

February 25, 2024

Internal Revenue Service  
CC:PA:LPD:PR (REG-117631-23)  
Room 5203  
P.O. Box 7604  
Ben Franklin Station  
Washington, D.C., 20044

**RE: Section 45V Credit for Production of Clean Hydrogen; Section 48(a)(15) Election To Treat Clean Hydrogen Production Facilities as Energy Property**

Greater New Orleans, Inc. (GNO, Inc.) is the regional economic development organization for the 10-parish region of Southeast Louisiana. On behalf of GNO, Inc. and a coalition of 23 Louisiana organizations represented in this public comment, we appreciate the Administration's proactiveness on advancing clean energy and emissions-reducing technology. Louisiana has correspondingly witnessed transformational benefits and investment in clean energy, as provided below:

- 35 future energy projects announced between 2018 and 2023
- Total amount of \$45.6 billion in capital expenditure represented by the 35 projects
- \$23.3 billion announced for renewable-powered industrial projects (50.7% of total)

GNO, Inc. and our economic development partners are working to secure electrolytic hydrogen and ammonia projects representing a total of **\$6.5 billion** in prospective capex. We believe these projects will be less likely to occur given the 45V Notice of Proposed Rulemaking (45V NPRM), which will impair Louisiana businesses' and workers' ability to access the credit.

The 24 Louisiana organizations represented both understand and appreciate the U.S. Treasury Department's commitment to emission reduction ambitions represented by the 3-Pillars. However, without a phased-in approach, we believe the three requirements will achieve lower growth of Louisiana's electrolytic hydrogen market, and thus less emissions reductions, than are achievable. The 45V rules will drive first-mover electrolytic hydrogen producers to places with ample existing renewable power rather than locations with high hydrogen demand and decarbonization potential, undermining the purpose of the credit. This public comment expresses concerns vocalized by industry experts in Louisiana and offers recommendations that bridge the gap between climate integrity and favorable market conditions for electrolytic hydrogen.

**Recommendations Overview:**

1. **Deliverability** – Redefine the regions referenced for the deliverability requirement to align clean hydrogen production viability with energy market transactions, encouraging interregional delivery
2. **Temporal Matching** – Establish a phased-in adoption of hourly temporal matching and project-specific extension policy for hourly temporal matching
3. **Temporal Matching** – Establish a midterm review procedure for the U.S. Treasury Department to assess the readiness of each region before hourly temporal matching requirement. Determine a set of qualifications for a project-specific extension request process (see Recommendation 2)
4. **Natural Gas Supply Chain Abatement** – Recognize the efforts of states and investments by companies to reduce upstream emissions in the natural gas supply chain
5. **Steam as Fuel** – Account for excess steam generated during hydrogen production used as fuel

Concerns raised from industry partners underscore the anticipated negative impacts of the 45V NPRM left in current form on three aspects of Louisiana’s clean energy economy, summarized below:

- Undercut Federal Investments – 45V NPRM will undercut the trajectory towards clean energy guided by a total of \$1.47 billion in federal grants awarded to Louisiana
- Undermine Offshore Wind and Solar Potential – hourly temporal matching by 2028 will undermine the opportunity for electrolytic hydrogen production to use planned offshore wind and solar projects
- Restrict Hydrogen Production Diversity – 45V NPRM will exclude electrolytic hydrogen producers from accessing Louisiana’s clean hydrogen market

### **LOUISIANA HYDROGEN DEMAND**

According to a recent McKinsey analysis, Louisiana consumes 30% of the U.S. hydrogen market. End-use hydrogen demand in the state underpins the economic bottom-line for companies seeking to produce low- or no-emission hydrogen. **The advancement of electrolytic hydrogen production has the potential to reduce total emissions of the hardest-to-abate sectors in South Louisiana by as much as 68%.<sup>1</sup>** As a flexible, zero-carbon energy carrier, electrolytic hydrogen can decarbonize hydrogen-intensive assets and utilize existing infrastructure located in South Louisiana, including the following:

- Fifteen oil refineries which represent 15% of U.S. oil capacity
- Four ammonia facilities which represent 35% of national capacity
- One of the densest networks of pipelines, including the largest hydrogen system, stretching more than 700 miles from Galveston Bay in Texas to New Orleans

Extensive industry interviews conducted by McKinsey & Co. on behalf of the H2theFuture coalition convey that the greatest barrier to attract private capital and catalyze expansive development of electrolysis facilities in South Louisiana is marginal average cost per kilogram. If not cost competitive, electrolytic hydrogen will fail to find sustainable commercial application.<sup>2</sup>

Price parity of clean hydrogen produced relies on the reliability of electricity supply, marginal average cost of clean hydrogen, and end-use hydrogen demand. Market demand models for end-use hydrogen forecast national demand between 2020 and 2050. The following data of market demand displays a compelling case for electrolytic hydrogen production in Louisiana:

- Louisiana was the largest national hydrogen consumer in 2020, totaling 2.8 metric tons of hydrogen
- Louisiana is projected to be the 2<sup>nd</sup> largest consumer of hydrogen in 2050, following Texas
- The primary offtake for end-use hydrogen demand is bulk chemical, which likely includes foundational Louisiana sectors such as ammonia and fertilizer, oil product refining, petrochemical, and steel manufacturing

**Long-term end-use hydrogen demand in Louisiana (see figures below) creates stable and reliable conditions for businesses seeking to develop electrolytic hydrogen production facilities to leverage high hydrogen consumption to reach price parity.**

Relevant to the clean hydrogen production market, economic conditions in Louisiana are favorable for investment in carbon capture and sequestration (CCS) projects. The State of Louisiana currently has 56 Class VI Well Applications pending approval from the Department of Energy and Natural Resources.<sup>3</sup> Carbon capture and sequestration technology will primarily service the removal of carbon dioxide from industrial and power plant emissions in Louisiana, so CCS project development is reliant on the activity of oil, natural gas, and other fossil fueled generating assets. PwC US recently published an economic analysis, commissioned by the American Petroleum Institute, which demonstrates that Louisiana’s oil and natural gas industry alone supports 346,000 jobs, provides \$25.8 billion in labor income, and contributed more than

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<sup>1</sup> H2theFuture, “The Case for Hydrogen in Louisiana,” <https://h2thefuture.org/hydrogen/> (Accessed February 6, 2024)

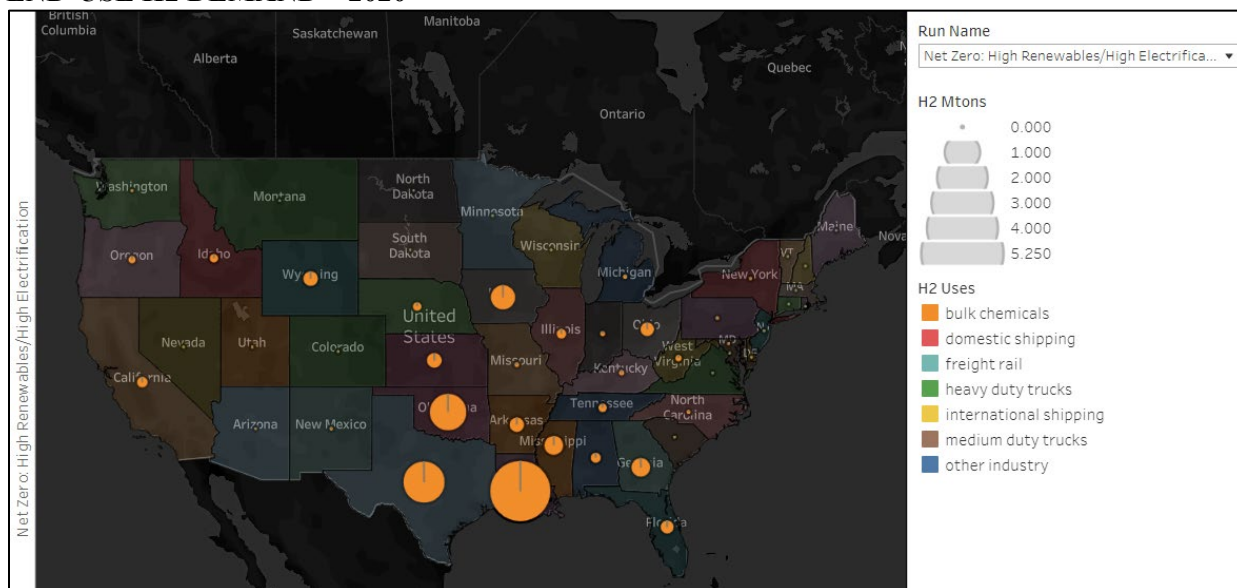
<sup>2</sup> H2theFuture, “The Case for Hydrogen in Louisiana,” <https://h2thefuture.org/hydrogen/>

<sup>3</sup> Louisiana Department of Energy and Natural Resources, Class VI Carbon Sequestration Program, <https://www.dnr.louisiana.gov/index.cfm/page/1695> (Accessed February 21, 2024)

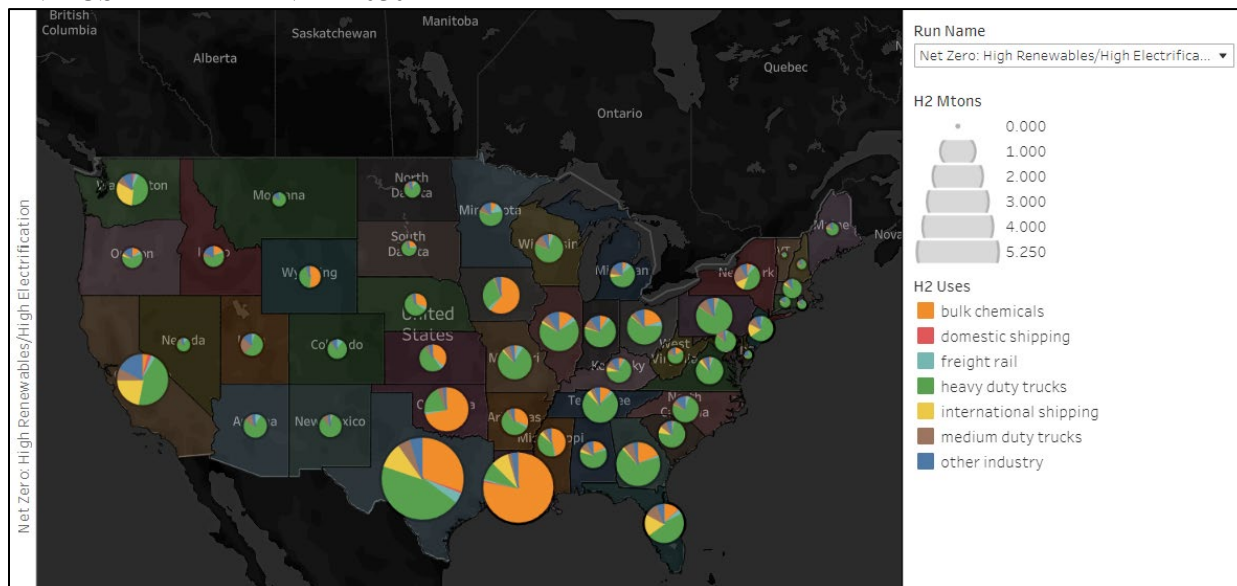
\$54 billion towards the state’s economy. Carbon capture and sequestration projects serve a critical role allowing industries in Louisiana to realize decarbonization goals – and enabling the United States to achieve goals set by the Paris Agreement – while renewable energy resources are developed and deployed.

For these reasons, hydrogen producers have identified Louisiana as a natural investment location for clean hydrogen and ammonia production. **GNO, Inc. and our economic development partners are currently working to secure electrolytic hydrogen and ammonia projects representing a total of \$6.5 billion in prospective capex in business development pipelines.** The current 45V NPRM requirements will negatively impact investor confidence by instilling doubt in business prospects seeking to decarbonize industrial production life cycles. Louisiana joins states across the country in economic development projects expressing investment hesitation due to 45V NPRM parameters. Recommendations presented seek to address concerns for Louisiana clean hydrogen prospects and for national workability of the rules.

### END-USE H2 DEMAND – 2020



### END-USE H2 DEMAND – 2050



Source: Decarb America, Hydrogen End-use Interactive Map (accessed February 1, 2024). The above map represents hydrogen demand, expressed in metric tons in 2020. The below map represents demand in 2050. The models are run with the assumption of high electrification and development of renewable electricity sources.

## **CLEAN TECHNOLOGY AND RENEWABLE ENERGY IN LOUISIANA**

Louisiana has been a leader in energy production and innovation for generations. The longevity of energy leadership and workforce experience posture the state to lead clean energy development and widespread market viability of emission reducing technologies. The expertise of industry leaders and organizational partners in Louisiana was leveraged to develop the concerns and recommendations expressed in this public comment.

Between 2018 and 2023, Louisiana has seen a renaissance in our energy sector thanks to clean energy projects. An all-of-the-above energy strategy postures the state to advance and leverage new energy and decarbonization opportunities including, but not limited to, offshore wind, solar expansion, electrolytic hydrogen production, direct air capture of greenhouse gas emissions, lithium-ion batteries, and renewable fuels. According to Louisiana Economic Development, over the last five years the State of Louisiana has announced:

- **35 clean energy projects**
- **Totaling \$45.6 billion in capital expenditure (capex)**
- **Creating 23,000 new jobs:** 5,268 direct jobs and 17,831 indirect jobs
- **Generating an average salary of \$79,900**
- **\$23.3 billion in capex for renewable-powered industrial projects (50.7% of total)**

**Future energy projects and development in Louisiana have been supported by a total of \$1.47 billion in discretionary federal grant funding.** Advancing an all-of-the-above energy strategy has increased the attractiveness and competitiveness of Louisiana and has instilled federal confidence in the growth of renewable energy in the state.

Louisiana experienced unprecedented solar growth over the last 3 years.<sup>4</sup> Reported in September 2023, the state of Louisiana currently has approximately 311 megawatts of solar power generating capacity, with an additional 500 megawatts under construction.<sup>5</sup> While Louisiana's solar energy sector is ranked 38<sup>th</sup> nationally in size, the state is projected to add over 2,999 megawatts of solar electricity over the next five years, improving its ranking to 19<sup>th</sup> nationally.<sup>6</sup> Solar energy at utility scale costs approximately half the amount of renewable energy alternatives like offshore wind, and projects can be completed more quickly. In the short term, solar energy can support the development and commercialization of electrolytic hydrogen.

Our state also has an opportunity to capitalize on biomass to support electrolytic hydrogen production via thermal conversion – both as a power generation source and a direct hydrogen production mechanism. Utilizing biomass produces the most cost-effective clean hydrogen currently in the market (approximately \$3.50/kg). Louisiana possesses comparably large inventories of wood and lumber that can be utilized, particularly due to decreasing paper demand. Rural communities in the state that have the opportunity to support projects which use wood supplies for clean hydrogen production are some of the most economically disadvantaged, thereby benefiting most from new sector growth. Utilizing biomass for hydrogen production represents a commercially viable technology that is prepared for near-term implementation.

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<sup>4</sup> <https://www.energynewsroom.com/news/entergy-louisiana-receives-approval-for-additional-renewable-power-facilities/>

<sup>5</sup> *Louisiana Illuminator*, “Renewable power expected to grow as Louisiana marks clean energy transition,” September 18, 2023, <https://lailluminator.com/2023/09/18/renewable-power-expected-to-grow/#:~:text=%E2%80%9CLouisiana's%20solar%20power%20sector%20is,jobs%20in%20Louisiana%20in%202022.%E2%80%9D> (Accessed February 2, 2024)

<sup>6</sup> Solar Energy Industries Association, Louisiana Solar, <https://www.seia.org/state-solar-policy/louisiana-solar> (Accessed February 2, 2024)

Finally, offshore wind is a significant scalable renewable resource in Louisiana, and development in the Gulf of Mexico is pivotal for supporting large-scale electrolytic hydrogen production:

- Louisiana was found to have the 4<sup>th</sup> highest technical potential for offshore wind energy (NREL)
- Gulf of Mexico has the largest OSW capacity potential in the contiguous U.S. (adjacent graph)

**Progress is underway:** On August 29, 2023, BOEM held the first-ever offshore wind auction for the Gulf of Mexico, with German firm RWE acquiring a wind energy lease near Lake Charles, Louisiana. RWE’s proposed project represents 2,000 MW of emission-free energy potential – enough to power 350,000 homes with an opportunity to direct the equivalent capacity towards industrial operations. The state additionally announced the approval of two projects: Diamond Offshore Wind (DOW) project off the coast of Terrebonne and Lafourche parishes, and Cajun Wind development in Cameron Parish’s coastal waters. BOEM has identified the next 4 Wind Energy Areas for an anticipated 2024 lease sale with the potential to generate an additional 9 GW if developed.<sup>7</sup>

Total OSW Capacity Potential - NREL				
Region	Fixed-Bottom (GW)	Floating (GW)	Fixed-Bottom (%)	Floating (%)
California	4	88	4	96
Great Lakes	160	415	28	72
Gulf	696	867	45	55
Mid-Atlantic	157	166	49	51
North Atlantic	264	442	37	63
Oregon	2	150	1	99
South Atlantic	188	586	24	76
Washington	5	59	8	92
<b>CONUS Total</b>	<b>1,476</b>	<b>2,773</b>	<b>35</b>	<b>65</b>

\*values are rounded to closest integer

*Source: National Renewable Energy Laboratory, "Offshore Wind Energy Technical Potential for the Contiguous United States," August 2022*

## RECOMMENDATIONS

This coalition of 24 organizations appreciates the opportunity to express to the Treasury Department the importance of flexibility in awarding and administering the 45V clean hydrogen production tax credit. To reach the national goal of industrial net-zero emissions, targeted strategies require aggressive technology development, market adoption, and market mechanisms.<sup>8</sup> The current 45V rules will drive first-mover electrolytic hydrogen producers to regions where renewable power exists and new renewable power generation projects can be built at the lowest cost, rather than locations with the highest hydrogen demand and decarbonization potential. Market mechanisms relevant for clean hydrogen production should instead consider marginal emissions and marginal electricity usage to produce clean hydrogen if we are to achieve the most emissions reductions for a given cost. Flexibility is a necessary aspect for market mechanisms to achieve emission abatement goals in the most cost-effective way.

Incentives like the 45V credit raise the cost of environmental shirking and allow a cost-effective level of flexibility. According to this Administration’s Office of Management and Budget’s Circular A-4, benefits and costs associated with a regulation will increase with the level of stringency.<sup>9</sup> This coalition of organizations agrees that the stringency of the 45V NPRM three pillars creates a barrier to catalyze an electrolytic hydrogen economic boom in South Louisiana because they create a barrier to reduce in marginal average cost gap between traditional hydrogen and clean hydrogen. We respectfully express that the proposed rules are too specific and do not match marginal emissions on the grid with hydrogen production, and thus request that the U.S. Treasury consider recommendations provided.

<sup>7</sup> <https://www.boem.gov/renewable-energy/state-activities/gulf-mexico-activities>

<sup>8</sup> Department of Energy, “Industrial Decarbonization Roadmap,” September 2022, <https://www.energy.gov/sites/default/files/2022-09/Industrial%20Decarbonization%20Roadmap.pdf> (Accessed February 21, 2024)

<sup>9</sup> United States Office of Management and Budget, Circular No. A-4, November 2023, <https://www.whitehouse.gov/wp-content/uploads/2023/11/CircularA-4.pdf> (Accessed February 21, 2024)

**Recommendation 1: *Deliverability* – Redefine regions to align clean hydrogen production viability with energy market transactions**

**Recommendation 1A:** Encourage and permit interregional transmission delivery of renewable energy between the Delta and Plains region. The existing renewable energy fleet in Oklahoma – predominately onshore wind farms – can provide sufficient power to electrolyzer technology adopted in Louisiana’s high concentration of hydrogen utilizing industries, thereby supporting commercialization and nearing price parity as offshore wind and solar resources in Louisiana come online.

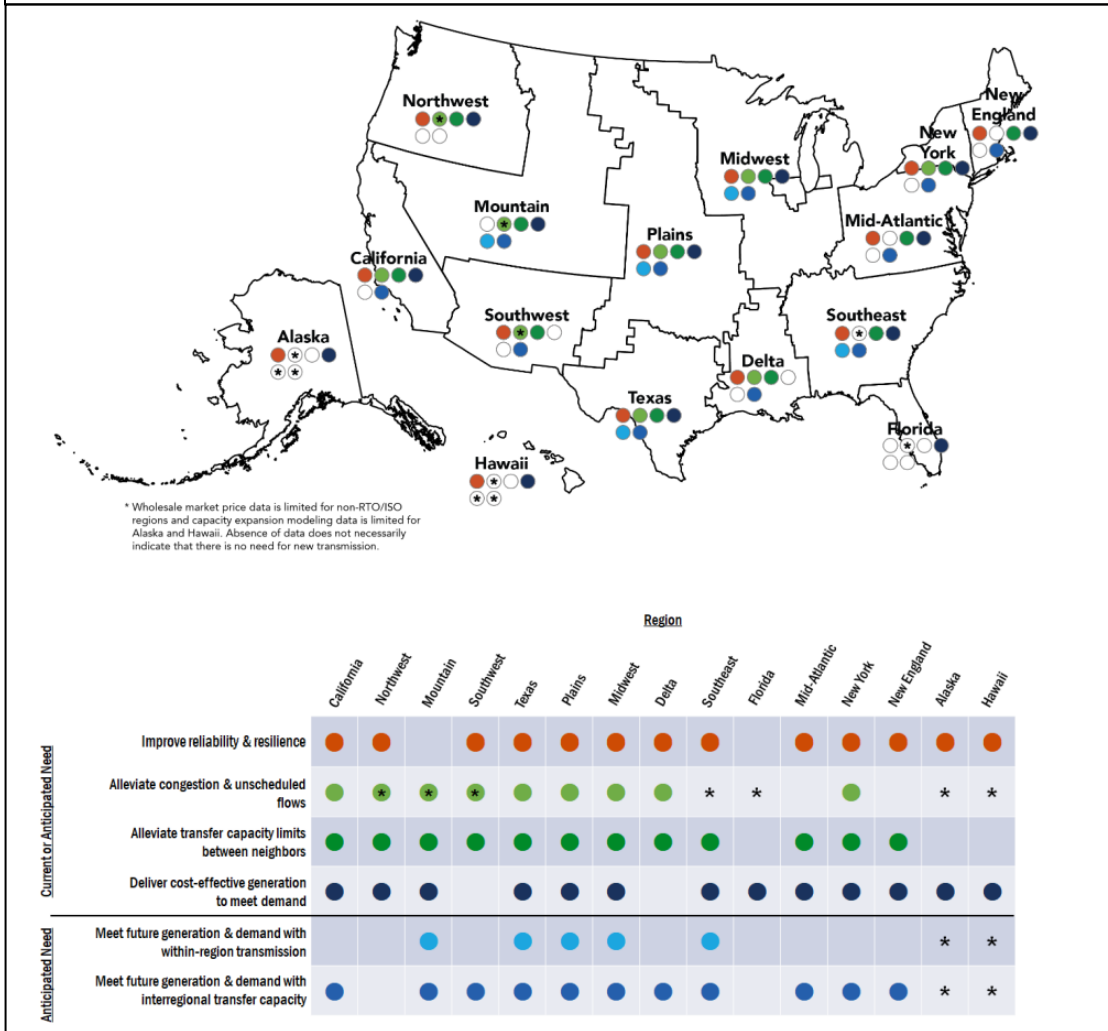
**Recommendation 1B:** Encourage and permit interregional transmission delivery of renewable energy between the Delta and Texas regions. The largest network of hydrogen delivery pipelines in the United States exists between Texas and Louisiana, and the first federal offshore wind leases are strategically postured between the two states. Additionally, planning for transmission expansion from Texas to deliver electricity to other Gulf states in the Delta region is already underway.

A stringent spatial requirement undercuts the recommendation of this Administration’s Circular A-4 and misaligns with the aim to regulate according to marginal emissions and marginal electricity usage. The DOE Needs Study defines regions to provide recommendations for national preparedness to meet current and anticipated transmission needs. Wholesale market price differentials that exist between and within the footprint of RTOs and ISOs reveal transmission congestion. Deployment of renewable energy resources will compound the congestion, requiring transmission capacity expansion. This reality is especially true in the Gulf Coast region, where limited renewable generation capacity currently exists.

Adopting the defined regions for 45V deliverability requirement contradicts the Needs Study’s recommendations, undercuts national clean energy development, and has the potential to increase the cost of electrolytic hydrogen production. The Needs Study recommends for eleven out of thirteen regions in the contiguous United States (representing 85%) increased interregional transfer capacity to meet future generation and demand (see figure below). For the Delta region, the Needs Study recommends that the region will need between 10.8 and 23.8 GW of additional transfer capacity with the Plains region in 2035 to meet moderate load growth and high clean energy growth.

The current 45V NPRM impairs the execution of the Needs Study’s recommendations by restricting the development of renewable energy sources to localized boundaries. The deliverability requirement also contradicts competitive wholesale electricity markets: siting a renewable energy asset within a defined region does not necessarily mean the asset is the marginal generational source of electricity for clean hydrogen production. **Electrolytic hydrogen production and the commercial viability of electrolyzer technology in the Delta region and the State of Louisiana will be disproportionately disadvantaged by the current form of the 45V NPRM.**

## Summary of Current and Anticipated Transmission Needs by Geographic Region



Source: U.S. Department of Energy National Transmission Needs Study (Oct 2023)

### Recommendation 2: *Temporal Matching* – Establish a phased-in adoption of hourly temporal matching and project-specific extension policy for hourly temporal matching

Coalition members agree that the deliverability requirement should be relaxed to 2030 or 2032. If a full delay of hourly temporal matching is not feasible, this public comment recommends that the U.S. Treasury Department establish a phased-in approach. The creation of an extension policy granted on a project-specific basis – a project-specific on-ramp process – will further bridge the gap between a commitment to climate integrity and the facilitation of favorable market conditions.

The commercial viability of electrolyzer technology will rely on the scalability, generation capacity, and price of renewable energy. Hourly temporal matching required by 2028 disproportionately disincentivizes interest in states like Louisiana with limited levels of renewable energy capacity, despite proven viable market activity and statewide action to increase renewable electricity generation. The reason for this is that stringent temporal matching and deliverability will not align with economic decision based on marginal cost and benefit.<sup>10</sup> Economic development projects monitored by public utilities and economic development organizations across the state are already expressing investment hesitation due to 45V NPRM parameters.

<sup>10</sup> United States Office of Management and Budget, Circular No. A-4, November 2023, <https://www.whitehouse.gov/wp-content/uploads/2023/11/CircularA-4.pdf> (Accessed February 21, 2024)

The U.S is not prepared to adopt hourly temporal matching requirements for renewable electricity usage. According to DOE, hourly tracking systems for Energy Attribute Certificates (EACs) are not universally available across the country and, while they are in effect or under development in some regions, widespread availability and functionality will take time. Moreover, data, software, regulatory structure, and market practices will need to evolve to enable hourly matching at scale.<sup>11</sup> A review of temporal matching readiness across EAC registries indicates the shortcoming of national tracking systems: Six out of nine tracking systems do not possess hourly tracking ability; the anticipated timeline for implementation ranges between one and five years.<sup>12</sup> **The majority of the identified Delta region, as well as the entire State of Louisiana, lacks a formally adopted EAC registry tracking system. Without a phased in approach to temporal matching, or a project-specific extension procedure, the opportunity to employ electrolytic hydrogen to decarbonize Louisiana’s large hydrogen end-use market will be passed over.**

**Recommendation 3: *Temporal Matching* – Establish a midterm review procedure for the U.S. Treasury Department to assess the readiness of each region before hourly temporal matching requirement. Determine a set of qualifications for a project-specific extension request process (see Recommendation 2)**

This public comment recommends that the U.S. Treasury Department establish a midterm review procedure to determine (likely a year or two in advance of the 2028 requirement) the readiness of each region established by the final rule. Given the sizable subsidy represented by the 45V credit, the three pillar requirements must establish a framework that provides flexibility which achieves emission abatement in the most cost-effective way. Project delivery timeline for offshore wind farms, and the expansion of solar to almost 3,000 megawatts, will not come online by the 2028 requirement. The full magnitude of OSW developments in the Gulf of Mexico may materialize as late as 2034, and the anticipated expansion of solar to 3,000 megawatts is projected to materialize by 2029. **Louisiana and the Delta region should not be penalized when measurable progress is being made.** A midterm review conducted by the U.S. Treasury Department will ensure the accountability of Louisiana’s commitment to renewable energy deployment.

This public comment also recommends that Treasury align the final rule with the Administration’s Circular A-4 and determine a set of qualifications for a project-specific extension policy relevant to hourly temporal matching, potentially considering the following:

- Whether the project location is making demonstrable progress towards compliance with 45V
- Implementation timelines for hourly tracking systems
- Whether a project location has formally adopted an EAC tracking system
- Renewable energy resource project delivery schedule
- The establishment of greenhouse gas emissions targets<sup>13</sup> – statutory or executive targets – in addition to renewable portfolio standards and clean energy standards<sup>14</sup>

**Recommendation 4: Final regulations should recognize the efforts of states and investments by companies to reduce upstream emissions in the natural gas supply chain**

The final regulations must recognize the efforts of states and investments by companies to reduce upstream emissions in the natural gas supply chain. Neglecting to recognize the reduced emissions of the natural gas supply chain will discourage efforts to scale a hydrogen economy and leave significant emission abatement opportunities on the table and cutting room floor.

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<sup>11</sup> U.S. Department of Energy, “Assessing Lifecycle Greenhouse Gas Emissions Associated with Electricity Use for the Section 45V Clean Hydrogen Production Tax Credit,” December 22, 2023, <https://www.ushydrogenalliance.org/news/assessing-lifecycle-greenhouse-gas-emissions-associated-with-electricity-use-for-the-section-45v-clean-hydrogen-production-tax-credit> (Accessed February 2, 2024)

<sup>12</sup> Center for Resource Solutions, “Readiness for Hourly: U.S. Renewable Energy Tracking Systems,” June 2023 (Accessed February 6, 2024)

<sup>13</sup> The State of Louisiana established economy-wide greenhouse gas (GHG) emissions targets, as reflected by the Louisiana Climate Action Plan, <https://gov.louisiana.gov/page/climate-initiatives-task-force>

<sup>14</sup> <https://www.c2es.org/document/greenhouse-gas-emissions-targets/> (Accessed February 2, 2024)



As currently drafted, the proposed rules disadvantage hydrogen produced by low-carbon natural gas, which we have in the Permian Basin. This is particularly troubling since the hydrogen incentives hold great near-term potential for meeting our climate and clean-energy goals.

Specifically, the proposed regulations and the newly released 45VH2 GREET 2023 model would disadvantage hydrogen produced with Permian low-carbon natural gas by requiring producers and taxpayers to use the national average carbon intensity of natural gas. By locking in this default value, there is no ability to account for, or recognize, investments made to lower the upstream emissions and resulting carbon intensity of natural gas, even where such lower emissions could be measured, monitored, and reported through existing programs like the Environmental Protection Agency's Methane Emission Reduction Program (MERP) or the Mandatory Greenhouse Gas Registry.

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 CO2 emissions critical to cleaning up the natural gas supply chain. Our state and our companies have made significant progress to reduce emissions in the natural gas supply chain and that needs to be recognized as part of the final hydrogen product's carbon intensity.

#### **Recommendation 5: Account for excess steam generated during hydrogen production used as fuel**

The final 45V rules should 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 our facility. The goal of the IRA is to lower overall emissions and using this excess steam helps effectuate that goal. Unfortunately, the proposed rules assume there is no excess steam generated as part of the hydrogen production process; rather, any excess steam generated is assumed to be used to power the necessary carbon capture equipment. If companies use a more efficient hydrogen production process and more efficient carbon capture equipment, the regulations should be flexible enough to allow additional emission reductions to be reflected in the final carbon intensity score of the produced hydrogen.

Congress intended the 45V clean hydrogen production tax credit to be feedstock and technology neutral, with the only qualification criteria being the overall carbon intensity of the hydrogen produced. Congress designed the credit to incentivize producers to take steps to reduce the 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.

To summarize, we believe the proposed 45V rules should allow for the actual carbon intensity of a producer's natural gas to be taken into account and any additional emissions to be counted so the resulting hydrogen's carbon intensity is appropriately reflected. Without such an alignment, natural gas hydrogen producers will have no incentive to reduce the overall carbon intensity of their hydrogen production, and scaling up the hydrogen economy will falter. Getting the rules right is critical to our overall clean-energy and climate goals.

### **CONCERNING IMPACTS OF CURENT 45V NPRM**

#### **1. On Public Investment in Louisiana's Clean Energy Evolution**

GNO, Inc. was awarded in September 2022 a \$50 million grant from the Economic Development Administration (EDA), matched with \$24.5 million from Louisiana Economic Development, for the H<sub>2</sub>theFuture initiative. H<sub>2</sub>theFuture is a 25-organization partnership with representation from across South Louisiana with the objective to develop a world-leading clean energy cluster in South Louisiana.

In October 2023, the EDA designated the Gulf Louisiana Offshore Wind (GLOW) Propeller as one of 31 national Tech Hubs. The GLOW Propeller, led by Louisiana State University, aims to leverage the state's energy infrastructure, port and shipbuilding network, and specialized energy workforce to establish a domestic offshore wind supply chain and generate thousands of jobs. Announced in January 2024, Future

Use of Energy in Louisiana (FUEL), a statewide effort with more than fifty partners, won the largest and most competitive grant awarded by the National Science Foundation – up to \$160 million over the next decade. FUEL strives to solve emerging challenges in decarbonizing the industrial corridor.

**Federal grants awarded to H2theFuture, GLOW Propeller, and FUEL – joined with the remaining \$1.47 billion in federal grant awarded – demonstrate that the decarbonization of the Gulf Coast remains a priority for the Administration’s energy and climate strategies.** Federal grant awards have enabled coalitions to form, establishing collaborative platforms for industry, public sector, economic development, and non-profit leaders to generate and execute a clean energy roadmap. **Coalition partners represented here suspect that 45V NPRM in current form will undermine the trajectory towards clean energy, emission reduction, and economic development which federal awards has guided and emboldened.**

## **2. On the Market Opportunity for Solar, Offshore Wind, and Electrolytic Hydrogen**

The development of solar and OSW energy in the Gulf of Mexico is pivotal for supporting large-scale electrolytic hydrogen. Decarbonization in Louisiana cannot be achieved through electrification alone by virtue of its immense industrial footprint. Electrolytic hydrogen is a uniquely compelling opportunity for solar and offshore wind energy to support hard to abate sectors by serving as an emission-free feedstock<sup>15</sup>. Absent of reliable solar and offshore wind growth – catalyzed by both a strong market case for electricity offload to electrolysis technology and the workability of the 45V credit for Louisiana business prospects – electrolytic hydrogen in Louisiana is not a certain pathway for adequate decarbonization.

**Despite aggressive progress in renewable energy project development, the 45V NPRM hourly temporal matching requirements will undercut the opportunity for clean hydrogen production to utilize electricity generated by solar and offshore wind resources, since project delivery timelines for Gulf of Mexico wind farms and sufficient solar capacity are not projected to be completed by 2028.**

## **3. On Diversity of Louisiana’s Hydrogen Production Market**

Final rules released for 45V will influence within each region the balance of hydrogen production technologies, as well as associated emissions. Details regarding the growth potential of electrolytic hydrogen production in Louisiana are provided in the above sections. However, **NPRM requirements in current form will likely lead electrolysis facility developers to dismiss the opportunity, resulting in a carbon capture-dominated hydrogen market. Organizations represented in this public comment concur that carbon capture and sequestration is an integral part of Louisiana’s energy leadership and economy, and we are encouraged by the prospective investments in this sector. We elevate this point to demonstrate how the current 45V NPRM is not, in application, a technology-neutral incentive.**

Industrial processes in South Louisiana are operated constantly and at high pressures. Fossil fuel-based feedstocks can be consistently and reliably supplied into interminable industrial processes. Industrial offtake customers will require the same reliability from clean hydrogen producers. To match this reliability and achieve compliance according to the 45V 3 Pillars, ramping up electrolytic hydrogen production must accelerate in conjunction with investments in hydrogen batteries, storage, and distribution infrastructure. Without substantial infrastructure build-out, particularly before hourly temporal matching, Louisiana’s electrolytic hydrogen market will lose confidence and investment.

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<sup>15</sup> U.S. Department of Energy, “Industrial Decarbonization Roadmap”

## **CONCLUSION**

GNO, Inc. and the coalition of 23 South Louisiana organizations urge the U.S. Treasury Department to integrate industry input vocalized by this public comment and to adopt the recommendations provided. Louisiana continues to demonstrate leadership in clean energy progress and possesses an optimal opportunity for the use of electrolytic hydrogen to decarbonize hardest-to-abate sectors. This South Louisiana coalition appreciates the opportunity to provide a collective Louisiana voice in the discussion of guidelines to support electrolytic hydrogen production under Section 45V. We would be happy to discuss our comments further if so requested.

Sincerely,

### **Michael Hecht**

*President & CEO,*  
Greater New Orleans, Inc.

### **Lacy McManus**

*Executive Direct of Future Energy*  
Greater New Orleans, Inc.

### **Jasmine Brown-DeRousselle**

*Senior Vice President of Public Policy*  
Greater New Orleans, Inc.

### **South Louisiana Coalition Organizations Represented as Signatories**

- Baton Rouge Area Chamber
- Canal Barge Co.
- Cleco Power LLC
- Delgado Community College
- ExxonMobil
- Fletcher Technical Community College
- Grand Isle Shipyard
- Gulf Coast Bank & Trust
- Louisiana Technical and Community College System
- Northshore Technical Community College
- Nunez Community College
- One Acadiana
- Port of South Louisiana
- River Parishes Community College
- Shell
- South Louisiana Community College
- South Louisiana Economic Council
- Southern University and A&M College at Baton Rouge
- Southern University at New Orleans
- Southwest Louisiana Economic Development Alliance
- SOWELA Technical Community College
- The Beach at UNO
- University of Louisiana at Lafayette