

February 2025 Meeting Minutes

Attending: Barbara Menne, Sue Lepore, Elly Claus-McGahan, Linda Cohan, Carl Cohan, Allan Maas, Linda Whipple, Suzi Crawford, Peggy LovellFord, Chuck Jensen, Michael Humkey, and Nancy Atwood.

Announcements

The **CCL [Greater PNW Regional Conference](#)**, “Cultivating Climate Champions,” takes place at Heathman Lodge, Vancouver, WA, this weekend. Five of our members are going--Michael, Peggy, Chuck, Allan, and Barbara. Congrats to Barbara, who was asked to be on the panel for electrification outreach!

Our next chapter meeting, **March 19, 7 pm**, will be a field trip to the [Tacoma Tool Library](#). It provides tools for loan, fix it fairs, how-to classes and more, thus encouraging re-use, repair, and reduced consumption. It's on the second floor of the **Tacoma Public Main Library, 1102 Tacoma Ave S, Ste 201**. Directions will be sent out—the entryway is direct from the alley at **1100 Court F**, not via the main library entrance. After the tour, there is room for us to hold a brief business meeting, and snacks are welcome!

CCL national is urging us to [ask Congress](#) to protect the **National Oceanic and Atmospheric Administration** and its gold standard research on climate and climate change! Not sure of the value of calling electeds who are already climate champions? They do pay attention to constituent calls and keep statistics of positions on issues. Expressing our gratitude and support for their work is very important too, especially in today's political atmosphere.

Action Team Reports

Resilience group--It's still going well and proving useful, **10 am every Friday at Cutters, 6th Ave**. Anyone is welcome, including non-CCL friends.

Advocacy in the current state legislative session-- This week is the cutoff for bills to go out of committee and move on to appropriations, otherwise they are finished for this year. The **CURB Act HB1303/SB56380, Community solar HB1598, Recycling Reform HB1150/SB4284**, are some that have succeeded in moving on. Our chapter participated in **Environmental Lobby Day** on Feb. 6, and many of us use online action alerts to vote “pro” and support the bills we prioritize. For a reminder on how to do that, click our website's [link](#).

Tabling, Linda Cohan—Tabling season is about to begin! A tabling committee meeting will be announced soon, and everyone is encouraged to join in. We are signed up for the [South Sound Sustainability Expo Sat Apr 26, 10-3](#) on the **UW-Tacoma** campus. There is also an [Earth Day Celebration Sat Apr 12, 11-2](#) at **Meridian Habitat Park, Puyallup**.

[Climate Pierce County](#) news, Elly Claus-McGahan—the [County Sustainability Plan 2030](#) and the [Climate Action Plan Tacoma](#) are due for updates, go to their websites to make suggestions for instance, that heat pump or geothermal technology be included in new development. Folks from **PC Climate Conversation** are working on an **Urban Tree Canopy Workshop**, helping municipalities in the region come up with good code/ordinance re: tree location, maintenance and funding, mature tree protections, etc.

The [Puget Sound Clean Air Agency](#) invites the public to attend community workshops on concerns about climate pollution. Pierce County’s workshop is **April 15, 5:30-7:30, at Clover Park Technical College**. For more information and to register, click [here](#).

The [Washington Climate Partnership](#) is hosting a series of “virtual roadshow” meetings to request public input on a new **WA Comprehensive Climate Action Plan**, discussing specific actions the state can take to meet its long-term climate goals. It goes by sector—“Electric Power” is on **Tuesday, March 11, from 12-2**. [Register](#). You can also take the quick online survey on their website.

Elly was impressed by a series of four videos recommended by someone in [CCL Community](#)—The **Human Predicament: Reality Short Course**, with topics including Metacognition in the Anthropocene, The Fossils that Power the Global Economy, The Real Stock market, and Finding Resilience in an Age of Turbulence. To watch:

https://www.youtube.com/watch?v=QbbfqyJ9eIY&list=PLdc087VsWiC4AdSNFNq1a_n_O18Cko8Cr

And lastly, an article for tonight’s topic-- [“Clean Energy 101, the Colors of Hydrogen,”](#) from [RMI](#)

Speaker, Chris Green, President of PNW Hydrogen Association

“**Chris Green** is the President of the Pacific Northwest Hydrogen Association, where he is responsible for executing on PNWH2’s vision to create a clean hydrogen ecosystem in partnership with labor, Tribal Nations, and public and private sectors in the Pacific Northwest. Chris comes from the Washington State Department of Commerce, where he served as Director for the Office of Economic Development and Competitiveness from 2015 to 2024. Before assuming the role of President, he served as PNWH2’s Board Chair from its inception in 2022 to June 2024.

Prior to that, Chris was Vice President for Business Retention and Expansion for the Economic Development Board for Tacoma-Pierce County, and Co-Chair of the Tacoma-Pierce Aerospace Partners, a group focused on growing and improving the local aerospace industry. Green previously worked in government relations and on the staff of several elected officials, including former Congressmen Norm Dicks and Derek Kilmer.” (from website, pnwh2.com)

The following is a summary of Mr. Green’s remarks and excerpts from the website. Hydrogen has been around for a long time: we’ve been using it for a lot of industrial and refining processes, and we make a lot of it in our state, especially in Whatcom County. We have a lot of experience using it, storing it, moving it, accessing it, and fueling different vehicles with it. The current goal is to make it more widely accessible and as clean as possible. We do

this with **green electrolytic hydrogen** made with the clean energy we have here--hydropower, wind and solar power. Putting water through an **electrolyzer** separates the oxygen (which is vented) and the hydrogen gas, which is stored in a fuel cell. Fuel cells can run a car, boat, truck, etc. with zero emissions. (Others use natural gas to make gray hydrogen through **pyrolysis** vs electrolysis, using carbon capture/sequestering carbon in asphalt or concrete). It is now too expensive, but the goal is to achieve scale and bring the price down to \$4-5, in parity with gas.

The Pacific Northwest Hydrogen Hub is one of 7 regional hydrogen hubs in the U.S. funded by the **Biden Administration** and expected to “leverage multiple production technologies, become integrated into a broad spectrum of technologies, and provide positive benefits across many communities.” It is a multi-state nonprofit organization made up of public and private partners dedicated to creating a robust hydrogen network in the PNW.

Its vision is:

“--To create a clean hydrogen ecosystem across the PNW in partnership with labor, tribal nations, and public and private sectors to improve the lives and futures of people throughout the region.

--Accelerate deployment of hydrogen infrastructure to attract greater investments and promote high-quality jobs with a strong focus on social equity and environ justice as guiding principles.

--Establish the PNW as a national benchmark for successful low carbon intensity and economically viable hydro production to decarbonize hard to abate industries.”(pnwh2.com)

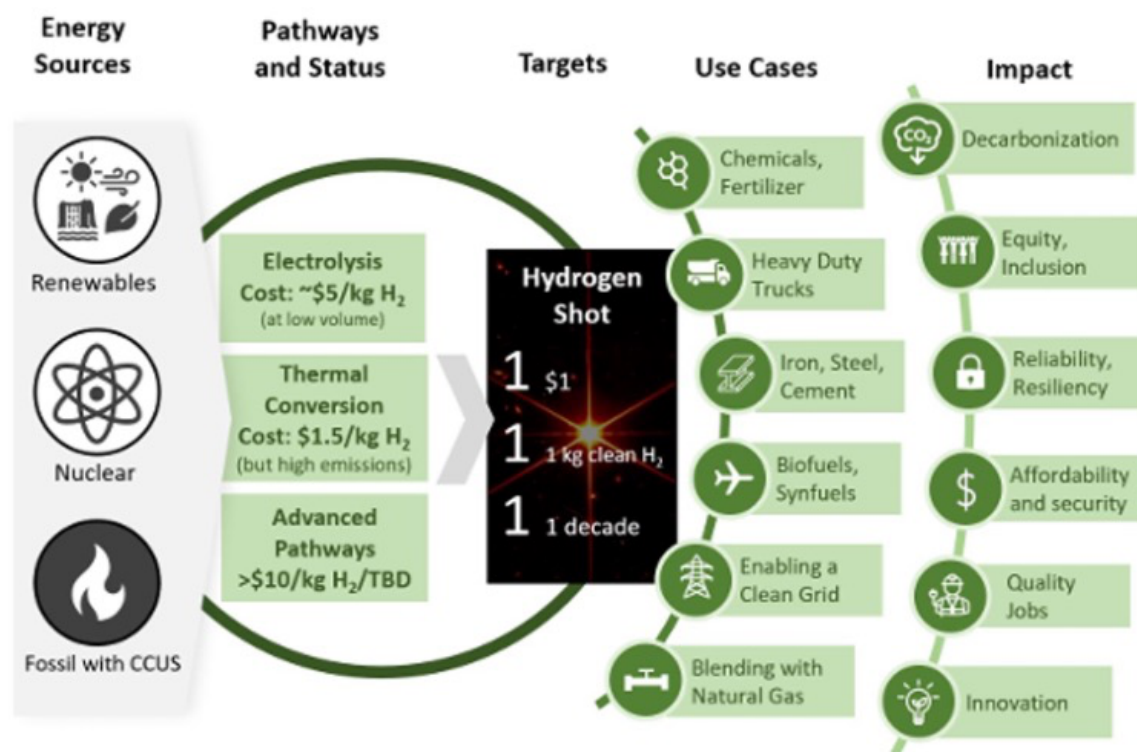


Figure 19: The Hydrogen Shot targets build on progress for a variety of pathways, enabling a range of use cases and impacts.

The “**Use Cases**” column, second to last, shows all the different ways that we expect hydrogen to be used for market:

Chemicals, fertilizer—green hydrogen offers a much cleaner way to make it. We haven’t had a WA state fertilizer producer before now, had to import it, which added all the emissions from transport as well as production.

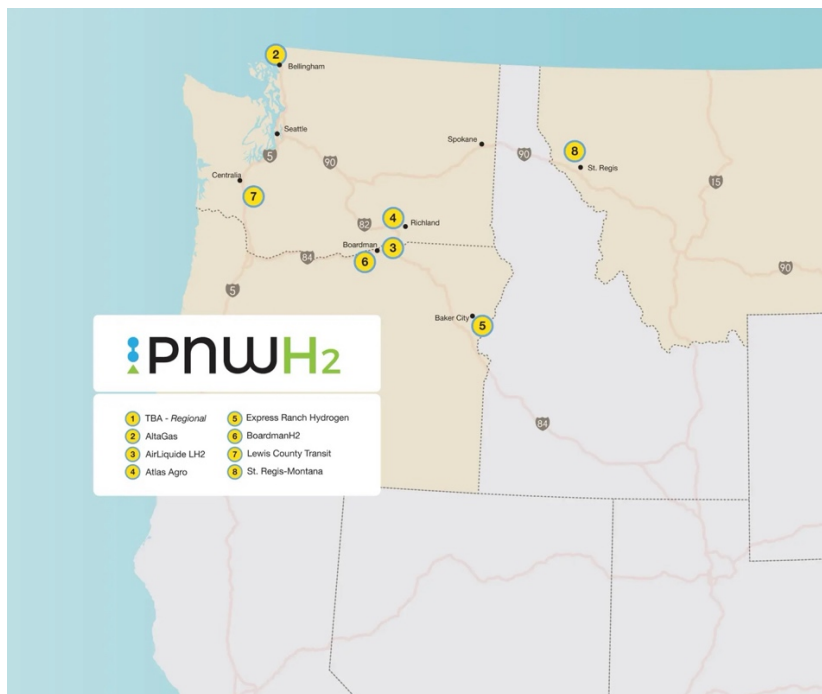
Heavy Duty Trucks--Making fuel cell trucks is now in progress. They will be better than battery trucks for longer routes, eliminating the lengthy charging time. We expect a huge demand for hydrogen fuel cells.

Iron, steel, cement—large energy demands of heavy industry production processes, formerly all fossil fuel, can be lower emission with hydrogen.

Biofuels, synfuels--Many airlines are looking at getting away from high emissions of using jet fuel. Fuel cells can work for smaller planes and shorter regional trips, which represent a lot of air travel. Hydrogen is a big part of the chemical process in making biofuels, which are a drop-in solution in great demand (no need to redesign plane). There is a big opportunity here with other transit agencies too, such as fuel cell buses, again avoiding the long charging times.

Enabling a clean grid--Hydro tech is very complementary to energy grid needs of utilities as we all prepare for our state’s commitment to totally clean energy by 2045. This is a very difficult goal for which energy storage is key. Utilities are very interested in a technology that helps reduce “spillage” of surplus and balances energy ebbs and flows.

The **PNWH2 Hub’s** proposed projects, known as nodes, will work collectively to produce, store, transport, and utilize low-carbon hydrogen. About \$6B worth of new facilities will be built in the region, representing \$5B from private investors and the \$1B **HUB** money from the **U.S. Dept. of Energy**.



Some of the nodes:

Bellingham-- Altagas Industries, liquified H2

Boardman, OR--Air Liquide, NW Seaport Alliance, liquified H2 for heavy-duty transportation

Richland--Atlas Agro, H2 for calcium ammonium nitrate fertilizer production

Baker City, OR--Express Ranch Hydrogen LLC, H2 for heavy duty transport and cement production, they sell to mining companies

Boardman, OR—Mitsubishi, to produce green hydro with **Portland General Electric**.

Centralia--Lewis County Public Transit, a real leader in H2 for public transit, a fueling station depot for long rural routes.

St Regis, MT--St. Regis Solar LLC, H2 produced with solar power, for heavy-duty transportation and a variety of uses including rail corridors and freight mobility

Timeline

We are in Phase 1 (planning/permitting). Phase 2 (project development) will be later this year. Phase 3 (install, construct) and Phase 4 (ramp up and operate) are in the future.

It has been quite an endeavor, with 212 stakeholder groups, including 28 labor unions and 15 tribal nations. We had over 100 community expressions of support.

A regional coalition of apprenticeship programs, colleges and universities will develop and sustain an enduring hydrogen workforce for over 10k good paying jobs.

Selected Q & A

Q-How safe are the federal funds from being cut in this new administration?

A-We are watching carefully and are in close contact with the **Dept. of Energy**. The funding is obligated, it was passed three years ago, coming from the **Infrastructure Investment and Jobs Act of 2021**. Hydrogen has so much to offer from so many points of view. Big oil and gas companies have already been investigating H2 for years via natural gas, and many other nations in the world are heavily invested in it for clean energy. It makes sense for us to remain competitive leaders in this.

Q-Are any projects connected to the Ports?

A-**NW Seaport Alliance** is definitely part of our HUB partnership. Interest in decarbonization of drayage plus lots of work going on with using derivatives of hydrogen for marine fuels. Huge opportunity here in the West, and work between Busan, South Korea, and Tacoma.

Q-Are our Congresspeople supportive on this issue? **Dan Newhouse**?

A-Yes they have all been very helpful and supportive. **Newhouse, Murray, Cantwell** are so good, he meets with them often. And there is bipartisan interest in the jobs and energy independence from H2.

Q-Is there anything a grassroots group like ours can do to help your cause?

A-Chime in with Congress, any voice in support is really helpful. Mention that is good for jobs and for tribes as well as for decarbonizing.

Q-What about trains and H2? Is a hydrogen leak a greenhouse gas?

A- Yes, a large leak would be, but nowhere near the level of emissions from tailpipes, etc. There's a lot of work on producing green technology for trains. For a Seattle to Chicago line, for instance. Also plans for transporting liquified H2 by train, terrible to think of having to build pipelines to move it.

This work appeals to him—great paying jobs for people. Thanks for your interest, any question just email him at chris.green@pnwh2.com.