

Houston to Los Angeles Local Project Advisory Group Meeting Summary June 5, 2024

The Houston to Los Angeles (H2LA) Local Project Advisory Group met on Wednesday, June 5, 2024 through Zoom. The following Local Project Advisory Group members were present: **Chris McElrath** (Hill College, Chairman of Job Training and Workforce Programs), **Shannon Ydoyaga** (Weatherford College, Executive Vice President and Chief Academic Officer), **Damien Ydoyaga** (Hill College, Director of Special Projects), **Thomas Mills** (Hill College, President), **Darrell Smith** (Interim Dean, North Central Texas College), **Heath Schaaf** (Texas State Technical College, Dean of Transportation), **Jeremy Hutt** (City of Cleburne, Director of Public Works), **Chris Wright** (City of Waxahachie, Mayor Pro Tem), **Kevin Strength** (Waxahachie Chamber of Commerce, President), **Marcus Balch** (Texas State Technical College, Provost), **Michael Erny** (Paris Junior College, VP of Workforce Education), **Michelle McKenzie** (Hood County Clean Air Coalition, Air Quality Program Manager), and **Susan Shifflet** (Texas Hydrogen Alliance, Executive Director).

Others present at the meeting were: **Lori Clark** (NCTCOG, Senior Program Manager and DFWCC, Director), **Jared Wright** (NCTCOG, Senior Air Quality Planner), **Eden Wagner-Muns** (NCTCOG, Intern), **Maggie Quinn** (NCTCOG, Air Quality Planner), **Cadie Allen** (NCTCOG, Educational Partnerships Coordinator), **Eric Boria** (GTI Energy, Senior Analyst and Project Manager), and **Faye Farahmand** (STV, Zero Emission Facility Engineering Lead).

1. Presentation Overview:

The kickoff meeting for the Houston to Los Angeles Rural Local Project Advisory Group was held through zoom. Jared Wright from the North Central Texas Council of Governments (NCTCOG) opened the meeting with a presentation that included background information on NCTCOG and Dallas-Fort Worth Clean Cities. Faye Farahmand from STV continued the introduction with a presentation on the basics of hydrogen fueling. She introduced hydrogen fuel cell vehicles, different hydrogen refueling infrastructure systems, and the state of the industry. Jared Wright concluded his presentation by providing an overview of GTI Energy, the H2LA project, and the focus of receiving stakeholder feedback.

2. Discussion:

The main discussion following the presentation centered around workforce development, training needs, and hydrogen safety. Heath Schaaf from Texas State Technical College asked how to support the project by developing a qualified workforce and wanted to know what type of education is needed for the hydrogen infrastructure. Eric Boria from GTI Energy explained that the Department of Energy (DOE) is interested in job retention initiatives such as reskilling and retraining existing workers and developing holistic workforce models aligned with hydrogen infrastructure. Faye Farahmand also mentioned the need to train maintenance staff on safety for both hydrogen vehicles and infrastructure like complex on-site production facilities, noting specialized contractors may be required. Heath Schaaf asked which category hydrogen training would fall under within the existing categories at Texas State Technical College: compression ignition or spark ignition. Faye Farahmand explained that hydrogen internal combustion engines are quite uncommon and differentiated hydrogen fuel cells (which convert hydrogen to electricity) from traditional internal combustion engines.

Attendees inquired about safety issues, citing concerns about lithium-ion battery safety and questions about how similar this type of technology is. Susan Shifflet from the Texas Hydrogen Alliance (THA) mentioned THA's DOE proposal for permitting and first responder

training, including webinars for fire marshals on codes and regulations, traveling training seminars across Texas, and live fire training for volunteer firefighters at Texas A&M. Shannon Ydoyaga from Weatherford College raised concerns about battery fire risks requiring simulated training environments, and if hydrogen fuel cell vehicles would pose similar concerns. Faye Farahmand answered that while fuel cell vehicles do have smaller batteries compared to battery electric vehicles (BEVs), high voltage safety is still a concern for both technologies. Heath Schaaf expressed interest in cooperative training programs where the college could provide classroom instruction and partner with industry experts for applied training off campus due to safety concerns like battery and hydrogen fires. Faye said the level of safety concern is comparable to compressed natural gas (CNG).

Shannon Ydoyaga asked if local auto dealers have been engaged in this project. Lori Clark from NCTCOG said that NCTCOG has not involved the North Texas Auto Dealers Association much yet, since there is more focus on advancing the heavy-duty hydrogen truck market and producing large volumes of hydrogen for industrial end-users, which are sectors which allow for faster scaling up of hydrogen production. This scaling up is necessary to bring down the price of hydrogen as a fuel. Only after that does NCTCOG envision potential for a market for consumer vehicles powered by hydrogen.

On the topic of infrastructure challenges, Damien Ydoyaga asked about the primary technical and logistical challenges in scaling hydrogen fueling infrastructure for heavy-duty transportation. Lori Clark mentioned NCTCOG's recent \$70 million grant from the Federal Highway Administration (FHWA) to build up to five hydrogen stations in the Texas Triangle. She said beginning work on this grant will provide insights into the logistical challenges. Lori Clark also explained that while there are a lot of willing hydrogen suppliers, there are market challenges such as the extremely new nature of hydrogen fuel cell trucks, coordinating hydrogen supply, and the overall newness of the infrastructure. When deploying this new technology, it will be important to avoid stranded assets and find companies willing to adopt early. Darrell Smith from North Central Texas College asked for recommendations on technical engineering resources about hydrogen fuel cells. The Hydrogen Fuel Cell Partnership (<https://h2fcp.org/>) and H2Tools (<https://h2tools.org/>) webpages were suggested by Susan Shifflet.

Kevin Strength from the Waxahachie Chamber of Commerce wanted clarification about the goal of these meetings. Lori Clark explained that the goal of the Local Project Advisory Group is to understand community concerns and build that dialogue before building hydrogen stations. Kevin Strength also asked if hydrogen refueling planning is considering construction near existing gas stations. Lori Clark said that as of now, NCTCOG's plan for their \$70 million CFI Corridor award is to co-locate hydrogen refueling stations on or next to diesel sites. Co-locating new fuels at existing fueling stations helps remove a barrier to adoption because it enables truck drivers to continue using the types of sites they are already acclimated to.

Eric Boria reminded the group that it is fine to share concerns via email between meetings as well. An example he provided of the sort of feedback the group could send was preferring hydrogen infrastructure to be further from residential areas than how close gas stations are now. Lori Clark added that NCTCOG can provide available resources as well. Susan Shifflet suggested outreach to make communities aware that hydrogen already has existing usage internationally and in other sectors like industrial processes.

3. **Key Takeaways:**

- Concerns and priorities:
 - Proper workforce education for hydrogen refueling infrastructure. Understanding where new curricula/training is needed to fill gaps versus what is already in existence.
 - Understanding the necessary safety protocols for workforce training on hydrogen vehicles and infrastructure.
 - Resources on the technical aspects and challenges of building hydrogen refueling infrastructure.
- Resources:
 - Hydrogen Fuel Cell Partnership has technical resources on hydrogen refueling.
 - If awarded, the Texas Hydrogen Alliance may have resources on first responder training through a proposal to the DOE.
 - GTI Energy and NCTCOG can provide additional resources via email.

4. **Next Steps:**

Immediate follow-ups:

- Sending out the survey mentioned in the meeting to the group to determine future meeting times and frequency.
- Include any relevant Dallas-Fort Worth Clean Cities upcoming events.