



*Renewable Hydrogen Alliance*  
**2020 ANNUAL REPORT**

## OUR MISSION —

**PROMOTING THE USE OF RENEWABLE ELECTRICITY  
TO PRODUCE HYDROGEN AND CLIMATE-NEUTRAL  
FUELS REDUCING DEPENDENCE ON FOSSIL FUELS  
ACROSS MULTIPLE SECTORS**



### **LETTER FROM THE PRESIDENT** Don Ruff, RHA Board President

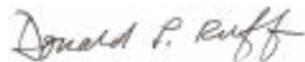
It is my pleasure to introduce the Renewable Hydrogen Alliance's annual report of accomplishments for the year 2020. Although it was a highly unusual and incredibly difficult year, RHA maintained its focus and success advancing the interests of the renewable hydrogen sector.

We are proud that RHA has continued to establish its reputation as a reliable source of information and an effective and trusted advocate. During 2020, RHA:

- *Advocated in the Washington State legislature on transportation infrastructure and energy policy issues;*
- *Organized numerous webinars and other virtual events providing information on the latest developments in renewable hydrogen sector projects, policy, and research and development;*
- *Continued to build our membership;*
- *Strengthened our political presence in the Western states and continued to build a national reputation for effectiveness.*

The work and opportunities ahead are unimaginably large, and RHA is adapting to meet the needs we foresee. As 2020 drew to a close, RHA set its sights on strengthening organizational structure, stabilizing funding, and ensuring that its goals, objectives and activities in the renewable hydrogen sector are in line with members' needs and expectations. It is the job of RHA's Board of Directors to ensure that the organization succeed in its mission to accelerate use of renewable electricity to create hydrogen and supplant use of fossil fuels across multiple sectors in the Pacific Northwest economy. Creating clean fuels from renewable electricity is crucial to meeting the crisis of climate change. The Board pledges continued support for that mission and looks forward to meeting the challenges.

Sincerely,



Don Ruff, Chair  
RHA Board of Directors

## INTRODUCTION

Michelle Detwiler, Executive Director, RHA

It is difficult to know how to introduce an annual report that is a retrospective on the year 2020. It was a difficult year in so many ways and it seems everyone was negatively impacted in some way, some surely more than others.

Like many nonprofits, RHA soldiered on, buoyed by the urgency and the importance of the work we do. While the year saw the cancellation of RHA's signature event, the Renewable Power to Clean Fuels Symposium, it also prompted creativity and adaptability in the ways RHA serves and connects with its membership. We continued to pursue state legislative policies to position renewable hydrogen as a feasible, sustainable and practical solution for addressing climate change, and educating policymakers, advocacy groups, agency staff, business owners and others about renewable hydrogen.

RHA experienced a big change at the end of 2020 when we bid farewell to RHA's founder and first Executive Director, Ken Dragoon, who continues to pursue his passion for the renewable hydrogen cause as he helps Obsidian Renewables develop renewable hydrogen projects in the Northwest. Ken also remains on the Board of Directors, so we will continue to have his expertise and guidance as RHA moves into the next phase of its growth. Ken's hard work and immense dedication to advancing the interests of the renewable hydrogen sector were recognized this year by the Northwest Energy Coalition, who awarded him their prestigious 2020 Headwaters Award.

Ken's departure created the opportunity for me to pursue a transition from participation as an RHA member to a role where I could be much more active. It is my honor and privilege to be selected to take the helm of RHA to pursue and realize the organization's mission, represent and serve its membership, and educate any and all who will listen about renewable hydrogen and why it is essential to realizing the region's goals of clean energy and a clean economy.

As the pandemic crisis starts, as we expect, to recede, I sincerely hope that 2021 will prove to have been a year of healing, reuniting, heightened appreciation for everything we have, and renewed commitment to valuing and protecting people and the planet.

To a better year.

Sincerely



Michelle Detwiler,  
Executive Director, RHA



*“RHA has been incredibly responsive, has given us major contacts and kept us in mind throughout our growth and that of RHA.”*

**Darrel Smith, CEO, Hydrostar USA**

## MEMBERSHIP

By the end of 2020, RHA had grown to over 75 members representing electric and gas utilities, clean energy and transportation advocacy organizations, project developers, law firms, consultants, transit agencies, and manufacturers of hydrogen electrolyzers, fuel cells, and fuel cell vehicles. Our members join RHA for many reasons: to learn about the industry, support our advocacy for clean energy and clean transportation policies, support our efforts to create a successful renewable hydrogen sector through policy and regulatory changes that reduce economic barriers to their business success, get connected with potential business partners and/or funding sources, and amplify our messages to educate policymakers, stakeholders and the general public about the versatility of renewable hydrogen. What they have in common is supporting RHA’s mission to promote the use of hydrogen produced with renewable energy to reduce dependence on fossil fuels across multiple sectors and reverse climate change.

Members who joined in 2020 (a full list of members can be found at the end of this report):

**Northwest Energy Coalition**  
**Nowland Services**  
**Stoel Rives**  
**Center for Hydrogen Safety**  
**Colorado Hydrogen Network**  
**Confederated Tribes of the Umatilla Indian Reservation**

**Mitsubishi Hitachi Power Systems**  
**Electron Communications**  
**Electrify Now**  
**Western States Hydrogen Alliance**  
**Capstone**  
**K&L Gates**  
**EV Global**

*“We really appreciated RHA’s support on our application with the Bonneville Environmental Foundation for the \$1.9M grant we received to build the state’s first H2 fueling station in Centralia. This grant set the stage for more funding for fueling stations in Washington, including the \$1.5M grant for a Douglas PUD fueling station.”*

**Gary Ivory, General Manager  
 Douglas County PUD**



## ADVOCACY AND EDUCATION

Advocacy and education are the backbone of RHA’s work. Through our efforts, the last couple of years have seen a dramatic increase in awareness of the ways renewable electricity can be used to make storable fuels capable of fully decarbonizing not only the electric grid, but also transportation and industrial processes.

RHA continued to provide interviews and speak at virtual conferences and in other online forums during the pandemic, when it was impossible to do more personal and direct educational outreach and messaging. RHA testified at committee hearings in Washington and Oregon on bills related to cap and invest; renewable ammonia, including a bill that would have developed a certification and labeling protocol for fertilizer products made from renewable hydrogen; and transportation electrification planning, urging policy makers to ensure that renewable hydrogen fueling infrastructure for fuel cell electric vehicles is included in such planning.

RHA submitted comments on the **Oregon Governor’s Executive Order on Climate (20-04)**. Our comments commended the Governor for strengthening the Clean Fuels Program and encouraged work with RHA and others to open new low-carbon pathways through development of hydrogen fuel cell electric vehicles. RHA also encouraged state and local governments to include consideration of fuel cell hydrogen electric vehicles in their zero-emission vehicle planning.

When RHA had the opportunity to review the Western Governors Association (WGA) Electric Vehicles Roadmap Initiative and found it failed to mention hydrogen fuel cell vehicle infrastructure, we contacted Oregon Governor Kate Brown, Chair of the WGA. By providing information on FCEVs and related infrastructure to Governor Brown’s office, we successfully persuaded her staff to include it in their analysis. The EV Roadmap Initiative can be found [here](#)



*“For the first time, the Northwest will produce clean fuels from renewable electricity—and the Douglas County PUD’s innovative plan will use their electrolyzer’s flexibility to free up valuable capacity on their dam.”*

**Ken Dragono  
 Executive Director, RHA  
 Chemical Engineering Magazine  
 August 27, 2020**

## MEDIA AND OUTREACH

RHA continued to be sought out for interviews with major industry publications such as H2 View and appearances in presentations such as the Future Fuels strategies podcast, as well as by local and regional media outlets. Virtual conference presentations included the World Hydrogen conference, the Australian Hydrogen Forum, and a public awareness raising event for National Hydrogen Day together with Sunline Transit.

RHA's Martina Steinkusz helped found the Women in Hydrogen group, creating a welcoming networking forum for women active in all aspects of the hydrogen industry and interested in its role in a clean energy and transportation future.

RHA provided notification and information to members on numerous public and private funding opportunities, including federal stimulus grants and loans, H2@Scale funding for small scale fuel cells, and Department of Defense Disaster Relief Fuel Cell Vehicle funding.

We also coordinated with RHA member Bonneville Environmental Foundation (BEF) to develop the RHA Fact Sheet as an educational resource for legislators.



## LEGISLATIVE AND REGULATORY ACTIVITY

### WASHINGTON

While Washington legislative sessions in even-numbered years are shorter and do not usually tackle major policy initiatives, the 2020 session did see continued effort to pass a Low Carbon Fuel Standard (LCFS), an effort held over from the 2019 session. RHA was successful in working with the sponsor, Representative Joe Fitzgibbon, to include specific language to ensure that renewable hydrogen production and infrastructure will be investments eligible for LCFS fuel credits from electricity sales revenue earned by utilities for electric vehicle charging.

#### RHA also ...

- Ensured that the Washington State Department of Transportation's rulemaking for their public-private partnership grant program included hydrogen refueling infrastructure.
- Initiated a dialogue with Washington State Department of Commerce and Utilities and Transportation Commission staff, filing comments in Phase 1 rulemaking for the Clean Energy Transformation Act (CETA) addressing energy storage.
- Pulled together a coalition to cosign and submit a response/rebuttal to the Washington Legislature's Joint Transportation Committee's study on fleet electrification, which had dismissed any consideration of H2 production or FCEV deployment.
- Along with Toyota, supported BEF and Douglas PUD who applied for and were awarded a \$1.9M grant to build Washington's first H2 fueling station.
- Presented testimony and filed comments before the State Energy Strategy Committee on the benefits of hydrogen as an integral element of the state's Energy Strategy, with renewable hydrogen development and policy support now included throughout the final document.
- Through 2020's legislative and issue education work, substantially increased policymakers' awareness of electrolytic hydrogen as a zero emission fuel and FCEVs as an equal part of the solution to reducing transportation emissions.

### OREGON

In even-numbered years the Oregon legislature convenes for a brief 35-day session. Democratic lawmakers had planned as part of their 2020 agenda to pursue a cap and trade bill, as they had done without success in the 2019 session. However Republicans in both chambers, to express their disagreement with the bill, left the Capitol three days before the session was to officially adjourn causing the session to end early. RHA did meet with a number of senators and representatives to familiarize them with our work and to increase their awareness of renewable hydrogen and its applications. RHA further engaged with the Legislature, submitting an amendment to the cap and trade bill defining "transportation electrification" to include use of hydrogen fueling infrastructure for fuel cell electric vehicles, and preparing and submitting legislative concepts related to energy storage.

RHA was also consulted by the Oregon Department of Energy, working with them to provide input to ODOE's 2020 Biennial Energy Report to ensure that information on renewable hydrogen uses and potential was highlighted and accurate.

## MEMBER COMMITTEES

Members provide valuable input and information to RHA and to each other through their participation in member-only committees. This information guides and informs RHA's work and decision making, on members' behalf, in fulfilling its mission—advocating for beneficial policy, creating economic opportunity, and creating positive environmental impact throughout the Pacific Northwest. Members are welcome to join as many committees as they wish and we strongly encourage as much participation as possible. Committee participation is one of the most effective ways for members to understand and help develop RHA's work on their issues and interests and access information on the latest developments in the renewable hydrogen sector.

Three committees were active during 2020: Policy, with Oregon and Washington subcommittees; Commercial Development; and Transportation.

### Policy

The Policy committee meets about six times a year and provides information to members on relevant legislative and regulatory issues and activities that potentially affect RHA members in Oregon, Washington, Idaho and Montana. The Oregon and Washington subcommittees meet monthly and provide information and updates to members on the legislative and regulatory activities in these two states where RHA actively engages in advocacy. A key function of the policy committee is to solicit input and recommendations from members on the development of RHA's legislative issue agenda for upcoming legislative sessions.

In 2020 the Policy committee heard and provided input on RHA's engagement in legislative issues including low carbon fuel standards, cap and trade, tax incentives for renewable hydrogen project development, and funding for hydrogen refueling infrastructure, among others.

### Commercial Development

Each of the Commercial Development committee's monthly meetings features a presentation by a member on a project they are planning or that is in one or another stage of development or construction. This is an excellent forum for members to share information about project successes, challenges, resource needs, and best practices. Challenges reported in project development, construction or financing can sometimes reveal policy or regulatory gaps and generate RHA legislative requests.

**Members presenting to the committee in 2020 included:**

- **Ryan Sookhoo, Cummins (fka Hydrogenics)**
- **Alan Mace, Ballard Power Systems**
- **Michael MacDonald, Renewable Hydrogen Canada**
- **Gary Ivory, Douglas County PUD**
- **Jaimie Levin, Center for Transportation and the Environment**

## Transportation

Bringing clean hydrogen fuels to Northwest transportation is a high priority for RHA. The Transportation committee focuses on educating members about renewable hydrogen applications in the transportation sector including latest technology developments, projects, and funding opportunities.

In 2020, the Transportation committee organized and hosted a meeting of stakeholders interested in bringing hydrogen fueling stations to the Portland/Vancouver metropolitan area.



## SIGNIFICANT PROJECTS

### Member Legislative Priority Survey and Recommendations

RHA brought on two interns, Quinton Beauboeuf and Somtoochukwu Ik-Ejiofor from the University of Texas, to conduct a survey of members concerning their Oregon policy priorities in order to ensure RHA is on the right track in its advocacy. The interns' primary tasks were to research existing Oregon legislation and regulations regarding renewable hydrogen, gather feedback from RHA members to identify common policy goals, and create a set of legislative recommendations. Their work helped further define issue areas in which RHA would further engage with the Oregon legislature, including increasing hydrogen fueling infrastructure along I-5, ensuring renewable hydrogen's inclusion in Oregon's Clean Fuels Program, ensuring equal treatment of FCEV's under Oregon's EV Rebate Program, and pursuing renewable hydrogen injection standards for natural gas distribution systems.

### Pacific Northwest Renewable Hydrogen Action Plan

RHA began work with the Center for Sustainable Infrastructure (CSI) on the Pacific Northwest Renewable Hydrogen Action Plan, its purpose to develop recommendations for both short term and long term actions to grow a viable renewable hydrogen sector in the Pacific Northwest and realize the climate, economic and social benefits that renewable hydrogen offers the region and the planet. The process has involved interviews with dozens of thought leaders and experts from different sectors and disciplines, providing an initial agenda for renewable hydrogen supporters to agree upon and collaboratively accomplish. The Action Plan is expected to be published in the Spring of 2021.

## Formation of the Executive Advisory Committee and Strategic Plan

RHA was founded in 2018, before hydrogen as an energy and fuel alternative for combatting climate change in the United States became the hot topic that it is today. Within less than two years RHA was recognized as a credible, thoughtful, and trusted source of information and advocacy. The speed of our growth and success highlighted the need for RHA to plan for the ways it will mature into an organization ready to guide a rapidly expanding sector, with much happening on the state, regional and national levels. To ensure organizational structure, governance, and financial stability appropriate to secure longevity and continued growth, in 2020 RHA formed an Executive Advisory Committee made up of members to provide input and guidance through the next period of growth and increasing responsibility. The EAC worked closely with the Executive Director, providing advice and recommendations on budget, fundraising, staffing, member relations and recruitment, and financial planning. These recommendations formed the basis for ongoing work on RHA's Strategic Plan which is expected to be completed during 2021.

"Thank you for your great work, we truly value the work you are doing and the connections you have made for us."

-Geoffrey Drucker, Managing Director  
Countrywide Renewable Hydrogen, Ltd

## LOOKING FORWARD

In 2021 RHA will continue to educate and bring our message to decision-makers ranging from elected officials and CEOs to clean energy advocates and social and environmental justice groups. We'll continue to build understanding and consensus among diverse and non-traditional groups and stakeholders about the importance of a renewable hydrogen industry.

RHA looks forward to participation in the 2021 Oregon and Washington legislative sessions, advocating for favorable legislation that supports development of the industry. RHA plans to pursue legislation authorizing the Oregon Department of Energy to study benefits and market potential of renewable hydrogen to replace fossil-based hydrogen and serve other applications in multiple sectors. RHA also plans to pursue property tax exemption legislation in the Oregon legislature.

The Washington legislature is expected to take up cap and trade and low carbon fuel standard legislation; as in past sessions, RHA will ensure that renewable hydrogen production and infrastructure development are included in these decarbonization and climate related bills.

RHA's second Renewable Power to Fuels Symposium, canceled due to COVID-19, is scheduled to be held in August 2021. We hope to be able to hold it in person, reconnecting with current members and introducing ourselves to potential new ones.

## JOIN US!

Our members are the strength of our organization. We invite you to join us in creating viable and sustainable multi-sector decarbonization solutions to protect our planet for future generations.

3Degrees

Andioma

Ballard Power Systems

Barlow Strategies

Bonneville Environmental Foundation

Cable Huston

California Hydrogen Business Council

Canadian Hydrogen and Fuel Cell Association

Center for Energy Efficiency and Renewable Technologies

Center for Transportation and the Environment

Columbia HyFuel

Columbia-Willamette Clean Cities Coalition

Douglas County PUD

Eugene Water & Electric Board

Flink Energy Consulting

Forth Mobility

FortisBC

H2B2 USA

Jeff Hammarlund

Christopher Hinton

Hitachi Zosen Inova

Hydrogenics

HydroStar USA

ITM Power

Klickitat County PUD

McDowell Rackner & Gibson

Eric Mick

Navigant Consulting

Nikola Motor Company

Northwest Energy Coalition

Northwest Green Hydrogen

Northwest Innovation Works

NW Natural

Obsidian Renewables

Oregon Applied Research

PERA

Phoenix Finance

Portland General Electric

Nel Hydrogen

Puget Sound Energy

Renewable Hydrogen Canada

Renewable Northwest

Ian Richardson

Roberto Ruiz

Solar Oregon

Southern California Gas Company

Tacoma Power

The Warren Group

Toyota Motor North America

TriMet

Vashon Climate Action Group

To find out about joining RHA, please visit: <https://www.renewableh2.org/become-a-member/>.

To see more of our achievements and learn more about renewable hydrogen, visit: [www.renewableh2.org](http://www.renewableh2.org).

RHA is a non-profit 501(c)(6) organization based in Portland, Oregon, established to advocate using renewable electricity to produce hydrogen and climate-neutral derivatives to reduce dependence on fossil fuels.

RHA engages in education and outreach to utilities, the renewable energy and environmental communities, regulators, legislators, and others, promoting climate-neutral fuels from renewable electricity as critical to reaching climate change goals, and serving as a renewable hydrogen information clearinghouse.

Renewable Hydrogen Alliance  
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