



HYDROGEN STUDY TASK FORCE
Meeting Minutes¹

Tuesday, July 12, 2022
10:00 a.m. – 12:00 p.m.

The first meeting of the Hydrogen Study Task Force was held on July 12, 2022.

All participants joined via the Teams conference call.

Task Force Members Present: Katherine Ayers (Nel Hydrogen), Digaunto Chatterjee (Eversource Energy), Bryan Garcia (CT Green Bank), Sara Harari (CT Green Bank – Designee), Radenka Maric (UCONN), Taren O'Connor (PURA – Designee), Ugur Pasaogullari (UCONN – Designee), Frank Reynolds (Avangrid), Lauren Savidge (DEEP – Designee), William Smith (Infinity)

Task Force Members Absent:² Mary Nuara (Dominion Energy), Joel Rinebold (CCAT)

Others Present: Representative David Arconti, Lily Backer, Blaire Backman, Erin Childs, Nicolas Connell, Julia Dumaine, Brian Farnen, Barbara Fernandez, Senator Paul Formica, Jennifer Gorman, Bert Hunter, Alex Issac, Michael Palmer, Lydia Rupert, Rudy Sturk, Sarah Wall, Ryan Wolfe,

1. Call to Order

- Bryan Garcia, Chair of the Task Force called the meeting to order at 10:05 a.m.

2. Welcome and Launch of the Task Force

- Mr. Garcia launched the first meeting of the Hydrogen Study Task Force. He introduced Connecticut Green Bank's Dr. Bernard Baker Green Hydrogen Fuel Cell Conference Room whose namesake was a pioneer in the fuel cell industry. Additionally, he noted that Connecticut is the home of leading stationary fuel cell manufacturing in the United States; Connecticut has been a longstanding leader in the fuel cell industry.

3. Charge from the Leadership of the Energy and Technology Committee

- Mr. Garcia acknowledged the Energy and Technology Committee for bringing this Task Force together. He noted that the Connecticut Green Bank Team was still working with legislative leaders to assemble the Task Force members and clarifying the deliverables.

¹ For access to the meeting recording – <https://ct-n.com/ctnplayer.asp?odID=19873>

² It should be noted that Task Force members were assembled quickly and had prior commitments and unable to attend

Mr. Garcia also noted that Special Act 22-8, the legislation that convened this task force, was a key example of unanimous bipartisan energy and technology leadership.

- Mr. Garcia introduced the Energy and Technology Committee Leadership which includes Representative David Arconti and Senator Paul Formica.
 - Representative Arconti noted the integral role of the Task Force to develop a policy playbook for the upcoming year regarding hydrogen.
 - Senator Formica indicated the key role that this Task Force will play in future renewable energy infrastructure development. He also noted that district 20 was particularly well positioned with its nuclear capacity.

4. Task Force Member Introductions

- Bryan Garcia kicked off the Task Force member introductions and prompted the remaining Task Force members to introduce their title and expertise and explain why they got involved in clean energy.
 - Radenka Maric, the President of UCONN, noted her expertise in high and low temperature fuel cells, hydrogen production, and batteries. Ms. Maric noted that she will be involved in developing a letter of intent in response to the Hydrogen funding in the Federal Infrastructure Bill. She designated her authority to Ugur Pasaogullari, a Professor at the University at Connecticut, who has been working on hydrogen fuel cell systems for over two decades.
 - Kathy Ayers, the VP of R&D for Nel Hydrogen explained that she has experience with solar, batteries and hydrogen.
 - Victoria Hackett, the Deputy Commissioner at the Connecticut Department of Energy and Environmental Protection noted her previous experience working at the Office of Consumer Council on Integrated Resource Planning and collaboration with Commissioner Dykes at PURA. Ms. Hackett noted concurrent conversations with many Task Force members regarding a regional hydrogen hub.
 - Digaunto Chatterjee, the Vice President of System Planning at Eversource illustrated his experience with reliability, resource adequacy, transmission planning, device financing, and transmission and distribution standards.
 - Taren O'Connor, the Director of Legislation, Regulation, and Communications, at the Public Utilities Regulatory Authority, described her experience at the Office of Consumer Council working on conservation and energy efficiency.

5. Overview of Special Act 22-8

- Mr. Garcia provided an overview of Special Act 22-8. He noted that the final deliverables would be due January 15, 2023. He reviewed the Task Force Ex Officio members established to date including Commissioner Katie Dykes (DEEP), Chair Marissa Gillett (PURA), President Radenka Maric (UCONN) with Ugur Pasaogullari (UCONN – Designee), and Joel Rinebold (CCAT). He also noted that four out of sixteen political appointees had been made – Digaunto Chatterjee, Katherine Ayers, Mary Nuara, and

William Smith. Mr. Garcia reviewed a guide of key areas to address within Special Act 22-8.³

- In regards to a review of regulation and legislation, Mr. Garcia noted that legal support would be provided via Brian Farnen, their General Council.
 - Ms. Maric noted that we have to look at policy and regulation in neighboring states to evaluate opportunities and limitations for hydrogen end uses. Mr. Garcia agreed with this suggestion.
- Regarding workforce initiatives, Ms. Maric recommended conducting a survey of workforce needs at Eversource, Nel, and related companies to define required skill sets that may be developed at the University of Connecticut.
 - Ms. Hackett noted that the Clean Economy Council, ordered by the Governor, was still setting up its governance and participation structure and was open to recommendations for members.
 - Ms. Ayers recommended that a new feeder program may be established at the University of Connecticut. Ms. Maric agreed that a new program would be needed.
- Regarding funding sources for developing hydrogen programs and infrastructure, Barbara Fernandez clarified that private funding sources would be included in the funding analysis to create a sustainable economy.
 - Ms. Fernandez also referred to Connecticut as the insurance capital, noting that insurance is key for commercial products, and Connecticut is well positioned to provide this.
 - Ms. Maric noted that it would be most efficient to map supply and demand potential to figure out needs.
 - Mr. Chatterjee suggested that the analysis begin with developing a supply and demand curve for each end use to explore how policy can fill gaps regarding pricing.
 - Ms. Ayers highlighted how long permitting for hydrogen projects takes and also clarified that the sources of clean potential hydrogen such as solar and wind are not necessarily sources, rather, electrolysis is a source for hydrogen.
- Mr. Garcia noted that the Ex Officio members got together to discuss scope additions such as environmental justice considerations, strategic uses of the insurance industry, and hydrogen transportation and storage.

6. Process – Ground Rules, Structure, Logistics, and Timeline

- Mr. Garcia reviewed the meeting ground rules, Task Force and Working Group structures, and expected timeline.
 - Mr. Chatterjee noted the importance of defining use cases and multiple scenarios and agreed that this structure was very conducive to achieve this analysis. He also highlighted that the key advantage of hydrogen is its flexibility and lack of intermittency which can support reliability.
 - Ms. Maric explained the importance of considering hydrogen as an energy storage medium.

³ It should be noted that Frank Reynolds attended the meeting and was appointed to serve on the Task Force.

- Mr. Garcia explained that Working Groups would meet once to twice a month and invited interested members to attend. Mr. Garcia noted several cross-cutting issues for the Working Groups such as environmental justice, supply chain, safety, R&D, and insurance.
 - Ms. Ayers noted that R&D and supply chain are also key for funding.
 - Ms. Maric recommended looking at case studies of other regions to incorporate learnings.
 - Ms. Fernandez clarified whether co-chairs of the Working Groups had to be Task Force members. Mr. Garcia clarified that at least one member should be part of the Task Force.
 - Ms. Maric recommended the formation of an advisory group of industry experts.
- Mr. Chatterjee volunteered to contribute to the Hydrogen Sources Working Group and explained the importance of effective hydrogen siting to not put stress on the transmission grid.
- Mr. Chatterjee volunteered for and was appointed as the Co-Chair of the Hydrogen Uses Working Group.

7. Hydrogen 101

- Mr. Garcia introduced Strategen Consulting who will provide technical assistance for the Connecticut Green Bank Team.
- Ms. Erin Childs, a director at Strategen Consulting introduced Strategen's expertise.
- Mr. Nick Connell, a Policy Director at Strategen Consulting provided an overview of hydrogen production, storage, and use cases. He also provided an overview of current policy and regulatory activities driving hydrogen momentum.
 - Ms. Maric noted that it is important to transition from referring to hydrogen by colors such as blue and green and align with the US Department of Energy's definition of clean hydrogen. Mr. Connell agreed and highlighted the importance of a carbon intensity definition framework for hydrogen.
 - Ms. Fernandez questioned whether between now and 2050 customers could be expected to experience a price shock due to the price of green hydrogen. Mr. Connell responded noting the importance of policy in mitigating these impacts.
 - Ms. Maric shared that there is a hydrogen highway from San Diego to Whistler. She noted a key thing that Canada has focused on is public acceptance based on education and experience.

7. Public Comments

- No public comments.

8. Adjourn

- The first Hydrogen Study Task Force meeting was adjourned by Mr. Garcia at 12:00 p.m.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'B. Garcia', with a long horizontal flourish extending to the right.

Bryan Garcia, Chairperson