

BCSE Comments on Section 45Y Clean Electricity Production Credit and Section 48E Clean Electricity Investment Credit, Notice of Proposed Rulemaking

August 2, 2024

Thank you for the opportunity for the Business Council for Sustainable Energy (BCSE) to provide its views in response to the release of proposed regulations relating to the clean electricity production credit and the clean electricity investment credit established by the Inflation Reduction Act (IRA) of 2022.

Under Notice 2024-11719, the U.S. Department of Treasury (Treasury) and the Internal Revenue Service (IRS) released proposed rules for: determining greenhouse gas (GHG) emissions rates resulting from the production of electricity; petitioning for provisional emissions rates; and determining eligibility for these credits in various circumstances. The proposed regulations would affect all taxpayers who produce clean electricity and claim the clean electricity production credit with respect to a facility or the clean electricity investment credit with respect to a facility or energy storage technology, as applicable, that is placed in service after 2024.

The updates and expansion of the Section 45 Production Tax Credit and the Section 48 Investment Tax Credit, combined with their ten-year span, provide impactful market signals to invest in a variety of clean energy projects in the United States. These projects will provide communities with access to affordable, reliable, and clean energy resources, while creating jobs and expanding economic development. This is a historic opportunity to leverage private sector capital for public benefit. As such, the implementation rules are critical to delivering the results on the ground.

BCSE advocates for energy and environmental policies that promote markets for clean, efficient, and sustainable energy products and services. Since its founding in 1992, BCSE has advocated for policies that will increase the deployment of energy efficiency, natural gas, and renewable energy, as well as energy storage, sustainable transportation, and emerging decarbonization technologies. As a diverse coalition, not all BCSE members take a position or endorse the issues discussed in this submission.

BCSE would like to acknowledge the submissions made in response to this request for comment provided by the American Biogas Council, the American Biomass Energy Association, the Coalition for Renewable Natural Gas, the Fuel Cell and Hydrogen Energy Association, the National Hydropower Association, Reworld, and the Solar Energy Industries Association. BCSE encourages the thoughtful consideration of the issues and recommendations included in these submissions.

The BCSE submission includes comments on the following topics:

1) Eligibility Rules

- a) Clarify Eligibility Under the Proposed Rules for the Section 45Y Clean Electricity Production Credit and Section 48E Clean Electricity Investment Credit
- b) Allow the Eligibility for Separate Owners of Integral or Functionally Interdependent Equipment
- c) Confirm System Upgrade Equipment Eligibility in Interconnection Property Definition
- d) Include Avoided Emissions in Lifecycle Analysis Models
- e) Calculate ITC Credit for Additions of Capacity Based on the Whole Qualified Investment



2) 80/20 Rule Implementation

- a) Modify the Interpretation of the 80/20 Rule to Focus on Components Necessary for the Production of Electricity
- b) Clarify the 80/20 Rule as It Applies to Retrofits Under Section 48E
- c) Clarify That the 80/20 Rule Only Applies at the Property Level

3) Biogas, Biomass, and Renewable Natural Gas Recommendations

- a) Remove the First Productive Use Requirement for Biogas and Renewable Natural Gas
- b) Clarify Lifecycle Assessment Modelling to Fully Account for the Emissions of Biomass Power

4) Fuel Cells and Hydrogen-Related Recommendations

- a) Remove the Classification of Fuel Cells as Combustion and Gasification Facilities
- b) Revise the Definition of Hydrogen Energy Storage Property to Remove the Energy End-Use Requirement
- c) Expand the List of Integral and Functionally Interdependent Equipment to Be More Inclusive of Existing and Future Hydrogen Energy Storage Property Technologies
- d) Expand the Lifecycle Analysis Exclusions to Include Hydrogen Conditioning and Distribution

5) Hydropower Recommendations

- a) Calculate Incremental Production Based on Current Generating Capacity for Hydropower Facilities

6) Solar and Storage-Related Recommendations

- a) Amend the Rules to Allow a Single Credit for Hybrid Solar and Storage Systems

7) Waste Energy Recovery Property Recommendations

- a) Recognize All Waste Energy Recovery Property as Categorically Non-Combustion and Gasification Facilities

8) Additional Recommendations

- a) Allow 48E Credit Progress Expenditures for Elective Payments
- b) Allow GREET Model to Utilize Updated Data Sets



ELIGIBILITY RULES

Clarify Eligibility Under the Proposed Rules for the Section 45Y Clean Electricity Production Credit and Section 48E Clean Electricity Investment Credit

The IRA provided important expansions and modernization to a suite of energy efficiency and clean energy tax credits. Under the Section 45Y Clean Electricity Production Credit and Section 48E Clean Electricity Investment Credit (§§ 45Y and 48E), a qualified entity is a facility that is used for the generation of electricity, is placed in service after December 31, 2024, and has a zero GHG emissions rate. The GHG emissions rate is the amount of GHGs emitted into the atmosphere by a facility in the production of electricity, expressed as grams of carbon dioxide equivalent (CO₂e). This definition is applicable to zero-emission generating technologies. In addition, the statute provides a rule for combustion and gasification facilities (C&G) that requires the GHG emissions rate be equal to the net rate of GHGs emitted into the atmosphere by such facility, taking into account lifecycle GHG emissions as defined in under the Clean Air Act, in the production of electricity.

BCSE affirms the proposal's inclusion of hydropower in §§ 45Y and 48E and urges that this be affirmed in the final regulation. However, BCSE offers recommendations for changes to the proposal that should be made in the final regulations, are discussed in the sections that follow.

Ensure Eligibility for Separate Owners of Integral or Functionally Interdependent Equipment

BCSE is concerned with the proposed rule's requirement that distinguishes between “functionally interdependent” components and “integral parts” of energy property. The proposal’s use of this distinction deviates from the statute and would prevent different owners of “energy property” from claiming the Section 48 Investment Tax Credit (ITC).

The current Section 48 rules permit the ITC to be claimed by an owner of energy property when the original use of that energy property began with such owner. In other words, different components that the proposed rule would currently treat as “integral parts” (e.g., battery storage) would still be energy property and, thus, should still qualify for the ITC when separately owned. This flexibility is essential for many projects because it may be impractical (if not impossible) to cause one taxpayer to own all components of a larger system of eligible property.

Such limitation is not found in the statutory text and could have an unnecessary chilling effect on investment and deployment. Additionally, individual items of energy property may qualify for the ITC, even when placed into service after other related energy property is placed into service.

Clarify System Upgrade Equipment Eligibility in Interconnection Property Definition

Prior to the enactment of the IRA, interconnection costs for new or upgraded generation facilities were generally thought of as transmission or distribution costs rather than generation costs and thus not eligible for the Section 48 ITC. The IRA enacted a special rule for projects up to 5 MW, as measured in alternating current, under which the costs of the project’s ITC-eligible energy property are deemed to include costs attributable to qualified interconnection property, enabling a taxpayer to claim the ITC on qualifying interconnection costs. As such, while qualified transmission property is not considered energy property after IRA enactment, some of its costs are attributed and reallocated to the project’s basis in energy property.



The final rules should confirm that equipment required to modify and upgrade transmission or distribution systems beyond the point of interconnection would be considered qualified interconnection property.

Include Avoided Emissions in Lifecycle Analysis Models

BCSE supports the proposal's recognition that avoided emissions may be included in the lifecycle analysis.¹ "Avoided emissions means the estimated emissions associated with the feedstock, including the feedstock's production and use, that would have occurred in the alternative fate (if such feedstock had not been diverted for electricity production) but are instead avoided with the feedstock's use for electricity production."² Consistent with GREET and for biogas, renewable natural gas (RNG), and waste to energy (WTE) in particular, any modeling used for determining lifecycle GHG emissions should include avoided emissions.

After recycling and composting, municipal solid waste (MSW) is managed two ways in the United States. It is either (1) dumped in a landfill or (2) disposed of at a WTE facility. At a WTE facility, waste is combusted to generate renewable baseload electricity, landfill methane emissions are avoided, and metals are recovered for recycling. In contrast, significant methane and GHG emissions are generated when MSW is dumped in a landfill.

Disposing of MSW at a WTE facility results in demonstrably fewer GHG emissions compared to landfilling. Thus, it is appropriate to consider the GHG emissions that are avoided by diverting MSW from a landfill to instead be sustainably managed at a WTE facility when calculating the net GHG emissions associated with this C&G technology. This is consistent with the calculation of net emissions as described in section 211(o)(1)(H) of the Clean Air Act and is an approach utilized in the U.S. Environmental Protection Agency (EPA)'s Waste Reduction Model ("WARM") and its MSW Decision Support Tool ("MSW-DST").

Calculate 48E Credit for Additions of Capacity Based on the Whole Qualified Investment

For additions of capacity, the proposed rule would require taxpayers to calculate their qualified investment as the pro-rata share of the capacity increase, rather than the long-standing precedent that a taxpayer's ITC eligibility should be based on the whole qualified investment.³ BCSE recommends that final rule restore the current calculation for qualified investment in the case of capacity additions.

80/20 RULE IMPLEMENTATION

Modify the Interpretation of the 80/20 Rule to Focus on Components Necessary for the Production of Electricity

Under the 80/20 Rule, retrofitted energy property is considered originally placed in service, even if it contains some used components, if the fair market value of the used components of the energy property is not more than 20 percent of the total value of the energy property, taking into account the cost of the new components of property plus the value of the used components of the energy property.

¹ 89 Fed. Reg. at 47,804.

² *Id.*

³ See proposed rule § 1.48E-4(b)(3)(ii)



BCSE recommends that the final regulations define the “unit of qualified facility” as the specific components necessary to the production of electricity. The unit of qualified facility would not include the integral property not directly necessary to the production of electricity.

Impact on Biogas and Renewable Natural Gas Projects

For example, as it related to the biogas and RNG sectors, subjecting new-use RNG projects to the 80/20 Rule creates an unwarranted regulatory hurdle to qualification and will disincentivize the construction of environmentally beneficial and technologically advanced projects that provide for material emission reduction and other environmental benefits.

Additionally, as proposed, the regulations will render qualified biogas property significantly less valuable because the credits will not be available for most capital expenditure that is typically made related to biogas production equipment. The RNG industry has, in the aggregate, planned multi-billion-dollar investments in 2024 and beyond which will offer significant methane abatement potential, as well as economic and other environmental benefits to geographically diverse rural and urban communities. These investments are at risk if the proposed regulations are not revised.

Impact on Hydropower Projects

As applied to hydropower, each powerhouse generating unit, consisting of a turbine or pump turbine, generator or motor-generator, and associated unit-specific controls, is a “unit of qualified facility.” Many hydropower projects have multiple generating units. Each generating unit can be separately placed in service and can be separately controlled and operated. Each generating unit that can be separately placed into service, therefore, is a “unit of qualified facility” for purposes of applying the 80/20 Rule. Other hydropower facility property, such as the dam, spillway, substation, and other land improvements should be treated as integral property. Application of the 80/20 Rule as discussed above with respect to a unit of energy property for conventional hydropower, under Section 45Y, also should apply to pumped storage hydropower, under Section 48E.

Clarify the 80/20 Rule as It Applies to Retrofits Under Section 48E

Final rules under both Section 48 and Section 48E should make clear that the 80/20 Rule only applies to actual retrofits in the context of the Section 45 Production Tax Credit (PTC). For other situations regarding retrofits, final rules should be amended to make clear that taxpayers have the ability to continue to make upgrades or add capacity without adding an entirely new unit of qualified facility, consistent with the historic definition of energy property and the unit of property for cost recovery and depreciation purposes.

Since the inception of the ITC, IRS rules have provided that any capital addition of new eligible property qualifies for a new credit. But the proposed § 1.48E-4(c) would impose a fundamental change to that longstanding rule by treating new components added to an existing qualified facility as “excluded costs” unless such new components added to the existing qualified facility satisfy the 80/20 Rule.

Clarify That the 80/20 Rule Only Applies at the Property Level

Under IRS Notice 2018-59, the 80/20 Rule applies at the property level – not the project or system level. As an example, if a taxpayer with an existing solar energy project wants to add new units of energy storage technology, those should not be subject to the 80/20 Rule. Or, if a taxpayer adds new turbines (instead of



retrofitting existing ones), then the 80/20 Rule does not apply.

BIOGAS, BIOMASS, AND RENEWABLE NATURAL GAS-RELATED RECOMMENDATIONS

Remove the First Productive Use Requirement for Biogas and Renewable Natural Gas

The proposal indicates that the Treasury and the IRS anticipate requiring biogas and RNG used to produce electricity or to produce a feedstock or fuel that is used to produce electricity to “originate from the first productive use of the relevant methane.”⁴ Although not clear in the proposed regulations for §§ 45Y and 48E, the first productive use requirement in the proposal related to the 45V Clean Hydrogen Production Tax Credit was based on the notion that increased demand for RNG, as a result of potential increased hydrogen demand due to the availability of the tax credit, will simply result in RNG moving from one market to another, requiring backfilling. It further assumes that such backfilling will be done using conventional natural gas. Supporting the comment submission of the Coalition for Renewable Natural Gas, for RNG, it has been found that biofuel incentives do not lead to mere shifting of resources: “[T]here is strong evidence that demand for clean resources either driven by procurement mandates or voluntary action leads to resource additions without formal additionality requirements.”⁵

There is a significant untapped potential supply to meet increased demand for RNG. According to the Coalition for Renewable Natural Gas, there are almost 500 RNG projects in various stages of construction and development in the United States. The vast majority of RNG is currently used in the transportation fuel market as CNG/LNG under mandated programs such as the RFS program and California’s Low Carbon Fuel Standard program. These other mandated programs remain in place and seek to increase use of renewable fuels.

As an alternative to the first productive use requirement in the Section 45V proposal, the RNG industry suggested that a five-year “check-in” be conducted after the start of the program. This aligns with timing prior to which addressable biogas availability and RNG projects in the industry’s project pipeline will ensure that any movement of RNG from one end use to another end use will be backfilled with new RNG production. It also provides GREET modelers with more time to see how the market actually operates and allow for continuing policy changes to take shape, as the RNG industry is really in its beginning stages as far as reaching its potential supply. BCSE supports this recommendation for the final regulations. Please see the comment submission from the Coalition for Renewable Natural Gas for more detailed information on this topic.

Clarify Lifecycle Assessment Modelling to Fully Account for the Emissions Impact of Biomass Power

Biomass electricity provides significant environmental benefits and net carbon neutrality (or negativity). Electricity derived from biomass residues is essential for promoting sustainable, low-carbon-intensity electricity. In addition, the domestic biomass energy industry provides a vital service to communities that are often rural and under-resourced, while supporting economic development and jobs.

⁴ 89 Fed. Reg. at 47,804.

⁵ Jeffrey Reed, et al., *Environmental Attribute Credits: Analysis of Program Design Features and Impacts*, The UC Irvine Clean Energy Institute, at 15 (2023), available at https://cleanenergy.uci.edu/PDF_White_Papers/Environmental_Attribute_Credits_Analysis_of_Program_Design_Features_and_Impacts_091523.pdf.



Supporting the comment submission of the American Biomass Energy Association, the final regulations should be updated to allow for LCA models to fully reflect the net emissions impact of biomass power. This includes accounting for avoided emissions, as discussed in the first section of this submission.

LCAs and both regulatory and voluntary renewable energy certification programs, utilizing book-and-claim accounting, confirm the carbon neutrality of biomass, thereby reinforcing its role in reducing GHG emissions and combating climate change. LCAs of renewable energy produced from biomass residues must conform with the established international standards under International Standard Organization (ISO) 14040, ISO 14044, and ISO 14064, which provide guidance on developing an LCA system boundary, reference baseline, and consideration of avoided and indirect emissions. These standards consider the biogenic carbon contained in biomass as carbon neutral because it is incorporated into the biomass via photosynthesis during biomass growth, which offsets the carbon released during energy production, making biomass a sustainable and environmentally friendly energy source.

Of note, the GREET model that is required for the LCA of biomass power under §§ 45Y and 48E relies on waste composition data to inform a bottom-up approach to estimating landfill methane production and emissions. Although this bottom-up approach is common in waste-related LCAs, several studies⁶ have demonstrated that this approach underestimates methane generation at landfills. Laboratory studies^{7,8} used to estimate methane emissions from landfilled waste often overlook fines (small particles) in the waste which contribute significantly to methane emissions. Addressing these shortcomings will provide a more accurate assessment of the environmental impact of landfilling biomass residues and the benefits of using waste for energy production. Additionally, diverting these residues from landfills saves valuable space in landfills and extends their useful lifetimes.

FUEL CELL AND HYDROGEN-RELATED RECOMMENDATIONS

Remove the Classification of Fuel Cells as Combustion and Gasification Facilities

The Section 48 ITC has been critical to growing the fuel cell sector in the United States and has helped to make it a world leader in the technology. The sector has boosted American manufacturing, and according to a recent McKinsey report, the fuel cell and hydrogen industry could support 700,000 U.S. jobs by 2030. In addition to their avoided carbon-emissions benefits, fuel cells avoid 99 percent of harmful emissions – nitrogen oxides (NO_x), sulfur oxides (SO_x), and other significant air emissions – while also avoiding the withdrawal of tens of billions of gallons of water annually, when compared against the traditional electric grid. Fuel cells also can reuse almost 99 percent of their product materials at the end of a stationary fuel cell’s useful life, through aggressive repair and reuse programs developed by the industry.

Affirming the comment submission of the Fuel Cell and Hydrogen Energy Association (FCHEA), BCSE recommends that the final regulations remove the erroneous classification of most fuel cells as C&G facilities.

⁶ Amini, H.R., D. Reinhart, A. Niskanen (2013) “Comparison of First Order Decay Modeled and Actual Field Measured Municipal Solid Waste Landfill Methane Data”, *Waste Management* 33:12, 2720 – 2728

⁷ U.S. EPA (2018) “Determination of As-Discarded Methane Potential in Residential and Commercial Municipal Solid Waste”, www.epa.gov/ord

⁸ Wang, X. et al. (2013) “Using Observed Data to Improve Estimated Methane Collection from Select U.S. Landfills”, *Environ. Sci. Technol.* 2013, 47, 3251-3257. <http://pubs.acs.org/doi/abs/10.1021/es304565m>



This classification would require these facilities to utilize a broad definition of lifecycle GHG emissions that accounts for the emissions related to the full scope of fuel and feedstock production (e.g., extraction, refinement), distribution, and consumption. Under the proposed categorization of fuel cells as C&G facilities, almost all new low-carbon fuel cell projects would no longer qualify for this critical tax incentive, regardless of technology or feedstock.

Further, consistent with the recommendation of FCHEA, BCSE does not support the C&G classification for hydrogen fuel cells. The proposed regulations do not offer a pathway for generating zero-emission hydrogen using grid-sourced electricity with the purchase of energy attribute certificates. Of note, the lack of any method to access a zero-GHG hydrogen pathway under the proposed regulations is inconsistent with the regulations proposed by Treasury and the IRS with respect to the treatment of hydrogen across various energy sectors under the 45V Clean Hydrogen Production Tax Credit.

Revise the Definition of Hydrogen Energy Storage Property to Remove the Energy End-Use Requirement

BCSE requests that the final regulations remove the energy only end-use requirement for hydrogen energy storage. Consistent with the BCSE's submission on the Section 48 ITC earlier this year,⁹ it is noted that hydrogen's unique properties make it a critically important element of the emerging new energy economy and our national decarbonization plans. Different from electricity, which must be converted to chemical energy in order to be stored over time (such as a lithium-ion battery), or mechanical energy (such as pumped hydro), hydrogen itself is a form of energy storage.

As the Clean Hydrogen Roadmap states, "hydrogen [is] a versatile energy carrier and chemical feedstock [that] can couple high-capacity factor firm power with variable generation to offer resiliency and energy storage [and] then be used as a fuel or feedstock for applications that lack competitive and efficient clean alternatives."¹⁰ The Clean Hydrogen Roadmap further observes that "hydrogen storage can decouple power generation from energy use and achieve lower costs compared to other technologies at scales of multiple days or weeks."¹¹

Pursuant to IRC section 48(c)(6)(A)(i), the energy storage technology definition recognizes that hydrogen is inherently a form of energy itself and eligible for the ITC. As energy storage property, there is no need to require that the stored energy must, when withdrawn, be used in an energy application.

The proposed regulation's "energy only" limitation states that "hydrogen energy storage property must store hydrogen that is solely used as energy and not for other purposes". As noted in the comments submitted by FCHEA, the imposition of such an end-use limitation for hydrogen energy storage property would make the ITC unworkable for most of the hydrogen sector today as well as for the foreseeable future. Further, the proposal does not place an end-use restriction on electricity stored within and discharged from batteries or other storage technologies; energy withdrawn from batteries may be used for any purpose without losing its eligibility status.

⁹ See BCSE comment submission:

<https://bcse.org/images/2024%20FPC/BCSE%20Comments%20on%20Sec%2048%20ITC%201%2022%2024%20FOR%20SUBMISSION.pdf>

¹⁰ See page 13 at Energy.gov; U.S. National Clean Hydrogen Strategy Roadmap;

<https://www.hydrogen.energy.gov/docs/hydrogenprogramlibraries/pdfs/us-national-clean-hydrogen-strategy-roadmap.pdf> (accessed January 8, 2024).

¹¹ *Id.* at page 54.



Finally, recordkeeping and documentation of stored hydrogen's end-use will cause an undue burden on taxpayers and the IRS due to the fungibility of hydrogen. Therefore, if the end-use limitation requirement is not removed, then Treasury should clarify that the end-use limitation requirement is not in perpetuity and concludes with the five-year recapture period. Finally, if the end-use limitation requirement is not removed, a dual use safe harbor should be established that permits a taxpayer to claim a reduced ITC when a portion of stored hydrogen is used for any other purpose than the currently limited use as energy.

Expand the List of Integral and Functionally Interdependent Equipment to Be More Inclusive of Existing and Future Hydrogen Energy Storage Property Technologies

BCSE supports the proposal's explicit inclusion of hydrogen compressors and underground hydrogen storage facilities as eligible hydrogen energy storage property under the ITC. These pieces of equipment are vital components in the activity of distributing, redistributing, and storing hydrogen. However, BCSE requests that the final regulations expand the list to be more inclusive of the various technologies required during the hydrogen energy storage process, including hydrogen liquefaction and related equipment, other equipment required to operate underground hydrogen storage property, and dedicated hydrogen distribution equipment such as pipelines located on the storage side of custody meters as well as dedicated hydrogen trailers and railcars. These pieces of equipment all meet the requirements outlined in the proposed regulations of being functionally interdependent and an integral part of the hydrogen storage property.

Expand the Lifecycle Analysis Exclusions to Include Hydrogen Conditioning and Distribution

The proposed regulations detail a range of activities and emissions sources that are excluded from the lifecycle analysis for both C&G facilities and non-C&G facilities. While Treasury and IRS detail a range of excluded emissions sources, it is notable that no examples are provided that relate to the hydrogen sector. BCSE requests that equitable treatment be provided for hydrogen and electricity in the list of exclusions. Specifically, emissions associated with conditioning hydrogen into a suitable form for use or sale should be excluded. For hydrogen, this would mean that any emissions associated with compression, liquefaction, or storage of the hydrogen should be excluded from this calculation. In addition, any emissions associated with the distribution of hydrogen to consumers should also be excluded.

HYDROPOWER-RELATED RECOMMENDATIONS

Calculate Incremental Production Based on Current Generating Capacity for Hydropower Facilities

The proposed regulations refer to "nameplate capacity" for purposes of calculating incremental production and further provide that "[t]axpayers must use modified or amended facility operating licenses or the ISO conditions to measure the maximum electrical generating output of a facility to determine its nameplate capacity."¹²

With regards to hydropower facilities, BCSE refers to the National Hydropower Association (NHA)'s submission that recommends that incremental production be based on current generating capacity. For these facilities, it is important that the baseline for measuring incremental production be based on the current generating capacity (not nameplate, licensed, or rated capacity) of the facility immediately prior to the addition of capacity.

¹² Prop. Reg. § 1.45Y-4(c)(1); Prop. Reg. § 1.48E-4(b)(1)



In the case of hydropower facilities, physical depreciation, degradation, and other naturally occurring factors may significantly reduce the maximum generating output and safe operating conditions of the facility over time when compared to the facility's original nameplate capacity.

SOLAR AND STORAGE-RELATED RECOMMENDATIONS

Amend the Rules to Allow a Single Credit for Hybrid Solar and Storage Systems

Affirming the comment submission made by the Solar Energy Industries Association (SEIA), under the current Section 48 ITC, and depending on the type of hybrid system and other factors, a taxpayer may claim a single credit in the case of a single energy property that includes both equipment to generate electricity from solar energy and energy storage technology. In addition, the IRS has proposed revisions to its Section 48 regulations that would continue to allow taxpayers to claim either a single credit for a hybrid solar and storage "energy project," or separate credits for the solar and the storage property, depending on whether certain conditions are satisfied.

As a result, it is common practice across the solar and storage industry today to flexibly design and claim single or separate credits for hybrid systems depending on a variety of factors, including whether the system is a residential rooftop solar with battery storage systems or a very large, ground-mount utility-scale solar with battery storage systems. IRS's current approach simply and efficiently supports the growing practice of adding energy storage to solar generating systems for a variety of use cases, including enabling more firm and dispatchable clean power, providing resilient backup power in the case of natural disasters, demand charge management, virtual power plants, and others.

Interpreting Section 48E(a)(1) for the first time in these proposed rules, however, IRS appears to have imposed a new construct for energy projects placed in service after 2024. To avoid disruptions in the market and better align the final rules with existing and proposed IRS regulations, the final regulations should clarify that even if qualified facilities and energy storage technology are separate categories under Section 48E, a taxpayer developing a hybrid system that incorporates both is permitted to file a single Form 3468. Without this modest allowance, taxpayers developing many smaller rooftop systems in particular will incur double the administrative burden associated with claiming the credit, which in turn will double the strain on IRS processing and examinations. This could increase costs for consumers and create inefficiencies in enforcement.

Specifically, IRS should revise proposed § 1.48E-2(b)(3) to clarify that "energy storage technology" may be considered an "integral part" of a qualified facility. This change will give effect in Section 48E rules to the plain meaning of "and" in Section 48E(a)(1). It will also align final rules with current guidance on the domestic content bonus credit and with the factorial test under the Section 48 NPRM.

WASTE ENERGY RECOVERY PROPERTY RECOMMENDATIONS

Recognize All WERP as Categorically Non-C&G Facilities

Under the proposed rule, waste energy recovery property (WERP), also known to industry as waste heat to power, is classified as non-C&G when the underlying process generating waste energy is powered by other non-C&G facilities. The final regulations should recognize all WERP applications as categorically non-



C&G, which is consistent with U.S. Department of Energy and National Laboratory analyses and findings. The final regulations should strike “that derives energy from a source described in paragraphs (c)(2)(i) through (vii) of this section” from proposed §1.45Y-5(c)(2)(viii).

ADDITIONAL RECOMMENDATIONS

Allow 48E Credit Progress Expenditures for Elective Payments

The proposed rule allows taxpayers to claim qualified progress expenditures for purposes of the 48E credit.¹³ In general, qualified progress expenditures can be claimed when a qualifying property will take at least two years to construct and will have a useful life of seven years or more.

IRA enacted provisions allowing applicable entities, including local governments, to utilize elective payment provisions for a list of applicable credits including the 48E Credit. The final regulation should allow 48E credit progress expenditures for elective payments.

Allow GREET Model to Utilize Updated Data Sets

The final rule should allow the GREET model to be updated and utilize updated data from the U.S. Environmental Protection Agency and other current published sources, to be sure the default inputs in the LCA model are up to date.

Thank you for the opportunity to share the views of the Business Council for Sustainable Energy. Please do not hesitate to contact BCSE President [Lisa Jacobson](#) with any questions.

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About the Business Council for Sustainable Energy

The [Business Council for Sustainable Energy \(BCSE\)](#) is a coalition of companies and trade associations that deploy clean energy and decarbonization solutions, with a sector focus on energy efficiency, natural gas, and renewable energy. Members include investor-owned utilities, public power, independent power producers, project developers, technology providers, equipment manufacturers, environmental and energy market service companies, and more. The coalition advocates at the federal level for policies that advance the deployment of a broad portfolio of clean energy technologies. Established in 1992, BCSE has also been an accredited observer of the UNFCCC climate negotiations for more than 30 years.

BCSE collaborates frequently with its small business division, the [Clean Energy Business Network \(CEBN\)](#), with convenes a network of more than 7,000 members across all 50 states. Collectively, BCSE and CEBN mobilize the full breadth of the clean energy economy, from innovators and small businesses to industry leaders and the trade associations that represent them.

¹³ See proposed rule §48E(d)(1)