



# STATE OF CONNECTICUT

## PUBLIC UTILITIES REGULATORY AUTHORITY

December 9, 2022

### **Re: PURA Response to Connecticut Hydrogen Task Force Request for Written Comments**

The Connecticut Public Utilities Regulatory Authority (PURA or the Authority) appreciates both the Connecticut Green Bank's work to coordinate the Hydrogen Task Force (Task Force) and the opportunity to provide comment. The Authority submits the following comments to assist the Task Force in its preparation of the report due to the General Assembly by January 15, 2023.

#### **I. General Comments – Overview of Existing Regulatory Authority**

The Authority is statutorily charged with ensuring that Connecticut's public service companies, or "utilities" as used throughout, provide safe, clean, reliable, and affordable service related to their monopoly franchise (e.g., delivery of electricity, natural gas, or drinking water) to the customers, or ratepayers, within their exclusive service territory. The utilities are required to invest in and maintain infrastructure to provide these services. Presently, PURA's regulatory jurisdiction covers the in-state, investor-owned electric, natural gas, and water utilities, as well as aspects of the telecommunications industries, natural gas pipeline safety matters, and the retail electric supplier market.

The Authority appreciates the opportunity provided through its participation in the Task Force process to informally assess the role PURA may play in a future hydrogen ecosystem given its current statutory authority. The initial question is to what extent does Title 16 of the General Statutes of Connecticut grant PURA jurisdiction over hydrogen infrastructure and the companies that would produce, sell, and transport hydrogen?

To answer that question, the Authority considered two broad scenarios under which hydrogen infrastructure may be deployed in the state. One is that the local distribution companies (LDCs; also known as the natural gas utilities) use their natural gas pipeline infrastructure to distribute hydrogen. In this case, the LDCs would likely seek to rate base any requisite hydrogen infrastructure costs, as they do with the infrastructure necessary to deliver natural gas to customers. Pursuant to § 16-1(3) and (5) of the General Statutes of Connecticut (Conn. Gen. Stat.), the terms "gas company" and "public service company" are broadly defined to include the distribution of "gas for sale for heat or power." Although the term "natural gas" (which may or may not include

hydrogen) is used in the statutes, the term itself is not defined and is not used to define a “gas company.”

Given the generality of the statutory language, there is a reasonable basis to conclude that the LDCs could store, transmit, and distribute hydrogen gas under the existing statutory structure for “natural gas.” In short, an LDC may be permitted to use existing or new infrastructure to deliver hydrogen for the purposes of heat or power and to recover the cost of such infrastructure through rates under the current cost of service regulatory paradigm. If this were the case, any cost recovery would be subject to Conn. Gen. Stat. §§ 16-19 and 16-19e(a).

The second scenario involves hydrogen production, sales, and distribution through companies other than regulated LDCs. Generally, only public service companies, such as LDCs, are permitted to build infrastructure in the public right of way; therefore, distribution of hydrogen via infrastructure in the public right of way would likely be limited to LDCs under the current statutory structure. However, the production and distribution of gas does not necessarily require infrastructure in the public right of way. For example, propane companies can sell and distribute Liquid Natural Gas (LNG) by truck. Therefore, Title 16 may permit entities not subject to cost-of-service regulation to produce, sell, and distribute hydrogen. As with the propane example, the Authority might retain some jurisdiction for purposes of safety but would generally not regulate rates.

In summary, Title 16 does not directly address the production, sale, or distribution of hydrogen gas; however, the language in statutes related to gas companies and natural gas is fairly broad and could be interpreted as extending PURA’s jurisdiction to include the distribution of hydrogen by LDCs and by other entities. Ultimately, the statutes may require revision to further clarify PURA’s role in regulating hydrogen.

The analysis above should not be construed as PURA advocating for an expansion of its statutory responsibilities for oversight of either natural gas or hydrogen delivery or to expand the application of cost-of-service regulation. The Authority strongly encourages the Task Force to consider which distribution technologies will be most beneficial to end users and the state. Given the wide variety of potential end-uses, PURA is not yet convinced that natural gas pipelines are the optimal option, as existing pipelines may not reach all potential end-use sites or serve all necessary end uses.

Additionally, rate-basing hydrogen infrastructure outside of the LDCs’ existing franchise and for purposes other than heat and power will impose costs on natural gas ratepayers that may not actually consume any hydrogen. Moreover, allowing the LDCs to rate-base infrastructure unrelated to their existing franchise has significant long-term implications; namely, it would allow the LDC to expand its monopoly and to gain a large market share of a nascent industry in Connecticut. The expansion of monopolies should be done with great care and consideration, and limited to situations where

market solutions are not available or inefficient. The Authority is not convinced that market solutions are not available in this instance. Therefore, the Authority recommends that the Task Force further investigate transmission and distribution options that take advantage of market competition and fairly and equitably allocate costs.

## **II. Responses to Specific Questions**

### **a. Defining Clean Hydrogen**

- 1. Do you believe that Connecticut should pursue a more stringent definition for clean hydrogen than the one that has been established by the Federal government? If so, why? If not, why not?**

The Authority does not have a position at this time regarding what Connecticut should adopt as a definition for clean hydrogen; however, the Authority does recommend caution in using a definition that is significantly different than that used regionally or nationally. Inconsistent definitions may create a barrier to lowering the cost of clean hydrogen and limit available supply for in-state uses. This could diminish the cost effectiveness of using hydrogen in place of other energy sources and may delay end-user uptake.

### **b. Stakeholder Engagement & Equity**

- 2. When and how should the state of Connecticut engage with environmental justice and disadvantaged communities throughout the clean hydrogen planning and development process? What steps can the state take to support EJ and disadvantaged communities' engagement in these processes?**
- 3. What steps should the state of Connecticut take to ensure that the clean hydrogen economy provides equitable benefits for environmental justice and disadvantaged communities?**

Public Act 21-43, *An Act Concerning a Just Transition to Climate-Protective Energy Production and Community Investment*, provides a clear policy template for ensuring that disadvantaged communities are both participants in and beneficiaries to clean energy deployment. Currently, the statutes require that Class I renewable energy developers (with a capacity of at least 2 MW) establish a workforce development program, enter into a community benefits agreement with an organization representing the community's residents, and require that contractors pay prevailing wage, among other stipulations. These are crucial steps to ensuring that energy generators of the future benefit, rather than harm, surrounding communities.

Public Act 21-43 encompasses Class I renewable energy sources, which includes fuel cells. This means, however, that hydrogen is only covered in its capacity to power fuel cell generation. The Task Force could consider legislative recommendations in its report that build upon the framework of Public Act 21-43.

### **c. Hydrogen End Uses**

#### **4. How should the state address differing stakeholder perspectives about hydrogen end use prioritization? Which specific end uses are of greatest concern, and why? What actions can or should the state take to continue to solicit stakeholder feedback?**

The Authority supports the draft prioritization framework established by the Uses Working Group as presented at the November 8, 2022 Task Force meeting. Prioritizing end-uses that are difficult to decarbonize, and provide meaningful societal benefits are useful filters through which to evaluate potential end-uses. However, the Authority does recommend that the Uses Working Group take one step further and specifically identify how each prioritized end-use clearly contributes to the state's specific policy goals. For example, the Uses Working Group identified dispatchable, peak power generation as a "Highest Priority" end-use. This end-use will help balance variable energy generation deployed in pursuit of the state's 100% Zero Carbon Electric Sector by 2040 goal. Mapping these end-uses to relevant policy goals can help the state strategically address barriers to a reliable, resilient, affordable, and clean energy future. Therefore, in analyzing the perspectives of other stakeholders, the state should consider how a particular end-use contributes to the state's larger decarbonization policy goals.

### **d. Hydrogen Infrastructure**

#### **6. What additional processes should the state consider to ensure that use of pipeline infrastructure for hydrogen transport is implemented safely, and supports community and climate goals?**

As stated above, if existing natural gas distribution or transmission infrastructure is used to transport hydrogen, it will be subject to state and federal safety regulations and requirements overseen by the Authority. These regulations mandate that LDCs maintain gas lines up to and including the gas meter. Maintenance beyond the gas meter, i.e., the gas line that extends from the meter into a building, is normally the responsibility of the gas user or property owner. The Authority notes that current requirements are designed to accommodate the chemical properties of natural gas and may need to be modified to account for hydrogen.

As explained by the Sandia National Laboratory during the October 11, 2022 Task Force Meeting, the majority of hydrogen safety standards and regulations at each point of the hydrogen infrastructure system are already developed by federal agencies.<sup>1</sup> For example, the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) is responsible for developing and implementing regulations governing the safe operation of the nation's pipeline transportation systems for hazardous fuels and natural gas; including hydrogen. The PHMSA, in coordination with the U.S. Department of Energy (DOE) is currently conducting research and development that will lower the cost of safely transporting hydrogen.<sup>2</sup> Continued cooperation and collaboration between federal agencies and the state agencies that implement their regulations will be essential to establishing effective, reasonable safety standards.

**7. What enabling infrastructure do you believe is highest priority for the state to pursue to support the development of Connecticut's hydrogen economy, and why?**

Successful consumption at end-use points will only be possible with the safe and efficient transportation and storage of clean hydrogen. As stated above, the Authority is concerned that rate-basing infrastructure to deliver hydrogen for purposes other than heat and power through natural gas rates may not be the most beneficial, fair, or equitable option for ratepayers with gas service, which represents only a portion of all Connecticut residents and businesses. The Authority recommends that Connecticut focus on investigating all storage and transportation options, including those that are still in the research and development phases.

**e. Hydrogen Funding and Policy Activities**

**9. Federal funding is hoped to represent a significant portion of hydrogen funding but is not expected to meet all funding needs. Which hydrogen investments (infrastructure, manufacturing equipment, workforce training, etc.) would be the most important for the state to consider funding? Why?**

Consistent across all developing industries is the need for a sustainable, capable, and equitable workforce to support growth and expansion. During the October 20, 2022 Policy and Workforce Development Working Group, and the November 8, 2022 Task Force meetings, Task Force members received presentations from the Building Trades Training Institute and the Connecticut

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<sup>1</sup> Sandia National Laboratory, Presentation on the Scientific Basis for Hydrogen Technologies, Slide 10, October 11, 2022, [https://www.ctgreenbank.com/wp-content/uploads/2022/10/SA-22-8\\_Hydrogen-Power-Study-Task-Force\\_101122.pdf](https://www.ctgreenbank.com/wp-content/uploads/2022/10/SA-22-8_Hydrogen-Power-Study-Task-Force_101122.pdf)

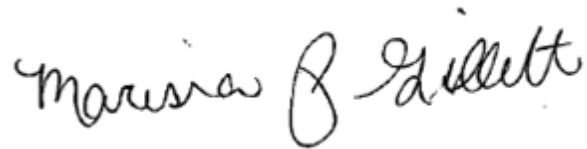
<sup>2</sup> <https://primis.phmsa.dot.gov/comm/hydrogen.htm>

Roundtable on Climate and Jobs. Both organizations emphasized the potential that the hydrogen industry has for trades such as plumbers and pipefitters, and the need to ensure that historically disadvantaged communities and jobs are able to participate in this industry.<sup>3</sup> The state should focus funding on building foundational workforce resources that will support the projects being funded with federal dollars. In particular, the state should work to address training and certification gaps either not provided, or not available at the scale needed by private industry.

The Authority is excited about the multiple opportunities that hydrogen presents Connecticut, its economic development, and the future 100% zero carbon grid. The Authority again commends the Connecticut Green Bank on the Task Force process to date, and looks forward to continued participation and partnership in the development of the final deliverable.

Sincerely,

PUBLIC UTILITIES REGULATORY  
AUTHORITY

A handwritten signature in black ink that reads "Marissa P. Gillett". The signature is written in a cursive, flowing style.

Marissa P. Gillett  
Chairman

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<sup>3</sup> See Connecticut Hydrogen Task Force – Policy and Workforce Development Working Group, Meeting Minutes, October 20, 2022, <https://www.ctgreenbank.com/wp-content/uploads/2022/11/Policy-Workforce-Development-Working-Group-2-Meeting-Minutes.pdf>; Connecticut Hydrogen Task Force, Meeting Minutes, November 8, 2022, <https://www.ctgreenbank.com/wp-content/uploads/2022/11/Hydrogen-Power-Study-Task-Force-November-2022-Meeting-Minutes-Draft.pdf>