

www.colorado-hydrogen.org

Monthly Meeting
21 January 2025

Agenda

- Geologic Helium & Hydrogen Conference, April 9 -10 Denver
- USGS potential geologic H2 map
- Presentations
 - Gold Hydrogen
 - Neuman & Esser
- Hydrogen Heroes Awards
- CHN membership drive
- Waning adoption of Zero Emission Vehicles (ZEV's)
- Climate news – a plan is needed

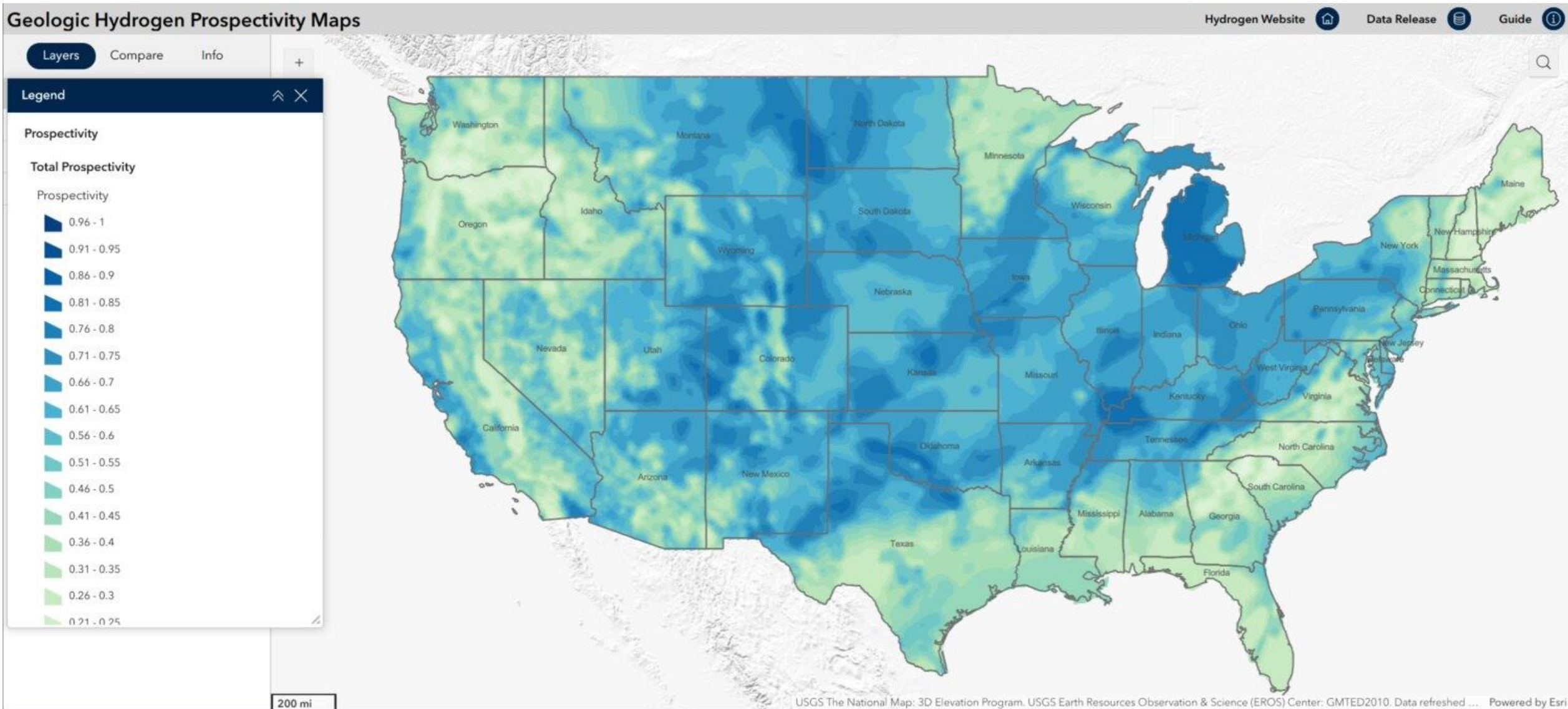
Geologic Helium & Hydrogen Conference

- April 9-10 in Denver
- Lectures and Exhibit Hall
- CHN participation
 - Booth
 - Poster session
- Presented by the Rocky Mountain Association of Geologists
- Info at www.rmag.org



Hydrogen From Geology is Likely the Lowest-Cost Source

USGS Releases Map of Potential Geologic Hydrogen



GoldHydrogen.com

- Hydrogen from oil reservoirs using biology
- Company and technology overview
- Alicia Dinges, Director of Business Development



*HydrogenNowCast
Jan 17 Podcast*



Gold H₂



CLEAN. COST-EFFECTIVE. HYDROGEN.

OUR VISION



To Upend the Energy Industry and Boldly Lead the Clean Energy Revolution.



Clean Tech



TRL 5-6

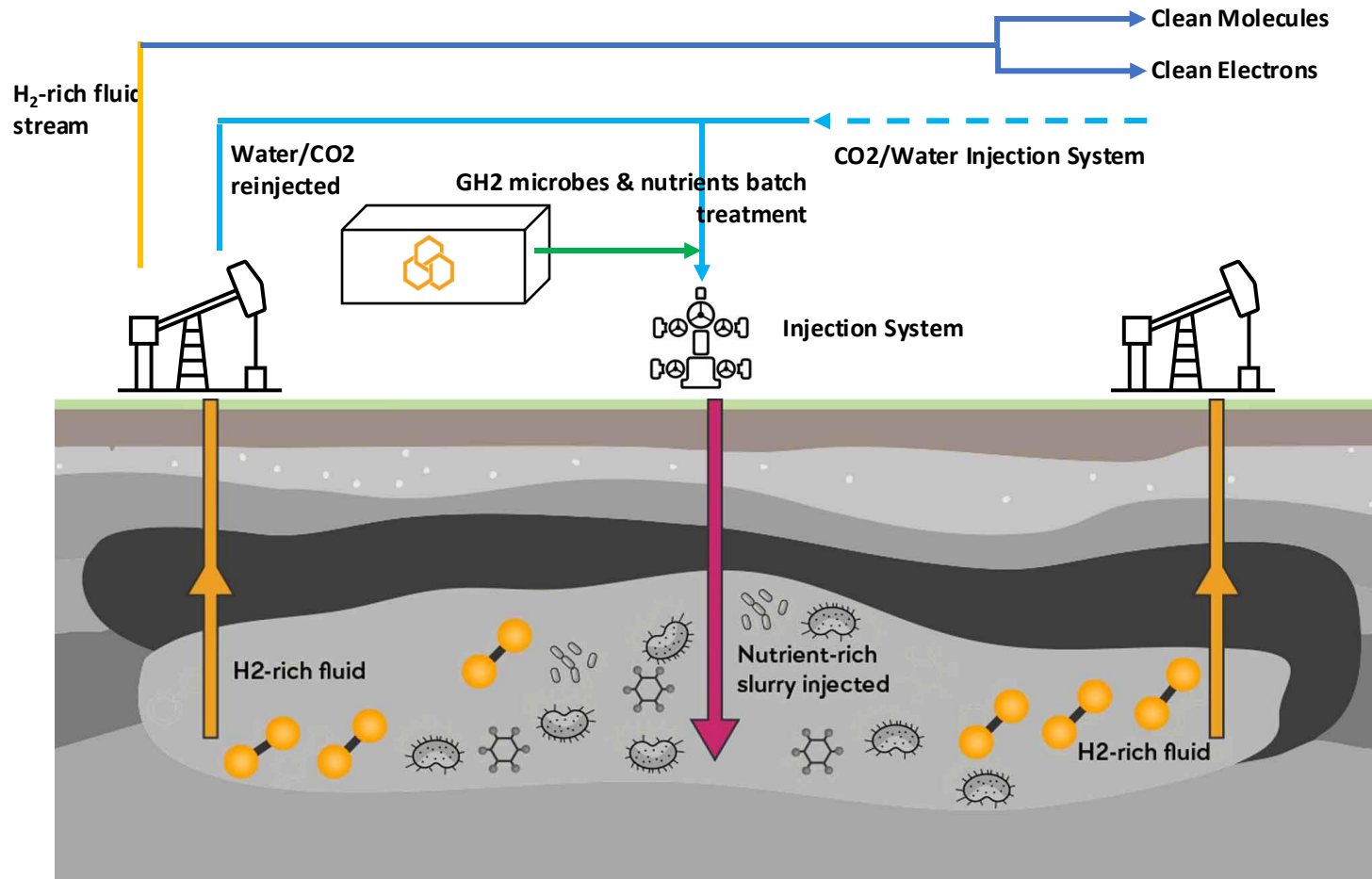


Gold H2



Black To Gold

BLACK TO GOLD TECHNOLOGY TRANSFORMS LIABILITIES INTO PROLIFIC ASSETS



Gold H₂ has developed the B2G technology for uneconomical oilfields. Operators **convert liabilities into low carbon-intensity H₂ assets**, making B2G Tech a Win-Win.

Gold H₂'s Mobile Fermentation Unit, **M3**, can grow Gold H₂'s microbes onsite with the capacity to feed 150 wells at once.

B2G technology is injected into a **depleted oilfield**, turning the subsurface into a **natural bioreactor** and creating in-situ hydrogen.

Through Gold H₂ optimization of natural processes, one well may produce **1,000kg of H₂ per day**. Reusing existing infrastructure brings the cost to **<\$0.80/kg**.

GOLD H₂ OVERVIEW AND HISTORY



Seed Fundraising Round

(\$7M) and Gold H2
Entity was formed

2022

Improved Tech

Expand microbes' tolerance in
a range of reservoirs

2023

Series A

Fundraising round (\$8M)

2024

Development and Offtake

Secure partnerships to
monetize H₂ in various
regions

2025

R&D Initiated

Kick off of B2G
technology development

Proof of Concept Pilot

Produce hydrogen in a single
well for the first time

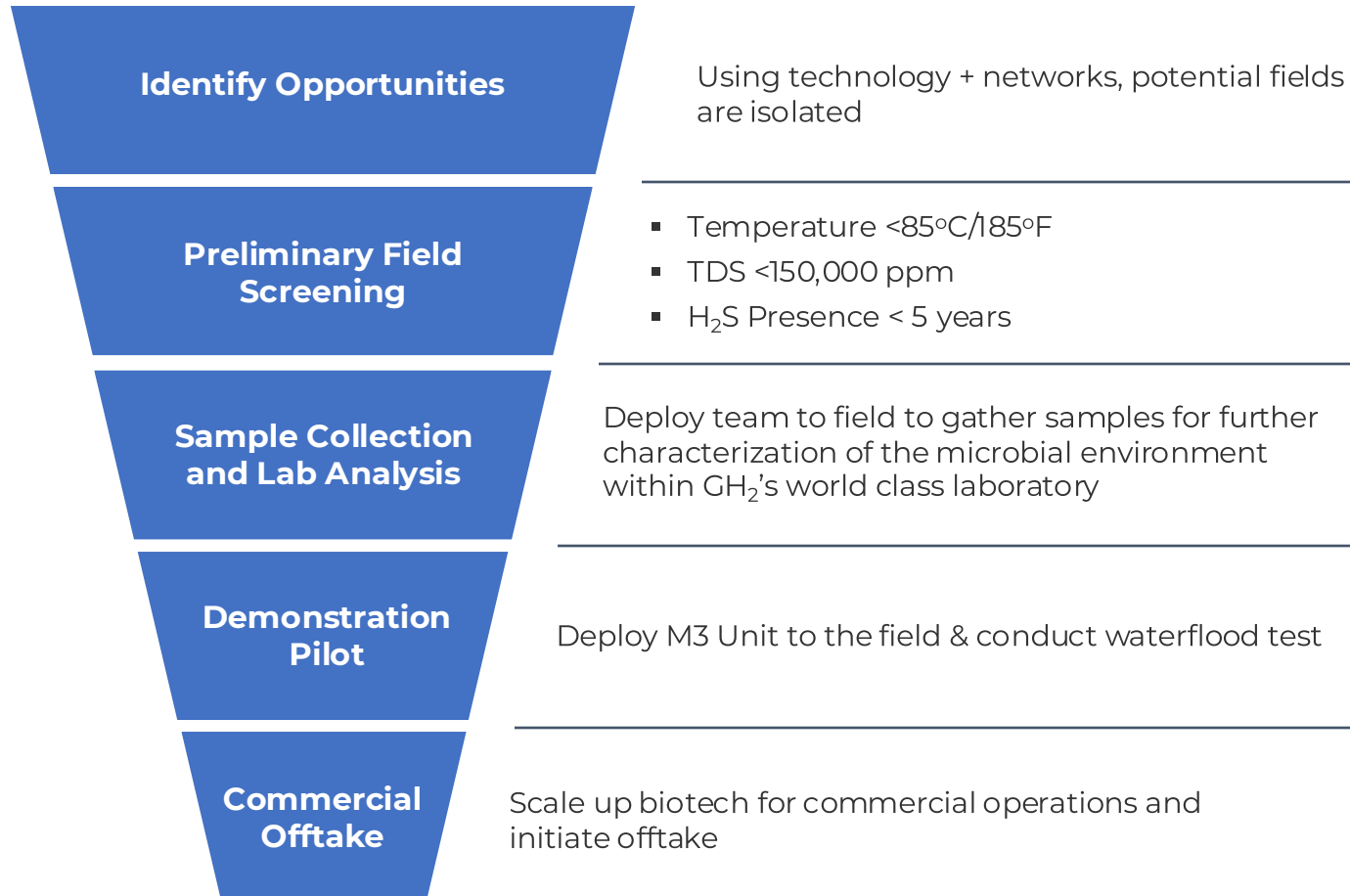
Built the M3

A mobile fermentation unit
to deploy tech anywhere in
the world

Commercial Pilots

Preparing for 5+ waterflood
pilots in the next 2 years (w/
commercial expansion)

COMMERCIAL DEV PLAN FOR A PROJECT



Gold H₂ uses a streamlined qualification process to derisk and deliver

Layers of analysis allows for customization of microbial nutrients to best fit each field- an adaptive solution increasing B2G tech range

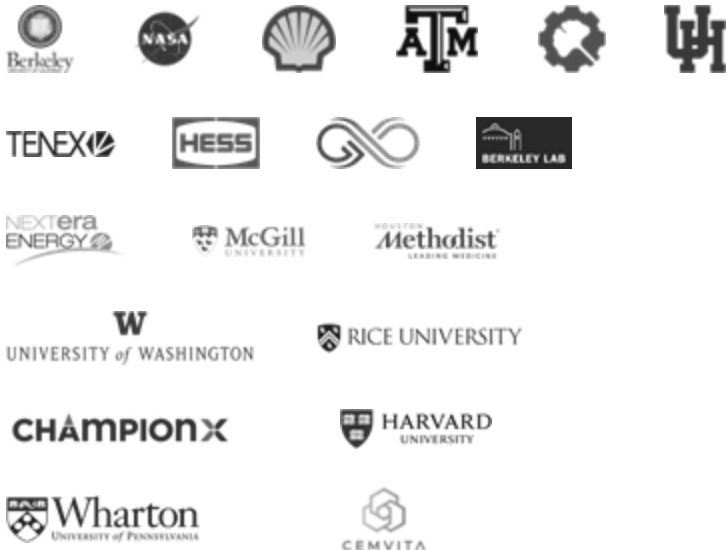
Each stage of the process prepares field for commercial offtake

THE TEAM DRIVING THE H₂ REVOLUTION



Gold H₂ is a unique multi-disciplinary team

- Biological Operations and MEOR
- Geosciences, Geochemistry, Petroleum Engineering
- Deep Tech Commercialization
- Rapid Business Scaling



Prab Sekhon
CEO



Michael Samual
COO



Jessica Kates
Frac. CFO



Brittany Pitlik
Chief of Staff



Dr Alicia Dinges
Director of BD



Toya Levi
EA



Dr Raja Ramanathan
Sr. Subsurface Engineer



Dr Renata Gonçalves
Research Scientist-
Microbiologist



Dr Addien Wray
Research Scientist-
Geochemist



Dr Daniel Gittins
Research Scientist-
Bioinformatics



Aaron Trevino
Research Associate



Isabella Sanchez-Hernandez
Research Assistant



Abbie Booker
BD Principal

THE GOLD H₂ HYPE IS REAL!



Biotech Start Up

Established in 2022

Located in Houston, TX

12 team members

Raised \$15M to date

Gold H₂ Investors



Gold H₂ News





Thank You

alicia@goldhydrogen.com



Neuman & Esser

- Luiz Soriano
Key Account Manager
Neuman & Esser



NEUMAN & ESSER

www.neuman-esser.com

HYDROGEN HEROES AWARD


(#)



Hydrogen Heroes Award

- The Hydrogen Heroes Award
 - Presented by the Colorado Hydrogen Network
 - To individuals who have given of their personal resources and creativity
 - To help deploy hydrogen infrastructure as a means to decarbonize our energy systems
- 8” x 10” wall plaque, photo-on-acrylic
- The Awards
 - Brendan Doner – Breathe Transport
 - Jane & Chris Allo – ElektrikGreen
 - Seth Terry & Buford Barr – New Day Hydrogen.

Brendan Doner

- For providing a Fuel Cell EV rental to the general public
 - With hydrogen fueling provided
 - Rental through [Turo.com](https://www.turo.com) 
- Personally financed purchase of
 - Toyota Mirai FCEV
 - Mobile hydrogen fueller from ElektrikGreen
- Giving people a chance to try a Fuel Cell EV first-hand.



breathetransport.com

HYDROGEN HEROES AWARD

*This Hydrogen Heroes Award is presented to
Brendan Doner*

*In recognition of his work to promote hydrogen for transportation
by personally funding a
Fuel Cell Electric Vehicle with fueling for rent to the public*

Brian DeBruine

*Brian DeBruine, Director
The Colorado Hydrogen Network*



January 2025

Jane & Chris Allo

- For providing low-cost hydrogen infrastructure for
 - Home energy storage
 - Hydrogen vehicle fueling
- Devoted time and personal resources for engineering design and manufacture
- Making available products unique in the market
 - Home energy storage using hydrogen
 - Small-scale mobile hydrogen fuelers
 - Large-scale public fueling devices.



ElektrikGreen

elektrikgreen.com

HYDROGEN HEROES AWARD

*This Hydrogen Heroes Award is presented to
Jane & Chris Allo
In recognition of devoting their personal resources to the
deployment of hydrogen for
home energy storage and vehicle fueling
through their start-up company ElektriGreen*

Brian DeBruine

*Brian DeBruine, Director
The Colorado Hydrogen Network*



January 2025

Seth Terry & Buford Barr

- For starting the hydrogen fueling market by
 - Deploying public hydrogen fuel stations
 - Enlisting commercial fleet customers
 - Locating commercial hydrogen vehicles
 - Securing financing and grants to fund the stations and help fund vehicles
- Have devoted 4 years and personal resources to this effort
- Providing a complete system solution unique in the marketplace.



HYDROGEN HEROES AWARD

*This Hydrogen Heroes Award is presented to
Seth Terry &
Buford Barr*

*In recognition of their tireless efforts to
start the hydrogen transportation market in Colorado
by founding and operating the
start-up company New Day Hydrogen*

Brian DeBruine

*Brian DeBruine, Director
The Colorado Hydrogen Network*



January 2025

CHN Membership Drive

- CHN has been able to operate on a shoe-string budget since we have no paid staff
 - Brian DeBruine runs the organization pro bono
- Help us build our budget so that we can someday hire paid staff
- Membership dues help us sponsor events like Colorado Hydrogen Day
- A way for everyone to help contribute to our efforts
 - Giving you a sense of ownership.

Membership in the Colorado Hydrogen Network has been provided as a joint membership in both CHN and our parent organization, the Colorado Cleantech Industries Association (CCIA). CCIA's dues are tailored for established companies, but CHN stakeholders include many individuals and start-up companies, many of whom would like to have a stake in supporting CHN.

So new in 2024, we're adding CHN-only dues so that individuals and start-up companies can help support the organization. These dues are voluntary and tax deductible. The rate for start-up companies is limited to the first 2 years of membership. The complete set of annual dues is shown in the table.

	CHN Only		Corporate Membership			
	Individual	Start-up (2 years)	1-20 Employees	21-50 Employees	51-150 Employees	151+ Employees
Annual Dues	\$50	\$200	\$1,000	\$2,500	\$5,000	\$10,000
Tax Deductible Donation	✓	✓				
CCIA Membership included			✓	✓	✓	✓

Why Join?

CHN is a non-profit organization devoted to advocating for hydrogen infrastructure and educating, so everyone is welcome to participate in the organization whether they pay dues or not. But here are the benefits of donating:

- Help to support and grow CHN
- Allows CHN to sponsor events
- To be invested and engaged in CHN
- Enable CHN to eventually have paid staff
- Your name and logo on the CHN members page on the website

Join Individual / Start-up

Join Corporate

Donations

Since CHN can now accept tax-deductible donations, we invite everyone to consider donating to the organization. (UNDER CONSTRUCTION, COMING SOON)

Donate

Help Support CHN With a Paid Membership

Individual and Start-Up Companies

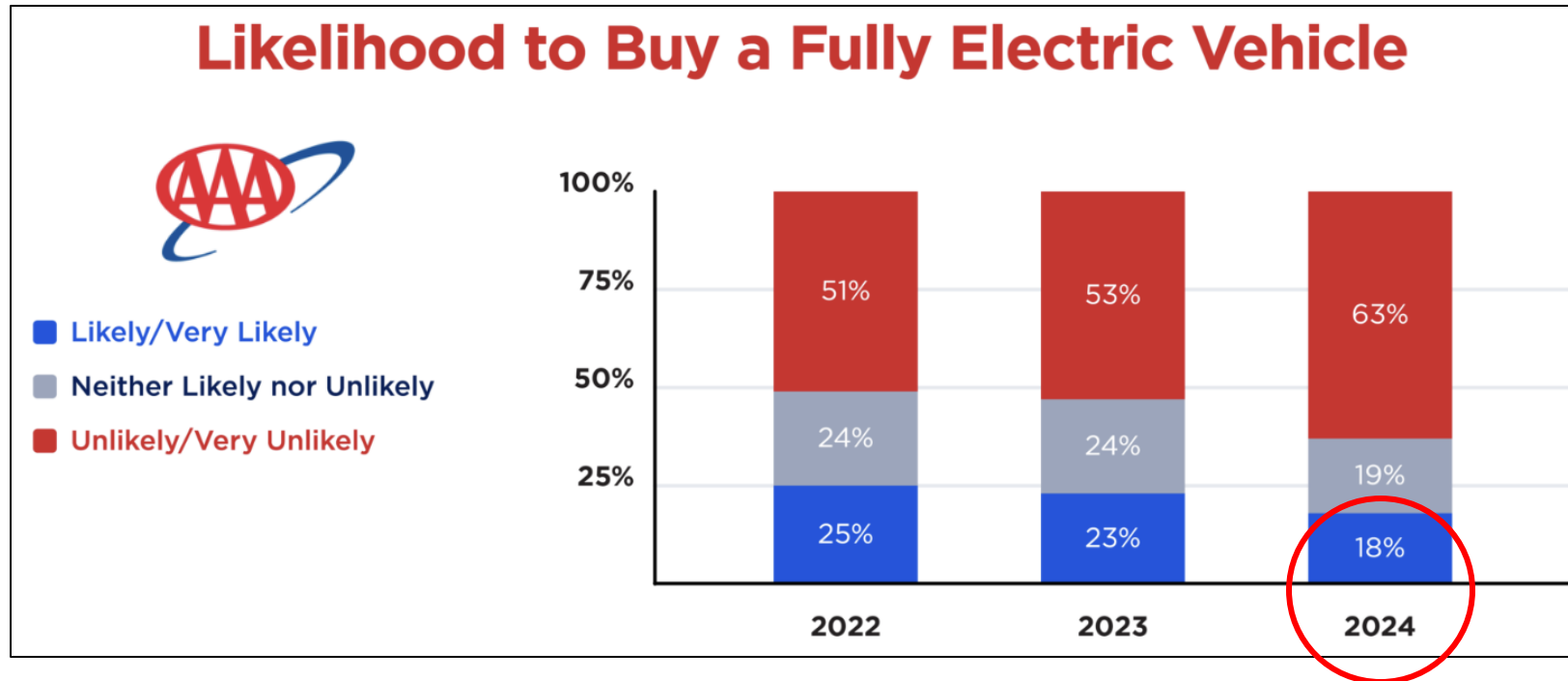
- Tax Deductible
- CHN membership only (no CCIA)
- Individual Membership \$50 per year
- Start-up Companies \$200 per year (first 2 years only)

Corporate Membership (Annual)

- Joint CCIA – CHN membership
- Based on number of employees

Participation Will Continue to be Open to All At No Charge

Waning Adoption of ZEV's



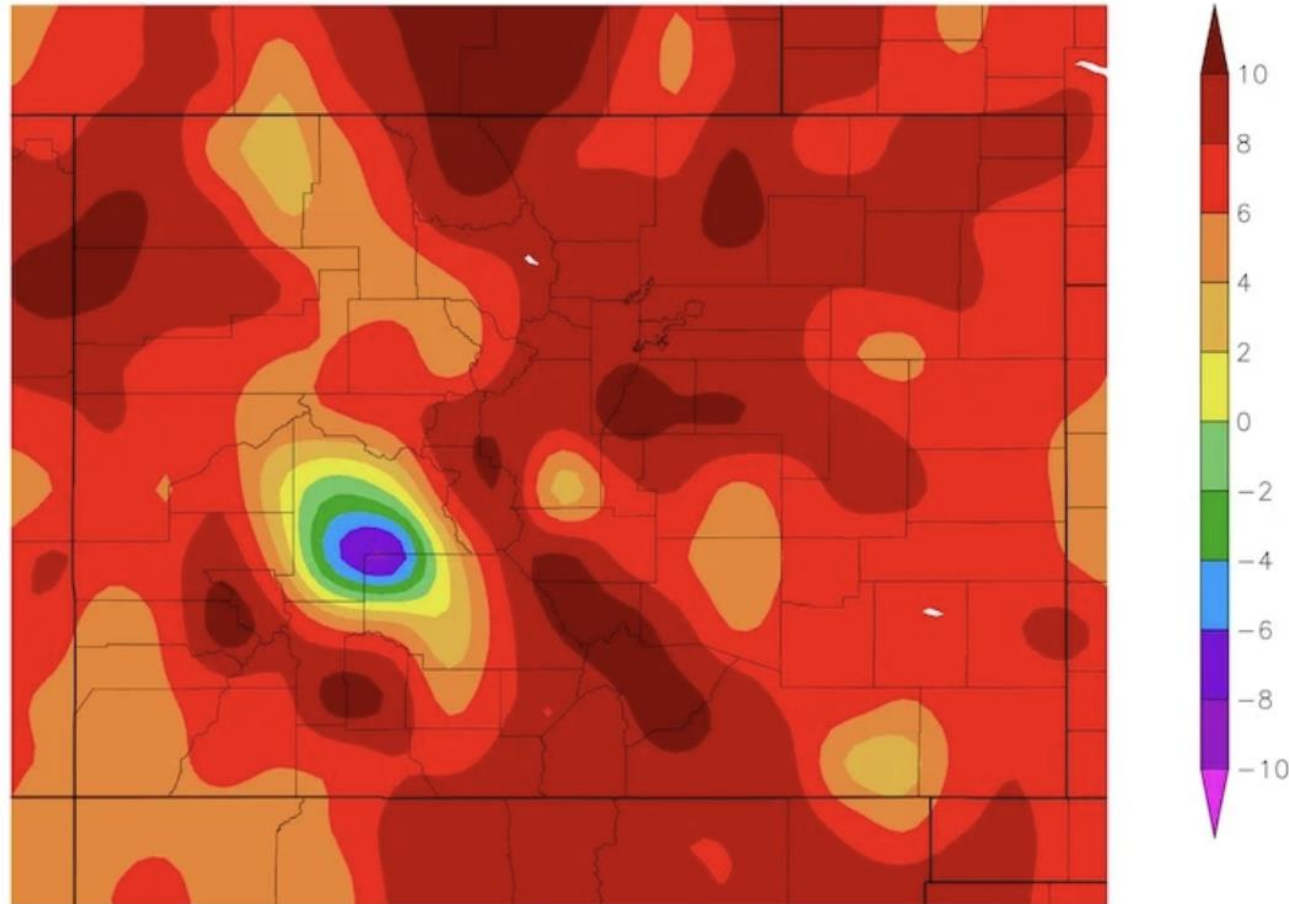
“29% of Electric Vehicle owners considering switching back to combustion engine car” -McKinsey

Ford is temporarily halting production of the EV Lightning pickup truck until 2025 amid falling consumer demand for electric vehicles. - CBS News

Clearly, we need hydrogen EV's to make it to 100% ZEV conversion

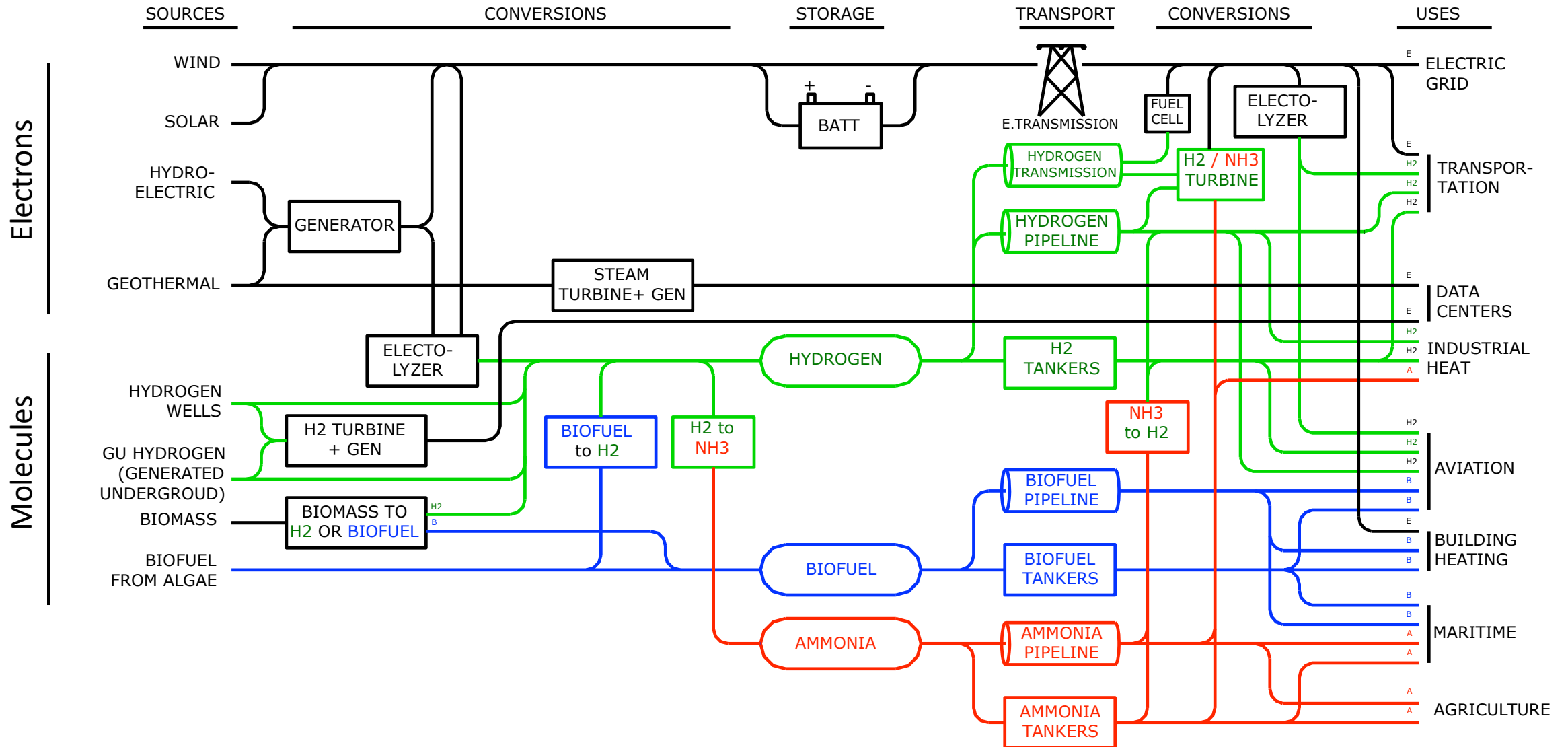
Colorado December Temperatures

Departure from Normal Temperature (F)
12/15/2024 – 12/21/2024



The State (and Country) Need a Plan to Address This! (Next Slide)

Clean Energy Ecosystem Plan




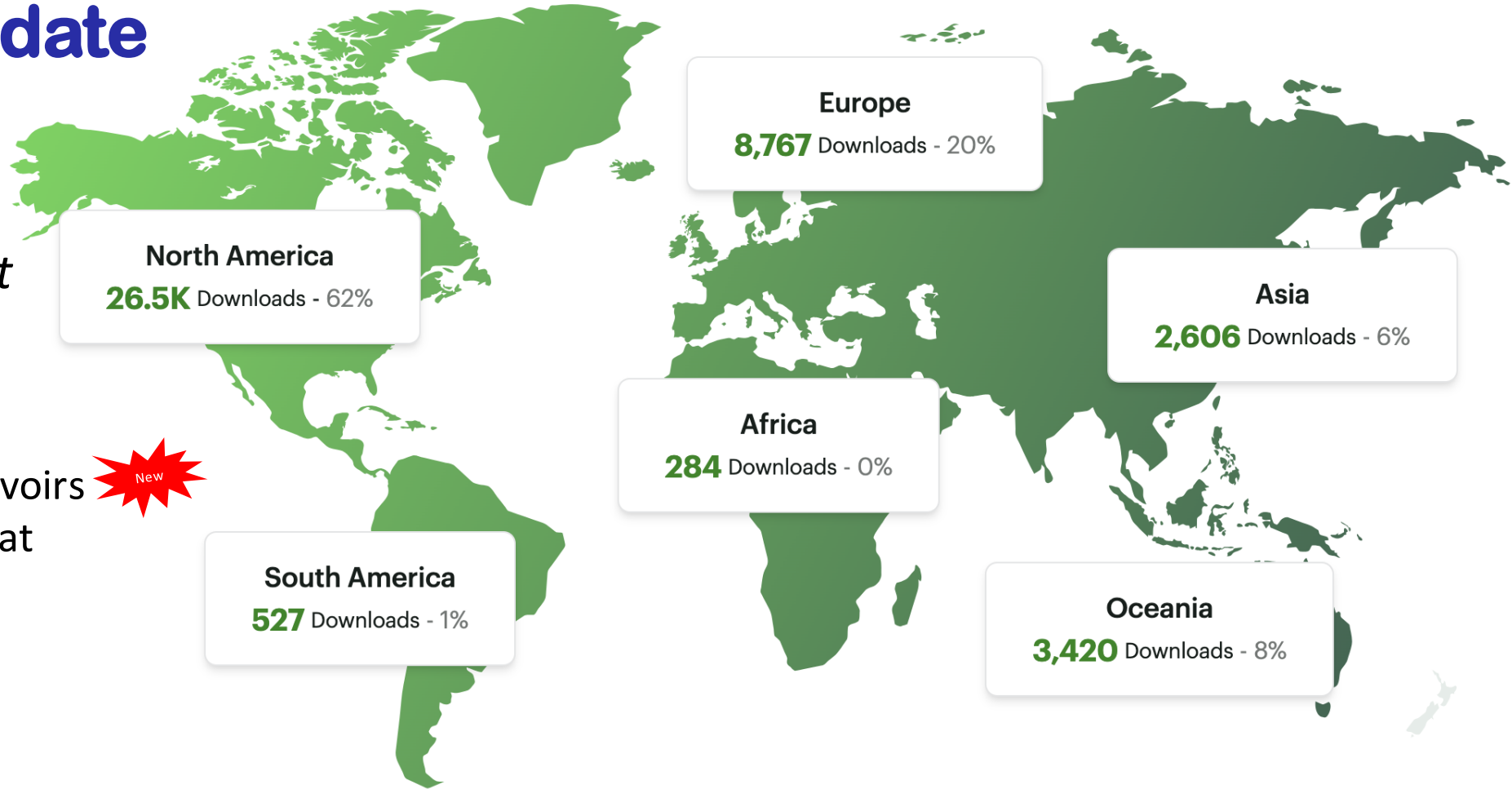
Suitable Energy Forms for Uses

Use	Electricity	Hydrogen	Biofuel	Key Discriminator
Electric Grid	✓			
Transportation	✓	✓		Performance & Convenience
Data Centers	✓	✓		Cost
Industrial Heat		✓		Technical
Aviation		✓ Short Range	✓ Long Range	Technical
Building Heat	✓ New Construction		✓ Existing	Cost
Maritime			✓	Technical

Podcast Update

The *HydrogenNowCast*

- 89 episodes
42,100 downloads
- Recent episodes
 - Bio H2 from oil reservoirs 
 - Hydrogen Mtn Retreat
 - TFL Podcast
 - Hydrogen transport



HydrogenNowCast



Podcast

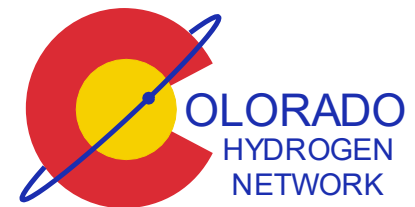


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Podcast