November 4, 2022

The Honorable Janet L. Yellen
U.S. Secretary of the Treasury
Internal Revenue Service
CC:PA:LPD:PR (Notice 2022-51)
Room 5203, P.O. Box 7604
Ben Franklin Station, Washington, DC 20044

RE: Notice 2022-51, Request for Comments on Prevailing Wage, Apprenticeship, Domestic Content, and Energy Communities Requirements Under the Act Commonly Known as the Inflation Reduction Act of 2022

Dear Secretary Yellen:

Morrow Energy, LLC ("Morrow Energy") submits these comments to the U.S. Department of the Treasury ("Treasury") on the implementation and administration of certain provisions of the Internal Revenue Code of 1986 (as amended and restated, the "Code"), as amended by Public Law 117-169, 136 Stat. 1818 (August 16, 2022), commonly known as the Inflation Reduction Act of 2022 ("IRA"). Morrow Energy appreciates the opportunity to provide Treasury its comments on aspects of the IRA.

Based in Midland, Texas, Morrow Energy is an American-owned and operated company that designs, manufactures, and installs the equipment needed to capture and process landfill gas into clean renewable natural gas ("RNG"). This equipment has been developed and refined by Morrow Energy staff over the last several decades. Based on our records, we estimate that 40 percent of U.S. landfill gases are currently processed in a Morrow Energy-designed and fabricated facility.

RNG produced at landfill gas-to-RNG facilities designed and installed by Morrow Energy qualifies as a cellulosic biofuel under the U.S. Environmental Protection Agency's ("EPA") Renewable Fuel Standard ("RFS") and as a biogas and biomethane under the California Air Resource Board's Low Carbon Fuel Standard. By working with contracted partners, Morrow Energy's RNG displaces conventional transport fuels under these federal and state programs, thereby supporting the Administration's efforts to combat climate change by promoting the development of renewable fuels and reducing greenhouse gas emissions in the transportation sector.

Through the IRA and other public efforts, Congress and the Biden Administration have made clear the importance of:

1. Combating climate change, promoting the development of renewable fuels and reducing greenhouse gas emissions;
2. Investing in domestic renewable energy production and manufacturing, creating jobs, expanding domestic supply chains, and increasing US energy security; and
3. Investing in disadvantaged communities, reducing pollution and improving quality of life.

To support these aims, Morrow Energy recommends that Treasury take several important steps in guidance it publishes to interpret the IRA:

1. Clearly distinguish between what products are considered to be iron and steel under the domestic content requirements and what products are considered to be manufactured products;
2. Adopt a clear test to determine whether manufactured products (including components) are manufactured in the United States; and
3. Specify that offsite work (e.g., work at an original equipment manufacturer site) is not considered to be construction, repair, or modification under the apprenticeship requirements.

With that introduction, Morrow Energy's specific comments are as follows:

I. Landfill gas-to-RNG facilities are crucial for reducing methane emissions, displacing petroleum and coal-derived natural gas, and improving local quality of life.

Over a twenty-year period, methane emissions are over 80 times more potent than carbon dioxide as a greenhouse gas. Capturing these emissions is crucial for combatting climate change.

Landfill gas-to-RNG facilities are the single most effective way to mitigate emissions from waste processing and storage facilities. Landfill gas-to-RNG facilities capture methane emitted by landfills, and prevent it from entering the atmosphere and accelerating climate change. In addition, they process the raw gas for productive use, thereby displacing petroleum and coal-derived natural gas in the market.

A common use for RNG today is as a transportation fuel. The U.S. Department of Energy currently estimates there are 175,000 natural gas-fueled transport vehicles in the US and 23 million worldwide. Common applications of natural gas-fueled vehicles are taxicabs, school buses, public transportation buses, centrally fueled commercial fleets, and garbage trucks. However, RNG is not limited to transportation applications. RNG from landfills is processed to meet the quality specifications of the U.S. intrastate and interstate natural gas pipeline grid and is interchangeable with conventional natural gas. Additionally, RNG can be used to produce electricity to power operations at landfills or in local communities, thus furthering electrification goals.

Landfill gas-to-RNG facilities are also beneficial for marginalized communities. Processes and facilities that use Morrow Energy equipment dramatically limit all emissions from landfills, not just methane emissions. This results in a material reduction in odors, which benefits the generally lower-income and marginalized communities that typically reside near landfills.

For example, Morrow Energy manufactured and installed landfill gas-to-RNG equipment at the Blue Ridge landfill in Pearland, Texas (a suburb of Houston) in 2018 and began selling RNG produced there in 2019. For that landfill, residents had logged with the Texas Commission on Environmental Quality 2,418 odor complaints in 2017 and 1,432 odor complaints in 2018. The number of complaints was dramatically reduced following the installation of Morrow Energy's landfill gas-to-RNG equipment: in 2019, there were

only 243 complaints; in 2020, only 106 complaints; in 2021, only 93 complaints; and in 2022, there have been a mere 25 complaints to date. This trend demonstrates how the reduction in emissions significantly improves the health, quality of life, and property values of communities neighboring landfills.

II. Treasury guidance interpreting Code Section 48 should include landfill gas-to-RNG equipment as qualified biogas property

"Qualified biogas property" is eligible for the Code Section 48 investment tax credit (the "ITC") under Code Section 48(a)(3)(A)(x). Code Section 48(c)(7)(A) defines qualified biogas property as:

> property comprising a system which --
>
> (i) converts biomass (as defined in Code Section 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.

Code Section 48(c)(7)(B) clarifies that property that "cleans or conditions" the gas produced by the system is part of the qualified biogas property.

The requirements above clearly encompass landfill gas-to-RNG facilities because gas emitted by a landfill is the product of converting biomass into methane and other gases through the action of bacterial decomposition of organic material in anaerobic conditions. The EPA recognizes the biomass converted in a landfill as cellulosic for purposes of the RFS. More specifically, in 2014, the EPA promulgated a rule that qualified compressed natural gas produced from biogas from landfills, among other fuel production pathways, as cellulosic biofuels under the RFS.[1] To qualify as a cellulosic biofuel under the EPA's RFS, the fuel must be a renewable fuel produced from cellulose, hemicellulose, or lignin and must reduce lifecycle greenhouse gas emissions by at least 60 percent compared to the petroleum baseline. The biogenic natural gas emitted by a landfill generally contains more than 52% methane (typically approximately 55%).[2] In addition, the landfill gas-to-RNG equipment and processes cleans, conditions, and condenses this raw gas such that the gas ultimately used as RNG comprises approximately 97% methane.

Morrow Energy suggests that Treasury use a broad approach to define qualified biogas property so as to encompass not only landfill gas, but also other known technologies that use biomass to produce biogas for use as a fuel. Further, we suggest that Treasury refrain from listing all the types of property that could qualify in favor of broad language that will embrace and encourage continued innovation in the field of

[1] *See* Regulation of Fuels and Fuel Additives: RFS Pathways II, and Technical Amendments to the RFS Standards and E15 Misfueling Mitigation Requirements, 79 Fed. Reg. 42,128 (Jul. 18, 2014) (codified at 40 C.F.R. pt. 80).

[2] Basic Information about Landfill Gas, Landfill Methane Outreach Program (LMOP), United States Environmental Protection Agency, https://www.epa.gov/lmop/basic-information-about-landfill-gas (last visited Oct. 31, 2022).

biomass-to-biogas technology. However, including examples would be very useful for taxpayers, particularly if the examples concern specific types of known biomass-to-biogas systems, including landfills.

When drafting, please consider that qualified biogas equipment at landfill facilities should include at least those items described in Attachment A.

III. Treasury should clearly distinguish between products that are considered iron or steel, on the one hand, and products that are considered "manufactured products," on the other hand, for purposes of the domestic content requirements

Morrow Energy strongly recommends Treasury clearly distinguish between products that are considered to be iron or steel, on the one hand, and items that are considered to be "manufactured products," on the other hand, under the domestic content requirements. This is important because, in order to qualify as domestic content, the threshold percentages applicable to steel and iron (100%) are significantly higher than those for manufactured products (40%). Moreover, a clear line is essential to provide certainty to manufacturers so that they can confidently invest in the equipment and facilities needed to manufacture components of new clean energy projects.

Code Section 45(b)(9)(B)(ii)[3] points to 49 C.F.R. 661.5 to define what steel and iron are for purposes of the domestic content requirements. The language in 49 C.F.R 661.5(c) is quite broad, but ill-suited for the task at hand. The subsection provides that "[t]he steel and iron requirements apply to all construction materials made primarily of steel or iron and used in infrastructure projects such as transit or maintenance facilities, rail lines, and bridges." However, this definition does not specifically address renewable energy facilities—which are separate and distinct from traditional infrastructure projects—and the role that steel and iron components play in them. Simply put, Treasury must separately define steel and iron for purposes of the domestic content bonus credits, or taxpayers will be paralyzed by the lack of certainty about how to interpret 49 C.F.R. 661.5 in the context of renewable energy facilities.

49 C.F.R. 661.5(c) goes on to state: "These items include, but are not limited to, structural steel or iron, steel or iron beams and columns, running rail and contact rail. These requirements do not apply to steel or iron used as components or sub components of other manufactured products or rolling stock, or to bimetallic power rail incorporating steel or iron components." Thus, is it clear that steel and iron in any context should include structural items and perhaps other items that perform a load-bearing function and have no other purpose. However, it is not clear what else could be viewed as "construction materials" for this purpose.

Morrow Energy urges Treasury to specify in guidance that, in the context of any property or facility described in any of the Code provisions included in the IRA, steel or iron is any component made primarily of steel or iron that has solely a structural, load-bearing, or support function for the property or facility. In this context, construction materials made primarily of steel or iron should include only those components described in the immediately preceding sentence when the steel or iron content of such materials is greater than 80 percent. The intent of this suggestion is to clarify that, in the context of a landfill gas-to-RNG facility, the "steel or iron" classification should apply to components of the facility that

[3] All of the Code sections that utilize a domestic content bonus amount ultimately point to this provision.

are related to its infrastructure. For example, the racking that holds up pipes that traverse distances between items of equipment and that supports various other types of equipment, or the structural steel used to build enclosures for electronic equipment. The "steel or iron" classification should not apply to various small fixtures and appliances within the facility that may nonetheless have steel or iron components. For example, most of Morrow Energy's facilities have steel skids that are used to secure various small items of equipment in specific, engineered arrays or to ensure that air can flow appropriately under certain items of equipment as required to permit those items to operate as intended and required. The skids are made of steel beams that are fabricated to order at a manufacturer's location. They are essentially frameworks arranged in specific configurations so that various small items of equipment and alliances can be mounted in precise locations to ensure that the biogas production facility can achieve optimal operation. Moreover, in many cases, air flow under the skids and between the equipment is critical for the operation of the equipment mounted to the skids. Thus, the skids are themselves integral to the operation of an agricultural waste-to-biogas facility, do not serve a merely structural purpose, and are fundamentally manufactured products.

Code Section 45(b)(9)(B)(iii) describes manufactured products, but does not define the concept generally or by reference to 49 CFR 661. Morrow Energy recommends that Treasury clearly define "manufactured product" to mean any item produced as the product of a manufacturing or fabrication process and expressly include in that definition any property incorporated into a qualified facility or energy property that is not steel or iron, as defined above. For this purpose, "Manufacturing or fabrication process" should be defined as the application of processes to alter the form or function of materials or of elements of tangible property in a manner that transforms those materials or property into something functionally different. For example, manufacturing or fabrication processes may include, but are not limited to, forming, extruding, bending, material removal, welding, soldering, etching, plating, material deposition, pressing, permanent adhesive joining, shot blasting, brushing, grinding, lapping, finishing, vacuum impregnating, and, in electrical and electronic pneumatic, or mechanical products, the collection, interconnection, and testing of various elements. For further context on manufactured products, please see Attachment A.

Finally, Morrow Energy urges Treasury to confirm in guidance that the waiver provisions set out in 49 CFR 661.7 are available for purposes of applying the domestic content requirements and setting forth a method of process for asking for a waiver under the circumstances described therein. Morrow Energy observes that Code Section 45(b)(10)(D) provides for certain waivers or relaxation of the domestic content requirements in certain circumstances. While this is appreciated, these waivers are quite specific and narrow. However, they are clearly not exclusive. Code Section 45(b)(10)(B)(i) refers to 49 C.F.R. 661 generally for purposes of determining if steel, iron, or manufactured products were "produced in the United States." 49 C.F.R. 661.7, which is a part of 49 C.F.R. 661, describes a waiver process applicable to four specific instances, none of which are duplicated in Code Section 45(b)(10)(D). This waiver process applies to steel, iron, and manufactured products. Thus, Code Section 45(b)(10)(D) should be interpreted as an expansion of the class of circumstances in 49 C.F.R. 661.7 in which a waiver will be available, and <u>not</u> as an exclusive list of the circumstances in which a waiver will be available.

IV. Treasury should adopt clear and administrable rules and documentation requirements for establishing when a manufactured product is manufactured in the United States

Most manufactured products are complex components comprised of multiple parts or subcomponents. In many cases, it may be very difficult to determine where any single part or subcomponent originated or was manufactured or fabricated. Accordingly, Morrow Energy recommends that Treasury publish clear and administrable rules for establishing when a manufactured product is manufactured in the United States.

To set the context, it is important to have in mind the precise language in Code Section 45(b)(9)(B)(iii):

> For purposes of clause (i), the manufactured products which are components of a qualified facility upon completion of construction shall be deemed to have been produced in the United States if not less than the adjusted percentage (as determined under subparagraph (C)) of the total costs of all such manufactured products of such facility are attributable to manufactured products (including components) which are mined, produced, or manufactured in the United States.

This statutory language clearly indicates that manufactured products and portions of those manufactured products that constitute components must be evaluated to determine if such components have been mined, produced, or manufactured in the United States. The statute does not require an analysis of the items of property that comprise a component. The statutory language also clearly indicates that it is sufficient that components be "mined, produced, or manufactured in the United States" (emphasis added).

To create a clear and administrable rule in this regard, Treasury must first distinguish between manufactured products, components, and items of property that are incorporated into components, which we refer to here as subcomponents. Morrow Energy's proposal for the definition of manufactured product appears in the first section of this letter. Morrow Energy further recommends that Treasury define "component" to mean manufactured products, articles, materials, or supplies that are separately delivered to the project site and incorporated into or affixed to the qualified facility or energy property and "subcomponent" to mean an individual part that is incorporated into a component during a manufacturing, fabrication, or assembly process.

Treasury must also provide taxpayers a method for calculating when a component is made in the United States for purposes of Code Section 45(b)(9). As noted above, it can be extremely difficult to determine whether each individual item in a component was mined, produced or manufactured. To ensure that taxpayers can realistically utilize the domestic content bonus credit, Treasury must both ensure that a taxpayer can prove compliance and that compliance is achievable. Thus, as an initial matter, Morrow Energy recommends that Treasury provide in guidance that any component is considered to be mined, produced, or manufactured in the United States if the component was manufactured, fabricated, or assembled in the United States, regardless of where its subcomponents originate.

Further, the rule adopted by Treasury should provide for a minimum threshold percentage for each component integrated into a manufactured product that must be met in order for the manufactured product as a whole to be treated as mined, produced, or manufactured in the United States. This allows

suppliers a margin of error in calculating whether a component was mined, produced, or manufactured in the United States. This margin of error is very important for purposes of ultimately financing the installation of a renewable energy facility because there is no reasonable cause or "fail safe" mechanism in case of inadvertent error in calculating qualification for the domestic content bonus credit. Moreover, obtaining the necessary assurances about very rigid information in complex supply chains is very difficult in the context of negotiating tax equity investments. If developers and project owners are forced to meet very rigid requirements concerning whether manufactured products are mined, produced, or manufactured in the United States in order to get tax equity investors (or transferees of tax credits under Code Section 6418) comfortable enough to invest, there is a very material chance that developers will simply stop attempting to utilize the domestic content bonus credit.

For these reasons, we recommend that Treasury publish in guidance a safe harbor that specifies that any item that is a manufactured product shall be deemed to have been mined, produced, or manufactured in the United States if all of the manufacturing processes resulting in the conversion of components into a manufactured product took place in the United States. For this purpose, care should be taken to define manufacturing processes consistently with the concept of production of items of property under Code Section 45X.

A taxpayer should also have the ability to otherwise demonstrate that a manufactured product was mined, produced, or manufactured in the United States, e.g., by making available documentation that the minerals or metallurgical ingredients used to produce a manufactured product were extracted or processed in the United States. In this case, the taxpayer should be required to demonstrate that the manufactured product was either mined, produced, or manufactured in the United States, in each case by reference to a threshold amount of the subcomponents incorporated into a manufactured product. For example, if a taxpayer can document that more than 50% of the subcomponents that comprise the biogas cleaning equipment installed at a biogas production facility were manufactured in the United States, all such biogas cleaning equipment, assuming it is a manufactured product, should qualify as mined, produced, or manufacturing in the United States.

Morrow Energy further recommends that in determining the origin of each subcomponent, each subcomponent must be treated as either entirely domestic or entirely foreign, based on the place where the subcomponent is mined, produced, or manufactured. Furthermore, the individual costs of subcomponents, even if of foreign origin, should be included in the cost of a component that is mined, produced, or manufactured in the United States.

V. Treasury should clearly state in guidance that offsite work (e.g., work at an original equipment manufacturer site) is not construction, repair, or modification of property or a facility for purposes of the apprenticeship requirements

Code Section 45(b)(6)(B) provides that the tax credit rate applicable to qualified facilities will be met when, among other things, certain apprenticeship requirements are met. Code Section 45(b)(8)(A) states that these requirements are applicable to a taxpayer or its contractor or subcontractor during "construction." However, construction is not defined in the Code for this purpose.

For Morrow Energy and other similarly situated equipment manufacturers in the landfill gas-to-RNG industry, only a small amount of construction occurs at the project site. Instead, much of the equipment and materials are fabricated at a manufacturer's facility and then shipped to the project location. In many cases, many small items of this equipment and materials are mounted to skids (as discussed above) and then shipped. This assembly work is not construction; it is manufacturing performed by a manufacturer (which is almost always unrelated to the project developer and owner) prior to the construction phase of any project. A construction contractor at the project site prepares the ground, excavates trenches, pours foundations, and assembles all of the components that a manufacturer such as Morrow Energy has manufactured.

The method of manufacturing used in the landfill gas-to-RNG industry is a product of the need to reduce uncertainty on site due to weather changes, crop cycles, site access, labor availability, and other matters beyond the developer's control. These are challenges that every project faces and each of them can significantly delay the progress of construction. Each delay raises the risk of hindering not only the chances of an individual project's success, but also the speed of America's energy transition. Assembling certain component parts, many of which are small, according to the facility design in the controlled environment of a manufacturing facility also generally facilitates a much higher degree of precision, ensuring that the finished facility work correctly and reliably for many years to come.

The process of building a landfill gas-to-RNG facility is not unlike the construction of a wind generation facility. In the case of wind generation, a turbine manufacturer assembles nacelles, which are highly engineered, in a controlled environment, i.e., a factory. The nacelles are then transported to a site and, together with other components, assembled into a complete turbine. In the case of both a biogas production facility and a wind generation facility, highly technical and precise work is performed by an equipment manufacturer away from the project site. Then, a construction contractor assembles the component parts onsite into a functional whole.

Further, by referring to laborers and mechanics during construction, repair, and modification of renewable energy property and facilities,[4] it is clear that the wage and apprenticeship rules are transparently intended to incentivize work in the building trades, not manufacturing.

It is clear that offsite work is an issue for a number of manufacturers and developers. In this case, Treasury's failure to craft a practical solution by excluding offsite work from the wage and apprenticeship requirements will significantly hinder the development of a robust domestic clean energy manufacturing base and the renewable energy and fuels facilities we need to win the climate war.

For these reasons, Morrow Energy recommends that Treasury determine that offsite work should not be considered as construction, repair, or modification for the purposes of calculating the total labor hours under the apprenticeship requirements.

[4] *See* Code Section 45(b)(7), (8).

Thank you for considering our comments regarding the interpretation of domestic content requirements set forth by the IRA. We look forward to more guidance around these important issues and encourage you to contact Morrow Energy's Vice President of Operations, Peter Smith, at PSmith@MorrowEnergy.com if we can provide additional context for any of these topics.

Sincerely,

DocuSigned by:
Paul Morrow
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Paul Morrow, President
Morrow Energy

Attachment A

Types of Equipment Produced by Morrow Energy

Morrow Energy recommends that Treasury use a broad approach to define "manufactured products." Further, we suggest that Treasury refrain from listing all the types of property that could qualify in favor of broad language that will embrace and encourage continued innovation in the field of biomass-to-biogas equipment and other equipment supporting clean energy development. However, including examples would be very useful for taxpayers and manufacturers, particularly if the examples concern specific types of known biomass-to-biogas systems, including landfills.

To support our request for broad language in the definition of "manufactured products," and to provide further background context, we thought it would be useful to set out a brief description of the range of equipment that we consider critical to the operation of landfill gas-to-RNG facilities, as follows:

- Gas upgrading equipment, including piping, fittings, valves, and exchangers, as well as coolers.
- The "sales" pipeline, which is used to move finished gas to the transmission pipeline, and associated equipment. Costs associated with this pipeline generally include the cost of a perpetual easement paid to a landowner to allow the pipeline to cross their land. When the landowner uses the property for farming, as is often the case, the owner of the landfill gas-to-RNG facility generally also must compensate the farmer for crop damage in the year of construction.
- Meter station and equipment. Meters are used to measure the amount of RNG that is placed on the transmission pipeline. The meter is the point where the transmission pipeline and sales pipeline meet. In the general, the meter station and associated equipment is owned by the transmission pipeline owner, but the landfill gas-to-RNG owner typically bears the cost of the equipment and installation, which typically ranges from $300,000 to $2,000,000.
- Electrical equipment needed to run the plant.
- Gas compressors.
- Filtration and separation equipment.
- Transmitters and control equipment.
- Towers (these are used to separate the molecules within the raw landfill gas) and vessels.
- Pumps and blowers.
- Fluid drivers.
- Catalyst. This is a platinum-based catalyst used to remove oxygen from the landfill gas in order to meet pipeline specifications. It must be replaced approximately every 10 years.
- Mechanical and piping supports and pipe racks.
- Foundations for the equipment.
- Electrical shelter, which has an HVAC unit integrated into the shelter to keep the electrical equipment cool.
- Transformer.
- Thermal oxidizer.
- Process flare (separate from the landfill flare).

- Air compressor system (controls valves, air used to create some solvents).
- Storage tanks for (1) chemicals used in the process and (2) waste water resulting from the upgrading process and header line.
- Skids for equipment. Skids are part of the engineered foundation to ensure that system can withstand winds and other stressors.
- Analyzers, i.e., equipment that analyzes raw landfill gas during intake, evaluates processes being conducted in the landfill gas-to-RNG facility, and tests finished RNG before it enters a natural gas pipeline to confirm that the RNG meets pipeline specifications.
- Extra wells and collection system equipment installed in the landfill. These items are not needed for the landfill to function or meet regulatory requirements applicable to it. They are solely to facilitate the collection of landfill gas for processing in the landfill gas-to-RNG facility.
- Header lines and related equipment between the landfill and the processing facility to route raw landfill gas. This is the line that transports raw landfill gas to the processing facility. The header line is generally buried and travels up and down to allow the gaseous material to rise and the water in all raw landfill gas to settle at the bottom of the line. Sumps are located at each low point in the header line to remove water from the line. This is required for the header line to function. The water removed from the header line is transferred to the wastewater storage tanks before transportation to a wastewater treatment facility.

Each of these items of equipment is integral to any landfill gas-to-RNG facility, and none of them has any purpose at a landfill that is not connected to a landfill gas-to-RNG production facility. Morrow Energy would be glad to provide additional information about the schematics and functionality of equipment integrated into landfill gas-to-RNG facilities.