



**MICHELLE LUJAN GRISHAM**  
GOVERNOR

February 26, 2024

Office of Chief Counsel  
Internal Revenue Service  
IRS Docket ID No. REG-117631-23

Submitted electronically via: <https://www.regulations.gov/>

RE: Section 45V Credit for Production of Clean Hydrogen; Section 48(a)(15) Election to Treat Clean Hydrogen Production Facilities as Energy Property - IRS Docket ID No. REG-117631-23

Dear Chief Counsel,

The Inflation Reduction Act (IRA) launched a period of historic investment in low carbon energy technologies in the United States from around the globe. These historic investments are already securing sustainable job growth and supporting an equitable transition for energy communities in states like New Mexico. With the implementation of the many IRA tax incentives, the U.S. Treasury and the Internal Revenue Service can enhance and secure further clean energy investments in the United States. A key provision of the IRA with the greatest potential for helping us reach our climate, air quality, and energy goals is the clean hydrogen production tax credit.

As currently proposed, New Mexico is concerned that the proposed rule will prevent the clean hydrogen industry from reaching its full potential in New Mexico and across the United States.

Attached please find the New Mexico Environment Department's (NMED) and the New Mexico Energy, Minerals and Natural Resources Department's (EMNRD) joint comments regarding the subject rulemaking.

Sincerely,

James C. Kenney  
Cabinet Secretary

Dylan M. Fuge  
Deputy Cabinet Secretary

cc: Ben Grumbles, Executive Director, Environmental Council of the States  
Courtney Kerster, Senior Advisor, Office of Governor Michelle Lujan Grisham  
Sydney Lienemann, Deputy Cabinet Secretary of Administration, NMED  
Michelle Miano, Director, Environmental Protection Division, NMED  
Zachary Ogaz, General Counsel, NMED

**New Mexico Environment Department  
Comments to the Internal Revenue Service  
Section 45V Credit for Production of Clean Hydrogen; Section 48(a)(15) Election to Treat Clean  
Hydrogen Production Facilities as Energy Property  
IRS Docket ID No. REG-117631-23**

**Introduction**

The New Mexico Environment Department (NMED) and the New Mexico Energy, Minerals and Natural Resources Department (EMNRD) offer the following comments to the U.S. Treasury, Internal Revenue Service (IRS) the “Section 45V Credit for Production of Clean Hydrogen; Section 48(a)(15) Election to Treat Clean Hydrogen Production Facilities as Energy Property” as they pertain to U.S. Code, Article 26, §45V Credit for Production of Clean Hydrogen.

**Comments**

According to the White House, the Inflation Reduction Act (IRA) and the Bipartisan Infrastructure Law (BIL) feature the world’s most ambitious policies to support the growth of our nation’s clean hydrogen industry and have already created a robust pipeline of planned clean hydrogen projects. The § 45V tax credit provides a tax credit of up to \$3 per kilogram of hydrogen to projects with low lifecycle greenhouse gas emissions and provides an important complement to other hydrogen programs such as the Department of Energy’s Regional Clean Hydrogen Hubs Program, which is investing \$7 billion to catalyze nearly \$50 billion in hydrogen investments across 7 selected Hubs. The tax credits will help catalyze investments in those hubs and elsewhere by enhancing national connectivity.

The clean hydrogen production tax credit proposed rule represents an opportunity to decarbonize numerous industrial sectors, including power generation, freight, and other industries that contribute to climate change and air pollution. Providing these industries with regulatory-based, economic tax incentives will help develop and deploy technologies that reduce carbon emissions and improve compliance with National Ambient Air Quality Standards (NAAQS) as mandated by the Clean Air Act.

In developing the proposed rule, the U.S. Treasury requested that the U.S. Environmental Protection Agency provide information related to the definition of lifecycle greenhouse gas emissions under the Clean Air Act to support the U.S. Treasury’s interpretation and implementation of the Internal Revenue Code Section 45V. Specifically, lifecycle greenhouse gas emissions, direct emissions, and significant indirect emissions. The U.S. Environmental Protection Agency responded in writing to the U.S. Treasury on December 20, 2023, and the hydrogen production tax credit proposed rule was published in the Federal Register on December 26, 2023.

While the NMED and EMNRD appreciates the U.S. Treasury seeking the U.S. Environmental Protection Agency’s input on lifecycle greenhouse gas emissions, direct emissions, and significant indirect emissions and their associated accounting and impacts, we were disappointed that the U.S. Treasury did not seek the input of states on this topic, leaving out a critical voice in implementing the nation’s energy and environmental laws.

On September 21, 2022, the Environmental Council of the 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 (Attachment A).<sup>1</sup> The resolution requests that the Secretary of the U.S. Department of Energy and the Administrator of the U.S. Environmental Protection Agency provide a consultative role for state and territorial co-regulators related to the development and implementation of clean hydrogen standards. While the origin of the U.S. Treasury's proposed rule stems from the IRA, the BIL law states: "...the U.S. Department of Energy, in consultation with the U.S. Environmental Protection Agency and accounting for input from industry and other stakeholders, will determine whether the initial clean hydrogen standard should be adjusted below 2 kg CO<sub>2</sub>e/kg H<sub>2</sub>."

States requested a more formal consultative role in developing proposed rules related to clean hydrogen production – including clean hydrogen production tax credits – because states and territories are the primary implementation agencies for the nation's energy and environmental laws; as such, the U.S. Department of Energy and the U.S. Environmental Protection Agency have an obligation to meaningfully engage with such agencies. This obligation to consult with states extends to the U.S. Treasury as the development of the proposed rule to implement the IRA's clean hydrogen production tax credit will either incentivize or disincentivize technologies that directly impact the ability of a state to achieve their carbon reduction goals and meet air quality standards pursuant to state and federal laws.

For example, 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 resources starting in 2045 and beyond. 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, while providing 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. The ETA includes provisions to protect consumers from large rate increases associated with the transition to renewable energy. The ETA allows utilities to recover certain costs associated with the transition, but it also includes a cap on how much of those costs can be passed on to consumers. This cap is designed to prevent substantial and sudden increases in utility bills for ratepayers. New Mexico's largest utility has stated publicly that it will meet the zero-carbon requirement by 2040, five years early.

In another example, state air quality rules are approved by the U.S. Environmental Protection Agency and codified into federal law (known as a State Implementation Plan or "SIP"). Federally approved state air quality rules prevent the degradation of air quality and are often designed to improve air quality to comply with the federal NAAQS. To meet the federal NAAQS, states spend considerable resources in monitoring ambient air quality, modeling ambient air quality scenarios, analyzing public health and economic impact data, engaging with stakeholders, and proposing rules to state boards or commissions to pass such air quality rules prior to submitting to the U.S. Environmental Protection Agency for SIP approval.

These examples highlight why coordination with state agencies is critical when developing the proposed clean hydrogen production tax credit as it will directly impact energy and air quality obligations in state and federal law. With this background, we offer the following recommendations for improvement:

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<sup>1</sup> See <https://www.ecos.org/wp-content/uploads/2022/09/Resolution-22-1-Hydrogen-Economy.pdf>.

1. Given the proposed rule does not adequately consider state laws and regulations related to energy and air quality obligations, the U.S. Treasury should convene discussions with states to understand how finalizing the proposed rule may impact state legal obligations and state economies through the clean hydrogen production tax credit. This comment is consistent with the New Mexico's November 9, 2022, letter to the U.S. Department of Energy related to a solicitation of comments on the draft guidance for a clean hydrogen production standard which is attached to this letter and incorporated into this comment letter (Attachment B).<sup>2</sup>
2. The proposed rule does not consider, model, or address the economic impact(s) for states that have enacted clean energy laws like New Mexico's ETA. The U.S. Treasury should solicit input from states prior to finalizing the proposed rule so as not to adversely impact state and utility plans to achieve carbon reduction goals established prior to the BIL or the proposed rule. This comment is consistent with the New Mexico's November 9, 2022 letter to the U.S. Department of Energy (see Attachment B).<sup>3</sup>
3. The proposed rule does not consider, model, or address the impacts on Clean Air Act obligations by states to maintain or achieve the NAAQS. The U.S. Treasury should convene discussions with states to understand how the proposed rule may impact such obligations prior to finalizing the proposed rule. This comment is consistent with the New Mexico Environment Department's November 9, 2022 letter to the U.S. Department of Energy (see Attachment B).<sup>4</sup>
4. As described in Guidelines to Determine Well-to-Gate Greenhouse Gas (GHG) Emissions of Hydrogen Production Pathways using 45V H2 GREET, certain parameters in 45V H2 GREET are fixed assumptions, referred to as "background data" in this document. Users of 45V H2 GREET may not change background data. Examples of background data include upstream methane loss rates, emissions associated with power generation from specific generator types, and emissions associated with regional electricity grids.

Background data are parameters for which individual inputs from hydrogen producers are unlikely to be independently verifiable with high fidelity, given the current status of verification mechanisms. The Treasury Department and the IRS seek comment on the readiness of verification mechanisms that could be utilized for certain background data in 45V H2 GREET if it were reverted to foreground data in future releases.

While the use of a model like the 45V H2 GREET is important for national consistency, states are not the same in terms of their economies, industries, climate laws, or regulatory frameworks, etc. Making national assumptions for states could prevent consideration of how the clean hydrogen economy is developing regionally and how the proposed rule may benefit or hinder states' economies and decarbonization efforts. The U.S. Treasury should provide flexibility in 45V H2 GREET model inputs for states to achieve the maximum clean hydrogen production tax credit.

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<sup>2</sup> See <https://www.hydrogen.energy.gov/docs/hydrogenprogramlibraries/pdfs/chps/new-mexico-environmental-department.pdf>

<sup>3</sup> See <https://www.hydrogen.energy.gov/docs/hydrogenprogramlibraries/pdfs/chps/new-mexico-environmental-department.pdf>

<sup>4</sup> See <https://www.hydrogen.energy.gov/docs/hydrogenprogramlibraries/pdfs/chps/new-mexico-environmental-department.pdf>

This is in addition to the provisional emissions rate process in the proposed rule.

In New Mexico, this lack of flexibility negates the progress made by laws like New Mexico's ETA, as well as rules requiring 98% gas capture from the oil and gas industry, our oil and natural gas ozone precursor rule, and our low carbon fuel standard for transportation fuels. As a result, the background assumptions for the 45V H2 GREET model to achieve the clean hydrogen production tax credit may disincentivize investment in New Mexico despite our leadership in clean energy, methane waste, and air quality laws and rules. States like New Mexico must be recognized in the final rule – not future releases of the 45V H2 GREET model – by providing a pathway to adjust the background data assumptions so that the model can incorporate state/region specific data and ensure accurate life cycle emissions calculations. This comment is consistent with the New Mexico's November 9, 2022 letter to the U.S. Department of Energy (see Attachment B).<sup>5</sup>

5. As currently drafted, the proposed rule and the 45V H2 GREET model are not feedstock and technology neutral with the qualifying criteria for the tax credit focused on the overall carbon intensity of the clean hydrogen produced. To this point, the proposed rule disadvantages clean hydrogen produced with low-carbon natural gas by requiring producers/taxpayers to use the national average carbon intensity of natural gas. As noted above, the default value does not account for, or recognize, investments made by states or industry to lower the upstream emissions and resulting carbon intensity of natural gas, even where such lower emissions could be measured, monitored, and reported through current state or federal programs. Consequently, the hydrogen produced will not reflect the actual (lower) carbon intensity of natural gas used in the production process, which will discourage investment and other efforts to reduce fugitive methane and CO<sub>2</sub> emissions critical to cleaning up the natural gas supply chain. States like New Mexico, along with energy companies doing business in New Mexico, have made significant investments and progress to reduce emissions in the supply chain in response to our comprehensive state rules and aggressive compliance assurance activities. These efforts should be recognized as part of the final hydrogen product's carbon intensity. This comment is consistent with the New Mexico's November 9, 2022 letter to the U.S. Department of Energy (see Attachment B).<sup>6</sup>
6. Congress designed the credit to incentivize producers to take steps to reduce carbon intensity wherever possible – in the feedstocks, in the hydrogen production processes, or in any other aspect of the well-to-gate lifecycle of the hydrogen being produced. In that vein, the proposed rule should align with Congressional intent to allow for the actual carbon intensity of a producer's natural gas – as verified through state environmental agencies – to be considered and any additional emissions to be counted so that the resulting hydrogen's carbon intensity is appropriately reflected. Without such an alignment, companies intending to produce clean hydrogen derived from natural gas will have no incentive to reduce the overall carbon intensity of their hydrogen production, which will unnecessarily limit scaling up the hydrogen economy, especially in states like New Mexico which has taken aggressive actions on upstream methane emissions. This comment is consistent with the New

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<sup>5</sup> See <https://www.hydrogen.energy.gov/docs/hydrogenprogramlibraries/pdfs/chps/new-mexico-environmental-department.pdf>

<sup>6</sup> See <https://www.hydrogen.energy.gov/docs/hydrogenprogramlibraries/pdfs/chps/new-mexico-environmental-department.pdf>

Mexico's November 9, 2022 letter to the U.S. Department of Energy (see Attachment B).<sup>7</sup>

7. In contrast to the last comment, the U.S. Environmental Protection Agency and state environmental agencies often identify “bad actors” that have not invested in controlling point source or fugitive emissions such that the default value used in the 45V H2 GREET may underestimate actual carbon intensity of feedstocks in the production process. Further, while New Mexico has taken proactive steps lower the carbon intensity of natural gas, other states have not taken such steps to reduce fugitive methane emissions through state law, rulemaking, and/or enforcement. By locking in the default value, the proposed rule penalizes New Mexico and effectively credits other states for inaction to curb carbon emissions.
8. In the proposed rule, the U.S. Treasury states “...the Treasury Department and the IRS do not have sufficient data to determine precisely the likely extent of the increased costs of compliance...” and is relying on taxpayer recordkeeping and reporting, along with third-party verifiers, for securing the clean hydrogen production tax credit. Consistent with prior comments, state environmental agencies assure compliance with rules and permits that could ensure the validity and integrity of the clean hydrogen production tax credit. States like New Mexico that have robust laws, rules, and permits and have invested in compliance assurance activities to hold permittees accountable. New Mexico is specifically asking the U.S. Treasury to consider an alternative pathway for the granting or denial of the federal clean hydrogen production tax credits to states with greenhouse gas emission laws, rules, and/or permitting programs. Proceeding without such an alternative pathway rewards inaction by states to reduce greenhouse gas emissions while punishing states like New Mexico that took early, bold, and ambitious actions to reduce carbon emissions.
9. Related to the verification reports and requirements for production attestation, sale or use attestation, etc.; the proposed rule is asking taxpayers and third-party verifiers to audit and attest to 45V H2 GREET model data with respect to lifecycle greenhouse gas emissions *knowing* that assumptions in the model and documentation may not be reflective of their actual greenhouse gas emissions or that national assumptions in the model and documentation under or over report the actual greenhouse gas emissions of a given hydrogen production facility. This verification and attestation required by the taxpayer and third party-verifiers is subject to penalties of perjury under the proposed rule. It is important to note that this could create legal liability for taxpayers with other U.S. laws and regulations, state laws and rules, and corporate governance structures by asking a responsible official to knowingly provide false information to the U.S. Treasury.
10. Related to the verification reports and requirements for production attestation, the U.S. Treasury should require taxpayers and third-party verifiers to obtain a statement of compliance from a responsible official for the applicable clean hydrogen production tax credit from state environmental agencies for the corresponding time. To the extent a state does not have applicable greenhouse gas emission laws, rules, and permits governing the taxpayer's compliance, the U.S. Treasury should prioritize such taxpayers for third-party lifecycle greenhouse gas emission audits given the lack of independent state verification data.
11. As currently drafted, the proposed rule via the 45V H2 GREET model disadvantages clean hydrogen produced by renewable natural gas, responsibly sourced natural gas, low-carbon natural gas, etc.

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<sup>7</sup> See <https://www.hydrogen.energy.gov/docs/hydrogenprogramlibraries/pdfs/chps/new-mexico-environmental-department.pdf>

Further, processes like pyrolysis, where biogas or natural gas is reformed into hydrogen and a co-product like carbon black or graphite, are devalued in the 45V H2 GREET model and guidance. The 45V H2 GREET model appears to only consider gaseous carbon co-products, like carbon capture and sequestration. This is problematic and should be corrected in the final rule since the clean hydrogen production tax credit incentives and co-products hold near-term potential for economically meeting both New Mexico and the nation's decarbonization and air quality goals.

12. Additionally, the proposed rule does not consider excess steam that is generated during the hydrogen production process and then used as a fuel substitute for higher emitting energy sources in other parts of the complex. The proposed rule assumes there is no excess steam generated as part of the hydrogen production process because whatever is actually generated is assumed to be used to power the necessary carbon capture equipment. This does not take into account more efficient equipment and again treats all capital investments, operational investments, and technologies the same. If companies use a more efficient hydrogen production process and more efficient carbon capture equipment (whether for producing solid carbon or gaseous carbon dioxide), the regulations should be flexible enough to allow additional emission reductions to be reflected in the final carbon intensity score of the produced hydrogen.
13. Clean hydrogen project plans could be adversely affected by the requirement for both the hydrogen and electric power to be produced in the same electric power region, as they are defined in the regulations. Proposed § 1.45V-4(d)(2)(vi) would define the term "region" to mean a United States region derived from the U.S. Department of Energy National Transmission Needs Study that was released by the U.S. Department of Energy on October 30, 2023.<sup>8</sup> It is likely that regional grids will integrate to include areas with different weather patterns to mitigate intermittent renewable generation. As such, the boundaries of what constitutes an electric power region may change over time. For instance, if integration were to occur to include wind and solar resources in the Southwest region to portions of the neighboring Mountain, Plains, or Texas regions, part of the incentive for doing so could be to improve the carbon intensity of those grids used in hydrogen production.
14. The proposed rule establishes hourly grid carbon-intensity accounting by January 1, 2028. While New Mexico is working to acquire this capacity over the next 3-5 years as part of the Western Renewable Energy Generation Information System (WREGIS), one potentially helpful tool in these efforts that was not mentioned in the regulatory guidance is the National Renewable Energy Laboratory's Regional Energy Deployment System (NREL-ReEDS). ReEDS covers 134 separate balancing areas in the United States, which may provide a level of specificity that is helpful for states like New Mexico that belong to multiple power regions. Since ReEDS is not specifically mentioned in Treasury's 45V guidance, the U.S. Treasury should provide clarification on the applicability of ReEDS for hourly tracking systems in regulatory compliance.
15. The proposed rule definition of regionality will affect the relationship between electric power and clean hydrogen production within portions of New Mexico that are assigned to different U.S. Department of Energy Needs regions. New Mexico has seen rapid development in its capacity for wind power generation in the eastern portion of the state (Quay, De Baca, Roosevelt, Curry, and Lea Counties). Some of these facilities are in the Western Energy Coordinating Council (WECC) reliability region, while others are in the Southwest Power Pool reliability region. These regional boundaries would not all line up with the U.S. Department of Energy Needs Study

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<sup>8</sup> See <https://www.energy.gov/gdo/national-transmission-needs-study>.

regions. Some of these wind-producing counties in the Southwest Power Pool reliability region would be assigned to the Plains region and required to sell their power to hydrogen producers to the east to receive the clean hydrogen production tax credit, who may be on the other side of state lines. The option for these facilities will be to sell renewable power to hydrogen producers who are both in the same state (New Mexico) and reliability region (Southwest Power Pool) but in a different U.S. Department of Energy Needs region (Southwest and not Plains). The final rule must provide flexibility to allow for power sales across the U.S. Department of Energy Needs regions to hydrogen producers who are in the same state and region. This would allow for renewable power buildouts in such areas.

16. The accounting of induced emissions with the hourly matching rule may create some instances in which electrolyzer owners with Distributed RE might prefer to avoid connecting to the grid. By not connecting Distributed RE to the grid, electrolyzer owners could produce hydrogen with “islanded” RE. This option could allow such owners to produce hydrogen without having to account for the “induced emissions” during different hours of the day. Unlike their counterparts who connect RE resource to the power grid, electrolyzer owners with onsite “islanded” RE may be able to avoid the need for hourly matching. The U.S. Treasury should consider flexibility or incentives to encourage clean hydrogen producers with Distributed RE to have a grid connection without incurring undue penalties for doing so on the 45V tax credits they receive. One way to accomplish this might be to apply the “induced emissions” criteria equally to Distributed RE + electrolyzer owners that both do and do not have grid connections.

## **Attachments (2)**



**Attachment A**



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 (CO<sub>2</sub>e) per kg of hydrogen (H<sub>2</sub>) 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 CO<sub>2</sub>e/kg H<sub>2</sub>.
- 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.

**Attachment B**



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](mailto: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<sub>2</sub>e/kgH<sub>2</sub> 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<sub>2</sub> 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 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.<sup>1</sup> 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 CO<sub>2</sub>e/kg H<sub>2</sub>.” 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 kgCO<sub>2</sub>e/kgH<sub>2</sub> 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

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<sup>1</sup> 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<sub>2</sub>e/kgH<sub>2</sub> 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 (CO<sub>2</sub>e) per kg of hydrogen (H<sub>2</sub>) 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 CO<sub>2</sub>e/kg H<sub>2</sub>.
- 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.