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February 26, 2024

Lily Batchelder
Assistant Secretary, Tax Policy
U.S. Treasury Department
1500 Pennsylvania Avenue NW
Washington, DC 20220

Douglas W. O'Donnell,
Deputy Commissioner for Services and Enforcement.
Internal Revenue Service
1111 Constitution Avenue NW
Washington, DC 20224

Submission Via Federal eRulemaking Portal
https://www.regulations.gov/document/IRS-2023-0066-0001

Re: Comments of Nikola Corporation on the Notice of Proposed Rulemaking for the Section 45V Credit for Production of Clean Hydrogen, Election to Treat Clean Hydrogen Production Facilities as Energy Property (REG-117631-23)

Dear Assistant Secretary Batchelder and Deputy Commissioner O'Donnell:

On behalf of Nikola Corporation (Nikola), we appreciate the opportunity to submit these comments on the Notice of Proposed Rulemaking (NOPR) relating to the section 45V credit for the production of clean hydrogen (Clean Hydrogen PTC). Nikola appreciates the work of the staff at the Department of the Treasury and the Internal Revenue Service on these proposed regulations.

By way of background, Nikola Corporation is a designer and manufacturer of zero-tailpipe emission battery electric vehicles (BEV) and hydrogen fuel cell electric vehicles (FCEV), electric vehicle drivetrains, vehicle components, and hydrogen infrastructure. Nikola, as a company that specializes in Class 8 trucks, is a pioneer among original equipment manufacturers (OEMs) producing zero-emission vehicles as well as introducing fueling assets that are available today to help support these newer technologies. Last year, Nikola formally highlighted its integrated hydrogen solution and introduced HYLA, its hydrogen infrastructure-focused energy brand. HYLA focuses on developing the hydrogen fueling ecosystem, which includes hydrogen production and hydrogen procurement, hydrogen distribution, and hydrogen storage and dispensing. HYLA aims to build a network of open-access, heavy-duty vehicle hydrogen refueling stations to support hydrogen fuel cell trucks from any OEM using industry-standard refueling equipment. Nikola also expects that it, along with other heavy-duty FCEV OEMs, will comprise a significant component of demand – especially early on – for the emerging hydrogen trucking economy.

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Nikola applauds the Biden administration for its recognition that clean hydrogen will play an important role in decarbonization. Historic investment in the clean energy economy through the CHIPS and Science Act, the Bipartisan Infrastructure Law, and the Inflation Reduction Act (IRA) have catalyzed substantial private sector investment in projects related to the production, transport, storage, and use of hydrogen. Historically hard-to-decarbonize industries such as heavy-duty transportation stand to achieve significant reductions in emissions if the United States succeeds in creating a robust domestic hydrogen industry capable of supplying reliable, affordable, and low-emissions fuel. Nikola understands that hourly matching will be required to accurately account for emissions from grid-connected electrolyzers in the 'end state' of the hydrogen economy. However, the current proposed rules for the clean hydrogen PTC create an onerous regulatory framework that will stifle the momentum created by the aforementioned pieces of legislation. This framework could greatly reduce the number of private sector projects that move forward and unintentionally decelerate emission reductions in the heavy-duty transportation sector.

Upon passage of the Inflation Reduction Act, Nikola and many others in the hydrogen space praised the creation of the clean hydrogen PTC – allowing us to get on the field and play to win. As enacted in the IRA, the clean hydrogen PTC would incentivize investment in diverse hydrogen production technologies and ultimately make clean hydrogen more available and affordable. Nikola believes that this would greatly benefit the zero-emission truck industry by providing a cost-effective and sustainable fuel source, accelerating the adoption of FCEVs and reducing carbon emissions in the transportation sector.

As a nascent technology, FCEVs face many of the same hurdles that battery electric vehicles did when they first entered the market. BEVs have benefitted from a mix of favorable policies and public investments that has encouraged private sector innovation and allowed the electric vehicle industry to scale and achieve a growing market share despite the historically higher emissions of grid supplied electricity for charging. Electricity generation from renewable energy sources has grown rapidly in the U.S. as renewable capacity has been added to the grid over several years, allowing for an incremental progression in the positive improvement of the carbon impact of grid fuel. When coupled with electrolytic hydrogen production, FCEVs, like BEVs, continue to deliver the benefits of incremental improvements in grid emissions to the transportation sector over the course of the vehicle's life. Nikola questions if the requirements in the NOPR will subject the emerging FCEV industry to burdensome regulations on incentives for infrastructure and fuel that the BEV industry was not hindered by in its early stages.

Nikola believes that the proposed rules are not congruent with the goals of the Biden administration, Congress, and the United States Department of Energy to work towards deep decarbonization in the near future. Imposing requirements as laid out in the NOPR will result in delayed and diminished development of clean hydrogen regardless of production method, which will impair the ability of pioneers such as Nikola to address emissions from hard-to-abate industries. Nikola urges the Department of the Treasury to consider relaxing or removing key provisions of the proposed rules to allow 45V to contribute to greater and more rapid overall emissions reductions. We are unable to capitalize on our position as leaders – as a company and more importantly as a country.

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Three Pillars

The NOPR lays out three main "pillars" for producers of clean hydrogen to accurately describe their emissions, regardless of production technology – Incrementality, Temporal Matching, and Regionality. While Nikola acknowledges the importance of the three pillars to accurately characterize emissions from hydrogen production, we also believe that the regulations as proposed will result in an underdeveloped American clean hydrogen industry, which will in turn delay emissions reductions in hard-to-decarbonize industries awaiting easily accessible, low-cost hydrogen.

Applied consistently, the three pillars will impact different hydrogen production methods differently. For example, electrolyzer economics will be principally impacted by the decision on when to impose hourly matching requirements for the use of renewable energy certificates (RECs), while projects which use hydrocarbon as a feedstock will be less impacted by time matching. Those projects, on the other hand, will be paying close attention to how additionality will be applied to their feedstocks, like renewable natural gas (RNG).

However, for all production methods, the rulemaking as proposed and lengthy rulemaking process itself present obstacles to reaching final investment decision (FID) on hydrogen production projects. These delays and uncertainty, despite being unevenly applied across a range of potential projects utilizing a variety of production methods, all impact Nikola and other likely consumers of clean hydrogen negatively by making planned offtakes riskier and, on average, more expensive and higher emissions than expected when the IRA was passed.

<u>Incrementality:</u>

For electrolyzers, the current NOPR allows hydrogen producers to only purchase EACs from new sources of clean power, i.e., projects that begin commercial operations within three years of a hydrogen facility being placed into service. The proposed rule also allows for certain newly added capacity or uprates to qualify.

For hydrocarbon feedstocks, the NOPR lays out an approach that would define a limited quantity of RNG as "eligible" for clean hydrogen production under 45V. Appropriately defining this boundary will be essential to balancing the competitiveness of hydrogen production methods and achieving emissions reductions, but it is also crucial that regulations granting certainty to project developers using a variety of production technologies are promulgated as quickly and as practically possible to allow projects to proceed.

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Temporal Matching:

The temporal matching requirement in the NOPR allows for annual matching of EACs until 2028, after which it will move to an hourly basis. Presently, the technology for hourly tracking does not exist at scale and may not be available at scale by 2028. If Treasury does move forward with hourly temporal matching requirements, a much longer timeline will likely be needed to ensure the feasibility and availability of hourly matching instruments.

For the majority of electrolyzer projects yet to reach FID, beginning operations in 2027 would be an ambitious target even if they reached FID today, leaving little actual 'runway' of annual matching time during which to operate. A 2028 switch to hourly matching essentially forces electrolyzer developers to plan for hourly matching immediately, or even to simply ignore the 45V credit completely when meeting the demands of the credit are infeasible or uneconomic.

Additionally, these time matching requirements are far more aggressive than other regions such as the European Union, who will allow monthly matching until 2030. American projects also only have the 10-year 45V crediting period to count on; uncertainty as to how many production years will be impacted by the uneconomic price or unavailability of hourly-matched electricity will be relatively more important to them than under a different incentive structure without the 10-year limit. This could be a disadvantage to the United States' hydrogen industry's competitiveness on a global scale.

Hydrogen production processes that primarily utilize hydrocarbon feedstocks will be less impacted by time matching requirements for process inputs due to the ease and low cost with which those inputs can typically be stored at the production site.

Treasury should strongly consider "grandfathering" facilities placed in service before a certain date, and up to a certain total capacity, to be able to match EACs on an annual basis for the full 10-year duration of the facility's 45V eligibility. Early movers in the industry who are prepared to take the financial risk to develop these facilities should be allowed to take advantage of annual matching for the 10-year lifetime of the clean hydrogen PTC and, in many cases, likely need the kind of certainty granted by a "grandfathering" regime or similar to reach FID without a clear path to hourly matching. "Grandfathering" can be key to unlocking cost learning that will allow the American electrolyzer industry to get off the ground, but that will be much less likely with strict hourly matching requirements starting in 2028. Treasury could also possibly set either an investment, beginning of construction, or operating deadline for grandfathering, which would further incentivize early investment in clean hydrogen production. As with the definition of eligible RNG discussed above, the decision on how to handle a transition to hourly matching for grid-connected electrolyzers will define how the American electrolyzer and hydrogen production industries develop in the decade to come.

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Regionality:

The regionality requirements in the NOPR, requiring EACs to be sourced within the same region as the hydrogen producer as dictated by the United States Department of Energy 2023 National Transmission Needs Study (NTNS) creates some issues. For example, GREET model regions and the regions identified in the NTNS are disconnected, which creates misalignment. Additionally, some regions are better suited to production of clean hydrogen rather than consumption, creating an imbalance which could strongly favor some regions over others.

Other Issues:

For electrolyzer project developers, the lack of a clearly defined CI averaging period creates drastic uncertainty for their project economics. Under an hourly averaging regime, a grid-connected electrolyzer could distinguish between credit generation for periods when zero-emissions electricity was available and when grid electricity was utilized to enable credit generation in the highest-value CI tier for zero-emissions hours. If the averaging period is annual, on the other hand, then a nominal 60%/40% grid/renewable split would likely push most projects' average CI completely out of the credit-generating range, as opposed to being able to generate $3/kg for the 40% of the time when renewable electricity is available. Clear definition on how CI will be averaged and reported is crucial to understanding the economics of electrolytic hydrogen production.

Lack of clarity around the Provisional Emissions Rate process and uncertainty about updated 45V-GREET versions and their contents have also created a difficult environment for investment in hydrogen production, especially production via novel or emerging methods. Nikola recommends that developers be able to utilize the version of 45V-GREET that applied in the first year for which they claim the 45V credit for a given facility for the entire 10-year period of 45V eligibility for that facility. This, along with timely release of rules surrounding the PER process from the Department of Energy, will enable developers of all types of hydrogen production projects to move forward on their investments with certainty.

Clean hydrogen has the potential to be a paradigm-shifting force in the effort to meet the United States' energy and decarbonization targets. The clean hydrogen PTC as initially outlined in the IRA positioned the United States to be a global leader in clean hydrogen, sparked a great deal of interest in private sector investment and had the potential to create thousands of new jobs in clean energy. The rules as proposed, would cause Nikola to delay investment in hydrogen production of its own and will, presumably, do the same for other developers. From the perspective of a clean hydrogen consumer, this will increase the risk associated with online dates, increase supply prices, and delay CI improvements of Nikola's portfolio of hydrogen offtakes that would have been achieved as new projects come online. They would also put the United States in a relatively worse competitive position in the emerging global hydrogen economy.

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Nikola applauds the Department of Treasury and the Internal Revenue Service's efforts to ensure that emissions from hydrogen production of all methods are accurately characterized. However, the emissions reductions enabled by a robust domestic hydrogen production industry are outsized in comparison to the additional emissions associated with more relaxed application of the three pillars in the very short term, especially to a limited number of early-stage production projects. For this reason, Nikola also strongly urges Treasury to consider relaxing or removing several key requirements proposed by the NOPR to ensure that a strong domestic clean hydrogen industry becomes a reality - and that the U.S., and U.S.-based companies such as Nikola are able to pioneer clean technologies improving quality of life for all.

Nikola appreciates the opportunity to provide these comments.

Respectfully,

Alexia Bednarz,

Team Lead, Sustainability and Government Affairs

Nikola Corporation