



HYDROPOWER
FOUNDATION



2021 ANNUAL REPORT

PREPARED BY:
HYDROPOWER FOUNDATION

GENERATING HYDROPOWER'S FUTURE

Photo: 2021 Think Tank Unplugged Competition

Mission & Vision



Our Mission

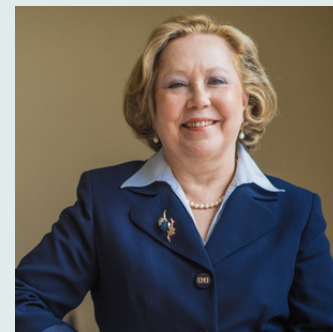
To increase the waterpower community's opportunity to contribute to society and the environment.

Our Vision

To be a recognized and credible leader in promoting research, education, and dialogue among and within the broad waterpower community, empowering waterpower to overcome its challenges and strengthen its contribution to a clean energy future.

MESSAGE FROM THE EXECUTIVE DIRECTOR

LINDA CHURCH-CIOCCI



We entered 2021 with high hopes that the challenges presented by the pandemic would subside as we moved into the summer months. We had planned wine tasting networking events, more Hiring for Hydro™ and Hydro Think Tank™ programs and other gatherings. Unfortunately, the need for safety required us to forgo these activities. So, 2021 became another year of adaptation. But it was also a year of excitement. With the return of some normalcy, we launched a new event, our first-ever Golf Outing this past fall at Clean Currents. We retooled our Hydro Think Tank™ to launch a condensed version we fondly term Think Tank Unplugged™; we continued our STEM work, and we built new partnerships. We have worked closely with the hydropower community on the "Un-Common Dialogue," which will continue into 2022. We have spent the year taking stock, building on our strengths, and refreshing our programs to better serve you.

We are very proud of the work we have done over this last year. We have placed a strong emphasis on workforce development, including the need to build more diversity within our ranks. Our Think Tank Unplugged™ program reached out to HBCU's to offer more opportunities for students of color and underserved communities. We launched the Mike Sale Memorial Scholarship program that will provide funding for graduate-level students focused on hydropower research within a strong science bent honoring Mike's incredible legacy. Our grant work has progressed as well. We continue to facilitate the reimagining of the Hydropower Vision. The results will be a stronger and improved Vision that acknowledges and provides a renewed roadmap to support the increasingly important role hydro plays in an ever-changing electricity system. Our STEM work under the NREL grant has continued. Together with NREL, we hosted a virtual STEM Dialogue Workshop Series. As a result, we had the opportunity to bring academia and industry together within a virtual setting to connect industry needs with educator and student needs.

Plans are underway to continue this great work in 2022. We also plan to host more fundraising events with our Second Annual Golf Outing, a wine tasting, a PNW Hydro Think Tank™, a Think Tank Unplugged™ and other networking opportunities at industry conferences.

We look forward to another terrific year in 2022. The Hydropower Foundation Board of Directors and Advisory Board Members are committed to furthering hydropower's future as they dedicate their time, resources, and energy to our work. They, along with our members and sponsors, have ensured the continuation of our efforts to support waterpower and its many contributions. We thank each member and sponsor for your support. Because of that support, we have been able to better serve this critically important resource, hydropower, that binds us together in our common cause to ensure its long-term sustainability.

PURPOSE & STRATEGY



OUR PRIMARY PURPOSE

To provide direct education, public awareness, focused research through specific outreach programs that create interest in employment in our industry. To prepare the next workforce by convening forums, workshops, and webinars that guide and support the hydropower community through our changing role in an evolving clean energy future.

STRATEGIC PROGRAMS

1. Direct education of students through programs designed to give them insight into the waterpower industry and opportunities for hands-on learning.
2. Workforce development and training through job fairs at industry conferences around the country.
3. Identify hydropower community issues that need to be addressed with written materials/reports, establishing and contracting expert resources to address these issues, and disseminate and promote the results.
4. Convene community forums that expand conversations (“uncommon dialogue”) around water issues with a broad range of stakeholders.
5. Support R&D consistent with solving hydropower community problem areas by recognizing and prioritizing industry research where information gaps exist, and establish investigation and research as appropriate.

2021 BOARD OF DIRECTORS & ADVISORY MEMBERS



Board of Directors

Gregg Carrington - Northwest Power Pool

Tim Brush - Interfluve, Inc.

Steve Amaral - Alden

Michael Manwaring - McMillen Jacobs

Wayne Pietz - AECOM

Jessica Coleman - Seattle City Light

Lisa Larson - HDR

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Norm Bishop - Knight Piesold

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Wendy Bley - Kleinschmidt

Kenneth Odom - Southern Company

Paul Jacobson - EPRI

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Tuuli Hakala - Chelan County PUD

Andy Peters - River Connectivity Systems

Shannon Ames - Low Impact Hydro Institute

Megan Nesbitt - GE Renewable Energy

Kevin Cooley - Kleinschmidt

Mark Killgore - State of Virginia

Del Shannon - Schnabel

2021 HYDROPOWER FOUNDATION COMMITTEES

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Knight Piesold - Treasurer &
Chair

Steve Wenke

Avista Utilities

Janet Audunson

National Grid

Wendy Bley

Kleinschmidt

Executive Committee

Steve Wenke

Avista - President

Norm Bishop

Knight Piesold - Treasurer

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National Grid - Legal Counsel

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Kenneth Odom

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President

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Interfluve, Inc. - Co-Chair

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Alden

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Wayne Pietz

AECOM

2021 HYDROPOWER FOUNDATION COMMITTEES

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Seattle City Light - Chair

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EPRI - Co-Chair

Michael Manwaring

McMillen Jacobs - Secretary

Kenneth Odom

Southern Company

Lisa Larson

HDR

Scott Ginesin

Consultant

Andy Peters

River Connectivity Systems

Alison Colotelo

PNNL

Megan Nesbitt

GE

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Interfluve, Inc. - Chair

Lisa Larson

HDR

Gregg Carrington

Northwest Power Pool

Wayne Pietz

AECOM

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Wayne Pietz

Chair

Mike Manwaring

Co-Chair

Scott Ginesin

Secretary

FINANCIAL VIABILITY



2021 MEMBERS

- SOUTHERN COMPANY
- SEATTLE CITY LIGHT
- HDR
- CLARION EVENTS
- AECOM
- AVISTA
- CHELAN COUNTY PUD
- NORTHWEST HYDROELECTRIC ASSOCIATION
- KLEINSCHMIDT
- NATIONAL HYDROPOWER ASSOCIATION
- GENERAL ELECTRIC
- HCI PARTNERS
- KNIGHT PIESOLD
- GRANT COUNTY PUD
- EMERSON
- VAN NESS FELDMAN
- LOW IMPACT HYDRO INSTITUTE
- SCHNABEL ENGINEERING
- CURRENT HYDRO
- IDAHO NATIONAL LABORATORY
- PACIFIC NETTING PRODUCTS
- PORTLAND GENERAL ELECTRIC
- MCMILLEN JACOBS ASSOCIATES
- JANET AUDUNSON & DAVE YOULEN
- BARNARD CONSTRUCTION
- ALDEN

2021 SPONSORS & SUPPORTERS

- KBH THOMPSON
- LITOSTROJ
- NATIONAL RENEWABLE ENERGY LAB
- PACIFIC NORTHWEST NATIONAL LABORATORY
- SOUTHERN COMPANY
- THOMPSON/HCMS
- MAVEL
- SCOTT BRIDGE COMPANY
- BRASFIELD & GORRIE
- TROUTMAN PEPPER
- HYDROPOINT WELDING & MACHINING
- EMERSON
- ADVANCED HYDRO SOLUTIONS
- BALCH & BINGHAM
- KLEINSCHMIDT
- U.S. DEPARTMENT OF ENERGY WATERPOWER TECHNOLOGIES OFFICE

2021 FRIENDS OF THE FOUNDATION

- NORM BISHOP
- STEVE WENKE
- WAYNE PIETZ
- DAVID SINCLAIR
- MARK KILLGORE
- TIM BRUSH

MEMBERSHIP

Our clean energy future depends on a robust renewable energy portfolio. If you are a leader in our industry who believes in expanding renewable energy's place in the nation, the Hydropower Foundation is worthy of your support. The Foundation, established in 1994, is a 501(c)(3) non-partisan, non-profit organization dedicated to building a sustainable clean energy future and improving hydropower as an important tool toward that end.

Our Foundation's success depends on you. Your support and sponsorship will contribute directly to the Foundation's mission and the hydropower community. With both Corporate and Individual memberships available, there are levels of memberships that fit budgets for all new or continuing Foundation members.

Here are some of the things members of the Foundation receive:

- Excellent networking opportunities and corporate visibility with other corporate members and industry key individuals participating in several Foundation-sponsored regional and national events.
- Direct access to bright young students that are interested in obtaining a career in hydropower.
- Support of the development of future workforce development programs like Vets for Hydro, and the opportunity to provide input in the development of a host of educational opportunities through seminars and summits.
- Access to our Foundation experts who may be able to assist you with your current and future projects.
- Ability to post job openings with the Foundation to our website and social media outlets.

Contact Bree Mendlin at Bree@hydrofoundation.org for more information on memberships.



OUR PROGRAMS



THINK TANK UNPLUGGED™

The Foundation is a leader in identifying talent and spreading the good word about hydropower and its opportunities. The hydropower industry recognizes it has a large deficit in having readily available good qualified candidates to join the workforce. From skilled technical and craft resources to engineers there is not only a loss of employees but a large gap in knowledge transfer as there is no one to pass the knowledge along to. Competition is fierce for qualified new employees.

The Foundation conducted a condensed version of the Hydro Think Tank program and called it the Think Tank Unplugged. It was held in Atlanta, GA in October 2021 alongside the National Hydropower Association's Clean Currents Conference. This event brought together undergraduate and graduate students with diverse backgrounds to create their renewable cities of the future. They networked with industry leaders learned about the value of hydropower, and participated in a little healthy competition! This event was made possible by NREL, Southern Company, and GE.



What our students had to say:

"As a fourth-year Ph.D. looking for a job, the connections I made were invaluable. During the competition, I learned a lot about what a MW of Hydropower can "buy" you. It put into perspective how much energy we need to power the world and the challenges stemming from intermittent renewables."

"The Hydro Think Tank Unplugged allowed me to further understand the process when considering a transition to 100% renewable energy and the difficulties and possibilities that entails."

OUR PROGRAMS



Walla Walla Community College, Washington State University, and Portland State University

HYDRO THINK TANK™

PNW HYDRO THINK TANK™ - COMING AUGUST 16-18, 2022

The Hydropower Foundation will organize a Hydro Think Tank™ Competition at *Grand Coulee Dam* August 16-18, 2022. Students will be invited to participate from universities, colleges, and trade schools in the region. Students will meet for a few days of hands-on problem solving to give their best solution to a pressing hydropower issue presented by The United States Bureau of Reclamation, Chelan County PUD, Grant County PUD, Avista Utilities, HDR, McMillen Jacobs.

Student Benefits:

- Hands-On Exploration
- Training
- Teamwork
- Personal Development
- Cash prizes!
- Resume booster
- Potential internships and/or positions with sponsoring companies.

Organizational Partner Benefits:

- Access to bright new potential workforce entrants and gaining contacts into area schools.
- A first-hand glimpse at potential hires before a commitment is made.
- Experience in giving back to the next generation
- Opportunity to present to students on a special topic during the Think Tank event.

OUR GRANT WORK

STEM WORKFORCE DEVELOPMENT PROJECT 2019 - CURRENT



BREE MENDLIN, PROGRAM DIRECTOR

STEM to Marine Energy Poster Presentation at 2021 Clean Currents

As part of an effort to recruit the best and brightest waterpower workforce to the Hydropower Foundation has partnered with the U.S. Department of Energy's (DOE's) Water Power Technologies Office (WPTO) and the National Renewable Energy Laboratory (NREL) to launch the Science, Technology, Engineering, and Math (STEM) workforce development and education portals for water power technologies.

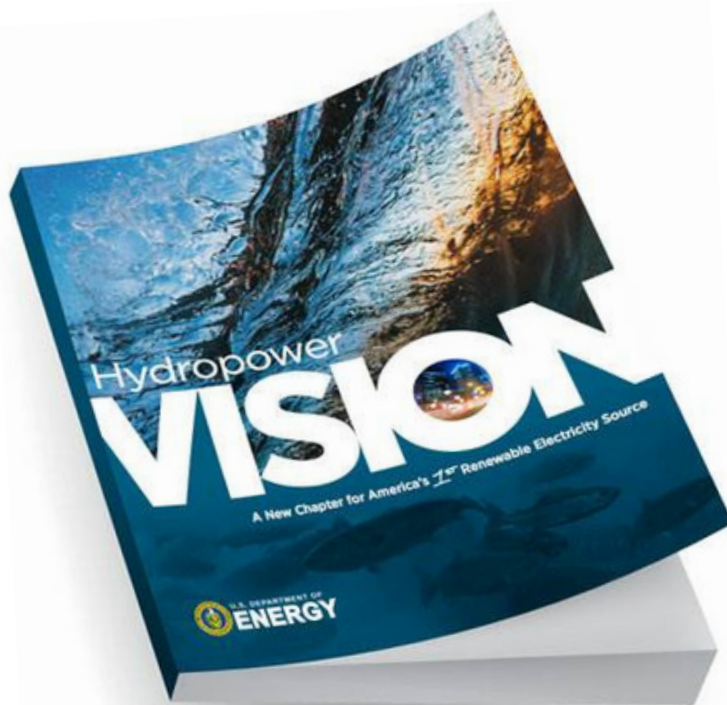
The Hydropower Foundation, the WPTO, and NREL hosted a STEM to Hydro & Marine Energy Dialogue Series. Where we gained valuable feedback regarding the educational resources hosted on the new STEM for Hydro and STEM for Marine Energy portals, we shared brand new hydropower curricula developed by our partners at NEED, we discussed the current challenges of the workforce and the need for an update on the industry's workforce needs as it relates to careers in trades and operations. Because we brought together academia and industry within a virtual setting to we were presented with the opportunity to learn more about the industry, educator, and student needs. We discussed the need for a Hydropower Collegiate Competition, similar to the successful Marine Energy Collegiate Competition and we are excited to get to work on producing this first-time competition with our partners at NREL to be hosted in 2023.



BREE MENDLIN, PROGRAM DIRECTOR

Hydropower Collegiate Competition Workshop/2021 Clean Currents

OUR GRANT WORK



VISIONARIES REPORT - REIMAGINING TO BE COMPLETE IN 2022

A CONVENING ROLE FOR THE FOUNDATION

The Hydropower Foundation is working together with the U.S. Department of Energy and the Pacific Northwest National Laboratory to convene and facilitate industry forums in support of the Hydropower Visionaries Report and the associated leadership of its Visionary Program. This utilizes The Foundation's unique independent status and leadership to bring together many divergent interests.

The Hydropower Vision Roadmap: A Pathway Forward: Provides a detailed roadmap of potential technical, economic, and institutional actions by the hydropower community to optimize hydropower's continued contribution to a clean, reliable low-carbon domestic energy generation portfolio, while also ensuring the nation's natural resources are adequately protected or conserved.

OUR EVENTS



FIRST ANNUAL GOLF OUTING

To benefit the new Mike Sale Memorial Scholarship

MADE POSSIBLE BY:





MIKE SALE MEMORIAL SCHOLARSHIP

To promote graduate-level research in specific areas associated with and to benefit the waterpower industry and its environmental management practices.

- Mike Sale was a huge presence in the hydropower community. He served over 25 years as a distinguished research staff member and manager at Oak Ridge National Laboratory before retiring in 2008. Not one to rest, Mike became an independent consultant and invaluable member of numerous technical teams offering support on energy, water and environmental issues, including for the U.S. Department of Energy's Wind and Water Power Technologies Program.
- Mike was a charter member of the Low Impact Hydropower Institute's governing board and served as Executive Director from 2013 to 2016 during a critical period of the organization's development.
- Mike also served as a member of the Hydropower Foundation and its predecessor, the Hydro Research Foundation, since its inception in 1994. He was an invaluable member of the Foundation's Board of Directors serving until his passing. He had a deep love for hydropower and its value to the electric system, and continually emphasized the importance of improving the resource through science based investigation and problem solving.
- The Mike Sale Memorial Scholarship will promote graduate-level research in specific areas associated with and to benefit the waterpower industry and its environmental management practices.
- Applications for the scholarship will be accepted in the spring of 2022.

A NOTE FROM THE PRESIDENT

As I reflect on 2021, you should all be proud of the interest and support each of you has placed with the Foundation. With the cloud of COVID hovering over all activities for yet another year, the Foundation has continued developing and setting itself up for a more active and engaging future.

In 2020, with COVID forcing cancellations of all of our planned events, we used the opportunity to solidify our internal structure by re-chartering some of our committees and creating new ones needed to sustain and grow the Foundation. In 2021, we shifted our focus to start tasking these committees, and we are still in that process. Several of our Board Members had stepped up to these tasks. Without the efforts of our Board members, we would be stalled.

We greatly appreciate those companies who renewed their membership and those who saw fit to entrust the Foundation as new members. These companies and their memberships allow the Foundation to continue to operate while COVID is still active. We continue with our outreach, and if you are not currently an individual or corporate member, I hope you might consider formally joining the Foundation and its mission.

2021 also saw the Foundation Establish the Mike Sale Scholarship Fund. This new scholarship is targeted to support graduate students conducting work in the hydro industry. Adding growth to the scholarship options as the Foundation embarks on managing an additional scholarship complimentary to the Julie Keil Scholarship Fund, which the Foundation also manages.

I also want to call out our staff and the contributions they have overseen this past year. We continue to support the Department of Energy (DOE) by moderating DOE's Hydro Visioning meeting efforts and working with the STEM Hydropower efforts with National Renewable Energy Laboratory (NREL). We continue to run our signature Hiring for Hydro™ and Hydro Think Tank™ programs and were able to host a fundraising golf outing in conjunction with the NHA Clean Current's Conference. These all had to be adapted due to COVID, which created many challenges. I can't express how dedicated Linda, Bree, and David are to the Foundation and take on the work it takes to put on these events. They are beyond amazing, and we are lucky to have them!!

Finally, I want to thank again those who renewed or became new members this past year. I hope you will strongly consider remaining with us and continuing your membership for 2022. For those who think they might be interested in becoming members, please connect with us.

I also want to thank those companies who sponsored our events this past year. Your sponsorships allow us to not only put on our events but fund our scholarship programs and help us sustain the Foundation. Thank you!

STEVE WENKE

PRESIDENT

HYDROPOWER FOUNDATION

LOOKING AHEAD

As we look ahead to 2022, we plan to start seeing some events being held in person. The Foundation will continue its important grant work in 2022 focused on workforce development and outreach to a network of universities. In addition, we plan to work more closely with community colleges and trade schools around the country. We will return to hosting our great fundraising events in 2022, including fundraising events in Washington D.C., Denver, CO, and a 2nd Annual Golf Outing at Clean Currents in Sacramento, CA. In addition, we will host a 2nd Think Tank Unplugged™ program and use it as a platform to kick off a WPTO supported Hydropower Collegiate Competition. Finally, we are bringing back the PNW Hydro Think Tank™ and additionally, hope to bring the program to a partner university.

We are planning to research possible relationships with other organizations that have similar interests as our mission and who might support our efforts mutually. We plan to improve our website, making it easier for you to find out what is going on with the Foundation. We have big plans as we begin to make our way into a new year, and we hope you will join us.

We want to hear from you. The Hydropower Foundation was created to serve you, the industry, in ways that bring additional value through education and research, and workforce development. We continue to build on that mission and 2022 will be no different. We want to hear from you on how we can serve you better. If you have specific ideas, we want to hear them. You can contact us at any time and speak to any board member or staff.

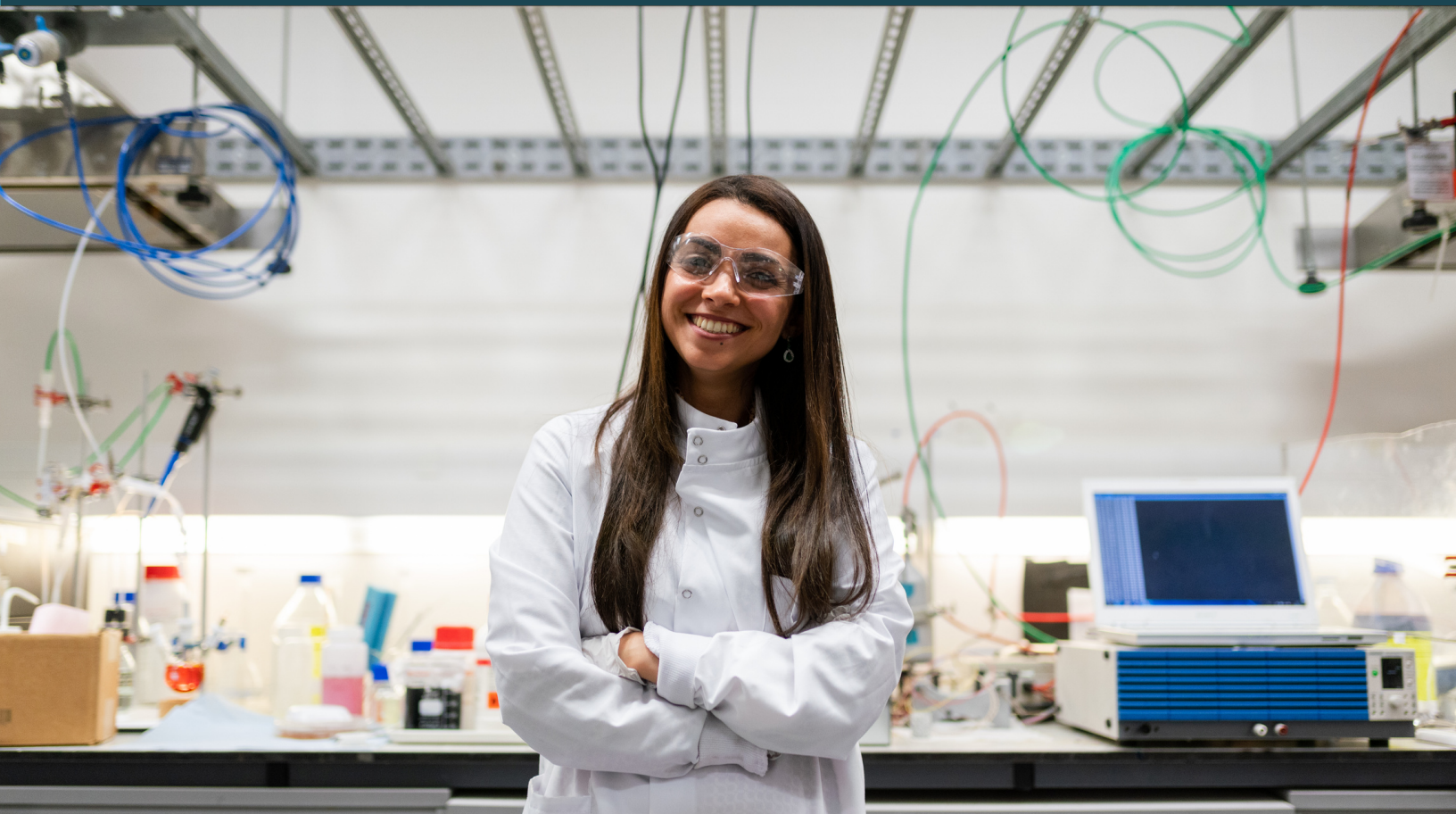
We look for your continued support of the Foundation in 2022 through our membership program, sponsorship of our events, or simply registering to participate in our activities as the year unfolds. Remember the Foundation's mission is to support the industry in building a stronger and better future, but we can't do that alone, We need you!

STEVE WENKE

PRESIDENT

HYDROPOWER FOUNDATION

YOU TOO CAN BUILD THE FUTURE OF HYDROPOWER



- Make a Financial Contribution
- Become a Member
- Sponsor an Event - Hiring for Hydro, Hydro Think Tank, Fundraising and Career Building Events
- Join our Communications List
- Be a Mentor
- Donate to the Julie Keil Scholarship or the Mike Sale Scholarship Fund
- Join the Board
- Consider a Legacy Gift
- Follow us on the Social Media Channel of your choice



To learn more about how to plug into The Hydropower Foundation's effort to further the future of hydropower, contact Bree Mendlin at Bree@HydroFoundation.org

Donations by mail can be made to:
Hydropower Foundation
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Littleton, CO 80127