# 20 24

# ANNUAL REPORT

LOW IMPACT HYDROPOWER INSTITUTE







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# **A Word From Our Leaders**

The previous fiscal year marked a period of both introspection and strategic advancement for the Low Impact Hydropower Institute (LIHI).

LIHI undertook a comprehensive evaluation of our certification program to ensure it remains robust and responsive to the needs of the dynamic renewable energy sector. In pursuit of our 2024 strategic goals, we gathered extensive stakeholder feedback, refined our handbook to reflect evolving ecological and social considerations, and researched new market opportunities. Central to these efforts was our unwavering commitment to environmental stewardship and river protection, ensuring that our certification standards support clean energy production, safeguard river ecosystems, and promote sustainable water management.

Amongst our diligent efforts, we convened advisory group members from every corner of the hydropower community to discuss the inner workings of pumped storage hydropower. From those meetings, we drafted a definition for low impact pumped storage, which is undergoing a public comment period that commenced in February 2025.

We are also mindful of the legacy that brought us here and honor the memory and contributions of Pat McIlvaine, a longtime supporter, reviewer, and friend of LIHI. Pat's wisdom, dedication, and unwavering belief in the power of thoughtful review and dialogue helped shape the foundation of our work. We are grateful for her years of service. Pat's influence will forever be felt throughout the organization, from our processes and values to the core of LIHI's mission.

It's clear that 2025 will be a season of rapid transformation. Amid these shifts, LIHI remains steadfast in our mission to recognize and support hydropower that prioritizes environmental, recreational, historical, and cultural resource protection.

LIHI will continue to work towards strengthening the integrity, relevance, and value of the LIHI Certification, positioning our program as an attractive investment for potential certificate holders and funders alike. We will continue to engage with tribal nations and local communities, promote technological innovation, and explore new opportunities for environmental markets and incentives where LIHI certification could provide certainty that hydropower production meets a transparent and measurable standard.

While it is uncertain what surprises the future holds, LIHI's unwavering commitment to helping project owners and operators demonstrate credible, science-based performance to regulators, communities, and investors is our top priority. We remain committed to keeping two core priorities in balance: empowering project developers to achieve science-based, credible certification, and ensuring that impacted communities—especially those that are historically underrepresented—have both access to information and meaningful influence over the projects that affect them.

Thank you to our stakeholders, certificate holders, reviewers, and supporters for your continued trust and engagement. Together, we are proving that hydropower can—and must—be a force for a clean energy future.

With gratitude and commitment,

Bruch My Partie

Brenda Pracheil, Board Chair

harrow & ams

Shannon Ames, Executive Director



# **GET TO KNOW LIHI**

The Low Impact Hydropower Institute (LIHI) is a non-profit 501(c)(3) organization that seeks to reduce the impacts of hydropower generation by certifying hydropower projects that have avoided or reduced their environmental impacts pursuant to the Low Impact Hydropower Institute's criteria.

### VISION

We envision a world where hydropower puts people and the environment first.

### MISSION

We recognize and support hydropower that prioritizes environmental, recreational, historical, and cultural resource protection.



Each certification represents a shared commitment between hydropower operators, environmental advocates, and communities to balance renewable energy production with protecting our natural and cultural resources.



## LIHI'S

### CORE VALUES

- Water Stewardship: Natural flowing waters are essential to healthy life on earth. We strive to protect water's natural, social, and cultural values.
- Low Impact Hydropower: Hydropower can operate in a low impact way that ensures ecosystems and human communities can thrive. We support Low Impact hydropower that achieves this goal as a valuable resource in the clean energy transition.
- **Transparency**: Transparency builds trust and fosters accountability. We seek public input and communicate openly and honestly about the considerations underlying our decisions.
- **Integrity**: Inclusivity and consistency lead to higher quality outcomes. We value different viewpoints and approach our decisions with neutrality, devoid of personal interests or external pressures.
- **Data-driven:** Quality information leads to better decisions. To ensure our actions are grounded in science and reason, we rely on data, facts, and evidence, and we evolve if new information calls for change.
- **Collaboration**: Common ground and shared goals are the path to progress. To do this, we encourage kind, open, and candid conversations with all individuals and organizations regardless of affiliation. We value and actively seek diverse perspectives to build mutual understanding and enduring connections.



# CERTIFICATION PROGRAM



IMAGE: LIHI Certificate #59 - Rice Rips Project, Maine

### WHAT IS LIHI CERTIFICATION?

LIHI Certified® hydropower assures consumers that their hydropower-based electricity has been independently verified as being protective of river habitat and resources, while giving owners access to regulatory and voluntary power markets that can provide a return on their environmental and social investments.

185 Certificates Active in 2024

representing **323** powerhouses and dams in **24** states, on **101** rivers, and **13** canal systems.

### **CRITERIA & STANDARDS**

Applications for Low Impact Certification are evaluated using a consistent, hierarchical set of eight criteria, goals, and standards. All criteria and their respective goals must be satisfied, but the alternative standards are designed to be flexible enough to be applicable to the wide range of conditions that can occur at different hydropower facilities in different river systems.

LIHI Certified projects supplied nearly

4,446 MW

of capacity and an average of **16,239 GWh** of electricity.

Certificates range in size from **10 kW** of capacity to **805 MW** and **10 kW** to **450 MW** for individual powerhouses.

# **SUSTAINABLE IMPACT BY THE NUMBERS**

LIHI continues to provide a trusted benchmark for meaningful environmental performance, ensuring that renewable energy doesn't come at the expense of rivers, wildlife, or communities. Here's how the LIHI Certification Program is helping hydropower facilities improve sustainable practices and drive innovation.

Putting People and the Planet First — The Low Impact Hydropower Way.

#### **Environmental & Community Impact Metrics**

LIHI Certified facilities protect over



Collectively, LIHI Certified facilities provide over

1,000

recreational and public access amenities.



Nearly **30%** 

of certified facilities have implemented actions that go above and beyond the basic LIHI criteria to minimize their impacts.

#### **PROGRAM PERFORMANCE**



Nearly **39.5%** of applications to LIHI do not result in certification.



Half of those, 20%, are not certified because they do not meet the criteria.



LIHI has certified 11.4% of all LIHI-eligible, FERCregulated projects.

#### LIHI Certified hydropower projects are proving that clean energy can also mean environmental and community stewardship.



Behind these numbers are real projects making tangible changes on the ground—shaped by local priorities, ecological needs, and a shared commitment to better hydropower.

In order to obtain and retain LIHI Certification, four facilities in the Merrimack River watershed in New Hampshire voluntarily entered into a binding Memorandum of Agreement with the U.S. Fish and Wildlife Service that established a plan and schedule to implement measures to protect aquatic life at all facilities. Specified measures included establishment of minimum flows in the bypassed reaches, operational flow monitoring plans, and downstream passage facilities for American eel and river herring. The owner conducted flow tests to determine adequate minimum flows for habitat needs and developed fish passage designs and fish passage operational plans. These measures have positively affected the rivers in ways that would not have happened in the absence of LIHI Certification.





A 30 MW store/release facility in Utah developed a Resource Management Plan (RMP) in consultation with resource agencies. The RMP was designed to improve water quality, wildlife habitat, and scenic resources, as well as retaining and improving agricultural uses of the facility's waters and creating or improving recreation access to facility waters. Under the RMP, including additional voluntary measures, the owner has protected 189 miles of shoreline (99.6% of the undeveloped shoreline) with a buffer extending at least 200 feet from the shore, totalling 1,440 acres. A vegetation management program protected and created habitat for wildlife and sensitive species on over 1,225 acres. About 600 acres of land were converted from agriculture to grassland. Shoreline tillage buffers were created, herbicide restrictions were instituted, and 21 miles of fencing were installed to keep livestock away from the shorelines. Collectively, these measures not only protect the lands but also the river from agricultural runoff. 8

# PUMPED STORAGE HYDROPOWER PROJECT

### 2024 Update



From February through October of 2024, LIHI held over twenty meetings to discuss potential impacts from new and existing pumped storage hydropower facilities.

These meetings focused on a specific area of potential impact, included subject matter experts, and were professionally facilitated. The result was a draft definition of "low impact pumped storage," which is now being reviewed in an open public comment period. Those comments will be considered and woven into the next draft of the definition.

In addition to the information being used to draft a definition, the participants walked away with a greater understanding of the broad range of potential impacts and thoughts on mitigation measures. LIHI looks forward to advancing the definition, considering a certification program (including incentives for achieving certification), and creating educational opportunities around the information shared and captured.

Please keep an eye out for public comment opportunities and share your thoughts with us. You can find the project page here:

lowimpacthydro.org/low-impact-pumped-storage-public-comment-9298/



# **Financial Overview**

		Program	General & Administrative	Fundraising
	2021	\$426,406	\$154,166	\$0
	2022	\$430,730	\$182,636	\$0
	2023	\$488,109	\$142,987	\$9,478
IMAGE: LIHI Project #26 Goat Lake	2024	\$752,526	\$179,688	\$15,149

This year, LIHI strengthened its commitment to mission-driven work by significantly increasing investments in program services. Program-related spending rose by over **50%** compared to the previous year, accounting for the vast majority of LIHI's total expenses in 2024. This growth reflects a strategic focus on expanding the reach and impact of certification, deepening engagement with stakeholders, and driving measurable improvements across the hydropower industry.



# Statement of Financial Position

	2024	2023
Assets		
Current Assets		
Cash & Cash Equivalents	\$150,892	\$149,753
Accounts Receivable	\$16,117	\$89,340
Investments	\$511,800	\$490,682
Other Current Assets	\$2,857	\$3,098
Total Current Assets	\$681,666	\$732,873
Total Assets	\$681,666	\$732,873
Liabilities & Net Assets		
Accounts Pavable	\$2,881	\$1 272
Accrued Expenses	\$29,661	\$20,579
Deferred Revenue	\$3,400	\$80,180
Total Current Liabilities	\$35,942	\$102,031
Total Liabilities	\$35,942	\$102,031
Net Assets		
Without Donor Restrictions	\$645,724	\$630,842
Total Net Assets	\$645,724	\$630,842
Total Liabilities & Net Assets	\$681,666	\$732,873

# **Statement of Activities**

	2024	2023
Revenue & Support		
Annual Fee Income	\$737,367	\$597,781
Application Fee Income	\$29,824	\$73,554
Grant & Donation Income	\$163,661	\$27,577
Other Income	\$43	\$4,895
Unrealized & Realized Gains	\$12,319	\$14,587
Interest & Dividend Income	\$19,031	\$20,231
Total Revenue & Support	\$962,245	\$738,625
Expenses		
Program Services	\$752,526	\$488,109
General & Administrative	\$179,688	\$142,987
Fundraising	\$15,149	\$9,478
Total Expenses	\$947,363	\$640,574
Change in Net Assets from Operations	\$14,882	\$98,051
Net Assets at Beginning of Year	\$630,842	\$532,791
Net Assets at End of Year	\$645,724	\$630,842

### Governance



### **Governing Board**

#### **BRENDA PRACHEIL**

Board Chair, Technical Committee, Executive Management Committee (Chair) Pacific Northwest National Lab, TN

#### JULIE MCNAMARA

Board Vice-Chair, Executive Management Committee, Policy Committee (Chair), Nominations Committee (Chair), *Union of Concerned Scientists, MA* 

#### LISA ZAREK

Board Treasurer, Executive Management Committee, Finance Committee (Chair) *Brookfield Renewable (retired), FL* 

#### **RICK GLICK**

Board Secretary, Executive Management Committee, Policy Committee Davis Wright Tremaine (retired), OR

#### JULIE GANTENBEIN

Director, Technical Committee Vice-Chair, Executive Management Committee *Water & Power Law Group, CA* 

#### T.J. HEIBEL

Director, Technical Committee, Communications Committee (Chair) Pacific Northwest National Laboratories, DC

#### MARK ZAKUTANSKY

Director, Technical Committee (Chair) Appalachian Mountain Club, PA

#### NATALIE GRIFFITHS

Director, Technical Committee **Oak Ridge National Lab, TN** 

#### DAVE STEINDORF

Director, Technical Committee American Whitewater (retired), CA

#### **VICKI TAYLOR**

Director, Executive Management Committee Catawba-Wateree Relicensing Coalition, NC

#### **KELLY CATLETT**

Director, Policy Committee American Rivers/Hydro Reform Coalition, CA

#### NALNEESH GAUR

Director, Finance Committee, Communications Committee *PricewaterhouseCoopers, TX* 

#### TED WISE

Director, Technical Committee Oregon Department of Fish and Wildlife (retired), *WaterWatch Oregon, OR* 

#### MARK BEVELHIMER

Director, Technical Committee Oak Ridge National Lab (retired), **Tennessee Citizens for Wilderness Planning, TN** 

#### Staff

SHANNON AMES Executive Director

MARYALICE FISCHER Certification Program Director

SURABHI KARAMBELKAR Policy Director

WHITNEY STOVALL Communications Manager

#### WHITMAN CONSTANTINEAU

Administrative Manager

## Governance

### Hydropower Industry Advisors

ELIZABETH ABLOW Seattle City Light, WA

SARAH HILL-NELSON Bowersock Mills Hydroelectric Project, KS

**MADELEINE MINEAU** Essex Hydro, MA

**DAN PARKER** Consultant, NY

JON PETRILLO Gravity Renewables, RI

JOHN RAGONESE Great River Hydro (retired), NH

**STEVE ZURETTI** Brookfield Renewable Energy Group, MA

JOHN TEDESCO Green Mountain Power, VT

KATE STIRR Natel Energy, CA

KELSEY RUGANI Kearns & West, CA

### **Executive Advisors**

SHAWN SEAMAN Maryland Department of Natural Resources, MD

JACK PALMER Kleinschmidt (retired), DE

### Renewable Markets Advisors

PHILIP RAPHALS Helios Centre, QC

JONATHAN BURNSTON Karbone, NY

JENNIFER MARTIN Center for Resource Solutions, CA



www.lowimpacthydro.org

info@lowimpacthydro.org

All photos are of LIHI certified hydropower plants. LIHI reserves the right to share and distribute images for promotional purposes.



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