Scott L. Strazik
Chief Executive Officer
GE Vernova

58 Charles Street
Cambridge, MA 02141
USA

February 26, 2024

SUBMITTED ELECTRONICALLY

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

RE: REG-117631-23

GE Vernova appreciates the opportunity to submit the following comments to the U.S. Department of Treasury (Treasury) and the Internal Revenue Service (IRS) on REG-117631-23, Section 45V Credit for Production of Clean Hydrogen; Section 48(a)(15) Election to Treat Clean Hydrogen Production Facilities as Energy Property.

As the nation's leading energy and technology innovation company, GE Vernova is committed to supporting the success of the implementation of the Inflation Reduction Act of 2022 (IRA). GE Vernova strongly supports clean energy tax credits because of the opportunity to reduce energy sector greenhouse gas emissions and to build a more expansive and resilient domestic energy supply chain, infrastructure, and grid that promote energy security. GE Vernova appreciates the opportunity to share these comments in support of pragmatic implementation of the IRA to succeed in these goals.

The Section 45V credit for production of clean hydrogen has received significant attention from a wide variety of stakeholders. While we have been involved in many discussions on issues related to this credit, especially as it relates to the so-called "Three Pillars," our comments are solely focused on two very specific items in the proposed rulemaking that we believe Treasury and the IRS needs to address.

Specifically, we respectfully request confirmation in final regulations of the following:

- A clean hydrogen production facility may use qualifying energy attribute certificates with respect to repowered wind energy facilities that satisfy the 80/20 rule and are treated as a new facility with a new original placed-in-service date for U.S. federal income tax purposes. The tax law has long treated repowered facilities the same as "new" facilities. Section 45V final regulations should either confirm the established tax law treatment of repowered facilities and use the consistent term "placed in service" instead of COD with respect to the incrementality requirement or clearly state that a repowered facility that obtains a new original placed in service date also is treated as having a new COD.

GE VERNOVA

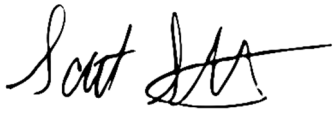
- Uprates or upgrades to a nuclear facility or other zero emission generating facility that results in increased production and incremental generation capacity should satisfy the incrementality requirement provided that the uprate or upgrade results in an incremental increase in the electricity generation output based on the actual productive capability of such facility, after considering degradation and other limitations on its original nameplate, licensed, or rated capacity. The nameplate capacity of the facility should be determined in a manner similar to the determination of nameplate capacity under the recently-released Section 48 proposed regulations and the definition of nameplate capacity provided in 40 CFR 96.202.

  Final regulations should provide flexibility and alternative approaches to establishing how incremental capacity is determined for upgraded or uprated generating facilities.

Detailed support for these positions is included in the following technical comments.

We appreciate the opportunity to submit comments. GE Vernova is prepared to make its subject matter experts and its outside counsel available to Treasury and the IRS to discuss and explain each or any of these issues in detail. We look forward to engaging in discussion and providing assistance.

Best regards,



Scott Strazik
Chief Executive Officer
GE Vernova

GE VERNOVA

Comments in Response to Notice of Proposed Rulemaking
Section 45V Credit for Production of Clean Hydrogen

February 26, 2024

Executive Summary

Regulations should clarify the incrementality requirement for the use of electricity from grid-connected renewable and other zero emission electric generating facilities such as wind and nuclear. Specifically, the final regulations should clarify that a clean hydrogen production facility may use qualifying energy attribute certificates with respect to repowered wind energy facilities that satisfy the 80/20 Rule and are treated as a new facility with a new original placed-in-service date for U.S. federal income tax purposes. Regulations also should clarify that uprates or upgrades with respect to zero emission electric generating facilities, such as a nuclear energy facility, satisfy the incrementality requirement, provided that the uprate results in an incremental increase in the electricity output based on the actual productive capability of the facility, after considering degradation and other limitations on its original nameplate, licensed, or rated capacity.

Discussion

The Inflation Reduction Act of 2022, Pub. L. No. 117-169 ("IRA"), provides a tax credit for production of qualified clean hydrogen under § 45V of the Internal Revenue Code ("Code").[1] The amount of the § 45V credit is dependent upon the "lifecycle greenhouse gas emissions rate" through the "point of production," which requires consideration of emissions from any energy sources used in the production of the clean hydrogen. Clean hydrogen may be produced through electrolysis by using renewable and other low-carbon energy sources such as wind, hydropower, and nuclear.

On December 26, 2023, the U.S. Department of Treasury ("Treasury") and the Internal Revenue Service ("IRS") issued a notice of proposed rulemaking and public hearing requesting comments with respect to the § 45V credit (the "Proposed Regulations"). Among other things, the Proposed Regulations impose strict standards on the use of electricity to produce clean hydrogen. In calculating greenhouse gas ("GHG") emissions from the use of electricity, the Proposed Regulations allow the use of energy attribute certificates ("EACs") that meet the requirements of the so-called "Three Pillars" – i.e., incrementality, temporal matching, and deliverability.

Taxpayers require clarification and guidance on the application of the § 45V credit, specifically the incrementality rules, with respect to the use of electricity from repowered renewable electricity facilities (e.g., wind facilities) and with respect to existing nuclear facilities

[1] All Section (§) references are to the Code as amended by the Inflation Reduction Act of 2022, Pub. L. No. 117-169. References to "Prop. Reg." are to the Proposed Regulations at 88 Fed. Reg. 89220 (Dec. 26, 2023).

that produce incremental power through uprates to such facilities. GE Vernova requests clarification in revised rulemaking, final regulations, or other guidance ("Guidance").

<u>Comment 1</u>: Guidance should clarify that a clean hydrogen production facility may use EACs with respect to repowered wind energy facilities that satisfy the 80/20 Rule and have a new original placed-in-service date for tax purposes. For purposes of the incrementality requirement, such repowered wind facilities should be treated as a new facility with a new COD.

Renewable energy facilities (in particular, wind turbines) are commonly repowered. Repowering conserves resources and accelerates the development of clean energy projects by using existing infrastructure and property. In a repowered wind turbine, it is common to reuse certain components, including the tower, foundation pad, and certain uncomplicated elements. Ultimately, however, the repowering results in what the tax law (discussed below) recognizes as a new facility with a new original placed-in-service date. The "placed-in-service" date of a zero emission or low carbon electric generating facility, such as a wind facility, solar facility, geothermal facility or nuclear facility has a well-established meaning under the tax law. The placed-in-service date is the date on which a facility is placed in a condition or state of readiness and availability for its intended use. *See* Treas. Reg § 1.167(a)-(11)(e)(1). It is the date any tax credits associated with such facility accrue (or in the case of a production tax credit, begin to accrue) and depreciation begins. The same definition is applied to a clean hydrogen production facility in determining when tax credits begin to accrue for such facility. Prop. Reg. § 1.45V-1(b). It also is the date for the hydrogen production facility against which the incrementality rule for electricity consumed by that facility is measured. Prop. Reg. § 1.45V-4(d)(3)(i)(A).

Rather than using the placed-in-service date for the electric generating facility supplying a hydrogen production facility, the Proposed Regulations introduce the concept of a "commercial operations date," or "COD," as the basis for determining whether existing electricity generation facilities satisfy the incrementality requirement. While the term "COD" is commonly used in the energy industry, it can have different meanings depending on the commercial contracts associated with such generating facility or the rules relating to the grid operator to which the generating facility is interconnected. More importantly, use of a non-specific, non-tax term creates uncertainty as to whether EACs from repowered wind facilities are qualified under the incrementality requirement. Given the importance of repowering to the wind energy industry, and of achieving climate goals by additional wind power generation taking advantage of existing infrastructure, it is imperative that Guidance resolve this uncertainty and recognize that repowered energy facilities are treated as "new" facilities for purposes of the incrementality requirement as of their new original placed-in-service date.

Under Prop. Reg. § 1.45V-4(a), the amount of the § 45V credit is determined according to the lifecycle GHG emissions rate of all hydrogen produced at a hydrogen production facility during the taxable year using either the most recent GREET model or a determined provisional emissions rate. If a lifecycle GHG emissions rate is determined for hydrogen produced at a clean hydrogen production facility by considering a particular energy source, then Prop. Reg. § 1.45V-4(d)(1) allows the taxpayer to treat such hydrogen production facility's use of electricity as being from a specific electricity generating facility rather than being from the regional electricity grid

only if the taxpayer acquires and retires qualifying EACs for each unit of electricity that the taxpayer claims from such source. Renewable energy certificates ("RECs") and other similar energy certificates issued through a registry or accounting system are forms of EACs. Prop. Reg. § 1.45V-4(d)(2)(ii). The rules for qualifying EACs apply regardless of whether the electricity generating facility is grid connected, directly connected, or co-located with the clean hydrogen production facility. Prop. Reg. § 1.45V-4(d)(1).

It is anticipated that many hydrogen facilities under § 45V will utilize grid-connected energy sources in order to power electrolyzers and to produce "green hydrogen." It is further anticipated that a significant source of this grid-connected power will be wind energy facilities, and that many of these wind energy facilities will involve wind turbines that have been repowered to extend their useful life and increase their productive capacity in response to the enactment of the IRA. Repowered wind facilities that satisfy the 80/20 Rule are treated as wholly new facilities which have new "original placed-in-service dates" under the tax law. Thus, it is anticipated that a significant source of grid-connected electricity may be sourced from repowered wind energy facilities, which will be important for the future development of both the nascent clean hydrogen production and regeneration of clean electricity from wind.

The term "qualifying EAC" means an eligible EAC that meets the specific requirements of Prop. Reg. § 1.45V-4(d)(3), i.e., the so-called Three Pillars. Prop. Reg. § 1.45V-4(d)(2)(iv). The first requirement is "incrementality." An EAC meets the incrementality requirement if the electricity generation facility producing the unit of electricity to which the EAC relates has a "commercial operations date" or "COD" that is "no more than 36 months before the clean hydrogen production facility for which the EAC is retired was placed in service." Prop. Reg. § 1.45V-4(d)(3)(i)(A). The term "commercial operations date" or "COD" means "the date on which a facility that generates electricity begins commercial operations." Prop. Reg. § 1.45V-4(d)(2)(i). The Preamble explains the COD reference in this proposed rule:

> The Treasury Department and the IRS understand that EAC tracking systems capture the COD of each electricity generating facility during the registration process (often using data also reported to the Energy Information Administration), inclusive of month and year, which can be cross-referenced based on project identification codes included on those EACs. That COD should represent the initial date of operation for the relevant electricity generating facility. Third-party verifiers should use this data to confirm the eligibility of purchased and retired EACs.

88 Fed. Reg. 89220, 89229 (Dec. 26, 2023). The Preamble continues by recognizing that there are circumstances in which an existing higher-emitting electricity generating facility may make upgrades to subsequently deliver minimal-emitting electricity – namely, adding carbon capture sequestration equipment to an existing fossil-fuel electricity generating facility. However, neither the Preamble nor the Proposed Regulations addresses repowered electricity generating facilities such as wind facilities that obtain a new original placed-in-service date under the tax rules.[2]

[2] GE Vernova submitted comments on this issue in response to Notice 2022-58, 2022-47 I.R.B. 483. *Available at* https://www.regulations.gov/comment/IRS-2022-0029-0053.

The term "placed in service" has a well-understood meaning with respect to electricity generation facilities and is used throughout the Code with respect to both production tax credits and the investment tax credit. For example, Prop. Reg. § 1.45V-1(b)(1) describes the amount of the § 45V credit for any taxable year during the 10-year period beginning on the date such facility was originally placed in service. Further, with respect to a clean hydrogen production facility, Prop. Reg. § 1.45V-6 provides rules for an existing facility that was originally placed in service before January 1, 2023, and which is either modified or retrofitted to produce qualified clean hydrogen. Specifically, Prop. Reg. § 1.45V-6(b) provides that an existing facility may establish a new date on which it is considered "originally placed in service" by applying the so-called "80/20 Rule" that is applied to other energy facilities including wind energy facilities. Indeed, the 80/20 Rule described in Prop. Reg. § 1.45V-6(b) was originally described in Rev. Rul. 94-31, 1994-1 C.B. 16, which addressed electricity produced from wind under § 45.

Repowering of wind turbines is a common and recognized practice within the renewable energy industry and existing IRS guidance. Repowering conserves resources and accelerates clean energy projects by using existing infrastructure and property. As noted, it is common in the wind industry to reuse certain components, including the tower, foundation pad, and certain uncomplicated elements of the nacelle. The IRS has recognized the repowering of energy projects in a number of published rulings and notices. In Rev. Rul. 94-31, the IRS issued its seminal ruling recognizing that each wind turbine together with its tower and supporting pad is a separate qualified facility under § 45. Rev. Rul. 94-31 also holds that a facility would qualify as originally placed in service even though it contains some used property, provided the fair market value of the used property is not more than 20 percent of the facility's total value (the cost of the new property plus the value of the used property) – i.e., the "80/20 Rule." The same recognition has been made with respect to other § 45 facilities, *see, e.g.*, Notice 2008-60, 2008-30 I.R.B. 178, sec. 3.01(3) (biomass), and other credits such as § 45Q, *see* Treas. Reg. 1.45Q-2(g)(5). Likewise, repowering has been recognized in a number of beginning-of-construction notices published by the IRS. *See* Notice 2020-12, 2020-11 I.R.B. 495, sec. 8.04; Notice 2018-59, 2018-28 I.R.B. 196, sec. 7.05; Notice 2017-4, 2017-3 I.R.B. 541, sec. 5; Notice 2016-31, 2016-23 I.R.B. 1025, sec. 6; *see also* Notice 2023-38, 2023-22 I.R.B. 872, sec. 4.01 (adopting the 80/20 Rule in the context of domestic content). Thus, repowering and the 80/20 Rule are well-established and longstanding in the context of § 45 and the tax law generally.

It is imperative that the Guidance recognize the repowering of renewable energy and other zero emission sources as qualifying facilities for purposes of the incrementality requirement and allow EACs associated with such facilities to be used for the production of clean hydrogen. This would be clear if the Proposed Regulations used consistent tax terminology, i.e., placed-in-service date, for both the hydrogen production facility and the generating facility supplying electricity. The Proposed Regulations, however, create uncertainty as to the status of EACs from repowered facilities because of the use of COD concepts to confirm additionality of new clean electricity generating sources. According to the Preamble, the use of COD appears to have been included for administrative reasons in order to verify additionality and satisfaction of the look-back period of the incrementality requirement. According to the Preamble, EAC tracking systems generally capture the COD of each generating facility during the registration process. The Preamble then explains that COD should represent the initial date of operation for the relevant electricity generating facility. This statement that

COD represents the initial operation date is not accurate. In practice, the COD generally trails the placed-in-service date for an electricity generating facility, often by a significant period of time. As previously noted, the placed-in-service date occurs when a facility is placed in a condition or state of readiness and availability for its intended use. This is generally when the facility commences operations and begins to generate electricity. The COD, as generally understood, does not conform to the placed-in-service date or commencement of operations. COD generally does not occur until some later point in time that the generating facility either satisfies contractual standards under a power purchase agreement or it has satisfied post-operational testing standards related to proven availability or other requirements imposed by the grid operator where the facility is interconnected. These standards for declaring COD may vary between different grid operators.

The use of inconsistent terms, "COD" and "placed in service," in Prop. Reg. § 1.45V-4(d)(3)(i)(A), together with the absence of any mention of repowered facilities, creates great uncertainty as to Treasury and the IRS's intentions with respect to repowered facilities. It is imperative that Treasury and the IRS provide additional clarification regarding the application of the incrementality requirement with respect to repowered energy facilities. One way would be to use the well-known, accepted tax term of placed-in-service date for purposes of determining the 3-year required period with respect to both the electric generating facility and the hydrogen production facility. The placed-in-service date for all zero emission generating sources is known for tax purposes and eliminates any uncertainty associated with COD and its application to repowered facilities which obtain a new original placed-in-service date for tax purposes.

If inconsistent terms, placed in service for the hydrogen facility, and COD for the electric generating facility, are continued to be used, then the term COD must very clearly be defined to correspond with tax placed-in-service requirements. Specifically, the definition of COD must clearly state that a repowered facility that obtains a new original placed-in-service date is also treated as having a new COD. If COD continues to be used without any discussion of repowered facilities in final regulations, it may remove a major source of clean renewable electricity from qualifying as an electricity source for producing clean hydrogen. This result would be inconsistent with Congress' intent and also inconsistent with important clean energy policy goals of the Administration, Treasury, and IRS. It is noteworthy, as described above, that the Proposed Regulations recognize the 80/20 Rule and the validity of repowering of existing energy facilities in the context of the production of hydrogen itself. *See* Prop. Reg. § 1.45V-6(b). It would be inconsistent with the intent of the § 45V credit – and indeed with the fundamental objectives of the IRA – to allow hydrogen produced after 2022 from existing hydrogen production facilities to qualify for the credit, but then deny the credit because those existing facilities are powered by repowered renewable electricity facilities.

Requested Clarification to Proposed Regulations:

Final regulations should confirm that repowered facilities – i.e., those renewable energy facilities that have a new original placed-in-service date under the 80/20 Rule – will be treated as newly-built renewable electricity facilities. The tax law has long recognized that repowered facilities should be treated the same as "new" facilities for tax law purposes because they have a similar useful life as a newly-built facility, as well as a similar capacity and production profile to

match the state of current technology, but they also achieve efficiencies by re-utilizing and not wasting certain property and equipment from the "old" facility. The qualification of a hydrogen facility for the § 45V credit should be made without regard to whether the renewable electricity comes from a wholly new or repowered facility. Final regulations should therefore confirm the established tax law treatment of repowered facilities in the context of the § 45V credit by using the consistent term, placed in service, with respect to the incrementality requirement or by clearly stating that a repowered facility that obtains a new original placed-in-service date also is treated as having a new COD.

Comment 2: Guidance should clarify that uprates or upgrades with respect to a nuclear facility or other zero emission generating facility, such as hydropower, satisfy the incrementality requirement provided that the uprate or upgrade results in an incremental increase in the electricity generation output based on the actual productive capability of such facility, after considering degradation and other limitations on its original nameplate, licensed, or rated capacity.

In the case of an addition of capacity or modification of an existing electricity generation facility that results in any incremental generation of electricity, Treasury and the IRS should confirm that such incremental electricity will satisfy the incrementality requirement. It is important that Treasury and the IRS confirm that any "additions of capacity" which are placed in service after December 31, 2024 and qualify for tax credits under § 45Y(b)(1)(C) or § 48E(b)(3)(B) will constitute incremental generation that satisfies the incrementality requirement for purposes of § 45V. Treasury and the IRS also should confirm that qualifying additions of capacity or modifications resulting in incremental production include "uprates" and "upgrades" to a generating facility.

Because of their size and the magnitude of the costs necessary to fully retrofit other clean energy sources, certain electricity generating facilities may not be able to qualify under the 80/20 Rule and achieve a new original placed-in-service date. One example of this type of facility is a nuclear power facility. However, it is common in the nuclear industry for facilities to undergo what is described as "uprates" or "upgrades" that result in extension of life and increased production generation. In the case of a nuclear facility, an uprate (sometimes referred to as thermal efficiencies) might include, for example, (i) the incorporation of state-of-the-art devices to more precisely measure the feedwater flow used to calculate reactor power (i.e., measurement uncertainty recaptures), (ii) changes to instrumentation settings with respect to the high-pressure steam turbine (i.e., stretch power uprates), or (iii) substantial increases in steam flow through significant modifications to the balance-of-plant equipment, including the high pressure steam turbines, condensate pumps and motors, main generators, and transformers. These uprates may increase power output from the nuclear facility by 2 to 20 percent, thus increasing zero-emission electricity contributed to the grid substantially. The Proposed Regulations recognize the critical importance of uprates and, as explained below, allow increased generation from uprated facilities to qualify under the incrementality requirement. However, certain clarifications are required.

A nuclear facility also may include "upgrades," which are essentially an efficiency improvement on the secondary side of the existing nuclear power production facility – primarily upgrades to the steam turbine or generator. The electrical capacity of the facility is increased on

account of the upgrade due to improved performance with the installation of new modern technology. Upgrades also may be performed to extend the life of major components and/or to improve reliability and availability of the facility. Further improvements to electrical output from the facility are often realized through recovery of degradation of equipment and through improved optimization of the components within the facility. Upgrades range from individual components (such as last stage rotating blades on a turbine) to major equipment (such as a new generator field or new steam turbine bladed rotor and steam path), that result in an increase in electrical capacity. Upgrades should be treated in the same manner as uprates where such improvements or modifications result in incremental generation of electricity at nuclear and other clean energy facilities.[3]

An EAC also may meet the incrementality requirement if the electricity represented by the EAC is produced by "an electricity generating facility that had an uprate no more than 36 months before the hydrogen production facility with respect to which the EAC is retired was placed in service and such electricity is part of such electricity generating facility's uprated production." Prop. Reg. § 1.45V-4(d)(3)(i)(B) (emphasis added). The term "uprate" is defined as "an increase in an electricity generating facility's rated nameplate capacity (in nameplate megawatts)." *Id.* (emphasis added). In order to determine the "uprated production," the "pre-uprate capacity" of the electricity generating facility is compared to the "post-uprate capacity" in order to determine the "incremental generation capacity" which is used to calculate the "uprated production rate" and "uprated production" of such facility. *Id.* (emphasis added). The Proposed Regulations define these terms as follows:

> Pre-uprate capacity: The nameplate capacity of an electricity generating facility immediately before an uprate.
>
> Post-uprate capacity: The nameplate capacity of an electricity generating facility immediately after an uprate.
>
> Incremental generation capacity: The increase in an electricity generating facility's rated nameplate capacity from the pre-uprate capacity to the post-uprate capacity.
>
> Uprated production rate: The incremental generation capacity (in nameplate megawatts) divided by the post-uprate capacity (in nameplate megawatts).
>
> Uprated production: The uprated production rate of an electricity generating facility multiplied by its total generation output (in megawatt hours).

An uprated electricity generating facility's production must be prorated to each hour of such facility's generation by multiplying the production for each hour or each year, consistent with the temporal-matching requirements in Prop. Reg. § 1.45V-4(d)(3)(ii), by the uprated production rate to determine the electricity to which the uprate relates. Prop. Reg. § 1.45V-4(d)(3)(i)(B).

Importantly, further clarification is required with respect to these terms and definitions. For example, the Proposed Regulations for the § 45V credit do not define the term "nameplate

[3] For convenience, this section generally refers to "uprates," which is the term used in the Proposed Regulations.

capacity" for purposes of determining the uprated production. However, in the recent proposed regulations under § 48, Treasury and the IRS provided rules for the investment tax credit under § 48(a)(8) for the costs paid or incurred by the taxpayer for qualified interconnection property in connection with the installation of energy property. This credit is limited to energy property that has a maximum net output of not greater than 5 megawatts ("MW"). Under those proposed regulations, the determination of whether an energy property has a maximum net output of not greater than 5 MW is based on its "nameplate capacity" and, "[w]here applicable, taxpayers should use the International Standards Organization (ISO) conditions to measure the maximum electrical generating output or usable energy capacity of an energy property." Prop. Reg. § 1.48-14(g)(3)(ii). The § 48 proposed regulation further provide:

> In the case of an electrical generating energy property, the maximum electrical generating output in MW that the unit of energy property is capable of producing on a steady state basis and during continuous operation under standard conditions, as measured by the manufacturer and consistent with the definition of nameplate capacity provided in 40 CFR 96.202.

Prop. Reg. § 1.48-14(g)(3)(ii)(A). Under the referenced regulation, the term "nameplate capacity" is defined as follows:

> Nameplate capacity, starting from the initial installation of a generator, the maximum electrical generating output (in MWe) that the generator is capable of producing on a steady state basis and during continuous operation (when not restricted by seasonal or other deratings) as of such installation as specified by the manufacturer of the generator or, starting from the completion of any subsequent physical change in the generator resulting in an increase in the maximum electrical generating output (in MWe) that the generator is capable of producing on a steady state basis and during continuous operation (when not restricted by seasonal or other deratings), such increased maximum amount as of such completion as specified by the person conducting the physical change.

40 C.F.R. 96.202.

This definition of "nameplate capacity" recognizes that subsequent changes to an existing facility (e.g., uprates or upgrades) may result in an increase in the maximum generating output that the facility is capable of producing on a steady state basis and during continuous operation under standard conditions. This definition of "nameplate capacity" would account for changes in the maximum generating output of the facility relative to its original nameplate capacity, its licensed or rated capacity, or its maximum output rating from the original manufacturer. For example, degradation and other factors significantly reduce the maximum generating output and safe operating conditions of the facility over time. These subsequent changes may reflect natural and ordinary changes to facility equipment and processes over time, as well as project-specific factors that may affect the maximum generational output of a facility. Uprates are designated to reverse, in whole or in part, these changes and to increase the maximum electrical generating output or usable energy capacity of the facility. Final regulations should account for uprates that result in additional electricity generation and capture degradational aspects of nuclear facilities

and other similar low-carbon electric-generating facilities.

This clarification is critical because most, if not all, existing nuclear power production facilities have been in service for at least 30 years and much longer. Over time, those facilities have experienced natural degradation and depreciation and no longer operate at their original nameplate, licensed, or rated capacity. In establishing the pre-uprated capacity (i.e., the baseline against which incremental generation capacity is to be measured) it is important to distinguish such capacity from the original nameplate, licensed or rated capacity, which may not reflect the actual, current productive capability or capacity of the facility.

Requested Clarification to Proposed Regulations:

Guidance should confirm that any addition of capacity or modification of an existing electricity generation facility that results in any incremental generation of electricity will satisfy the incrementality requirement. Final regulations should confirm that any "additions of capacity" which are placed in service after December 31, 2024 and qualify for tax credits under § 45Y(b)(1)(C) or § 48E(b)(3)(B) also will be treated as incremental production for purposes of § 45V. As it pertains to incremental production of electricity. Guidance should confirm that uprated production and incremental generation capacity from uprates or upgrades to a nuclear facility or other zero emission generating facility is determined on the basis of changes to the nameplate capacity of the facility immediately before and immediately after the uprate is made. For this purpose, the nameplate capacity of the facility should be determined in a manner similar to the determination of nameplate capacity under the recently-released § 48 proposed regulations and the definition of nameplate capacity provided in 40 CFR 96.202. This definition of nameplate capacity recognizes generational changes to existing nuclear facilities relative to the original nameplate, licensed, or rated capacity of those facilities. Importantly, final regulations should determine pre-uprate capacity by taking into account degradation and similar factors that reduce the actual, current productive capability or capacity of the facility and should determine post-uprate capacity (and, therefore, incremental generation capacity) by taking into account uprate changes that improve the incremental generational output of the facility. In the case of nuclear power, it is particularly important that historical measurements based on nameplate capacity be avoided. Rather, final regulations should determine pre-uprate capacity after considering outages, idling, and degradation to the recent years' capability of nuclear facilities in order to provide effective use of EACs from this important generation source. Final regulations should provide flexibility and alternative approaches to establishing pre-uprate and post-uprate capacity, including the preferences noted in Prop. Reg. § 1.48-14(g)(3)(ii) and through approval of an amended or modified operating license or similar approval by a governmental or quasi-governmental agency, such as the Nuclear Energy Regulatory Commission, Federal Energy Regulatory Commission, or a regional grid operator.

* * *