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Via Electronic Submission

To: **Internal Revenue Service**
Department of the Treasury
Washington, DC

From: **Bloom Energy Corporation**
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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**

Bloom Energy Corporation ("Bloom Energy") respectfully submits these comments in response to 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 (the "Notice").

Bloom Energy applauds passage of the Inflation Reduction Act of 2022 (the "IRA") and the commitment the IRA represents to support the growth and expansion of clean energy solutions and domestic manufacturing operations. Bloom Energy sincerely appreciates the opportunity to respond to the Notice and looks forward to working with the Treasury Department and the IRS on these issues.

Bloom Energy was founded in 2001 with a mission to make clean, reliable, and affordable energy available for everyone in the world. Bloom manufactures solid oxide fuel cells (SOFC), which is the base technology for Bloom's Energy Server™, which constitutes a "qualified fuel cell property" within the meaning of Section 48(c)(1) of the Code.[1] The SOFC delivers highly reliable and resilient, AlwaysOn® clean electric baseload power. Bloom's Energy Server is a stationary generation platform for clean and sustainable electricity. Among the most efficient energy producers on the planet, it dramatically reduces cost and emissions. Bloom has deployed over 750 MWs of Energy Servers at over 700 installations, including 140 microgrids. Our systems power everything from hospitals to data centers to grocery stores with 24x7x365 on-site, uninterruptable power. At Bloom Energy, we help create sustainable communities by reducing carbon emissions and criteria air pollutants that disproportionately burden

[1] References to the "Code" are to the Internal Revenue Code of 1986, as amended.

disadvantaged communities. In 2021 alone our systems reduced CO2e, NOx, and SO2 emissions for our customers by 636,266 Metric Tons, 2,467,309 lbs and 550,651 lbs, respectively.

Using the same solid oxide technology and manufacturing equipment and tooling as used for the SOFC, Bloom Energy also manufactures solid oxide electrolyzer cells (SOEC) which are the basis of the Bloom Electrolyzer™. The Bloom Electrolyzer is been widely recognized as the leader in efficient, clean hydrogen production, and recently demonstrated its potential for pairing with zero-carbon energy production through its partnership with the Department of Energy's Idaho National Laboratory, which found that the Bloom Energy solid oxide electrolyzer was the most efficient it had tested to date. The Bloom Electrolyzer is exceptionally efficient in any application, but particularly excels when paired with both renewable power and steam.

The modular nature of Bloom Energy's SOFCs and SOECs products (deployed in increments of 300KW with no maximum installation size), have a very small footprint and are easily dispatchable, making them ideal for either quickly adding low- to zero-carbon capacity, resilience and stability to a grid or behind the meter commercial or industrial application in urban or rural areas, or producing hydrogen in quantities as needed now and into the future. The SOFCs are also fuel flexible and can operate using natural gas, natural gas blended with up to 50% hydrogen, 100% hydrogen or biogas, and are capable of capturing carbon emissions for sequestration or utilization (if powered using natural gas or biogas) as well as delivering up to 30% additional efficiency by harnessing and reusing their heat as part of a combined heat and power (CHP) system.

Bloom Energy's products are all manufactured in the United States and have a time-to-power availability of about 90 days (from order to commissioning). Bloom Energy's Electrolyzer and base power Energy Server products utilize the same core technology and rely on the same manufacturing supply chains.

We believe that the IRA was intended to support clean, low-carbon and resilient energy solutions like ours that are entirely conceived, designed, and manufactured in the United States. Bloom currently employs over 2,400 people in California and Delaware, with over 1600 engaged in manufacturing activities and expects its manufacturing headcount to continue to grow by 20% year over year.

In July 2022, Bloom celebrated the grand opening of its multi-gigawatt manufacturing plant in Fremont, California. The state-of-the-art 164,000 square foot facility will have over 600 megawatts of fuel cell capacity by the end of 2022, which when converted at the higher power rating, is over 1.3 gigawatts of electrolyzer capacity. Bloom plans to double this capacity in 2023. In 2022, Bloom also opened a new research and technical center and a global hydrogen development center in Fremont.

Bloom has also expanded operations in Delaware, where it recently added a second, overnight production shift. In November 2022, Bloom inaugurated its high volume commercial electrolyzer line, increasing the company's generating capacity of electrolyzers to two gigawatts.

I. Domestic Content Bonus Credit Qualification

Does the term "component of a qualified facility" need further clarification? If so, what should be clarified and is any clarification needed for specific types of property, such as qualified interconnection property?

Does the term "manufactured product" with regard to the various technologies eligible for the domestic content bonus credit need further clarification? If so, what should be clarified? Is guidance needed to clarify what constitutes an "end product" (as defined in 49 C.F.R. 661.3) for purposes of satisfying the domestic content requirements?

Does the treatment of subcomponents with regard to manufactured products need further clarification? If so, what should be clarified?

Section 3.03 of the Notice asks for comments related to the domestic content bonus credit under Sections 45(b)(9) and 48(a)(12) of the Code. Questions raised in the Notice include whether critical terms related to the domestic content rules, such as "component of a qualified facility" and "manufactured product," need clarification, what regulations under 49 C.F.R. 661 should apply for purposes of the domestic content bonus credit, and whether the treatment of subcomponents with regard to manufactured products need further clarification. Furthermore, Section 45(b)(9)(B)(iii) of the Code provides that manufactured products which are components of an energy project upon completion of construction shall be deemed to have been produced in the United States if not less than 40% of the total costs of all such manufactured products of such energy project are attributable to manufactured products (including components) which are mined, produced, or manufactured in the United States. Section 3.03(2)(e) of the Notice asks whether the 40% threshold rule needs further clarification.

Bloom Energy strongly encourages the Treasury Department and the Internal Revenue Service to issue guidance regarding the domestic content requirement that defines the applicable terms and applies the rules under 49 C.F.R. 661 broadly in a manner that will encourage U.S. manufacturing operations. In particular, guidance should incorporate an expansive definition of "manufactured product" so that a single steel or iron component will not cause an entire project to fail to qualify for the bonus credit. Guidance also should clarify that a manufactured product is treated as a U.S. manufactured project if the bulk of assembly and manufacturing takes place in the U.S., even if certain constituent parts (or subcomponents) of the manufactured product are not of U.S. origin. The guidance should encourage more U.S. manufacturing of products, consistent with the legislative intent of the IRA, even if certain parts of the end product are not readily available in the U.S.

All of Bloom Energy's fuel cell server manufacturing activities take place at its factories in the United States. The manufacturing processes used by Bloom Energy are covered by intellectual property that is solely owned by Bloom Energy as a U.S. entity. Bloom Energy's manufacturing covers various processes and technologies that includes, but is not limited to, mixing various powders into inks, screen printing electrodes, contact printing , seal printing, thermal processing, automated assembly of solid state fuel cell stacks, assembling individual fuel cells and interconnects into fuel cell columns, testing fuel cells, performing "burn in" and conditioning processes on modules that are part of the SOFC, installing wiring, plumbing, and fuel fixtures, welding various components and modules together, and installing power and fuel processing modules on a manufactured skid that includes all necessary components for electricity production that can be more easily transported to and installed at a customer's desired location. Bloom Energy sources the parts for its SOFCs from around the globe because such parts are not otherwise commercially available in the U.S. These component parts are all specific to Bloom, having either been solely developed by Bloom Energy and covered by Bloom Energy's intellectual property or jointly developed with the supplier specifically for Bloom's SOEC and SOFC. In addition, the equipment and tooling required to manufacture all the subcomponents into a final product are also specifically

designed and developed by Bloom for Bloom. These parts, or subcomponents, are then used in multiple manufacturing processes by Bloom Energy to create the various components of the finished SOFC. Bloom Energy's significant U.S. manufacturing activities performed with the various parts should cause any components manufactured pursuant to such processes to be considered a U.S. manufactured product, as an "end product" of a manufacturing process within the meaning of the rules under 49 C.F.R. 661.

In addition, all steel and iron parts that Bloom Energy incorporates into the SOFC are manufactured in the U.S. Some components of the finished product that involve steel or iron, however, may be manufactured outside the U.S. We strongly encourage the Treasury Department and the Internal Revenue Service to issue guidance that draws a clear distinction between "steel or iron," on one hand, and a "manufactured product," on the other hand, and that limits the items in a typical renewable energy project that are treated as steel or iron for these purposes. Because the incorporation of a single steel or iron component that is not produced in the U.S. can cause an entire project to fail to qualify for the domestic content bonus credit, and because many renewable energy projects, including Bloom Energy's SOFC, do not involve traditional steel or iron structural components, we would encourage the Treasury Department and the IRS to limit the definition of steel or iron components to components of buildings or other free-standing structures, and not to include an SOFC or its manufactured skid.

Does the adjusted percentage threshold rule that applies to manufactured products need further clarification? If so, what should be clarified?

More generally, the adjusted percentage threshold rule needs further clarification. The plain language of the statute does not clearly explain the manner in which the adjusted percentage calculation is determined. Guidance related to the adjusted percentage threshold rule should clarify that the calculation is based on the combined costs of all manufactured products in a facility or project compared to the combined costs of all manufactured products included in a facility or project that are mined, produced, or manufactured in the U.S. The guidance should also clarify that the total cost of a product that is manufactured in the U.S. with non-U.S. parts is considered to be 100% U.S. mined, produced, or manufactured. Although these appear to be the intended reading of the statute, it could be possible, without additional guidance, to read the statute as requiring determination of the costs of each part or subcomponent separately for purposes of calculating the adjusted percentage or requiring the adjusted percentage calculation to be determined on a manufactured product-by-manufactured product basis.

What records or documentation do taxpayers maintain or could they create to substantiate a taxpayer's certification that they have satisfied the domestic content requirements?

Considering the often complex nature of supply chains and manufacturing, guidance should permit a taxpayer to provide written certification of compliance with domestic content requirements with respect to an energy property. Such certification should specifically relate to the sourcing of steel and iron products and manufactured products included in the energy property. This would ease the administrative burden for both the IRS and for taxpayers. Taxpayers providing such certificates should be required to retain records relevant to the source of the steel, iron, and manufactured products, but not any parts or subcomponents that are not required to be U.S. source for purposes of the domestic content requirements.

I. Increased Credit Amount and Applicability of Prevailing Wage and Apprenticeship Requirements

1MW Net Output - Portfolio of Projects

Does the determination of when a facility or project will be considered to have a maximum net output of less than 1 megawatt need further clarification? If so, what should be clarified?

Section 48(a)(9) of the Code provides that an energy project with a maximum net output of less than 1 megawatt of electrical (as measured in alternating current) energy is eligible for the 5-times multiplier under Section 48(a)(9)(A) of the Code without regard to whether the prevailing wage requirement under Section 48(a)(10) and the apprenticeship requirement under Section 48(a)(11) are satisfied. The Code defines an "energy project" for this purpose as a project consisting of one or more energy properties that are part of a single project, but does not clarify the circumstances under which one or more energy properties are considered to be a single project. Section 3.05 of the Notice asks whether this rule applicable to energy projects with net output less than 1 megawatt of electrical energy needs clarification.

Bloom Energy customers often have numerous, multi-state locations at which Bloom Energy products, including SOFCs, will be supplied and installed pursuant to a single contract. The energy properties supplied and installed at each location pursuant to such a contract generally has a net output of less than 1 megawatt of electric energy, but if combined would have a net output of greater than 1 megawatt.

Under existing IRS guidance in IRS Notice 2018-59, 2018-28 IRB 196, multiple energy properties may be treated as a single project for beginning of construction purposes. That guidance provides a list of non-exclusive factors which may indicate that multiple energy properties constitute a single project. Under that existing guidance, the multiple energy properties that Bloom Energy sells and installs pursuant to a single contract would not be treated as a single project because, although the energy properties are owned by a single legal entity and are purchased and installed pursuant to a single master contract, the energy properties generally are not located on contiguous pieces of land, are not described in common power purchase agreements, do not share a common intertie or substation, and are not described in common environmental or other regulatory permits.

Guidance issued in relation to the Notice should confirm that whether multiple energy properties are treated as a single energy project for purposes of Section 48(a)(9) is determined based on factors similar to the single-project factors described in Notice 2018-59.

Non-Applicability of Wage and Apprenticeship Requirements to Ordinary Operation and Maintenance

Is guidance for purposes of § 45(b)(7)(A) needed to clarify the treatment of a qualified facility that has been placed in service but does not undergo alteration or repair during a year in which the prevailing wage requirements apply?

Please provide comments on any other topics relating to the prevailing wage requirements for purposes of § 45(b)(7)(A) that may require guidance.

Please provide comments on any other topics relating to the apprenticeship requirements in § 45(b)(8)(B) that may require guidance.

Both the prevailing wage requirement and the apprenticeship requirement described in Sections 48(a)(10) and (11) of the Code apply to construction, alteration, or repair work performed on an energy project. Sections 3.01(5) and 3.02(4) of the Notice asks for comments related to the prevailing wage and apprenticeship requirements.

Bloom Energy will perform operations and maintenance services for a customer pursuant to a multi-year services contract. Due to the nature of the SOFC equipment, which gradually degrades over time, and to ensure continuous operation consistent with design specifications and contract performance standards, Bloom Energy may replace certain parts of a SOFC as performance degrades or as parts malfunction. This regular maintenance service should not be subject to the prevailing wage or apprenticeship requirements because the part replacement services are performed simply in order to meet ongoing contracted performance standards and do not alter the intended function or purpose of, or substantially prolong the life beyond the origin design specifications of, the SOFC with respect to which work is performed. Guidance should confirm that general maintenance activities of the type described with respect to an energy property do not constitute alteration or repair work for purposes of the prevailing wage and apprenticeship requirements. In addition, the guidance should make clear that routine operation and maintenance, including non-material repairs, with respect to energy property is not considered an alteration or repair for purposes of Sections 48(a)(10) and (11) even if the routine maintenance involves replacements of components of the energy property.

II. Credit Limitation Applicable to Fuel Cell Property

Section 48(c)(1)(B) of the Code limits the ITC available with respect to qualified fuel cell property to an amount equal to $1,500 per 0.5 kilowatt of capacity. Although the limitation applies to the "credit otherwise determined under subsection (a)," the limitation was not amended by the IRA to explicitly take into account the additional credits that may be available for a particular installation, including the domestic content bonus credit or the increase in credit for energy communities pursuant to Section 48(a)(14) of the Code. Bloom Energy believes that this limitation should only be applied with respect to the base amount of investment tax credit for which a qualified fuel cell property qualifies under Section 48 of the Code, not taking into account any additional or bonus credit amounts under Sections 48(a)(13) and 48(a)(14) for which such property otherwise qualifies. This would be consistent with the legislative intent to encourage development of energy properties that satisfy the domestic content or energy community requirements; any other interpretation would unnecessarily undermine that intent, and discourage or truncate investments that would otherwise increase domestic content production and use, or limit the beneficial economic development for economic communities that the statute was meant to foster.

Bloom Energy appreciates the opportunity to provide these comments, and appreciates the work the Treasury Department and the Internal Revenue Service is undertaking to draft guidance that will continue to encourage development of clean energy solutions, consistent with the legislative intent of the IRA.

Please let us know if you have questions regarding Bloom Energy's products or any of the comments contained herein.

Sincerely,

/s/

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