



December 3, 2022

VIA The Federal eRulemaking Portal at [www.regulations.gov](http://www.regulations.gov)

Internal Revenue Service  
CC:PA:LPD:PR (Notice 2022-58)  
Room 5203  
P.O. Box 7604  
Ben Franklin Station  
Washington, DC 20044

**RE: Nikola Corporation Comments to the US Treasury on the Implementation of Energy Security and Climate Change Investments in the Inflation Reduction Act of 2022 – Notice 2022-58**

On behalf of Nikola Corporation (Nikola), we appreciate the opportunity to submit these comments regarding the historic investments included in the Inflation Reduction Act of 2022. Nikola is strongly supportive of this legislation that will bring down consumer energy costs, increase American energy security and substantially reduce greenhouse gas emissions across industry sectors, including heavy transportation.

Nikola Corporation is a global leader in zero-emissions transportation and energy supply and infrastructure solutions. As a designer and manufacturer of zero-emission battery-electric and hydrogen-electric vehicles, electric vehicle drivetrains, vehicle components, hydrogen production infrastructure, and hydrogen station infrastructure, Nikola is driven to revolutionize the economic and environmental impact of commerce as we know it today. The investments in the Inflation Reduction Act support every aspect of Nikola’s integrated truck and energy business model, from the development of zero-emissions vehicle (ZEV) technology through low-cost hydrogen production and infrastructure deployment.

**Comments on Notice IRS-2022-58**

.01 Credit for Production of Clean Hydrogen

(1) Clean Hydrogen. Section 45V provides a definition of the term “qualified clean hydrogen.” What, if any, guidance is needed to clarify the definition of qualified clean hydrogen?

*Nikola recommends that within a hydrogen production facility, each piece of generational equipment capable of producing clean hydrogen should be eligible to receive 10 years of production tax credit. Under this recommendation, the clean hydrogen production tax credit incentivizes (i) the addition of additional generational equipment on an existing facility footprint and (ii) the replacement of degraded equipment that has reached the end of its operational lifecycle.*

*Using an example of a clean hydrogen production facility that utilizes electrolysis:*

- (i) *An initial plant design that utilizes a single modular electrolyzer could be incentivized by market demand to add additional modular electrolyzers to the facility footprint. Each additional electrolyzer should receive 10 years of production tax credit from the date it is placed in service.*
- (ii) *When proton membrane stacks reach the end of their operational lifecycle – estimated at 80,000 hours – they should be replaced with new electrolyzers. Similar to the practice of repowering wind facilities, hydrogen facilities should be incentivized to implement new and improved electrolyzer technologies and should be granted 10 years of production tax credit from the date in the new equipment is placed into service. This practice ensures that retrofitted facilities receive the same credit value and remain competitive with newly constructed facilities.*

## (2) Alignment with the Clean Hydrogen Production Standard

*Nikola supports alignment between the CHPS and § 45V crediting ‘well-to-gate’ boundaries. Per DOE recommendation, Nikola has submitted comments on the draft guidance of the CHPS. Please refer to the Appendix for Nikola’s comments regarding the CHPS. We would like to specifically emphasize the recommendation of implementing a market-based system to allow for the use of renewable energy credits for the determination of the emissions intensity of electricity supplied to a hydrogen production facility.*

## (4) Recordkeeping and Reporting

(e) If a taxpayer serves as both the clean hydrogen producer and the clean hydrogen user, rather than selling to an intermediary third party, what verification process should be put in place (for example, amount of clean hydrogen utilized and guarantee of emissions or use of clean electricity) to demonstrate that the production of clean hydrogen meets the requirements for the § 45V credit?

*Nikola recommends that additional clarification be provided in the scenario where a taxpayer (i) produces hydrogen, (ii) stores the gaseous hydrogen or liquifies the hydrogen prior to storage, and (iii) consumes the hydrogen. Tracking the chain of custody through each of these processes is essential to be sure that the hydrogen producer meets the requirements of the § 45V credit while ensuring the eligibility of the storage facility to receive the investment tax credit under § 48. A proper system that tracks this chain of custody evidences that each transaction satisfies the requirement of selling to an ‘unrelated person’ and creates opportunities to maximize credit opportunities, without double counting, throughout the value chain.*

## (5) Coordinating Rules

### (c) Coordination with § 45Q

*We recommend clarifying guidance regarding the coordination with the credit for carbon oxide sequestration under § 45Q. As currently written, “[n]o credit shall be allowed under this section with respect to any qualified clean hydrogen produced at a facility which includes carbon capture equipment for which a credit is allowed to any taxpayer under section 45Q...”. We understand the requirement that prevents a facility from claiming both 45V and 45Q, but we believe the facility*



*should have an option to claim either credit, even when the facility has installed carbon capture equipment.*

Nikola appreciates the opportunity to provide these comments.

Respectfully,

Alana Langdon  
Head, Government Affairs and Global Policy  
Nikola Corporation



## Appendix

November 14, 2022

VIA E-mail: cleanh2standard@ee.doe.gov

US Department of Energy  
James V. Forrestal Building  
1000 Independence Avenue Southwest  
Washington, D.C. 20585

### **RE: Nikola Corporation Comments on DOE's Initial Proposed Clean Hydrogen Production Standard (CHPS)**

On behalf of Nikola Corporation (Nikola), we appreciate the opportunity to submit these comments to the Department of Energy (DOE) in support of the Clean Hydrogen Production Standard (CHPS).

Nikola Corporation is a global leader in zero-emissions transportation and energy supply and infrastructure solutions. As a designer and manufacturer of zero-emission battery-electric and hydrogen-electric vehicles, electric vehicle drivetrains, vehicle components, hydrogen production infrastructure, and hydrogen station infrastructure, Nikola is driven to revolutionize the economic and environmental impact of commerce as we know it today. Nikola supports the DOE's commitment to create and strengthen technologically and economically feasible production, processing, delivery, storage, and use of clean hydrogen from diverse sources.

### **Nikola supports the establishment of a target for lifecycle greenhouse gas emissions of 4.0 kgCO<sub>2</sub>e/kgH<sub>2</sub>, creating consistency with the Inflation Reduction Act's definition of "qualified clean hydrogen".**

Nikola is very encouraged by the shift away from a focus on hydrogen production technology as the determining factor of what determines 'clean' hydrogen. We support a focus on a scientific benchmark of lifecycle determined carbon intensity as the determining factor. 4.0 kgCO<sub>2</sub>e/kgH<sub>2</sub> is achievable through many production technologies outlined in the draft guidance, such as electrolysis with grid electricity and/or renewables, steam methane reformation with carbon capture and sequestration, and pyrolysis.

Regarding the lifecycle system boundary for hydrogen production, we support the language as written in footnote 11 of the draft guidance, however the reference to 'end use' can be misleading if the follow up sentence is omitted. We recommend replacing "end use" with "post-hydrogen production" for consistency throughout the footnote:

*In the CHPS, the lifecycle target corresponds to a system boundary that terminates at the point at which hydrogen is delivered for ~~end use~~ **post-hydrogen production**. This system boundary includes CCS even if sequestration is not at the site of production, but does not include other **post-hydrogen production** steps such as potential liquefaction, compression, dispensing into vehicles, etc., consistent with the intent of a hydrogen production standard.*



Specifically, Nikola envisions a future in which high volume transport of liquid hydrogen in tanker trailers connects clean hydrogen production sources to end use. Liquefaction of gaseous hydrogen for tanker transport is advantageous due to the ability to transport a significantly larger molecular quantity of hydrogen per trailer when compared to tube trailers. For the avoidance of doubt, we support the exclusion of liquefaction and the other items mentioned in footnote 11 from the lifecycle boundary.

Nikola supports the alignment of a consistent definition of “qualified clean hydrogen” with the Inflation Reduction Act, and in particular with provision 45V. It is imperative that these two definitions are aligned to form a standard that hydrogen project developers must meet to qualify for production tax credits and DOE funding opportunities.

**(3)(c) Should renewable energy credits, power purchase agreements, or other market structures be allowable in characterizing the intensity of electricity emissions for hydrogen production? Should any requirements be placed on these instruments if they are allowed to be accounted for as a source of clean electricity (e.g. restrictions on time of generation, time of use, or regional considerations)? What are the pros and cons of allowing different schemes? How should these instruments be structured (e.g. time of generation, time of use, or regional considerations) if they are allowed for use?**

Nikola recommends a market-based method for the determination of the emissions intensity of electricity supplied to a hydrogen production facility. As referenced by the International Partnership for Hydrogen in the Economy’s (IPHE’s) Hydrogen Production Analysis Task Force (H2PATF), contractual arrangements between the purchaser and provider of renewable electricity should be considered for the reduction of carbon intensity for hydrogen produced via electrolysis.

We recommend that this market-based approach also permit contractual arrangements for renewable natural gas for the reduction of carbon intensity for hydrogen produced from fossil natural gas feedstock.

The use of these market-based mechanisms should not be restricted by time of generation, time of use or any regional considerations. A streamlined framework that is not restricted by these requirements allows for the rapid development of clean hydrogen production facilities without the burden of near continuous monitoring of activity across the industry.

## **Conclusion**

Nikola appreciates the opportunity to provide these comments. Please feel free to contact us with any questions or comments you may have regarding this submission.

Respectfully,

Alana Langdon  
Head, Government Affairs and Global Policy  
Nikola Corporation