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POSCO HOLDINGS

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COMMENT BY POSCO HOLDINGS

1. Background

POSCO Holdings focuses its business on industries that are key to a sustainable and decarbonized future, including hydrogen production, which is essential for making green steel. In fact, POSCO, leading the development of green steelmaking technology, now generates the largest demand for hydrogen in South Korea through HyREX, POSCO's proprietary hydrogen reduction steelmaking technology, and through the power generation businesses of POSCO Energy. Based on a stable domestic demand, POSCO Holdings is developing a hydrogen business model, which could serve both domestic and growing overseas demand.

During the early stage, we plan to enter the hydrogen market by making use of by-product gas, generated in our own steel mills, and establishing a production system that can supply 70,000 tons of by-product hydrogen (gray hydrogen) per year to fuel cells and mobility industries by 2026. In addition, POSCO Holdings is actively seeking overseas investment opportunities for both blue and green hydrogen production projects. We anticipate achieving full scale by 2030 to reach an annual production of 500,000 tons, growing to 3 million tons by 2040 and, by 2050, to 7 million tons. At the same time, POSCO Holdings will gradually increase its production capacity to supply hydrogen to large-scale B2B sectors including batteries, power plants, and charging stations.

Currently, POSCO Holdings is developing 19 hydrogen production projects in seven strategic countries focusing on their supply chain and securing technological excellence. In the Middle East, POSCO Holdings is establishing off-take agreements for blue hydrogen allocation through equity investment with the world's largest oil company and is considering participation in a number of steel-linked green hydrogen production projects in Australia and Oman, where the environment is favorable to the production of renewable energy.

POSCO Holdings is securing core technologies for hydrogen production and utilization. These efforts include R&D projects for ammonia cracking technology to extract hydrogen from ammonia with the Korea Institute of Science and Technology (KIST), promoting high-temperature water electrolysis technology in connection with the nuclear power plants of Korea Atomic Energy Research Institute (KAERI), and the joint development of ammonia co-fired turbine power generation technology with Doosan Heavy Industries & Construction.

2. Comments on Clean Hydrogen

The Inflation Reduction Act (IRA) provides significant tax credits and other incentives for clean energy investments that will meaningfully impact energy infrastructure and technology in the United States. In particular, IRA's incentives for hydrogen production are expected to change the market related to clean hydrogen production. As a result, many companies are interested in clean hydrogen production in the United States. It is also expected to play a major role in accelerating the decarbonization of the U.S. and global economies. In that sense, POSCO Holdings, dedicated to decarbonization, welcomes the IRA.

However, with regard to clean hydrogen production and sales, we recognize some unclear conditions in the IRA. These uncertain terms would likely delay or make it difficult to invest in U.S. green hydrogen production. Thus, we urge the Treasury Department to clarify those uncertainties to guarantee two important factors: (1) making credits available for hydrogen produced for export and (2) extending federal support to the production of hydrogen for a period longer than 10 years.

POSCO Holdings urges the Treasury to clarify the rules relevant to the "sale or use" of qualified clean hydrogen, specifically § 45V(c)(2)(B)(i)(III). We believe that the hydrogen produced in the U.S. for export should qualify for the tax credit. This will ensure that companies interested in producing clean hydrogen in the U.S. to meet the global demand could make the long-term planning decisions necessary to launch U.S. hydrogen production investments. If export of clean hydrogen produced in the U.S. becomes eligible for tax credit, many companies will actively consider investment in the U.S., driving the growth of hydrogen market also in other parts of the world. Such a policy dovetails with Pillar III of the Indo-Pacific Economic Framework for Prosperity Ministerial Statement on September 9,

2022, which recognized the need for trade in clean energy to "reduce our dependence on fossil fuel energy." Also, it would facilitate the development of green steel, not only in the U.S but around the world

In addition, under § 45V(a)(1), the clean hydrogen production tax credit is only allowed for a period of 10 years, starting from the placed in-service date of the qualified clean hydrogen production facility of which begins construction before January 1, 2033. In order to fully integrate hydrogen into the economy, such as production and use of hydrogen, investments must be induced from a long-term perspective. Long-term support will accelerate the investment in the U.S. and firmly establish a stable hydrogen business. In addition, it would drive additional market expansion and advance the hydrogen transition within the steel industry. For these reasons, POSCO Holdings urges U.S. policymakers to consider extending the duration of the hydrogen production tax credit longer than 10 years.