

## **Special Meeting: Hydrogen Production, Transportation, and Infrastructure Task Force**

Oklahoma Association of Electric Cooperatives, Oklahoma City, OK

Monday, September 13, 2021

9:30 a.m.

Notice was posted online with the Secretary of State on September 1, 2021. Public notice was also posted at the Secretary of Energy and Environment Office and as the Oklahoma Association of Electric Cooperatives on Thursday, September 9, 2021 at 9:30 a.m.

### **PRESENT**

Secretary Kenneth Wagner – Chairman

Senator Kim David – Co-Chair

Representative Mark McBride – Co-Chair

Dr. Tomas de la Ruiz – University of Oklahoma

Terri Angier – Department of Transportation

Chris Neel (proxy)– Oklahoma Water Board Resources

Brandy Wreath – Oklahoma Corporation Commission

Secretary Wagner called the meeting to order at 9:37 a.m., confirmed proper posting of the meeting notice, ensured the presence of a quorum. Secretary Wagner moves to approve meeting minutes from September 13, 2021. Senator David motioned to approve the meeting minutes and Representative McBride seconded the motion.

### **1. Subcommittee Updates**

#### **a. Production**

The production subcommittee is represented by Chris Neel, OWRB; and Dr. Tomas de la Ruiz, University of Oklahoma. In summary, the production subcommittee meeting on August 25, 2021 discussed the following:

- a. Concept of Hydrogen Production Standard
- b. Goals for long term and near term
- c. Identifying portfolio of energy resources and carbon capture opportunities
- d. Gathering information at the universities and looking at other states as an example
- e. Regulation from state agencies and updates needed, along with necessary implementations

Dr. Diaz de la Rubia reiterates that there is a tremendous amount of dollars provided through the federal government and that Oklahoma should continue to look at federal opportunities with economic development, along with highlighting that there is still research to be done from the production perspective. Dr. Diaz de la Rubia mentions the importance and involvement of all universities with private sectors and working together in to not only integrate new development into our existing system, but also to advance technology and research for hydrogen. He continues to highlight that blue hydrogen will

be key part in the process to become a leader in advance research. Dr. Diaz de la Rubia adds that we need solutions to bring the price down and find different mechanisms to become leaders in research and advancements in production.

b. Distribution and Infrastructure

The distribution and infrastructure subcommittee is co-chaired by Terri Angier, ODOT; and Brandy Wreath, OCC. Brandy identified objectives from the subcommittee meeting, which included:

- a. Proposed legislative rule changes
- b. Safety of hydrogen in shared space
- c. Current storage rule
- d. Trucking
- e. Fueling stations, corridors
- f. Freight movement

The committee is still in a heavy information gathering stage and making progress. Brandy expands on how OCC has a list of action items to research and investigate on existing rules and safety measures that may need to be considered as we continue to discuss the integration of hydrogen into the state whether through pipeline changes or the necessary precautions and discussions regarding the safety of hydrogen distribution. He also mentions the coordination between ODEQ, ODOT, and OCC on current storage rules to have more in-depth information to be able to bring questions and present at the next subcommittee meeting. Also, testing requirements and blending possibilities on a safety and its economic impact.

Secretary Wagner adds that there are meetings being set with European counterparts to better understand hydrogen economy with their advancements with pipelines and fueling stations. We are hoping to connect experts from groups to the subcommittee, who are more advance in the hydrogen space to talk and expand on hydrogen.

Other distribution methods aside from pipelines discussed include surface distribution like transportation, waterways, and trucking. Terri mentions how her team is focusing on corridors, freight movement, trucking, and fueling stations. She reveals that through the subcommittee's efforts in research, freight movement through the nation is about 817 million ton and about 512 million of that is moving through the state showing the significance in Oklahoma's central location. Through meetings with the trucking association, it was also discovered that there is a positive appetite for the use of hydrogen and that there is an interest to focus on the commercial side. ODOT is also looking at safety, requirements, and needs to help eventually develop corridors and stations based on traveling ranges. More information to come as the subcommittee continues to gather information and piece them together.

Secretary Wagner introduces Nick Hayman, who leads the Oklahoma Geologic Survey at the University of Oklahoma. He has been an asset and contributing to studies on carbon capture and underground storage.

c. Economic Opportunities, Taxation, and Incentives

The economic opportunities, taxation, and incentives subcommittee is represented by Brent Kisling, ODOC. The subcommittee discussions included:

- a. Hypothetic facility and taxation
- b. Research on existing incentives
- c. Research on gaps and enhancements for the next legislative session
- d. Workforce component

Brent introduces Michael Craig from his department to expand on research of state incentives from all 50 states and investigated existing statutes in Oklahoma. Michael investigated the statute of each program, which included hydrogen except one. The state has an AFB infrastructure, the word hydrogen is not included in the statute. Secretary Wagner comments that the statute was updated two years ago, and “hydrogen” did not find its way back into the language. In this update, the state was renewing CNG and adding electric vehicle.

d. Off-takers and Market Uses

The off-takers and market use subcommittee is represented by Matt Newman, Hydrogen facilitator and coordinator. Matt mentions the importance of ports and industries to be able to make progress. There are a lot of interest in the state. The off-takers and market use subcommittee discussed:

- a. Ports and opportunities
- b. Supply chain and infrastructure of the market uses
- c. Subcommittee is trying to identify the 3-5 market uses
- d. Exporting of hydrogen
  - i. Barriers and challenges

The next subcommittee meeting has been scheduled on September 15, and the next task force meeting will be on Monday, October 18.

## **2. Public Comment**

Matt asks for all speakers to keep remarks limited to 2-minutes and opens the floor for comments, ideas, and thoughts to the audience.

Shawn Leopard, Nikola— asked if we will look at how taxation is done at other states because this will be a key component.

Michael mentions that he plans to do further research on taxation. At the previous subcommittee meeting, Michael mentioned the severance tax credit in Utah and then pointed out that later that week Chevron had announced a hydrogen project in the state of Utah.

Jim Newport, Oklahoma Trucking Association— shared trucking perspectives and things to consider. Hydrogen is exciting and people are doing research. Infrastructure and refueling is a big and crucial component and will need to be addressed. Also, incentives will have an effect and it will be seen through governmental policy. Another consideration is weight differentials and how that will affect roads and bridges. There are weight limits between axles of trucks with total length and weight. When you add technologies like fuel cells it will add weight, which means it may carry less cargo and profit is based on cargo delivery. On the note of taxation, Jim adds that trucks pay around 15% of taxes on the road, and trucks only use 14% of the lanes on the road.

Secretary Wagner benchmarked when thinking about range – trucks go about 1400 miles with a 200-gallon tanks. Hydrogen trucks are about 950 and is less but considers EV and batteries and about 250-300 maybe 350. Aside from weight, there is also consideration in range and infrastructure needed based on range capabilities.

Secretary Wagner reiterates that there are 90 days left and to send in comments. He continues that the report is the beginning, so we want to inform the legislature that will help jump start the hydrogen ecosystem and accelerate research. There are many opportunities for the state.

Also, the Oklahoma Energy Assurance Plan will be released after working in partnership with the Department of Commerce, University of Oklahoma, and the Secretary of Energy and Environment's office. It outlines a roadmap of the state's assets, vulnerabilities, weaknesses and strengths, and communication plans in emergency responses. A great resource for the state and it includes lessons learned from the February 2021 winter storm. The Oklahoma Energy Plan is also available, which highlights the state's resources and what the state has been doing and has to offer regarding energy.

Meeting was adjourned at 10:25 a.m.