

From: Colorado Cleantech Industries Association brian.debruine@gmail.com
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To: brian.debruine@gmail.com



Colorado Hydrogen Network



An initiative of



Newsletter - October 2020

Colorado's First Public Hydrogen Fuel Station Arrives in Fort Collins!



Dr. Bryan Willson (left) and Kirk Evans (right) guide one of the two hydrogen station fuel containers into a temporary location at the CSU Energy Institute Powerhouse Campus. Payment keypad visible on the side of the container

Colorado's first public hydrogen fuel station arrived at Colorado State University (CSU) on September 29. Once operational, the station will enable the deployment of Fuel Cell Electric Vehicles (FCEV's) and will be one of just three public stations in the country that can generate hydrogen on-site by splitting water molecules using renewable electricity.

The station operated previously in Washington D.C. and was scheduled to be

The station operated previously in Washington D.C. and was scheduled to be decommissioned. The National Renewable Energy Laboratory (NREL) led that process and thanks to the efforts of our partners at NREL, arrangements were made for the owner, Nel Hydrogen to donate the station to CSU. The station will be operated and maintained by the CSU Energy Institute at the Powerhouse Energy Campus in Fort Collins, Colorado.

Arrival of this pilot hydrogen station is significant for three reasons:

- 1) It enables the deployment of Fuel Cell EV's in Colorado by providing a source of hydrogen fuel. We can now start promoting Fuel Cell EV's to the public, the media, municipalities and businesses.
- 2) It will give CSU and the Colorado Hydrogen Network experience in operating and maintaining hydrogen fuel stations. This gives us experience and credibility as we engage investors and commercial users for the next stations, since we'll have experience with the costs and operation.
- 3) We'll use the station to establish codes and standards with state, county and municipal organizations, so that as commercial stations are deployed, we won't be reinventing-the-wheel every time.

The station produces 1.75 kg/hr and dispenses at both 350 and 700 bar. The 700 bar fueling meets SAE J2601 standards.

According to the U.S. Department of Energy's Alternative Fuels Data Center, there are currently 44 public hydrogen fueling stations in the country. Only two of those stations are currently generating hydrogen with on-site electricity: A non-public station at the National Renewable Energy Labs (NREL) in Golden, CO, and a public station on the campus of California State University - Los Angeles. CSU's hydrogen station will become only the third in the U.S. to generate hydrogen on-site.



Second Container Being Lifted Into Place



*Both Containers in Their Temporary Location
Note Dispenser on the right side of the Second
Container*

First Hydrogen Fuel Station in Washington State Announced

A \$1.9 million grant from the Centralia Coal Transition Board announced on September 29 that they will fund the Renewable Hydrogen Demonstration Project, which will deliver the first hydrogen fueling station for Fuel Cell Electric Vehicles (FCEVs) in Washington State.

Renewable hydrogen will be made via electrolysis using energy from Douglas County PUD's clean, renewable hydropower.

The hydrogen station in Washington State is expected to open in late 2021, with the vehicles in demonstration fleets shortly thereafter. Initial site selection will target locations halfway between the Seattle and Portland metro areas.

Read the entire article [here](#).

National Hydrogen Day October 8, 2020

Colorado Governor Jared Polis has declared October 8, 2020 as Hydrogen and Fuel Cell Day in Colorado. The proclamation is available on the CHN website [here](#).

The US Senate passed [Resolution 720](#) declaring October 8, 2020, National Hydrogen and Fuel Cell Day for the United States.

Upcoming Events & Announcements

Colorado Hydrogen Network October Monthly Meeting

All who are interested in hydrogen are encouraged to attend. The October Membership Meeting will take place via Zoom (link below).



Tuesday, October 20th
3:30 - 5:00 p.m. MDT

<https://us02web.zoom.us/j/4212771558>

Webinar #3 - New Date, October 29th

“Hydrogen is not a Commodity Like Petroleum — Understanding the Differences”

Thursday, October 29
10:00 - 11:00 a.m. MDT

The Webinar is free, but you must register [here](#).

Recordings from the previous two webinars are available here: [Webinar #1](#), [Webinar #2](#)

New Members



[The Colorado School of Mines](#) is a public research university in Golden, Colorado, founded in 1874. The school offers both undergraduate and graduate degrees in engineering, science, and mathematics, with a focus on energy and the environment.

Activities and Outreach

Networking

Hydrogen Associations Working Group (HAWG) – The Green Hydrogen Coalition and CHN are spearheading this Working Group to unify communication and action between the western states hydrogen advocacy organizations shown below:



CHN held a telecon was held with HAWG and Western Governors' Association (WGA) about the [EV Roadmap](#).

We learned that WGA *will* be evaluating the role of hydrogen in their road mapping efforts and that they welcome input from the HAWG organizations.

The WGA will be holding internal work sessions (not open to the public) covering: Utility Investment and Rate Structures; Streamlining Permitting and Siting; Exploring Charging Station Inconsistencies Across States; Coordinating State Investments Along Tourism Corridors; Expanding EV Fleets in Urban and Rural Areas; and Identifying Opportunities for Coordination between States and Clean Cities Coalitions.

CHN will provide an analysis of the economics of on-site hydrogen generation, and a suggestion that the EV Roadmap consider the driving habits of the recreational populace (distance traveled and temperature issues).

See: <https://westgov.org/initiatives/>



California State Los Angeles, Hydrogen Fueling – CHN and CSU held a telecon with staff members of Cal State LA Hydrogen Research and Fueling Facility. They pledged their support as the Energy Institute embarks on repair and operation of the new hydrogen fuel station.

In 2014, the Cal State LA Hydrogen Research and Fueling Facility became the first in the world to sell hydrogen fuel directly to retail customers. The station produces hydrogen onsite via electrolysis.

See: <https://www.calstatela.edu/ecst/h2station>



Trillium – [Trillium](#) is leading developer of alternative fueling systems including CNG, RNG, Hydrogen, and Battery EV Charging infrastructure and on-site generation from photovoltaic.

CHN held a telecon with Trillium and briefed them on CHN's plans for hydrogen fueling. We look forward to collaborating with them in the future.



Telecon with Nikola – CHN held our second telecon with Nikola to present the CHN 3-Phase plan to deploy hydrogen fueling and to discuss the economics of on-site hydrogen generation in Colorado.

Projects & Initiatives



Podcast Update – To date, we have released nine episodes of the HydrogenNowCast and the show has achieved over 1,200 downloads worldwide, with listeners on from six continents.

Episode 10 provides an overview of Colorado's first hydrogen fuel station at the Colorado State University Powerhouse. The HydrogenNowCast is now also available on [Amazon Music](#).

Please help promote the show by subscribing and giving us a rating in one of these podcast apps:

[Apple Podcasts](#), [Stitcher](#), [Spotify](#), [Google Podcasts](#), [iHeart Radio](#)

News



Visions for the West conference – The [Green Hydrogen Coalition](#), in collaboration with the National Association of State Energy Officials (NASEO) and the Western Interstate Energy Board (WIEB), is proud to present its 2nd Annual [Visions for the West conference](#), bringing together policy makers, industry leaders, utilities, and non-governmental organizations to accelerate progress for green hydrogen market and infrastructure development in the Western United States and beyond. See the [agenda](#).

November 17-18, 2020, 9:30AM-1:30PM MST. There is a 25% discount for CHN-CCIA members. Please contact Brian for the discount link at: brian.debruine@gmail.com.

Asia Pacific Hydrogen Summit

Asia-Pacific Hydrogen Summit November 24-26 (virtual)

The First Annual [Asia-Pacific Hydrogen Summit](#) is coming to bustling Singapore to deliver another conference full of cutting edge insight and collaboration building tailored to the region.

Held in partnership with CHN reciprocal member, the [Asia-Pacific Hydrogen Association](#), the Summit will gather high level leaders from Government, Industry, Research, and more to analyze how to tackle the key challenges in kick-starting the Asia-Pacific Hydrogen economy.

The Asia-Pacific Hydrogen Summit is presented by the [Sustainable Energy Council](#), London, and follows on the of the [World Hydrogen Summit Series](#) launch in Amsterdam in March 2020.

Further information [here](#).



Colorado Clean Truck Strategy Development – There will be a series of joint, online, public meetings as a follow-on to Colorado signing a multi-state Memorandum of Understanding to work collaboratively to advance the market for electric trucks and buses.

Click [here](#) for more information.

Public Meeting #3, October 28, 2020, 10:00 a.m. - 12:00 p.m. MDT (new date)

[Hydrogen is at a 'tipping point' with \\$11 trillion market set to explode, says Bank of America](#) – Hydrogen technology is poised to take off as falling production costs, technological improvements, and a global push toward sustainability converge, according to Bank of America. The firm believes this will generate \$2.5 trillion in direct revenue — or \$4 trillion if revenue from associated products such as fuel cell vehicles is counted — with the total market potential reaching \$11 trillion by 2050.

[Hydrogen: The Time is Right](#) – An article in Western Energy magazine by Michael Rutkowski of the Gas Technology Institute, states: "The enthusiasm about hydrogen today is resounding, well-justified, and holds promise to be fruitful to an extent not even considered a decade ago. The most impactful change of all is that gas and electric utilities, governments, global energy companies and industrial energy consumers have reached broad consensus in their interest in hydrogen as a low-carbon energy carrier."

Contact

[Brian DeBruine](#)
Director of Operations

[Frans Westenbrink](#)
Director of Strategy and Partnerships

Join CHN

Colorado Hydrogen Network | 1312 Meadow View Drive, Evergreen, CO 80439

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