to ownership stake (or lack thereof)* in the upstream equipment that it is functionally interdependent with.

²² See Prop. Reg. §1.48-14(a)(1)

²³ This aligns with the underlying intent of both the ITC and PTC tax credit regimes throughout their long history to drive investment and development in new technology and energy assets.

The “80/20” rule was first adopted in Rev. Rul. 68-111²⁴. In that ruling, the IRS allowed an ITC for a locomotive that was purchased by the taxpayer but also contained a certain number of used parts. The IRS allowed the taxpayer to claim the ITC in this instance because the total cost of the used parts making up the acquired locomotive did not constitute greater than 20% of the total cost of the locomotive and the “original use” of the locomotive began with the taxpayer claiming such credit.

In the following decades, the 80/20 rule was expanded to apply to energy tax credit regimes. For example, in Rev. Rul. 94-31, the IRS cited the 80/20 rule in allowing a taxpayer to claim an ITC for pre-existing and previously placed-in-service wind energy property that was refurbished. Application of the 80/20 rule in this context was appropriate and allowed the taxpayer to claim the ITC on the incremental CAPEX incurred in refurbishing certain wind turbines. Subsequently, in Notice 2018-59, the IRS approved the application of the 80/20 rule in allowing taxpayers to claim ITCs provided for under pre-IRA legislation.²⁵

We agree that the 80/20 rule should be available to taxpayers in assessing the ability to access ITCs and PTCs. However, where a taxpayer is building a new piece of energy property that is functionally interdependent with a preexisting and previously placed in service unit of property (qualified or otherwise) that is owned by a separate taxpayer, the application of the 80/20 rule is unnecessary and contrary to the underlying intent of the rule. Instead, bp believes the “original use” concept is implicit in previous guidance on this point (for example, in Rev. Rul. 94-31²⁶) and we request clarity from Treasury that “original use” similarly applies to the “retrofitted property” rule contained in the proposed regulations. This is particularly important within the biogas qualifying energy property space. It is common for the entire system to be comprised of biogas systems components owned by two different taxpayers and for the original use of these various components (i.e., landfill gas collection components and cleaning and conditioning components, both comprising the same biogas “system”) to sit with different taxpayers at potentially different points in time.²⁷

²⁴ Rev. Rul. 68-111, 1968-1 CB 29

²⁵ See Notice 2018-59, Section 7.05, IRB 2018-28

²⁶ Rev. Rul. 94-31, 1994-1 CB 16.

²⁷ See also Reg. §1.45Q-2(g)(5) (allowing taxpayers to treat §45Q “qualified facilities” and/or “carbon capture equipment” as originally placed in service for §45Q purposes under the 80/20 rule; it is common within the context of carbon capture projects for the “carbon capture equipment” to be owned by a taxpayer that is distinct and unrelated from the taxpayer that owns the underlying facility upon which such carbon capture equipment is installed).

We therefore respectfully request that the retrofitted energy property rule contained in Prop. Reg. §1.48-14 be clarified in the final regulations to apply to taxpayers only to the extent that use of both the new and used property originated with that same taxpayer. Such clarification is aligned with previous guidance, including Rev. Rul. 68-111, on this specific point.

Conclusion

We appreciate the opportunity to submit these comments and participate in the public hearing on February 20, 2024. We look forward to Treasury's consideration of our suggested changes and requested clarifications, as these are paramount to our interest in and desire to further invest in the build out of a premier, material biogas business in the US.

Sincerely,

/s/ Isabel Mogstad

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