

## **CALSTART Comments on Section 45W Credit for Qualified Commercial Clean Vehicles and Section 30C Alternative Fuel Vehicle Refueling Property Credit**

Dear Secretary Yellen,

**CALSTART** would like to thank the U.S. Department of Treasury (Treasury Department) and the Internal Revenue Service (IRS) for the opportunity to provide comments on Section 45 Credit for Qualified Commercial Clean Vehicles and Section 30C Alternative Fuel Vehicle Refueling Property Credit. The enclosed comments were prepared in collaboration with CALSTART's member companies under its Federal Policy Action Group.

### ***Background: Changing Transportation for Good***

CALSTART, headquartered in California, is a globally renowned 501(c)3 nonprofit organization dedicated to the advancement of zero emission vehicle and infrastructure technology. With a global consortium of 300 technology, government, industry, and community partners, CALSTART works to accelerate the commercialization and deployment of advanced technologies and solutions. For 30 years, CALSTART has been on the leading edge of creating innovative development and deployment partnerships that accelerate the commercialization and adoption of clean transportation technology. Through policy development, incentive program administration, and first-of-its-kind deployment partnerships, CALSTART has designed and managed programs that drive the market for clean transportation technologies needed to achieve critical greenhouse gas and criteria emission reduction goals.

### ***Industry Engagement for Commercial Vehicle and Infrastructure Considerations***

CALSTART formed the Federal Policy Action Group (PAG) as a collaborative partnership between industry members to evaluate policy and funding needs to advance the deployment of commercial medium- and heavy-duty zero-emission vehicles (ZEVs) and complimentary electric charging and hydrogen fueling infrastructure. Since supporting the enactment of the Bipartisan Infrastructure Law and the Inflation Reduction Act, the Federal PAG has met regularly to build consensus and provide feedback on implementation considerations of those measures and the additional U.S. policies that directly impact the commercialization and deployment of commercial ZEVs. Federal PAG membership includes commercial vehicle manufacturers, fleets, Electric Vehicle Service Providers (EVSPs) and infrastructure solution providers.

### ***Administrator for Commercial Vehicle and Infrastructure Incentives***

CALSTART has designed, developed, and administered the largest and most successful commercial incentive projects in the nation, creating and replicating a globally recognized standard as a best practice in incentive program design and implementation. Since 2009, CALSTART has managed the California Air Resources Board (CARB) [Hybrid and Zero Emission Truck and Bus Voucher Incentive Project \(HVIP\)](#) which has further inspired the development of CARB's [Clean Off-Road Equipment Voucher Incentive Project \(CORE\)](#), the New York State Energy and Research Development Authority's [New York Truck Voucher Incentive Project](#), and Illinois Department of Transportation's [Drive Clean Chicago](#). Combined, CALSTART

has administered over \$800 million in vehicle incentives resulting in more than 11,000 vehicles on the road or on order.

More recently, CALSTART has been awarded two contracts to manage first-of its-kind zero-emission infrastructure incentive projects for the California Energy Commission (CEC). The \$276 million [EnergIIZE Commercial Vehicles Project](#) is the nation's first commercial vehicle infrastructure incentive project. EnergIIZE provides incentives for zero-emission vehicle infrastructure for medium- and heavy-duty battery electric and hydrogen fuel cell vehicles. The project provides a user-friendly and streamlined process for participation by breaking down infrastructure deployment barriers through targeted incentives and specialized technical assistance. CALSTART is also managing the development of CEC's 'community-first' \$250 million Second Block Grant for Light-Duty Electric Vehicle Charger Incentive Projects that place equity at the core for inclusive project design and participation that directs infrastructure investments to low income, disadvantaged, and Tribal Nation communities.

CALSTART's position as a leader in developing and administering incentive projects for vehicles and infrastructure are the result and recognition of its extensive in-the-field experience, knowledge and technical expertise in commercial ZEV and infrastructure deployment. For each consumer-driven project, CALSTART led a stakeholder engagement process to inform project development considerations for successful implementation by collaborating with industry, government, utilities, and communities.

### **Section 45W Credit for Qualified Commercial Clean Vehicles**

CALSTART and members of its Federal PAG would like to provide comment on the section numbers listed below as described in the [Request for Information](#).

**(1) What factors should be considered, and what data sources should be relied on, to determine whether a vehicle is “comparable in size and use” for purposes of the comparable vehicle definition in § 45W(b)(3) to determine incremental cost?**

Comments:

- There are a variety of approaches to address this issue, each bringing with it some level of administrative burden for either the IRS, a supporting federal agency, or industry. Each also provides different levels of certainty and detail. It is further complicated by the fact that many Qualified Manufacturers produce only electric vehicles and therefore do not themselves produce a comparable conventionally powered vehicle.
- The simplest approach from an agency implementation perspective – **and the one recommended by most CALSTART industry partners** – would be to have each manufacturer who desires to offer a vehicle to receive credit under the bill to propose the base vehicle it would replace and provide the cost basis of that vehicle. In this approach manufacturers (including final-stage manufacturers and assemblers) would provide and certify what platform it considers “comparable in size and use” to its offering and provide a base cost of this platform. This would establish the basis for determining the incremental cost. Such reporting (and its inclusion in a registry) would need to be updated on a yearly

basis by manufacturers to IRS. This approach is similar to that which is followed by the Hybrid and Zero Emission Truck and Bus Voucher Incentive Project (HVIP) operated by the Air Resources Board in California.

- A simplified variant would be for manufacturers to self-certify that 30 percent of the incremental cost exceeds the category cap for the vehicle being offered. In the early years of the tax credit this is likely the case for most vehicles being offered. The self-certification would be updated by platform on a yearly basis.

**(2) What, if any, guidance is required to clarify the definition of mobile machinery for the purposes of § 45W(c)?**

Comments:

- Given the significant emission reduction opportunities from transitioning mobile machinery to electrified operations, CALSTART and its members recommend providing broad latitude in clarifying the definition of mobile machinery. Such definition should include all off-road equipment used to perform work at shipping, construction, agricultural, mining and other work sites, especially including cargo handling vehicles and equipment used at ports, terminals and multi-modal rail facilities. Importantly, it should also include on-road equipment where the value of the electrification is primarily in powering work tools while stationary, such as aerial boom trucks, digger-derricks, drill rigs and compressor equipment. This broader view best meets the intent of the legislation to speed the penetration and deployment of zero emission technology in all segments where it is applicable.

**(3) Section 45W(d)(1) provides that rules similar to the rules under § 30D(f) without regard to the income limitations in § 30D(f)(10) or the manufacturer’s suggested retail price limitations in § 30D(f)(11), apply for purposes of section 45W. The applicable rules in § 30D(f) are basis reduction, no double benefit, property used outside the United States not qualified, recapture, election not to take the credit, interaction with air quality and motor vehicle safety standards, and one credit per vehicle. What aspects of § 30D(f) should apply to the § 45W credit without modification and what aspects should be modified?**

Comments:

- The Section 30D(f) rules are generally transferable to commercial vehicles without comment except for the provision of providing the Vehicle Identification Number (VIN) for the clean vehicle. In the case of commercial mobile equipment and off-road equipment, which do not have VINs, providing the unique equipment serial number should be allowed as an alternative.

**(4) Section 45W(d)(3) provides that no § 45W credit is allowed with respect to any vehicle for which a credit was allowed under § 30D. What, if any, guidance is required to ensure that the allowance of credit under § 30D precludes the allowance of a credit under § 45W for the same vehicle?**

- Comments: All on-road vehicles have a unique Vehicle Identification Number (VIN) encoded on them. Using the VIN to track credits as part of the review will ensure that no vehicle can be “double counted”

across both credit structures. Maintaining a database of VINs that have been associated with a credit would easily allow IRS to grant or deny a credit.

- As pertains to mobile machinery, such equipment often (usually) does not have a VIN. However, all mobile machinery has a serial number which is unique to the specific manufacturer. Similar to requiring VINs for on-road vehicles, mobile machinery would be tracked against its unique manufacturer serial number.

**(5) The definition of qualified commercial clean vehicle in § 45W(c)(1) contains several requirements including that the vehicle be made by a qualified manufacturer as required by § 30D(d)(1)(C), as amended by the IRA. What, if any, guidance is necessary for qualified manufacturers to comply with the requirements of § 45W(c)(1)?**

Comments:

- The commercial vehicle manufacturing and distribution process is different in some aspects from that which is described for 30D in that there can be multiple stages of manufacturing and assembly because of the wide variety of applications, body types and work equipment added to the vehicle before final delivery to the user. As a result, CALSTART members recommend the use of slightly broader language to describe a qualified manufacturer to include intermediate stage and final stage manufacturers and assemblers. In any case, only one unique VIN or serial number would be finally eligible for any credit.

**(6) Section 45W(c)(3)(A) requires that a qualified commercial clean vehicle must either (i) satisfy the requirements under § 30B(b)(3)(A) and (B) for being a new qualified fuel cell motor vehicle, or (ii) be propelled to a significant extent by an electric motor which draws electricity from a battery that has a capacity of not less than 15 kilowatt hours (or, in the case of a vehicle which has a gross vehicle weight rating of less than 14,000 pounds, 7 kilowatt hours) and is capable of being recharged from an external source of electricity. How should “significant extent” be defined for this purpose?**

Comments:

- For fully electric on-road and off-road battery electric commercial vehicles this definition is sufficient.
- However, there are some complications which arise from this criteria, particularly for mobile machinery where the value of the electrification is not so much in being propelled a certain distance but in performing work with the electric power.
- Some guidance may be provided by referring to already existing language in statute. Title 26 U.S. Code Section 30B provides language describing a hybrid electric system at Section 30B(d)(3)(A)(i) and requires that 15 percent of the maximum available power be provided by the electric system. Such a definition could be useful to on road hybrids under the 45W provision to define significant extent. This would be more useful than setting an absolute requirement in range (distance traveled on electric), which would need to be established for each weight class and use and would be far more complicated.
- For off-road equipment and mobile machinery, using maximum available power could also be a valuable approach. However, given that work power is more important than traction power for

mobile machinery, it is recommended that a slight modification of the language to determine the percentage of power found at Section 30B(d)(3)(C)(ii) be adopted. Rather than basing the formula on storage maximum power, it could instead be based on the ratio between the electric motor maximum output to the full system output (combined power from electric motor plus power from an engine).

**(7) Is guidance necessary to clarify the meaning of the term “property of a character subject to an allowance for depreciation” for purposes of § 45W(c)(4)?**

Comments:

- Yes, it is necessary to provide clarification to the meaning of “property of a character subject to an allowance for depreciation.” It is important to define “property” as it relates to land use, physical infrastructure deployed on site, property ownership, and eligibility of tax credit for entities leasing land/property to develop, deploy and manage operation of alternative fueling infrastructure. In addition, it is necessary to distinguish “property” intended for use of light-, medium-, and/or heavy-duty vehicles or any combination thereof.
- Physical property (land use) should be defined as any public or private property, at a single address, purchased or put into service during the filing year for the tax credit, used solely for the purpose of charging or fueling a light-, medium- and/or heavy-duty clean fueled vehicle or any combination thereof.
- “Property” should be defined as related to ownership and/or use of for intended benefit of small fleets, small business owners, Tribes, and non-governmental organizations within a low-income or disadvantaged community.
- The guidance should provide flexibility around the definition of “property” to factor in geography of a site host (i.e., commercial fleet) to allow for considerations of costs associated with the placement of said alternative fueling infrastructure from the distance of the main power line (i.e., transformer) and the required costs associated with build out.
- The guidance should also provide definition and clarity to allow a property owner to take advantage of Tax Credit at different site locations they own or lease.

**(8) Please provide comments on any other terms in § 45W that may require definition or additional guidance.**

Comments:

- The 45W provisions are valuable on their own but are particularly valuable when a purchasing owner can combine them and take advantage of other incentive and assistance programs for the same vehicle at the state and federal level. CALSTART and its members recommend and request that the government provide maximum flexibility possible for users to combine the tax credit with other program funding so long as 45W tax credits are not double counted with 30D incentives.
- The 45W credit should be applied to the total cost before state/local/federal rebate is applied.
- Manufacturers who acquire and take ownership of qualifying vehicles for use in roles such as customer evaluation, loaner, or marketing vehicles should also be allowed to make use of the tax credit as they assist with educating and motivating customers to purchase clean vehicles.

- CALSTART asks that the 30D(g) language on transfer be included in guidance on 45W, and that flexibility be provided on the definition of the eligible tax payer, which in the case of a fleet means an operator of multiple vehicles, as well as in the case of entities operating transportation as a service (TaaS) offerings.

### **Section 30C, Alternative Fuel Vehicle Refueling Property Credit**

CALSTART and members of its Federal PAG would like to provide comment on section numbers 1, 2, 3, 4 and 6 as described in the [Request for Information](#).

#### **(1) Is guidance necessary to clarify the meaning of the term “property of a character subject to an allowance for depreciation” for purposes of § 30C?**

Comments:

- Yes, it is necessary to provide clarification to the meaning of “property of a character subject to an allowance for depreciation.” It is important to define “property” as it relates to land use, physical infrastructure deployed on site, property ownership, and eligibility of tax credit for entities leasing land/property to develop, deploy and manage operation of alternative fueling infrastructure. In addition, it is necessary to distinguish “property” intended for use of light-, medium-, and/or heavy-duty vehicles or any combination thereof.
- Physical property (land use) should be defined as any public or private property, at a single address, purchased or put into service during the filing year for the tax credit, used solely for the purpose of charging or fueling a light-, medium- and/or heavy-duty clean fueled vehicle or any combination thereof.
- “Property” should be defined as related to ownership and/or use of for intended benefit of small fleets, small business owners, Tribes, and non-governmental organizations within a low-income or disadvantaged community.
- The guidance should provide flexibility around the definition of “property” to factor in geography of a site host (i.e., commercial fleet) to allow for considerations of costs associated with the placement of said alternative fueling infrastructure from the distance of the main power line (i.e., transformer) and the required costs associated with build out.
- The guidance should also provide definition and clarity to allow a property owner to take advantage of Tax Credit at different site locations they own or lease.

#### **(2) Section 30C(b) provides that the credit is allowed with respect to any single item of qualified alternative fuel vehicle refueling property. How should “single item” be defined for this purpose?**

Comments:

- A “single item” should be defined as the charging dispenser, and that in cases where a single power cabinet has multiple dispensers, that each should count as a "single item" as long as it can simultaneously charge a vehicle. This would allow for the maximum number of single items, each eligible for the full capped amount of the credit. A “single item” should include the following needed

for commercial zero-emission vehicle infrastructure for electric charging and hydrogen refueling station equipment, utility upgrades, labor, maintenance, and operation:

#### Electric Charging Infrastructure

- The cost and installation of the utility switch gear and the internal components the meter mains and the circuit breakers.
- Utility cost for the request for new service.
- Trenching, back-fill, conduit, wiring and all associated labor (oat prevailing wage rates) and construction cost.
- Electric Vehicle Supply Equipment (EVSEs) including the level 2 and DC fast chargers.
- Concrete and/or asphalt for ingress and egress to the Electric Vehicle Charging site.
- All upgrades to the site for compliance with American with Disabilities Act and site striping per local building codes for ADA parking with EV Charging.
- Third-party contract fees for payment processing and the monthly service cost.
- Electric vehicle supply equipment (EVSE) networking and management software expenses
- Telecommunications equipment and charge management site controllers for managing EVSE hardware and other on-site Distributed Energy Resources (DERs)
- The 4G wireless contract fees and the monthly operational fees.
- Signage including Depart of Transportation (DOT) way-finding signs, price signs per NIST handbook 130 and parking signs per regional green building codes, placards per FHWA and other placards per Code of Federal Regulation's, title 16, part 309.
- Distributed Energy Resources (DER) such as onsite battery storage with or without solar panels, unless the taxpayer also claims a credit under IRC § 48 for on-site energy storage.
- Onsite power generation technology.
- Vehicle to Grid (V2G), Vehicle to Building (V2B) and all other forms for the Vehicle to Everything (V2X) technologies

#### Hydrogen Refueling Infrastructure

- Preliminary site design, fire management and suppression design and fire Marshall review (architecture zoning plans and site development usually take many iterations with the Authority Having Jurisdiction (AHJ)).
- Development of the Hydrogen Safety Plan requires a technical specialist and cannot be finished till the site design has been approved by the AHJ and fire Marshall.
- Utility cost for the request for new service.
- Hydrogen hardware including the high-pressure tank, dispenser, plumbing, high pressure pumps, cooling system and liquid refrigeration systems.
- Site preparation including trenching, back-fill, labor, and construction.
- All wiring, terminations, and installation cost at prevailing wage rates.
- Concrete and/or asphalt for ingress and egress to the hydrogen refueling site.
- Signage including DOT way-finding signs, price signs per NIST handbook 130 and parking signs per regional green building codes, placards per FHWA and other placards per Code of Federal Regulation's, title 16, part 309.

- Distributed Energy Resources (DER) like onsite battery storage with or without solar panels should be an eligible cost.
- Electrolyzer and onsite power generation technology.

**(3) Section 30C(c)(2) provides that property does not fail to be qualified alternative fuel vehicle refueling property solely because such property is capable of charging the battery of a motor vehicle propelled by electricity and allows discharging electricity from such battery to an electric load external to such motor vehicle. What factors and definitions should be considered in developing guidance for qualified alternative fuel vehicle refueling property that is also bidirectional charging equipment?**

Comments:

- Vehicle to Grid (V2G), Vehicle to Building (V2B) and all other forms for the Vehicle to Everything (V2X) technologies should be factored in as an “eligible cost” to support climate resiliency in the event of a power outage/shortage.
- The guidance should clarify requirements for use of V2G/V2B/V2X to ensure Tax Credit is prioritized for motor vehicles and not as a profit gain for selling energy back to the grid. Ensure reliability and uptime on the operation, use and maintenance of bidirectional charging equipment to. Encourage use of V2G/V2B/V2X technologies for site hosts/properties that serve Tribes, small businesses/commercial fleets, and low-income and disadvantaged communities most vulnerable to climate change impacts (weather events, fires, power outage/shortage).
- When developing guidance for bidirectional charging equipment, Treasury and the IRS should take an inclusive view of how exported power can be used either to offset the energy consumed on the customer side of the meter or to feed the energy directly back into the grid. There are examples of programs that demonstrate how customer-side (i.e., behind-the-meter/non grid interconnected) and grid-side (i.e., front-of-the-meter/ grid interconnected) approaches offer different value streams. Both strategies support both the grid and the site operator. Bidirectional charging projects to date--including EV school buses, EV battery repurposing, battery swapping stations and other bidirectional grid services applications--have used both grid and customer side strategies.
- In addition, Treasury and the IRS should consider other bidirectional-related costs when determining credit eligibility. This should include costs associated with the installation of the equipment and upfront costs, such as software and hardware. On-site storage that directly supports the charging of electric vehicles and can also be utilized in bidirectional charging should be explicitly covered.
- **(4) Section 30C(e)(3) requires qualified alternative fuel vehicle refueling property to be placed in service in an eligible census tract. What guidance, if any, is needed to clarify the definition of eligible census tract?**

Comments:

- How Treasury and the IRS define “eligible census tract” will have an enormous impact on how many individuals can access the tax credit for residential or commercial EV chargers reauthorized by the Inflation Reduction Act (IRA) Section 30C. The guidance should include a broad definition of an eligible census tract that would support and enable the following type of property/project scenarios:

- Site located within a low-income, disadvantaged, Tribal or rural location within one mile distance of a transportation corridor or major thoroughfare.
  - A warehouse or distribution center/or business (freight hub) location that falls between a rural and urban census tract. For example, it is important to not define boundaries that may prevent a warehouse within a rural area but lies within an urban census tract.
  - Urban-dense location within low-income or disadvantaged community that serves purpose of goods movement or commercial services.
  - Priority locations that demonstrate high non-attainment for air contaminants, heavy concentration of freight movement, and communities overburdened by transportation and other forms of air pollution (environmental justice communities).
- It should ensure that the approach used to define census tract or location eligible for Tax Credit does not restrict access to how communities, small businesses or small commercial ZEV fleets can use for a qualified alternative fuel vehicle refueling project.
  - The guidance should define “urban area” census tract under IRA §30C as: “census tracts in which no more than 25 percent of census blocks are classified as rural by the Census Bureau.”
  - The law makes census tracts designated as “urban” by the Census Bureau ineligible for the tax credit. However, the Census Bureau does not actually designate tracts one way or the other. It defines census blocks as “urban” or “rural” and there are on average approximately 100 blocks in a tract.
  - Accordingly, Treasury and the IRS must designate which tracts will be eligible based on the Census Bureau’s designation of blocks. The range of legally permissible outcomes is vast. For example, it may seem logical to define a tract as urban if more than half of its blocks are urban, but an analysis by the Natural Resources Defense Council (NRDC), provided by NRDC for the purpose of RFI Notice 2022-56, shows that this would unduly deny eligibility to tens of millions of people who live in rural census blocks that happen to be located in a census tract with many urban blocks. Additionally, to ensure all Americans living in rural areas are eligible, Treasury could define “urban” as a tract as one comprised entirely of urban blocks. This would ensure that no rural communities are left out, but could be seen as not sufficiently targeting the most underserved rural areas.
  - However, NRDC’s analysis found that, “a census tract in which no more than 25 percent of census blocks are classified as rural by the Census Bureau” would significantly increase eligibility relative to a 50 percent threshold. Such a definition is within the intent and spirit of the law to help low-income and rural communities, as it would prevent 58 million people from being unduly denied eligibility under the non-urban designation (including 2 million rural residents, 4 million people in poverty, 4 million Black people, and 6 million Hispanic/Latino people).
  - We urge Treasury and the IRS to establish a defensible definition that maximizes eligibility, consistent with the Administration’s guiding principle of “ensuring that as many eligible taxpayers as possible benefit from the incentives provided by the law while protecting against fraud and abuse.”

**(6) Please provide comments on any other terms in, or topics related to, § 30C that may require definition or guidance.**

Comments:

- Provide definition around the \$100K tax credit and how it applies to a property with scalable costs (small project (5 Level 2 chargers) vs. large project (20 DCFC 150kW chargers)).

- Provide clarity around a property's ability to apply for tax credit year to year to factor in scaling needs of infrastructure to support increased volumes of light-, medium-, and/or heavy-duty vehicles or any combination thereof.
- Provide clarity on the special rules for electric charging stations for certain vehicles with two or three wheels.
- Provide clarity on special rules that may be required for commercial medium- and heavy-duty vehicles.
- Ensure alignment of eligible costs for hardware, labor, operation, and maintenance aligns with those outlined under the National Electric Vehicle Infrastructure program and enables deployment of infrastructure for commercial medium- and heavy-duty ZEVs.
- Work with Joint Office to support effective education and outreach on 30C Tax Credit with priority on low-income, disadvantaged, and environmental justice communities.
- Provide guidance on workforce development around needed training on requirements, ADA compliance, prevailing wage, and other development programs to grow needed workforce.

We look forward to supporting the implementation of these historic provisions that will accelerate the transition to zero-emission transportation. Please contact Trisha Dellolacono, Federal Policy Director, CALSTART, at [tdelloiacono@calstart.org](mailto:tdelloiacono@calstart.org) with any questions.