Hyundai Motor Group
Comments on Proposed Rule by the Internal Revenue Service
Federal Document 2023-28359

Hyundai Motor Company ("**HMC**"), which manufactures Hyundai and Genesis brand automobiles, and Kia Corporation ("**Kia**"; collectively with HMC, "**Hyundai Motor Group**" or "**HMG**" or "**We**") hereby submit comments on the proposed "Section 45V Credit for Production of Clean Hydrogen; Section 48(a)(15) Election To Treat Clean Hydrogen Production Facilities as Energy Property" issued by the Department of the Treasury ("**Treasury**") and the Internal Revenue Service ("**IRS**") on December 26, 2023 ("**Proposed Rule**").

Section 45V of the Internal Revenue Code ("**IRC**") (26 U.S.C. 45V), as amended by the Inflation Reduction Act of 2022 ("**IRA**"), provides rules with respect to the clean hydrogen production credit. To provide further guidance and clarity on the clean hydrogen production credit, the Treasury and IRS issued the Proposed Rule.

We welcome the issuance of the Proposed Rule, and hereby provide our comments and suggestions for the clarification thereof.

01 Comments on the "qualifying EAC requirements"

According to § 1.45V–4(d)(3) of the Proposed Rule, only eligible EACs that satisfy all three requirements of "incrementality," "temporal matching," and "deliverability" are considered as "qualifying EACs." Among these three requirements, we would like to provide comments on the "incrementality" and "temporal matching" requirements.

(1) "Incrementality" requirement

§ 1.45V–4(d)(3)(i) of the Proposed Rule states that an EAC meets the incrementality requirement "if the electricity generation facility that produced the unit of electricity to which the EAC relates has a COD that is no more than 36 months before the hydrogen production facility for which the EAC is retired was placed in service" or "if the electricity represented by the EAC is produced by an electricity generating facility that had an uprate no more than 36 months before the hydrogen production facility with respect to which the EAC is retired was placed in service and such electricity is part of such electricity generating facility's uprated production".

While this requirement might lead to an increase in the number of clean hydrogen production facilities in the short term, it may not necessarily contribute to a long-term clean

hydrogen production because of the following reasons. First, the current clean energy system faces an interconnection bottleneck, and until this issue is addressed, the expansion of clean hydrogen production is not expected to bring benefits to the users. Instead, it would impose additional costs on clean hydrogen producers, and impede the progress of clean hydrogen development. Moreover, considering that the taxpayers may favor Section 45Q credit over Section 45V credit, hydrogen production based on fossil fuels with CCS (carbon capture and storage) may become more appealing to the taxpayers.

To establish a strong, robust and stable clean hydrogen production system, a more gradual development approach is needed. However, the incrementality requirement outlined in the Proposed Rule leans towards the rapid expansion of clean hydrogen production, especially with an emphasis on increasing the number of production facilities. As previously highlighted by the Treasury and the IRS in the preamble of the Proposed Rule, we suggest that the Treasury and IRS ease the incrementality requirement taking into account alternative circumstances under which EACs may be deemed to have satisfied the incrementality requirement.

(2) "Temporal matching" requirement

§ 1.45V–4(d)(3)(ii)(B) of the Proposed Rule provides a transition rule by stating that "[f]or EACs that represent electricity generated before January 1, 2028, the EAC will be considered generated in the same hour that the taxpayer's hydrogen production facility uses electricity to produce hydrogen as required in paragraph (d)(3)(ii)(A) of this section if the electricity represented by the EAC is generated in the same calendar year that the taxpayer's hydrogen production facility uses electricity to produce hydrogen." According to the preamble of the Proposed Rule, this transition rule is being introduced to provide sufficient time for the EAC market to develop the hourly tracking capability.

As the Treasury and IRS notes, it requires electricity generating entities time to develop EAC systems that are capable of tracking electricity that they generate on an hourly basis, and less than 4 years may be insufficient to fulfill such purpose. Further, even after electricity generators introduce EAC systems capable of tracking electricity generation amount on an hourly basis, they need additional time to operate and adapt to the new EAC system.

The European Union has also introduced a "temporal correlation" provision in the EU Delegated Acts on Renewable Fuels of Non-Biological Origin (RFNBO), which is similar to the temporal matching requirement of the Proposed Rule. However, due to the difficulties to

overcome the technical barrier in measuring the amount of electricity generated on an hourly basis and due to the lack of infrastructure in producing hydrogen gas, the EU has postponed the application of the temporal correlation condition requiring an hourly tracking of the electricity generated until January 1, 2030. Moreover, the European Commission is scheduled to submit a report on the impact of temporal correlation condition to the European Parliament by July 1, 2028, and the European Parliament may decide to remove the temporal correlation condition after they review the outcome of the report.

Considering the above, there is a possibility that an EAC system that can track the electricity generation amount every hour cannot be developed by January 1, 2028. Therefore, we ask that the Treasury and IRS allow additional time for the EAC market participants to develop and adopt qualifying systems capable of tracking the electricity production amount on an hourly basis in an effort to meet the temporal matching requirement.

02 Comments on the definition of "facility"

§ 1.45V–1(a)(7) of the Proposed Rule defines the term "facility" for the qualified clean hydrogen facility in 26 USC 45V(c)(3) and paragraph (a)(10) of § 1.45V–1 as "a single production line that is used to produce qualified clean hydrogen" and the "single production line" includes all components that function interdependently.

We respectfully request that the Treasury or IRS clarify whether a facility used to produce RNG and that used to produce qualified clean hydrogen in the below scenario are deemed not to function interdependently.

Scenario: The taxpayer produces renewable natural gas (RNG) using the facility employing carbon capture equipment, and uses this RNG and puts it into additional set of facilities, having another carbon capture equipment as its component, to produce qualified clean hydrogen.

In the above scenario, an important point is that RNG is produced with a set of facilities having carbon capture equipment as its component, and a qualified clean hydrogen is produced with RNG using additional set of facilities having a different carbon capture equipment as its component. In this scenario, our view is that not the set of facilities for producing RNG but only the set of facilities engaged in producing qualified clean hydrogen should be considered as a qualified clean hydrogen facility. We think this is appropriate because the facilities used to produce RNG and that used to produce qualified clean hydrogen cannot be deemed to function

interdependently considering following facts: (i) RNG is just one of the inputs that can be used to produce qualified clean hydrogen, and (ii) the usage of RNG is not limited to producing qualified clean hydrogen. Consequently, in the above scenario, the taxpayer is eligible to enjoy both 45Q credit, which is based upon the carbon capture equipment used to produce RNG, and 45V credit, which is based upon the qualified clean hydrogen produced.

We urge the Treasury or IRS to clarify whether the above understanding on the Proposed Rule complies with its intent.

03 Inclusion of additional hydrogen pathways in 45VH2-GREET

Proposed Rule § 1.45V–4(b) requires the taxpayers claiming Section 45V credit to gauge the lifecycle GHG emissions rate of the hydrogen produced using the 'most recent GREET model', which refers to the '45VH2-GREET'. As of the publication date of the Proposed Rule, there are various pathways to generate clean hydrogen. However, only the pathways using the landfill gas and biomass (corn stover and logging residue) are included in the 45VH2-GREET 2023 model. Nevertheless, there are other pathways recognized in other versions of the GREET, through which clean hydrogen can be manufactured such as (i) reformation of RNG from municipal solid waste diverted from landfills and (ii) reformation of RNG from the food waste diverted from landfills.

In order to meet the congressional purpose of Section 45V and provide incentives to increase the production amount of clean hydrogen, we urge the Treasury and IRS not to limit the pathways for producing hydrogen to claim Section 45V credit, and allow other pathways in addition to those identified in the 45VH2-GREET model. There are no reasons to exclude other pathways in producing the clean hydrogen for the purpose of Section 45V credit as long as they do not harm the environment and add value to increased clean hydrogen production.

04 Announce on detailed regulations concerning Section 45Q

According to the Proposed Rule § 1.45V–2(a), a taxpayer who produces qualified clean hydrogen at a hydrogen production facility, where carbon capture equipment that has received the Section 45Q credit is installed, cannot receive the Section 45V credit for the produced qualified clean hydrogen.

Consequently, when planning business projects related to hydrogen production, companies must consider not only the Section 45V credit but also the contents related to the Section 45Q credit. Although the Proposed Rule concerning Section 45V has been announced, detailed regulations regarding Section 45Q have not yet been released. We request that regulations concerning Section 45Q be announced as soon as possible.

Conclusion

HMG is committed to investing in the resource-circulating hydrogen production technology, including Waste-to-Hydrogen (W2H) and green hydrogen. As announced, Hyundai Motor's Fuel Cell System ("**HTWO**"), which is its fuel cell system brand, will expand into hydrogen value chain business brand, and introduce a 'HTWO Grid' solution that spans production, storage, transportation and utilization. Also, HMG has successfully demonstrated a complete resource-circulating hydrogen production technology that utilizes waste, ensuring high purity and current density of hydrogen. HMG's green hydrogen production plans to involve mass-producing a megawatt-scale polymer electrolyte membrane (PEM) electrolyzers in the coming years. Furthermore, HMG aims to release successor models to the NEXO, the hydrogen-powered SUV, by next year and, in the long term, introduce a variety of hydrogen mobility solutions. As such, HMG's hydrogen solutions transcend passenger cars, trucks and buses and include trams, special equipment, vessels, power generators and advanced air mobility. HMG has also set an ambitious goal to significantly increase annual hydrogen consumption by end-users from 13,000 tons last year to 3 million tons by 2035.

The Proposed Rule is very critical in completing these tasks in the United States and will have a great impact on our business. For these reasons, we kindly ask for your clarification on the issues outlined in this paper.

Thank you for the opportunity to provide the Treasury and IRS with these comments.

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