



October 20, 2022

U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585

VIA EMAIL: Cleanh2standard@ee.doe.gov

Re: Comments to DOE's initial proposal for a Clean Hydrogen Production Standard

To Whom it May Concern,

Viridis Chemical, LLC (Viridis) is a manufacturer of renewable chemicals using corn ethanol (the only feedstock material in the production process) along with a catalyst in a reaction chamber to produce its products. Our first plant is located in Columbus, Nebraska, and has the capacity to be the largest producer of bio-based ethyl acetate in the world. We began our plant commissioning efforts in 2022 and expect to be ramping up to full production capacity by 2024. We have other technologies in development that use corn ethanol as the only feedstock to produce other bio-based chemicals such as n-butanol, butyl acetate and other higher alcohols. Through our catalytic processes, we have the unique ability to capture hydrogen as a by-product when making our bio-based ethyl acetate chemical and certain other bio-based chemicals we currently have under development.

Viridis is in support of the Department of Energy's (DOE) proposal to define clean hydrogen in the Clean Hydrogen Production Standard (CHPS) as hydrogen produced with an initial target for lifecycle greenhouse gas emissions of $4.0 \text{ kgCO}_{2e}/\text{kgH}_2$. We believe that all stakeholders want to encourage the production of clean hydrogen in all currently known and economically feasible manners, but also will want to encourage the development of clean hydrogen as technology improves and new pathways are developed that were previously not considered. We believe that our production of hydrogen is intended to be included in the definition of clean hydrogen even though it was produced as a by-product of our bio-based ethyl acetate chemical. However, we would like the CHPS to be further clarified to ensure that the production of bio-based chemicals that results in hydrogen as a by-product can fit within the definition of clean hydrogen when the lifecycle greenhouse gas emission thresholds are otherwise met.

Sincerely,

A handwritten signature in dark ink, appearing to read "C. Rush, Jr.", written in a cursive style.

Carl V Rush, Jr.
Co-Founder and Chief Executive Officer