MICHELLE LUJAN GRISHAM
GOVERNOR

November 9, 2022

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

Submitted electronically to: Cleanh2standard@ee.doe.gov

RE: Clean Hydrogen Production Standard

To Whom It May Concern,

Enclosed please find the State of New Mexico's comments on the U.S. Department of Energy's (DOE) draft guidance for a Clean Hydrogen Production Standard (CHPS), developed to meet the requirements of the Bipartisan Infrastructure Law (BIL), Section 40315. Thank you for the opportunity to provide comments.

Sincerely,

DocuSigned by:
Sarah Cottrell Propst
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Sarah Cottrell Propst, Cabinet Secretary
New Mexico Energy, Minerals and Natural Resources Department

DocuSigned by:
Secretary Alicia Keyes
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Alicia J. Keyes, Cabinet Secretary
New Mexico Economic Development Department

DocuSigned by:
James C. Kenney
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James C. Kenney, Cabinet Secretary
New Mexico Environment Department

Enclosure

Cc: Ben Grumbles, Executive Director, ECOS
John Lucey, Deputy Associate Administrator for Intergovernmental Relations, U.S. EPA
Ali Nouri, Assistant Secretary for Congressional and Intergovernmental Affairs, U.S. DOE
Tom Nagle, Special Assistant, Office of Governor Michelle Lujan Grisham

Introduction:

The U.S. Department of Energy (DOE) released draft guidance proposing a Clean Hydrogen Production Standard (CHPS) that was developed to meet the requirements of the Bipartisan Infrastructure Law (BIL), Section 40315. The CHPS proposal establishes a target of 4.0 $kgCO_2e/kgH_2$ for lifecycle (i.e., "well-to-gate") greenhouse emissions associated with hydrogen production, accounting for multiple requirements within the BIL provision, as well as the incentives provided in the Inflation Reduction Act (IRA). This memo contains the State of New Mexico's comments on those provisions.

Comments:

1. **The DOE must prioritize investments in those states that have taken proactive steps to mitigate emissions across the supply chain.**

   As stated in the summary of the draft guidance: *"The CHPS is not a regulatory standard, and DOE may not necessarily require future funded activities to achieve the standard. However, hydrogen hubs funded in support of the BIL will be required to "demonstrably aid achievement" of the CHPS by mitigating emissions across the supply chain to the greatest extent possible (e.g., by employing high rates of carbon capture, using low-carbon electricity, or mitigating upstream methane emissions). Future DOE funding opportunity announcements will further describe merit review criteria that will be used in selection of successful projects subject to the CHPS."*

   The State of New Mexico appreciates the DOE's acknowledgement that the CHPS is not a regulatory standard serving a gating function for the BIL hydrogen hub program. The state also appreciates the flexibility provided in the guidance with respect to the range of variables that might be adjusted to aid in the overall goals. What is absent from the guidance is any discussion of how the mitigation steps will be measured and assessed by DOE. This is particularly relevant when assessing clean hydrogen derived from methane – e.g., are hydrogen producers permitted to rely on representations about upstream emissions by feedstock suppliers or must mitigation measures be verifiable by some independent scheme. Similarly, are producers to apply upstream emissions rates for entire basins or those applicable to specific produces. Finally, with respect to all types of hydrogen, how granularly can a hydrogen producer model the grid that power is derived from when modeling lifecycle emissions.

   New Mexico believes that some of these issues are best addressed with transparent public measures that provide certainty about any mitigation measures being accounted for in a produced hydrogen carbon intensity calculation. Absent such transparency and certainty, the DOE, public, and applicants cannot ensure that carbon reduction goals are being met.

   The state of New Mexico recognizes the value of such measures and demonstrated by the ambitious steps the state has taken to reduce carbon emissions and provide certainty for private and public sector investments by codifying key carbon and methane emission reductions into laws, rules and permits. Unlike other states that solely rely on policy and guidance, New Mexico's approach provides a certain and enforceable regulatory landscape that prevents backsliding, establishes a level playing field, and provides certainty to third parties. Three such actions include:

   a. In 2019, New Mexico passed the Energy Transition Act (ETA) which establishes New Mexico as a national leader in clean energy. The ETA sets a statewide renewable energy standard of 50 percent by 2030 for New Mexico investor-owned utilities (IOUs) and rural electric

cooperatives. The renewable energy standard rises to 80 percent by 2040 for IOUs and requires all generation to be from zero-carbon resource for 2045. Rural electric cooperatives must achieve a zero-carbon resource standard by 2050 comprised of at least 80% renewables. The law transitions New Mexico away from coal and toward clean electricity, ensuring greater renewable electricity production and reducing costs for consumers, and provides tens of millions of dollars of economic and workforce support for communities impacted by coal plant closures, as well as the development of renewable replacement power. New Mexico's largest utility has stated publicly that it will meet the zero-carbon requirement by 2040, five years early.

b. In 2021, New Mexico's Oil Conservation Division (OCD) adopted rules requiring oil and gas operators to capture 98 percent of their produced natural gas by 2026 and banned the practice of routine venting and flaring. OCD's rule was followed in 2022 by rules from the New Mexico Environment Department (NMED) targeting ozone precursor pollutants – volatile organic compounds and oxides of nitrogen that will reduce approximately 260 million pounds of these pollutants annually, while having the co-benefit of reducing methane emissions by over 851 million pounds annually. Together these rules establish a nation-leading framework to address fugitive emissions from the oil and gas sector and represent aggressive action to significantly reducing upstream methane emissions. The 2021 natural gas waste rule and 2022 ozone precursor rule were the result of two and half years of public and stakeholder engagement.

c. Finally, in 2022, NMED adopted regulations that implement a new air quality standard to strictly limit the amount of carbon dioxide emissions from coal-fired power plants in the state, pursuant to the Energy Transition Act. The standard applies to new and existing power plants and limits CO_2 emissions from those facilities to no more than one thousand one hundred pounds per megawatt-hour on and after January 1, 2023.

These actions, along with associated enforcement, provide objective integrity about the conditions on the ground in New Mexico with respect to the composition of our grid or upstream emissions in our producing basin. Precisely the type of objective integrity for DOE to consider when developing "…criteria that will be used in selection of successful projects subject to the CHPS." The State of New Mexico requests that DOE modify the CHPS guidance to highlight the importance of having measure that facility objective verification of the inputs into the carbon intensity calculation associated with H2 production. Separate from the CHPS guidance, the DOE should prioritize objective criteria that weight such laws, rules, permits and compliance assurance activities that provide meaning to CHPS when making its hydrogen hub award selections.

2. The DOE and the U.S. Environmental Protection Agency (EPA) must ensure states and territories are meaningfully consulted in setting policy for the hydrogen economy.

The BIL states that "not later than 180 days after November 15, 2021, the Secretary, in consultation with the Administrator of the Environmental Protection Agency (EPA) and after taking into account input from industry and other stakeholders, as determined by the Secretary, shall develop an initial standard for the carbon intensity of clean hydrogen production that shall apply to activities carried out under this subchapter." Further, the statute directs that the Secretary shall determine no later than 5 years after the initial standard is published, if the standard should be adjusted below the existing threshold and carry out the adjustment if deemed appropriate.

While the state of New Mexico appreciates the DOE seeking general comments on the draft guidance for a CHPS, the current approach to does not adequately value state input to the process, which is critical to establishing a robust clean hydrogen economy with necessary safeguards that protect public health, communities, the environment while properly incentivizing clean energy development.

On September 21, 2022, the Environmental Council of States (ECOS) adopted Resolution 22-1 titled: "Ensuring a Consultative Role for States and Territories in Setting Policy for the Hydrogen Economy" which is attached to this letter and incorporated into this comment letter.[1] The resolution requests that the Secretary of the DOE and the Administrator of the EPA provide a consultative role for state and territorial co-regulators related to the development and implementation of clean hydrogen standards pursuant to the BIL. NMED drafted this resolution for consideration by ECOS members given the BIL states "…the U.S. Department of Energy (U.S. DOE), in consultation with the U.S. Environmental Protection Agency (U.S. EPA) and accounting for input from industry and other stakeholders, will determine whether the initial clean hydrogen standard should be adjusted below 2 kg CO2e/kg H2." NMED and our fellow ECOS members requested a more formal consultative role in developing this guidance because states and territories are the primary implementation agencies for the nation's environmental and energy laws; as such, the DOE and EPA have an obligation to meaningfully engage with such agencies to obtain input on the CHPS outside of general stakeholder public comment processes. By the letter, the state of New Mexico reiterates that requests made in ECOS Resolution 22-1.

3. New Mexico concurs that DOE's proposed clean hydrogen production standard remain a target that projects seek to achieve during the pilot and startup periods.

New Mexico offers the following comments related to DOE's proposed CHPS:

a. New Mexico concurs with the DOE that the CHPS is not a regulatory standard. The BIL provisions governing Regional Clean Hydrogen Hubs provide that DOE can select projects that do not meet the CHPS so long as DOE selects projects that "demonstrably aid the achievement" of the CHPS by mitigating emissions as much as possible across the supply chain (e.g., through aggressive carbon capture onsite, measures to mitigate fugitive methane emissions, or use of clean electricity).

b. New Mexico agrees that DOE-funded activities may not necessarily require achievement of the target set forth in the CHPS or achievement of an emissions intensity of 2 kgCO2e/kgH2 at the site of production (the definition of "clean hydrogen").

c. New Mexico also agrees that DOE may expect stakeholders to reduce emissions across the supply chain as aggressively as technologically and economically feasible, and preference may be given to funding applicants based on their emissions alongside other selection criteria. However, NMED requests the DOE utilize independent auditing of applicant emissions statements, information, or data. In doing so, DOE should ensure that emission statements

[1] The New Mexico Environment Department is a proud member of ECOS. ECOS is the national nonprofit, nonpartisan association of state and territorial environmental agency leaders. The purpose of ECOS is to improve the capability of state environmental agencies and their leaders to protect and improve human health and the environment of the United States of America.

reflect actual emissions prioritize emission reductions that are quantifiable, enforceable, and permanent.

4. The DOE must establish criteria and system boundary conditions for calculating hydrogen lifecycle emissions.

The State of New Mexico appreciates the DOE's recognition that verifiable lifecycle methane, carbon dioxide, and criteria pollutant emissions data for hydrogen projects will be critical to the successful economic development of hydrogen in the US. Thus, New Mexico urges DOE to adopt a robust, yet flexible, system of monitoring, measuring, quantifying, and reporting emissions across the hydrogen lifecycle. A uniform system will increase the acceptability of clean hydrogen across industries, states, and among other stakeholders, while flexibility will allow for the continued innovation and deployment of advanced measuring technologies.

New Mexico also encourages DOE to expand hydrogen lifecycle analyses in GREET to distinguish emissions from specific projects and production facilities. This approach allows projects that invest in lower carbon-intensity technologies and establish in states with more proactive regulatory requirements to potentially reap economic benefits from their investments in cleaner hydrogen. Generalized default parameters may not reward states with regulatory programs that exceed federal standards, and such parameters may not respond to changes in grid and power sources for specific projects. New Mexico also encourages DOE to include broader sustainability metrics like energy use, land use changes, criteria air pollutants, water consumption, repurposing of existing infrastructure, waste production, equity, and cumulative impacts into carbon intensity (CI) calculations or a third-party clean hydrogen rating system.

New Mexico encourages DOE to continue to incorporate the work of the International Partnership for Hydrogen in the Economy's Hydrogen Production Analysis Task Force for guidance on how to harmonize methodologies and boundary conditions for calculating US hydrogen lifecycle emission with global equivalents to facilitate the export of US-produced hydrogen to global markets.

5. Additional Feedback

New Mexico offers the following additional comments on the Clean Hydrogen Production Standard (CHPS) guidance document.

a. Build in review and revision periodically; the suggested five-year timeframe seems appropriate provided DOE is relatively frequent contact with states.

b. Consider adjusting lifecycle system boundaries as shown in Figure 1 to include emissions from distribution and end uses including the combustion of hydrogen at the appropriate time, which may not be appropriate during the early phases of hydrogen market development and implementation. Additionally, establish comprehensive system boundaries for the lifecycle analysis.

c. New Mexico suggests that the initial CHPS should acknowledge that while 4.0 $kgCO_2e/kgH_2$ for lifecycle emissions is attainable using existing technology that supply chain constraints and the lack of deployment of any of those technologies at scale may mean it will take some time (possibly through the next update) for those levels to be realized. As a result, the focus should be on projects and efforts making meaningful progress towards those goals.

Resolution 22-1
Revised September 21, 2022
Park City, Utah

As certified by
Ben Grumbles
Executive Director

ENSURING A CONSULTATIVE ROLE FOR STATES AND TERRITORIES IN SETTING POLICY FOR THE HYDROGEN ECONOMY

WHEREAS, the Infrastructure Investment and Jobs Act (IIJA) also referred to as the Bipartisan Infrastructure Law (BIL) was signed into law by the President on November 15, 2021; and

WHEREAS, Subtitle B of the BIL, titled Hydrogen Research and Development, acknowledges that hydrogen plays a critical part in the comprehensive energy portfolio of the United States; and

WHEREAS, Section 40315 of the BIL amended the Energy Policy Act of 2005 to add Section 822, which includes the following pertinent provisions:

a. The term "clean hydrogen" is defined as hydrogen produced with a carbon intensity equal to or less than 2 kilograms (kg) of carbon dioxide equivalents (CO2e) per kg of hydrogen (H2) at the site of production.

b. The U.S. Department of Energy (U.S. DOE), in consultation with the U.S. Environmental Protection Agency (U.S. EPA) and accounting for input from industry and other stakeholders, will determine whether the initial clean hydrogen standard should be adjusted below 2 kg CO2e/kg H2.

c. The clean hydrogen standard shall apply to production from renewable, fossil fuel with carbon capture, utilization, and sequestration technologies, nuclear, and other fuel sources using any applicable production technology; and

WHEREAS, clean hydrogen represents an opportunity to decarbonize numerous industrial sectors, including power generation, freight, and other industries that contribute to climate change and air pollution; and

WHEREAS, clean hydrogen standards relate to National Ambient Air Quality Standards under the Clean Air Act and Underground Injection Control programs under the Safe Drinking Water Act; and

WHEREAS, state and territorial environmental programs are responsible for implementing nearly all the core federal, state, and territorial environmental programs that protect public health and our nation's air, land, and water resources; and

WHEREAS, a fundamental responsibility of the U.S. EPA is to work cooperatively and collaboratively with the states and territories as co-regulators to ensure that regulations and programs can be effectively implemented.

NOW, THEREFORE, BE IT RESOLVED THAT THE ENVIRONMENTAL COUNCIL OF THE STATES (ECOS):

Requests that the Secretary of the U.S. DOE and the Administrator of the U.S. EPA provide a consultative role for state and territorial co-regulators related to the development and implementation of clean hydrogen standards pursuant to the BIL.