

**State of Illinois**

**Hydrogen Economy Task Force**

**March 7, 2023**

**8:30am – 10:30am**

**Minutes**

**Location:**

*Virtual*

WebEx Video Conference

Join link: <https://illinois.webex.com/illinois/j.php?MTID=ma31e5ddf9be72038eda894ddc62598f6>

Meeting number (access code): 2452 854 0585

Meeting password: vQtFU2t6hr3

Join by phone

+1-312-535-8110 United States Toll (Chicago)

+1-415-655-0002 US Toll

**Agenda:**

1. Call to Order – Senator Laura Ellman, HETF Chair.

* 1. The meeting was called to order by Senator Ellman at 8:32 am.
  2. Roll Call of Membership

Rep. Terra Costa Howard: Yes

Patrick Devaney: Yes

Sarah Duffy: Yes

Sen. Laura Ellman: Yes

Patrick Evans: Yes

Haley Hoke: Yes

Jon Horek: Yes

Jim Hoyt: Yes

Elizabeth Irvin: Yes

Chad Kruse: Yes

Dan LeFevers: Yes

George Letavish: No

Carly McCrory-McKay: No

Dulce Ortiz: Yes

Chad Parker: Yes

Sen. Sue Rezin: Yes

Dr. Petros Sofronis: No

Catherine Stashak: Yes

Michael Wang: Yes

Michael Woods: Yes

Dana Wynn: Yes

Carrie Zalewski: Yes

There were 19 of 22 appointed members present at the time of the roll call. Quorum was established (13 of 22).

1. Review of 1/13/2023 Meeting Minutes

Draft minutes had been circulated to the task force prior to the meeting. Representative Costa-Howard moved to accept the minutes and Senator Rezin seconded. Motion passed unanimously.

1. Establishment of Working Groups

The HETF agreed to establish the following working groups, in accordance with discussions at the January meeting. These group will meet to research pertinent issues and present findings during future HETF meetings.

It was noted that the Commerce Development and Investment Working group, due to its size, must adhere to the open meetings act. Meeting for the group will be posted on the HETF site on DCEO’s web page.

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| --- | --- | --- | --- | --- |
| **Regulatory/ Safety** | **Workforce/ Entrepreneurship/ Education** | **Communities, Environmental Justice** | **Commerce Development and Investment** | **Interstate Coordination** |
| Catherine Stashak | Dana Wynn | Dana Wynn | Rep. Terra Costa Howard | Jon Horek |
| Patrick Evans | Michael Woods | Chad Kruse | Michael Wang | Dr. Petros Sofronis |
| Carrie Zalewski | Rep. Terra Costa Howard | Elizabeth Irvin | Pat Devaney | Sarah Duffy |
| Sarah Duffy | Carly McCrory-McKay | Sen. Laura Ellman | Dr. Petros Sofronis | Sen. Laura Ellman |
| Daniel Lefevers | Pat Devaney | Dulce Ortiz | Patrick Evans |  |
|  |  |  | Sarah Duffy |  |
|  |  |  | James Hoyt |  |

1. Roundtable Presentations

Four sets of guests participated in a roundtable discussion of market conditions and the usage of hydrogen in Illinois. Each set of panelists delivered a prepared slide deck, but also engaged with HETF members by answering questions.

* Messer/Avina

Michael Guth from Messer America and Vishal Shah from Avina launched the roundtable by discussing their joint efforts to promote green hydrogen production in Illinois.

The companies are currently developing a project in Illinois that will initially produce 15 tons/day of green hydrogen. The plant could ultimately be scaled up to produce 100 tons/day. They see this as a 1st wave of projects, bringing hydrogen supply to meet demand, and as an opportunity to facilitate decarbonization.

Regarding demand for hydrogen, Messer and Avina anticipate a significant increase in demand from the mass transit and heavy transportation sectors over the next 5-10 years as these agencies/companies gain experience and familiarity with the technology. Fuel switching of a myriad of applications from natural gas to hydrogen represents a large opportunity but will likely play out over a longer time frame.

Other market opportunities include using hydrogen in producing fertilizers, powering industrial and logistics equipment (e.g., forklifts) and producing power (primary or backup) for the electricity grid.

* Hydrogen Fuel Cell Partnership

Keith Malone presented on behalf of the Hydrogen Fuel Cell Partnership, a nationally focused nonprofit organization based in California.

Mr. Malone discussed private sector efforts to produce zero-emission vehicles using both hydrogen fuel cell and electric battery technologies. Both technologies feature distinct opportunities and challenges. He noted that fuel cells vehicles provide viable alternatives to internal combustion for nearly all market segments, and that more manufacturers are entering this space.

He noted that transit – buses in particular – represent the “canaries in the coal mine” as hydrogen fuel cell technologies are tested and refined. Buses are expected to be workhorses that offering durability and availability. Transit agencies are also more than willing to share their experiences and lessons learned with sister agencies across the country.

When asked about notable barriers to employment of hydrogen technologies, especially in the heavy-duty transportation sector, Mr. Malone noted that market participants are looking for short term and long term policy signals from government. Examples include incentives but also facilitation and provision of infrastructure development, such as fueling stations.

Mr. Malone also noted the importance of developing hydrogen mobility across the country. Absent a network of infrastructure, including strategic fueling access, development of this sector will be inherently limited. This effort is in its earliest stages.

* Nikola Motors

Philippe Gerretsen spoke on behalf of Nikola Motors, a maker of heavy-duty trucks using both hydrogen fuel cell and electric battery technologies. Nikola is looking for solutions to the chicken & egg problem of ensuring that charging and refueling infrastructure is robust enough to facilitate development of the market for zero-emission trucks.

Nikola’s new vehicles, including fuel cell prototypes, have been well received by customers in terms of performance and reliability. Battery electric will offer ranges of up to 330miles while fuel cell trucks will have a range upwards of 500 miles.Refueling and recharging infrastructure remains a challenge, as does the price premium for their vehicles under current fuel costs as these truck cost roughly twice as much as the diesel equavalent.

Mr. Gerretsen noted than current hydrogen prices are roughly $27/kg, which is roughly equivalent to the same price per gallon for gasoline. Nikola is seeking partnerships with fuel suppliers to bring prices down while keeping carbon intensity down, and is also seeking to develop fueling stations.

Nikola recommends an array of incentives to jump-start the market for heavy-duty zero-emission vehicles in Illinois. This includes financial incentives and sales tax exemptions for consumers and an exemption from weight limits. Nikola also recommends aggressive steps to promote infrastructure development and permitting, and adoption of a low carbon emissions standard. The company asserts that incentives comparable to those in California will be necessary to encourage trucking companies to make the substantial investment necessary to buy these trucks.

* Clean Jobs Coalition

A panel of speakers from the Clean Jobs Coalition offered a different perspective and what could be considered a counterpoint to the tenor of the prior presentations. These speakers included Lauren Piette from Earth Justice, Pete Budden from the Natural Resources Defense Council, and Dulce Ortiz from Clean Power Lake County.

The Clean Jobs Coalition contends that hydrogen use can be employed to promote a cleaner, more equitable future, but only if the transition is handled correctly.

Guard rails must be in place to ensure that the transition does not cause more harm than good.

The coalition offered the following principles governing use of hydrogen technologies:

* + - Must reduce net emissions. For example, producers should not use existing zero-carbon generation to produce hydrogen.
    - Must prioritize green (and only green) hydrogen. Using fossil fuels to produce hydrogen could easily raise net emissions and prove wasteful.
    - Use only to displace fossil hydrogen and in hard-to-electrify uses/sectors. Examples of the latter could include steel productions, and long-haul aviation and marine shipping.
    - Protect interests of environmental justice communities. Hydrogen projects should bring benefits and do no harm to host environmental justice communities, and should only be undertaken after meaningful engagement and collaboration.

The coalition contends that electrification should generally remain the priority. Hydrogen is generally ill-suited for fueling power plants, heating and cooking usage in buildings, passenger vehicles, and most transit and heavy trucking uses.

* Final Note on Roundtable Discussion: Meeting participants touched on a number of topics that – through questions to speakers and through the meeting’s chat – that will require more attention and more time from the task force to adequately address going forward. These included:
  + How can we best balance efficiency with system functionality and resilience?
  + What are the implications of hourly matching vs annual matching, or some intermediate alternative?
  + Would it be appropriate to phase in standards for green hydrogen production, or should they be implemented immediately given the substantial federal incentives available?

1. Close

Senator Ellman adjourned the meeting at 10:45 a.m.