



**Monthly Meeting – 19 January 2021**

# While We're Waiting to Start – The CHN Network

## Companies

Apex Design PC  
AquaHydrex  
Avangrid Renewables  
Barber-Nichols  
Bayotech  
Black and Veatch  
BPX  
Brendle Group  
Czero Solutions  
Danfoss  
Dash2Energy  
ElectroMech  
ElektrikGreen  
Element One  
Eneus Energy  
EPC  
FMI Capital Advisors  
Free Radical Ventures LLC  
Green Planet Lab  
H2 Aerospace  
Hydrogene Helix, SAS  
HyET  
Hyundai-Kia America  
IGX Group  
INNIO Jenbacher  
Innosphere  
Kempy Energetics

Krueger Transit Consulting  
Lightning eMotors  
Malmö Vimmerby  
Millennium Reign Energy LLC  
Nel Hydrogen  
Nikola Motors  
Pentad Associates, Inc.  
Planet Honda  
Rentricity / HydroCosm  
Resato  
Risktec Solutions  
RWDC Industries  
Saoradh  
Semester at Sea  
Sharper Energy Technologies  
Spirae, LLC Microgrid Software  
Starfire Energy  
Steelhead Composites Inc.  
Toyota Motors North America  
UQM  
Vairex  
Wärtsilä North America  
Woodward Inc.  
WSP  
X3Energy  
Xavier d'Hubert Consulting  
Zoma Capital

## Agencies

ARPA-e  
CDOT  
City of Boulder  
City of Denver  
City of Fort Collins  
Colo Div Oil & Public Safety  
Colorado Energy Office  
DoE H<sub>2</sub> & Fuel Cell Tech Off.  
DoE VTO  
NIST  
NREL  
Regional Air Quality Council

## CHN

Brian DeBruine  
Frans Westenbrink  
Bryan Willson  
Charlotte Hamilton  
Patty Kelley  
Buford Barr  
Seth Terry  
Kari Burman

## H<sub>2</sub> Advocacy

Asia-Pacific Hydrogen Association  
Backwhenfoods (Brian La Plante)  
Bonneville Environmental Foundation  
BRIGHT Energy Innovators  
California Fuel Cell Partnership  
California Hydrogen Business Council  
CCIA  
Climate Reality Project  
Colorado Cleantech Industries Association  
Colorado Energy Research Collaboratory  
CTE (Cent for Transportation & Environment)  
Clean Cities  
    Denver Metro  
    Northern Colorado  
    Southern Colorado  
    Columbia-Willamette  
Energy Independence Now  
Fuel Cell and Hydrogen Energy Association  
Green Hydrogen Coalition  
H2B2  
Renewable Hydrogen Alliance  
Renewable Hydrogen Fuel Cell Collaborative

## Utilities

Fort Collins Utilities  
Platte River Power Authority  
Tri-State Utility  
Xcel Energy

## Universities

California State at Los Angeles  
Cleveland State University  
Colorado School of Mines  
Colorado State University

# Announcing New Day Hydrogen

- An organization to deploy H<sub>2</sub> Fuel Stations
  - A Limited Liability Company
  - [www.newdayhydrogen.com](http://www.newdayhydrogen.com)
- Purpose
  - Develop the market around Fuel Cell EV's
  - Building both the Supply (stations) and Demand (H<sub>2</sub> users) simultaneously



*Listen to an Interview with New Day Hydrogen on the Latest HydrogenNowCast*

# New Day Hydrogen - Building the Market

- Supply
  - Deploy 5 (initial) Hydrogen Fuel Stations in the Denver market
    - Public stations, both 350 bar and 700 bar pressures
  - Financed by public / private investment
  - Hydrogen priced-per-mile at parity with premium gasoline
  - On-site hydrogen generation using renewable electricity
- Demand
  - Initially seeking commercial users (trucks, buses, fleets)
    - Help from Clean Cities “Hydrogen Fleet Working Group”
  - Once 5 stations are deployed, automakers can deploy passenger FCEV’s

# New Day Hydrogen Principals



## **CEO and CFO – Seth Terry**

- Energy and Cleantech Entrepreneur, founded and sold multiple start-ups
- PhD from the Colorado School of Mines

## **Vice President Projects – Buford Barr**

- Led engineering and commercial teams and managed capital projects across the US
- BS Architectural Engineering University of Texas



## **VP and General Counsel – Patricia Kelley**

- Entrepreneur and former trial attorney, experience in lobbying and regulatory matters
- Founder Kelley Green Clover Consulting, LLC which invests in clean energy technologies and sustainable products
- Harvard Law Degree

## **CTO and Communications Director – Brian DeBruine**

- 36 year career with Honeywell Aerospace leading new business pursuits and strategy
- BS Electrical Engineering University of Colorado
- Founder and director of the Colorado Hydrogen Network



# Brian's Role With CHN is NOT Changing

- Continue to support everyone in our Network
  - From students to the large businesses
- Continue to advocate with the state for hydrogen in all sectors
  - Expanding this role with help from Patty Kelley
- Continue to connect people in our Network
  - Increasing business opportunities
- Continue to be a hub in the worldwide hydrogen Network
  - A stakeholder forum for hydrogen communication and information
  - Podcast
  - Connecting CHN with other organizations and people around the world

# Events - Webinar

## Rockies Venture Club

- *Cleantech Investing in the Emerging Hydrogen Energy Market*
- This Thursday (Jan 21), 10:00 to 11:30 MST
  - Registration is free: <https://tinyurl.com/y43gmo3s>
- Panelists
  - Brian DeBruine – The Colorado Hydrogen Network
  - Michelle Robson, AP Ventures (apventures.com)
    - Venture capital firm based in the UK with a global portfolio focused on hydrogen and its role in decarbonizing energy
  - Shelli Zargary, GenCell Corporation (gencellenergy.com)
    - Israel-based company with unique fuel cell solutions for stationary applications

# News

## Hydrogen-Powered Snow Groomer

- Built by Prinoth (prinoth.com)
  - Italian manufacturer, Sterzing, Italy
  - 30 mi south of Innsbruck
- Used for the first time at Gran Risa in the Dolomites (Italy) for the Alpine Ski World Cup
- 544 horsepower (same as diesel version)
- 4 hours of operation
  - Battery version lasts 2 hours



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# Outreach and Networking



- CHN has reached out and connected with [Hyundai America Technical Center](#)
  - To inform Hyundai that CHN is proceeding with plans to deploy 5 hydrogen fuel stations in the Denver-Boulder area



- Contact with a group of grad students from UC Irvine
  - Starting company “H2 Aerospace” ([www.h2aeros.com](http://www.h2aeros.com))
  - Developing hydrogen powered aircraft
  - Principal Prantik Saha has just accepted a position with NREL



- Contact with [Dinesh Reddy Srirangapalle](#) who is an engineer and hydrogen advocate in Michigan
  - Interested in starting a movement in Michigan similar to the Colorado Hydrogen Network

# Contact and Networking



- [Roush Cleantech](#) is a vehicle integrator of alternative fuel vehicles, including fuel cell
  - CHN contacted Roush to get info on their available vehicles



- [Unique Electric Solutions](#) (UES) is a supplier of fuel cell trucks
  - CHN contacted UES to get info on their available vehicles



- CHN contacted the Center for Transportation and the Environment ([cte.tv](#) )
  - Requesting help connecting with fuel cell truck makers

# Connections



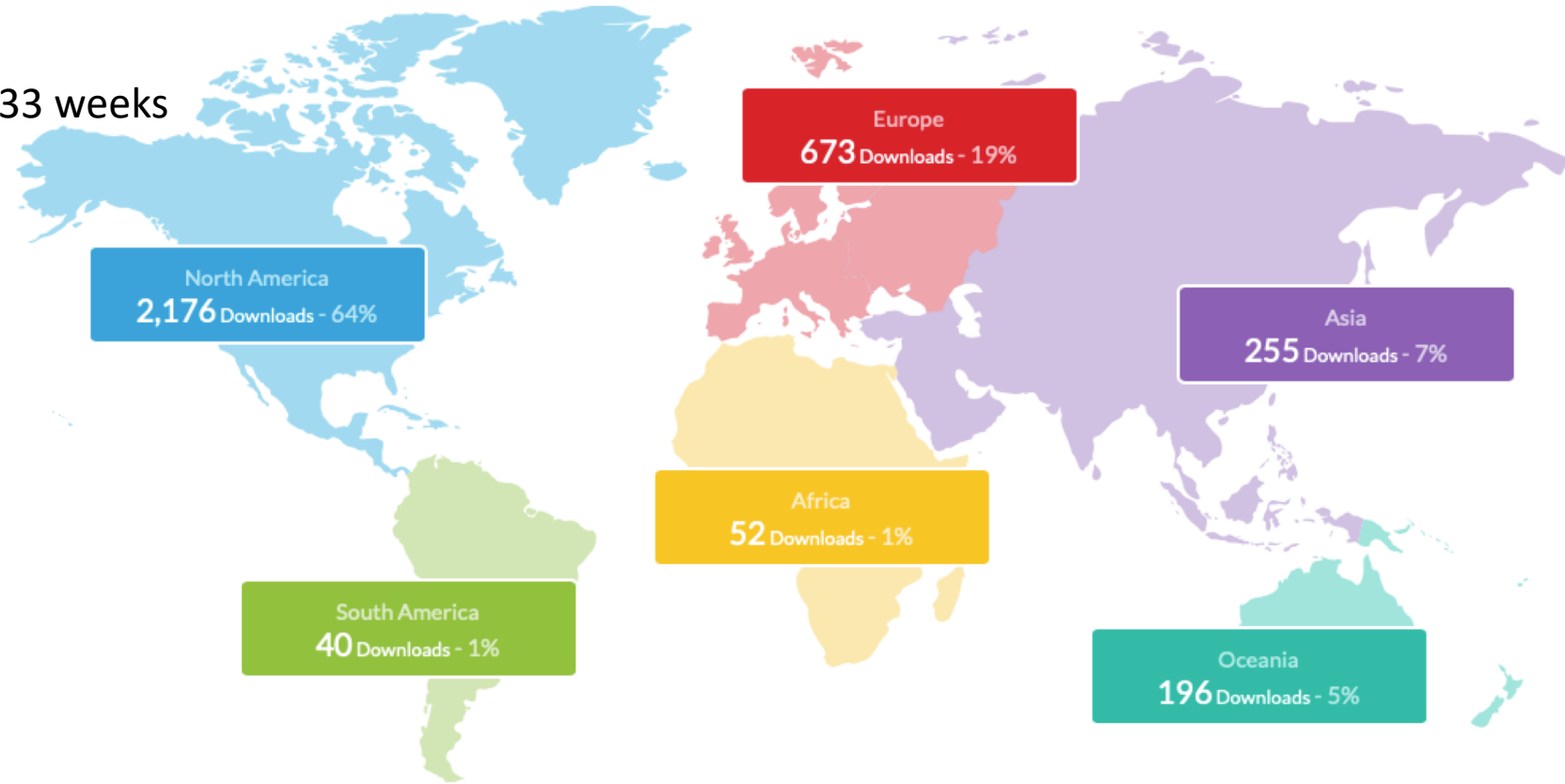
- We connected one of our members Czero ([czero-solutions.com](https://czero-solutions.com)) with the Leighty Foundation ([www.leightyfoundation.org](https://www.leightyfoundation.org))
  - Regarding a Department of Energy Funding Opportunity Announcement (FOA)



- Connected H2 Aerospace ([www.h2aeros.com](https://www.h2aeros.com)) with one of our members, Starfire Energy ([www.starfireenergy.com](https://www.starfireenergy.com))

# Projects and Initiatives – Podcast Update

- The *HydrogenNowCast*
  - Over 3,400 downloads in 33 weeks
  - 18 episodes released
  - Latest episodes
    - New Day Hydrogen  
H<sub>2</sub> Fuel Station Developer
    - Xavier d’Hubert  
Industrial Hydrogen Uses



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