Acciona Nordex Green Hydrogen, S.L. | Poligono Industrial Barasoain, Parcela 2, 31395 Barasoain (Navarra), Spain

The Honorable Lily Batchelder
Assistant Secretary for Tax Policy
Department of the Treasury
1500 Pennsylvania Avenue, NW Washington, DC 20220

Mr. Brett York Deputy
Tax Legislative Counsel
Department of the Treasury
1500 Pennsylvania Ave, NW Washington, DC 20020

Mr. William Paul Principal
Deputy Chief Counsel
Internal Revenue Service
1111 Constitution Avenue, NW Washington, DC 20224

Person to contract	Phone	Email	Date
Scott Baron	312-259-3680	sbaron@nordex-online.com	26 February 2024

Chicago, 26 February 2024

Re: ACCIONA & Nordex Green Hydrogen, S.L. ("ANGH") Comments to Section 45V Credit for Production of Clean Hydrogen; Section 48(a)(15) Election to Treat Clean Hydrogen Production Facilities as Energy Property (REG-117631-23)

Dear Ms. Batchelder, Mr. Paul, and Mr. York:

ACCIONA & Nordex Green Hydrogen ("ANGH") is a joint venture between ACCIONA (a multinational renewable energy and infrastructure company, which owns/operates 11 utility-scale wind, 4 utility-scale solar, 1 CSP, and 1 large-scale storage projects in the United States) and Nordex (a leading global wind turbine manufacturer, with our technology installed at 55 utility-scale wind projects in the United States). Between the two companies, we employ hundreds of people throughout the United States and maintain North American headquarters in Chicago, IL and West Branch, Iowa.

The mission of ANGH is to develop large-scale clean hydrogen (and derivative) projects in the best wind and solar locations globally. We started developing clean hydrogen projects in early 2021 (prior to the passage of the Inflation Reduction Act of 2022 ("IRA")) and are currently working on projects in 6 countries, representing a target capacity of over 50 GW wind and solar. Several of our large-scale clean hydrogen projects under development are based in the United States, located in rural areas of the Country with limited or no electrical transmission but with ideal conditions for producing low-cost clean hydrogen. Each project represents multiple billions of capital investment and gigawatts of incremental renewable energy capacity. Developing projects of this scale takes time and considerable investment, which we have committed, and we intend to reach Financial Investment Decision within 2027 and complete construction by 2030 (for at least one project).

In addition to ANGH, Nordex has established a separate business called *Nordex Electrolyzers* which is currently prototyping an alkaline electrolyzer design focused on operating with variable electricity from renewable resources. Prototyping will be complete in 2025 with commercial scale-up to follow. This experience has given us confidence that the technology (in general) will be ready and scalable in time to support the projects we and others intend to build within this decade.

As one of the early movers in this industry with a global perspective, we are uniquely qualified to provide certain comments pertaining to *REG-117631-23: Section 45V Credit for Production of Clean Hydrogen, Section 48(a)(15) Election to Treat Hydrogen Production Facilities as Energy Property.* Overall, we **strongly support** the emissions reduction goals embodied in the IRA and the requirement for meeting the so-called "three pillars" of incrementality, temporal matching, and regionality. We disagree with assessments made publicly by others which suggest that the proposed regulations would result in increased clean hydrogen costs, delayed scale-up, or no net impacts to the transmission system or greenhouse gas emissions. In addition to this letter, we have signed a separate letter in combination with other leading development and industrial companies who are planning to

successfully comply with these requirements and make substantial investments to scale-up the clean hydrogen industry[1].

Our support is predicated on a business model that ANGH and others are pursuing globally, which focuses on building very large-scale projects (typical projects are 1,000-3,000 MW electrolyzer capacity, with capital cost expectations of $3-10 billion) in the best renewable energy resource areas of the world but are remote and currently lack transmission infrastructure. These projects are exclusively or primarily "behind-the-meter" or "off-grid" and rely on system designs that optimize sizing of the various key pieces of equipment given the wind and/or solar profile of the site. Electrolyzers are sized below the nameplate capacity of the wind and/or solar capacity but typically operate at capacity factors between 60-80%, which is sufficient for reaching a low levelized cost of hydrogen. Therefore, there are zero emissions impacts as the renewable energy resources are directly connected to the electrolyzers. This approach requires certain power electronic and control technologies (e.g. batteries, statcoms, capacitor banks, etc.) but is entirely feasible.

The combination of scale plus best-in-class wind and solar leads to competitive levelized cost of hydrogen. As with other projects globally that are remote, the challenge is to distribute the final end-product (hydrogen or derivatives such as ammonia, e-methanol, SAF, e-methane) to where it will be consumed. Within the United States, there is tremendous potential to utilize and/or develop low-cost pipelines, which is a proven successful and low-cost method of transporting molecules. The scale of the projects ANGH is developing can support the capital costs associated with new longer distance pipelines. Rail is also a viable option for transporting derivative fuels.

The ANGH approach solves three problems for the emerging clean hydrogen industry. First, we avoid electrical transmission interconnection which is already overloaded and expanding too slowly. Second, we enable development in rural communities that have so far been left out of receiving the economic benefits of renewable energy (and hydrogen) projects[2]. Third, we allow for extremely competitive clean hydrogen to efficiently reach

[1] Other signatories include: Hy Stor Energy LP, Air Products, CWP Global, Synergetic, Strata Clean Energy – P2X

[2] Independent studies have estimated local and state tax benefits to be almost $1 billion over a 35-year project life for a 1-1.5 GW size project in the regions we are working.

demand centers through pipelines (or rail) which are proven and efficient ways of delivering energy (and where the United States has always been a global leader). All of these factors lead to achieving the objectives of the IRA and supporting American energy independence while *not* increasing greenhouse gas emissions.

With the hydrogen production tax credit ("PTC") as included in the IRA, the United States has already established the most substantial incentive to produce clean hydrogen globally. On average, the hydrogen PTC can reduce the cost of hydrogen *in half* compared to no incentive being in place. Weak rules that do not incorporate the three pillars or allow certain grandfathering or other loophole provisions that threaten to increase emissions as many sources have cited[3], could impact the credibility of the entire industry and jeopardize its ability to gain public support (and international alignment, if rules don't match with Europe or other countries who seek to be off-takers of American clean hydrogen).

We encourage the IRS to uphold the main provisions of the proposed regulations relating to the credit for production of clean hydrogen as established and amended by the Inflation Reduction Act of 2022. ANGH is prepared to meet these requirements and deliver on the objectives set out in the law to decarbonize the US economy. We stand ready to support the Administration throughout the implementation process.

Yours sincerely,

Acciona Nordex Green Hydrogen, S.L.

Scott Baron
VP, Development

[3] EPRI, Princeton ZERO Lab, Energy Innovation, MIT Energy Initiative, Rhodium Group