2015 ANNUAL REPORT

UNLOCKING HYDROPOWER’S POTENTIAL
HYDROPOWER IN AMERICA

- Over 26,600 MW across 228 projects of new hydropower projects are in the FERC licensing pipeline.
- Hydropower provides over 30 million American homes with affordable, renewable power each year.
- Hydropower currently supports over 300,000 American jobs annually and over 2,500 supply chain companies from coast to coast.
- Hydropower capacity exceeds 100,000 MW in the U.S. and generates nearly half of the nation’s renewable electricity.

WATERPOWER’S POTENTIAL

- Only 3 percent of the 80,000 dams in the U.S. generate electricity.
- The Department of Energy estimates that over 12,000 MW of capacity could be added to the nation’s non-powered dams and 65,000 MW exists in the nation’s stream reaches.
- Recent studies found that America’s technically recoverable wave energy resource is estimated to range between 898–1,229 terawatt hours (TWh) per year, distributed across the coast of Alaska, the West Coast, the East Coast, the Gulf of Mexico, Hawaii, and Puerto Rico.

OUR CLEAN ENERGY FUTURE

- Hydro avoids approximately 200 million tons of CO₂ emissions annually—that’s like taking 42 million cars off the road!
- Hundreds of millions of dollars are invested each year in environmental enhancements at hydro facilities.
- Industry is constantly innovating and investing in research and development to improve fish passage and ensure greater water quality with enhanced technology.

PROTECTING THE EXISTING FLEET

- Over the next 15 years, 412 projects with 18,708 MW of capacity will come before FERC for relicensing.
- 45 percent of the projects up for relicensing have a capacity between 1–10 MW.
Letter from the President and Executive Director

At the outset of 2016, in a New York Times op-ed, U.S. Senator Lisa Murkowski aptly exclaimed to Congress and the Administration to “Stop Wasting Hydropower’s Potential.” That phrase couldn’t be more fitting, as it perfectly encapsulates NHA’s focus in 2015.

Our legislative efforts were dedicated towards modernizing the licensing process. And throughout our journey to unlock hydropower’s potential, we’ve unveiled a new communications campaign to elevate our message and reach new supporters. As an industry, we worked together to make strides in knocking down the roadblocks that are keeping America’s largest source of renewable electricity from helping to secure our clean energy future. We also received a two-year extension of the production and investment tax credit, and recognition of hydropower in the EPA’s Clean Power Plan, both market drivers for future renewable energy development.

On all fronts, 2015 was a year of successes. We hosted the largest NHA Annual Conference to date, accompanied by two new events—the International Marine Renewable Energy Conference and Marine Energy Technology Symposium. At the same time, our regional meetings throughout the country received record attendance. Operational Excellence continues to grow, as we have expanded its functionality and event reports. And our seamless integration of the marine energy sector has yielded record federal funding for research and development.

All of these successes were made possible by the continued engagement of our members.

As we look to 2016, we see the beginnings of hydropower’s resurgence. The Department of Energy is slated to unveil the Hydropower Visioning report, which will lay the foundation for the growth of waterpower and its contribution to lessening the nation’s carbon footprint.

We encourage you to continue your support of NHA’s work and champion your role in the industry. Hydropower remains untapped. Together, we can realize hydropower’s true value.

Sincerely,

John McCormick
NHA President

Linda Church Ciocci
NHA Executive Director
Legislative Efforts

In Washington, 2015 was a year generating momentum for hydropower’s resurgence. In Congress, comprehensive energy bills are notoriously elusive—coming around on average once every seven to eight years. In response, NHA launched a highly-focused legislative effort to secure meaningful improvements to the licensing process to make the permitting process more collaborative and efficient.

Championing the effort in Congress, Senators Lisa Murkowski (R-AK) and Maria Cantwell (D-WA) and Representatives Cathy McMorris Rodgers (R-WA) and Jerry McNerney (D-CA), worked hard to include provisions that modernize the licensing process as part of the energy bills. As a result, both the House and Senate energy bills contain provisions that establish the Federal Energy Regulatory Commission (FERC) as the lead agency for purposes of coordinating all permits and authorizations. The bills also improve discipline by directing FERC to develop a schedule for completing its licensing process. We still have a lot of heavy lifting to enact those meaningful improvements into law, but NHA is committed to improving the permitting process, one that can take a decade or more, while protecting environmental values.

For hydropower and marine hydrokinetic energy (MHK), research and development is critical to producing the next generation of water power technologies and jump-start private sector innovation. To that end, NHA was pleased to successfully secure the highest level of funding ever for the Department of Energy’s Water Power Program—an increase of 14 percent from last year’s funding. The program received $70 million in funding ($45,000,000 for MHK and $25,000,000 for conventional hydropower and pumped storage). Within the funding provided for MHK, $22 million will be devoted to support competitive private sector-led research, development, and deployment. For conventional hydropower, $5 million will go to support pumped storage technologies and almost $4 million for the EPAct 2005 Section 242 incentive program.

NHA also continues to advocate in Congress for the inclusion of hydropower in clean energy and tax policies. We secured an extension of the PTC and ITC for 2 years through 2016 for hydropower and marine energy. Going forward, we are working with the other baseload renewables to secure long-term extensions and improvements to the tax incentives for our technologies.

Regulatory Efforts

2015 was also a busy year on the regulatory front. We advocated for the implementation of the Water Resources Reform and Development Act of 2014 provisions to improve the approval process for non-federal development at Corps of Engineers’ dams.

With the administration working to reduce greenhouse gas emissions, NHA achieved recognition for hydropower and marine energy as a compliance option for states under the Clean Power Plan (CPP), as they seek to meet carbon emission reduction targets. As states develop their CPP implementation plans, we will continue to encourage them to look to carbon-free hydropower as an effective pathway to lessen their carbon footprint.

In reaction to FERC’s 2015 Biennial Staff Memo Concerning Retrospective Analysis of Existing Rules, NHA filed comments identifying a number of hydropower prefilling requirements and regulations that were ineffective, outmoded, or overly burdensome.

Working closely with members of our industry, we filed comments on a FERC Notice of Proposed Rulemaking titled “Commencement of Assessment of Annual Charges” arguing that it would result in fewer hydropower projects being built. NHA recommended FERC maintain the status quo and continue assessing annual charges for non-municipal licensees at the commencement of project construction.

Additionally, NHA submitted comments to the Departments of Agriculture, Interior and Commerce on a revised interim final rule for trial-type hearings and alternative conditions under the Energy Policy Act of 2005. In the comments, among many other topics, NHA encouraged the Departments to revisit their interpretation of the equal consideration requirement.

And to strengthen the long-term working relationship between federal agencies, the Departments of Energy and Interior and the U.S. Army Corps of Engineers extended their Memorandum of Understanding (MOU) for five years. As a new approach to hydropower development, the MOU will help to prioritize similar goals.

2015 demonstrated that NHA has made the hydropower industry a powerful and influential voice in the nation’s capital. Hydropower’s renaissance is our top priority. And in the New Year, we will continue seeking legislative and regulatory improvements, engaging policymakers, and defending hydropower’s role in our clean energy future.
February 17
NHA provided comments on DOE request for information on laboratory-scale and open water testing of marine and hydrokinetic systems.

March 20
NHA provided comments to the Department of Energy to advise its strategy to advance marine energy technologies.

March 26
DOE, Corps of Engineers and Department of Interior extend the hydropower Memorandum of Understanding for 5 years.

March 27
NHA filed an appropriations statement supporting $100 million for DOE water power program for hydro, pumped storage and MHK R&D

April 11
NHA filed comments on Senate Finance Committee’s Business Tax and Community Development & Infrastructure Working Groups on fundamental tax reform.

April 14
NHA coordinated a joint letter with baseload renewable energy trade associations on shared principles on tax reform.

May 1
NHA filed comments on FERC’s 2015 Biennial Staff Memo Concerning Retrospective Analysis of Existing Rules on hydropower prefilng requirements.

May 13
NHA testified before House Energy and Commerce Committee on the need for hydropower licensing improvements and modernization.

June 1
NHA filed comments on Department of Agriculture, Interior and Commerce’s revised interim final rule for trial-type hearings and alternative conditions under the Energy Policy Act of 2005.

June 10
NHA coordinated and submitted to Congress a letter of support for hydropower, its value and the importance of licensing improvements signed by 55 organizations from across the U.S.

June 10
NHA submitted a statement for the record with the U.S. House Transportation & Infrastructure Committee in response to a hearing on WRRDA 2014 implementation.

June 19
NHA filed comments on D251’s Security Program for Hydropower Projects encouraging D251 to closely coordinate with other agencies in order to avoid unnecessary duplication and inconsistencies with other regulatory regimes.

July 21
NHA filed comments on a FERC Notice of Proposed Rulemaking titled “Commencement of Assessment of Annual Charges” urging for the continuation of the current practice for non-municipal licensees at the commencement of project construction.

July 30
Senate Energy and Natural Resources Committee reported the Energy Policy Modernization Act of 2015 out of committee containing provisions to modernize the licensing process.

August 3
EPA released the Clean Power Plan, accepting NHA’s comments and recognizing hydropower and marine energy as a compliance option for states in reducing carbon emissions.

August 21
NHA and NWHA signed a joint letter to Washington PUC promoting pumped storage in their workshop on energy storage modeling and integrated resource planning.

September 2
NHA submitted comments on DOE request for information: marine and hydrokinetic environmental monitoring technologies and field testing opportunities

November 18
NHA coordinated and submitted to Congress a joint utility trade associations letter (EEI, APPA, LPPC, NRECA) in support of hydropower licensing reform provisions.

November 23

November 30
NHA coordinated and submitted to Congress a letter of support for hydropower, its value and the importance of licensing improvements signed by 127 organizations from across the U.S.

December 12
U.S. House passed the North American Energy Security and Infrastructure Act (H.R.8) containing provisions to modernize the hydropower licensing process.

December 16
Congress passed a two-year extension of PTC and ITC for hydropower, wind, solar and MHK projects.

December 18
NHA submitted comments on a Department of Energy, U.S. Army Corps of Engineers (Corps), and Federal Energy Regulatory Commission (FERC) proposal intended to improve coordination between the FERC and Corps’ licensing and permitting processes for non-federal hydropower development on Corps’ infrastructure.
Connecting the Hydropower Industry

NHA’s Operational Excellence (OpEx) program, within the Hydraulic Power Committee, is a member-only event-reporting database that receives, distributes, and catalogs hydro operating experience, best practices and lessons learned. OpEx focuses on four areas of interest: (1) safety (dam, employee, and public); (2) operations; (3) maintenance; and (4) environmental performance. OpEx is a tool for the industry to manage aging assets, save limited financial resources, avoid events experienced by others, and train a workforce in transition. OpEx’s database contains over 360 lessons learned and corrective actions to prevent the reoccurrence of an event or reduce or eliminate equipment downtime.

OpEx is the only event reporting program and database available to the hydropower industry.

NHA prides itself on being of service to the industry and our membership. And one of the most important roles we play is bringing hydropower professionals from all segments of the industry together. As such, 2015 was a banner year for providing members with a myriad of opportunities to network and share best practices.

The 2015 NHA Annual Conference brought together over 630 members of the hydropower industry—making it the largest conference NHA has ever hosted. The Conference was accompanied by two new co-located events: International Marine Renewable Energy Conference (IMREC) and the 3rd Annual Marine Energy Technology Symposium (METS). The co-located events also drew a large crowd, over 140 attendees, bringing a total of 780 industry professionals to one place for networking and education.

NHA’s regional meetings program continues to be a central part of the hydropower industry’s calendar every year. With meetings in California, Alaska, Vermont, North Carolina, and Minnesota, attendance in 2015 grew by 16 percent. And our California Regional Meeting reached record attendance with 182 attendees.

As NHA’s yearly gathering in Washington continues to grow in size and scope, we felt it was time to rebrand this hydropower get-together. This is an event where the industry’s best and brightest converge to shape policy on not just conventional hydropower, but marine energy—ocean, wave, tidal. And to fully encapsulate the scope of this event, going forward, it will be known as Waterpower Week in Washington, which includes our three co-located events: NHA Annual Conference, IMREC and METS.

For more information go to: waterpowerweek.com
ELEVATING HYDROPOWER’S MESSAGE

Hydropower has a great story to tell. We are playing a key role in America’s clean energy future. We are good stewards of the environment. And our potential for growth is real. At NHA, we are continuously working to carry that message to the press, policymakers, and most importantly, the public.

In 2015, we began putting in place a new communications strategy to elevate our message, starting with our licensing improvement efforts. As an association, for the first time we launched a communications campaign titled UnlockHydro. Our goal was to educate policymakers, raise public awareness, and generate support for modernizing the licensing process.

As part of the campaign, we unveiled a microsite (unlockhydro.org), which serves as the campaign’s virtual headquarters and member engagement platform. We created shareable infographics and a motion graphic video to make modernizing the process more relatable to everyday Americans.

We also executed an online digital advertising strategy that reached over 270,000 people, with over 1.9 million impressions. We encourage you to visit Unlockhydro.org for more information.

For 2016, NHA plans to unveil a host of new advocacy campaigns, strategies and tactics to reach supporters of clean energy. Also, with the release of the Department of Energy’s Hydropower Visioning Report slated for this summer, our industry will have a powerful tool to extoll the value and benefits of waterpower.
NHA 2015 Events
- NHA Annual Conference + International Marine Renewable Energy Conference + Marine Energy Technology Symposium—Washington, DC
- MHUG/MW Regional Meeting—Duluth, MN
- NHA Negotiation Workshop—Lakewood, CO
- NE Regional Meeting—Burlington, VT
- AK Regional Meeting—Anchorage AK
- NWHA/NHA Fall Workshop—Eugene, OR
- SE Regional Meeting—Charlotte, NC
- CA Regional Meeting—Sacramento, CA
- HPC Fall Retreat—Birmingham, AL

BY THE NUMBERS
HYDROPOWER IN 2015

In the FERC Pipeline
26,603 MW across 228 projects

Preliminary Permits Pending
37 projects, 1,333 MW, 18 states

Pending Licenses/Relicensing/Exemptions
93 projects, 10,166 MW, 21 states

Preliminary Permits Issued
151 projects, 23,618 MW, 40 states

At a Glance:
U.S. Hydropower Relicensing
- Over the next 15 years, 412 projects with 18,708 MW of capacity will come before FERC for relicensing.
- 45 percent of the projects up for relicensing have a capacity between 1-10 MW.
Outlook

During a presidential election year, it is well known that things slow down in Washington, and priorities get deferred. NHA, however, doesn’t see 2016 that way.

We have two comprehensive energy bills working their way through Congress that contain key provisions for our industry’s future. These provisions will bring our regulatory process into the 21st century, and we will continue to fight to get them signed into law.

The Army Corps of Engineers, Federal Energy Regulatory Commission, and Department of Energy released guidance on developing hydropower on Corps infrastructure, and we are staying vigilant to ensure the proper implementation of the Water Resources Reform and Development Act.

Hydropower and marine energy received a 2-year extension for the PTC and ITC, which is not on par with other renewables. Working with the other baseload industries, we will work to obtain a 5-year extension of the tax incentives. And we are kicking off a year of review on the issue of relicensing as nearly 30 percent of our existing FERC projects enter the relicensing process. This effort will culminate in a national summit being planned for the fall. These are just a few of our priorities for 2016.

NHA is also gearing up for the release of the Department of Energy’s Hydropower Visioning Report. This new tool will provide us a 360 degree view of our industry and a roadmap for future growth.

In the end, the challenges of 2016 are really opportunities—opportunities for increased development, improved communications and a more functional regulatory process.

It goes without saying that NHA can’t do this alone. 2015 was a watershed moment for the industry for member engagement. Your continued support will be vital as we move forward.

As always, we encourage you to be involved in every aspect of NHA’s work in 2016, as we look forward to another exceptional year for the industry.

2015 New Members

Albany Engineering
Ampersand Energy Partners/ London Economics
Aquantis, Inc.
Baker Botts L.L.P
Barnard Construction
Beacon Hill Consulting Services, LLC
City of San Diego
Coatings Unlimited, Inc.
Columbia Power Technologies Inc.
Denver Water
Eco Auger
Florida Atlantic University
Helios Altras Corp.
J. F. Brennan Company Inc.
Kearns & West
Lawrence Berkeley National Laboratory
Lights Camera Action
M. J. Sale and Associates Marine Composites Alliance
Northwest National Marine Renewable Energy Center
Obermeyer Hydro, Inc.
Ocean Power Technologies, Inc.
Ocean Renewable Power Company
OpenHydro
Oregon Wave Energy Trust
Oscilla Power
Parsons
Redding Electric Utility
Resolute Marine Energy Inc.
Rye Development LLC
San Diego County Water Authority
Sleeping Giant Power LLC
SmartBay Ireland LTD
SNC Lavalin Inc.
Spiegel McDiarmid LLP
Summit Global Hydro
United States Bureau of Reclamation
University of Hawaii
Van Heuvelen Strategies
Verdant Power Inc.
2015 Awards

Outstanding Stewards of America’s Waters
New York Power Authority
Pacific Gas & Electric
Tacoma Power
McMillen Jacobs Associates
Minnesota Power

Dr. Kenneth Henwood Award Recipient
John Suloway

NHA Past Presidents’ Legacy Scholarship
Scott Schenkelberg,
University of Nebraska – Lincoln

2015 NHA Leadership

President
John McCormick, Tennessee Valley Authority

Vice President
Steve Wenke, Avista Utilities

Treasurer
Debbie Mursch, GE Renewable Energy

Secretary
John Suloway, New York Power Authority

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David Sinclair, Advanced Hydro Solutions
John Suloway, New York Power Authority
Alvin Thoma, Pacific Gas & Electric Co.
Steve Wenke, Avista Utilities
Pamela Williams, Santee Cooper
SAVE THE DATES!
Upcoming NHA Events

NHA CONFERENCES & SYMPOSIAUS
Waterpower Week in Washington:
2016 NHA Annual Conference
2016 International Marine Renewable Energy Conference (IMREC)
2016 Marine Energy Technology Symposium

2016 NHA REGIONAL MEETINGS
NHA Southwest Regional Meeting
Denver, CO — March 29–30, 2016

NHA Southeast Regional Meeting
Knoxville, TN — May 11–12, 2016

NHA Northeast Regional Meeting
Philadelphia, PA — June 1–2, 2016

NHA Alaska Regional Meeting
Cordova, AK — September 19–20, 2016

NHA California Regional Meeting
San Diego, CA — December 6–7, 2016

2016 NHA HYDRAULIC POWER COMMITTEE (HPC) MEETING
HPC Fall Retreat
Green Bay, WI — October 25–27, 2016 (Tentative)