KEY HYDROPOWER FACTS

AVAILABLE
• 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.
• Over 40,000 MW of new hydropower projects are in the FERC regulatory pipeline.
• Hydropower currently supports over 300,000 American jobs annually and over 2,500 supply chain companies from coast to coast. Continued growth could add 1.4 million new jobs.

RELIABLE
• Hydropower capacity exceeds 100,000 MW in the U.S. and generates approximately half of the nation’s renewable electricity.
• Hydropower provides over 30 million American homes with affordable power each year.
• A flexible resource, hydropower is well-suited to meet changing electricity demands.
• Pumped storage hydropower provides a reliable solution for energy storage and grid integration of variable renewable resources like wind and solar.

AFFORDABLE
• Compared to all other sources of electricity, hydropower has the lowest cost per kilowatt hour.
• States that get the majority of their electricity from hydropower, like Idaho, Washington, and Oregon, on average have energy bills that are lower than the rest of the country.
• Relying only on the power of moving water, hydropower prices are not dependent on unpredictable changes in fuel costs.

SUSTAINABLE
• Hydro avoids up to 225 million tons of CO₂ emissions annually; that’s like taking 42 million cars off the road!
• Satellite imagery shows that the Pacific Northwest, home to the most hydropower in United States, is an island of low carbon emissions.
• 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.
LETTER FROM THE PRESIDENT AND EXECUTIVE DIRECTOR

“We have to . . . pick up the covers off this hidden renewable right in front of our eyes,” U.S. Energy Secretary Ernest Moniz told the attendees of NHA’s Annual Conference in April. And that’s exactly what NHA set out to do in 2014: champion the resurgence of hydropower, in all its forms, as America’s premier renewable energy resource. Through its tireless efforts, NHA has raised the voice of the hydropower industry to levels no one can ignore, all while strengthening the organization and bringing the industry together.

Additional legislative achievements were attained. New ways to tell our industry’s story were created. Operational excellence continues to grow with new tools launched to share information. And we’ve connected the hydropower industry through events all across the country and in the fall expanded the hydropower family to include the marine energy industry. All of it made possible by the continued engagement of our members.

You can learn more about the successes we’ve seen in the past year right here in the pages of this report.

As we look to 2015, a new Congress brings new opportunities, and new challenges. Fresh faces in DC may still be blind to the “hidden renewable” right before their eyes. We encourage you to continue your support of NHA’s work and champion your role in the hydropower industry to your elected officials.

Together, we can fulfill Secretary Moniz’s call to action and advance a positive business environment that values hydropower’s current contributions and seeks to expand those benefits to more Americans.

Sincerely,

Marc Gerken
President

Linda Church Ciocci
Executive Director
CONTINUING THE POLICY PUSH

In Washington, an association is only as good as its next success. That’s why NHA didn’t rest on its laurels after securing enactment of two pieces of hydro legislation in 2013. It harnessed that momentum to further boost hydro’s role in the nation’s energy policies and added the industry’s voice to ongoing debates about our nation’s energy future.

At the annual conference in April, U.S. Energy Secretary Ernest Moniz announced a new partnership with the hydropower industry to develop a long-term vision for the future of hydropower in the United States. The development of this landmark vision over the next year will establish the analytical basis for an ambitious roadmap to usher in a new era of growth in sustainable domestic hydropower over the next half century.

New legislative successes were achieved, securing language designed to improve the Army Corps’ regulatory process for private hydropower development on Corps’ infrastructure as part of the Water Resource Reform and Development Act. The language’s inclusion was a direct result of NHA’s leadership in unifying various stakeholders to agree upon additional improvements in the hydropower regulatory process. As a result, Congress directed the Corps to give priority to non-federal development of hydro at its non-powered facilities while ensuring their permitting is done in a timely and consistent manner. This is significant, as 81 of the top 100 dams with the greatest potential for hydropower capacity identified by the Department of Energy are owned by the Corps.

Congress also upped its investments in research and development to improve the full suite of water power technologies. Working with appropriators throughout the year, NHA partnered with the marine energy industry to secure just over $60 million, a continuation of the $41.3 million for marine energy and a slight boost to $19.2 million for conventional hydropower.

NHA also coordinated a response to the Environmental Protection Agency’s Clean Power Plan to regulate greenhouse gas emissions from existing power plants, a proposal which, if implemented, will have profound impacts on the state of the nation’s electricity portfolio for decades to come. NHA stressed hydropower’s role in reducing emissions; the opportunities to increase its growth across the country; its importance in meeting the policy goals of the plan, along with hydro-specific recommendations and accommodations that should be made; and the need for EPA to send stronger signals of support to the states for protecting and preserving the existing hydro system and promoting new generation.

By engaging in the development of a new vision of hydropower, continuing to seek regulatory improvements and financial investment for projects, and defending hydropower’s role in our clean energy future, NHA has made the hydropower industry a powerful voice in Washington, DC. The engagement of top policymakers and our continued success is a testament to hydropower’s role as a key part of the nation’s energy portfolio.
**LEGISLATIVE AND REGULATORY TIMELINE**

**March 2014** – NHA filed amicus brief with the Second Circuit Court of Appeals in *Catskill Mountains Chapter of Trout Unlimited, Inc. v. EPA.*

**April 11, 2014** – NHA filed appropriations request with Congressional appropriators seeking $90 million for the DOE’s Water Power Program.

**June 10, 2014** – President Obama signs WRRDA into law with language to make non-federal hydropower development an Army Corps priority.

**July 17, 2014** – NHA advocates in comments filed with DOE for certainty and consistency in implementing the section 242 hydro incentive and secured a number of positive changes to the draft guidance.

**Aug. 2014** – NHA’s Hydraulic Power Committee filed comments with FERC’s Division of Dam Safety and Inspection outlining concerns with a new Chief Dam Safety Engineering requirement (CDSE), ultimately securing important changes to the CDSE requirement.

**Sept. 18, 2014** – FERC issues Order 800, the final rule implementing the Hydropower Regulatory Efficiency Act of 2013.

**Oct. 3, 2014** – NHA filed comments on FERC’s noticed of proposed rulemaking on refining policies and procedures for market based electricity rates.

**Oct. 9, 2014** – NHA filed comments with Fish and Wildlife Service and National Marine Fisheries Service on proposed changes to the process for designating critical habitat and the definition of adverse modification under the Endangered Species Act.

**Nov. 5, 2014** – NHA filed amicus brief with the Supreme Court in *San Luis & Delta-Medota Water Authorities v. Jewell.*

**Nov. 21, 2014** – NHA filed comments with the White House’s Quadrennial Energy Review Task Force that included executive and legislative recommendations to increase the role of pumped storage and conventional hydro to meet the energy challenges and transformations facing our energy infrastructure.

**Nov. 24, 2014** – NHA pushed for recognition of hydropower’s clean air benefits under the proposed Clean Power Plan in comments filed with the EPA.

**Dec. 12, 2014** – Congress passes defense authorization which includes Bureau of Reclamation Conduit Hydropower Development Equity and Jobs Act to boost conduit hydropower.

**Dec. 19, 2014** – Congress passes and the President signs into law retroactive extension of the production tax credit through end of 2014.

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**June 10, 2014**
President Obama signs WRRDA into law with language to make non-federal hydropower development an Army Corps priority.
NHA’s Operational Excellence (OpEx) program is a member-only voluntary event reporting system that receives, distributes, archives, and catalogs hydro operating experiences and resulting best practices and lessons learned. OpEx’s scope and focus is on events related to safety (dam, employee, and public), operations, maintenance and environmental performance, and is intended to be a tool to help avoid events experienced by others, train a workforce in development, and assist in managing aging assets.

In 2014, OpEx launched hydroexcellence.org a new website providing the only event reporting program and database available to the hydropower industry. Please visit hydroexcellence.org where you will be able to search the database of event reports and best practices.

In-person and virtually, NHA is the gathering point for hydropower professionals from all segments of the industry. And we’re constantly growing our family and expanding our reach. With new staff in place, NHA was able to provide members myriad opportunities to network, share best practices, and connect with their association.

The Annual Conference brought nearly 600 policymakers, regulators, generators, industry professionals, and more together in the nation’s capital to celebrate the successes of the past year. NHA honored legislators of the year for their work to enact the Hydropower Regulatory Efficiency Act and saw the first-ever address by a sitting U.S. Secretary of Energy.

The regional meetings program continues to be a central part of the hydropower industry’s calendar every year, averaging 115 attendees at events in California, Alaska, Georgia, Wisconsin, and Colorado. Additionally, NHA hosted its first series of webinars, giving NHA members a low-cost, virtual opportunity to engage on important issues facing the industry, including cyber security and tax policy.

This packed schedule saw four new events added to the offerings for NHA members to share information and network. From coast-to-coast, NHA events and webinars attracted over 1,300 participants, the largest involvement in NHA history.

And in December, NHA formed the Marine Energy Council to provide a home for the marine energy community, cementing NHA’s role as the unified trade association representing the full spectrum of water power technologies. The MEC unites technology developers, academic institutions, consultants, component suppliers and service providers representing the wave, tidal, ocean current, and riverine sectors and focuses attention on the potential growth opportunities of emerging technologies, share information among industry members, and provide a forum in which to discuss the various challenges ocean, tidal, hydrokinetic and emerging water technologies face.

Columbia Power’s SeaRAY wave power device undergoing sea trials in Puget Sound.

Local, state, and federal officials attended Minnesota Power’s “Hometown Hydro” event at their Fond du Lac hydro facility near Duluth in May 2014. Each dignitary, including NHA’s Jeff Leahey (second from left), received a commemorative medallion at the kick-off event.
NHA continues to expand its work telling the story of the benefits our families, economy, and grid enjoy thanks to hydropower, employing new research and new digital content to inform our audiences.

Through new public polling, the first of its kind in nearly 12 years, we learned that Americans view hydropower as a clean, reliable and renewable resource, and support policies to bolster its unique contributions to the nation’s diverse energy grid. The NHA-commissioned research found broad bipartisan public support for our nation's original renewable, including a strong belief in maintaining the current hydropower infrastructure and expanding the energy source going forward.

The industry has constantly articulated one simple fact: Hydropower is America’s key renewable energy source now and for our future. And NHA has always looked for new ways to carry that message to policymakers, the press, and the public. That’s why this year we developed our first original digital content in the form of a two-and-a-half-minute video about the important role hydropower plays in our nation.

Available on YouTube, “Hydropower in America’s New Energy Era” lays out the important benefits hydropower already brings to our nation’s electricity grid, as well as some of the opportunities we have to expand those contributions while providing for a clean, renewable electricity tomorrow. You are encouraged to share this video with your customers, clients, ratepayers, co-workers, friends, family . . . any and every audience you can think of!

NHA would like to extend a special thanks to industry members who contributed to the development of this video: Alstom, Andritz, Brookfield Renewable Energy Partners, Grant County PUD, Idaho Power, Mavel, Minnesota Power, MWH, Natel, New York Power Authority, Northern California Power Agency, Santee Cooper, Snohomish County PUD, Southern Company, Tacoma Power, TransCanada, and the U.S. Army Corps of Engineers.

Check out the video on YouTube at http://youtu.be/BibHjN74cxk
BY THE NUMBERS: HYDROPOWER IN 2014

40,914 MW in FERC Pipeline

- Issued Preliminary Permits: 29,728 MW
- Pending Preliminary Permits: 2,062 MW
- Pending Licenses and Exemptions: 9,124 MW

U.S. Hydropower Build

Cumulative capacity

Source: Sustainable Energy in America Factbook, Bloomberg New Energy Finance, EIA
Notes: 2014 results are as of end-October 2014. Excludes pumped storage.
Federal Investments in Hydropower

- Production Tax Credit
- Section 1603 Grants
- Advanced Hydropower Development (DOE)
- Rural Energy for America Program (USDA)
- Marine and Hydrokinetic System Performance Advancement Projects (DOE)
- 48C Advanced Energy Manufacturing Tax Credit

Department of Energy Water Power Program

- Marine and Hydrokinetic
- Conventional
OUTLOOK

2015 brings with it a new Congress, new opportunities, and new challenges to be met by our industry.

Despite many legislative successes in 2014, the expiration of tax incentives at the end of 2014 has left the industry with financial uncertainty as it looks to develop new hydropower projects. It is critical that Congress provide that certainty to developers looking to expand our vastly untapped hydropower resource.

Congress must be continually educated on the need for robust investment in advancing research and development for the range of water power technology. NHA will be on the Hill with our member partners advocating continued funding for both conventional and marine and hydrokinetic technologies at the DOE’s Water Power Program.

NHA will also work to ensure the continued implementation of our past successes. The Federal Energy Regulatory Commission’s development of a two-year licensing process for hydropower projects is still ongoing. The Army Corps still needs to implement Congress’ direction to make hydropower development at their facilities a priority. And the EPA will finalize its rule on greenhouse gases this year. NHA will need its members support engaging with all of these agencies to ensure hydropower is recognized for the benefits it brings to our nation’s grid.

All this will take place as Republican leaders, now at the helm of both chambers of Congress, look to develop a comprehensive energy package, the first of its kind in almost a decade. This presents a new opportunity to achieve additional regulatory improvements for existing projects and new development, thus improving the business environment for hydropower in the United States. NHA, working with our member companies, will seize this opportunity and be at the forefront of the discussions to enact licensing reform provisions.

NHA can’t do this alone; continued member engagement and support will be vital. We encourage you to be involved in every aspect of NHA’s work over the next year and look forward to another banner year for hydropower victories in 2015.

WELCOME NEW MEMBERS, 2014

NHA continues to strengthen the hydropower industry with the addition of these new member organizations in 2014. Not a member? Contact Diane Lear at diane@hydro.org for membership information.

Absakora Energy LLC  Preti, Flaherty, Beliveau and Pachios LLP
Americas Energy Holding Company  Resolute Marine Energy, Inc.
Ames Construction, Inc.  Sabine River Authority of Texas
City of San Diego  San Diego County Water Authority
COH INC  Schnabel Engineering
Columbia Technologies, Inc.  South Carolina Electric & Gas (SCANA)
David Moore Law  Southern California Edison
H20 Power LP  Stantec
ICP Hydro  Summit Global Hydro
kW River Hydroelectric  Tomlin Infrastructure Group
Lights Camera Action  Trelleborg Sealing Solutions America
Northwest Hydraulic Consultants  Verdant Power
Ocean Renewable Power Company  VibroSystM
Oregon Iron Works  Whooshh Innovations
Oregon Wave Energy Trust
Parsons
Pioneer Motor Bearings

NHA events provide great networking opportunities.
2014 Awards

**Legislators of the Year Award**
U.S. Senator Lisa Murkowski of Alaska
U.S. Senator Ron Wyden of Oregon
U.S. Representative Cathy McMorris Rodgers of Washington
U.S. Representative Diana DeGette of Colorado

**Outstanding Stewards of America’s Waters**
Grant County Public Utility District
Tacoma Power
Georgia Power
Portland General Electric
Northwest RiverPartners
Kaukauna Utilities

**Dr. Kenneth Henwood Award**
Michael Swiger, Van Ness Feldman LLP

**NHA Past Presidents’ Legacy Scholarship**
Thomas Decker, State University of New York
Nicole Peterson, University of Wyoming

2014 NHA Leadership

**Executive Committee**
President
Marc Gerken, AMP
Vice President
Jane Cirrincione, Northern California Power Agency
Treasurer
Eric Van Deuren, Pacific Gas & Electric
Secretary
Steve Wenke, Avista
Immediate Past President
David Moller, Pacific Gas & Electric
Executive Director
Linda Church Ciocci
General Counsel
James Hancock, Balch & Bingham LLP

**Board of Directors**
William Bunker, Pacific Gas & Electric
Wayne Dyok, Alaska Energy Authority
Kevin Frank, Voith Hydro
Kirby Gilbert, MWH
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Suzanne Grassell, Chelan County PUD
Lisa Grow, Idaho Power
Tom Heller, Missouri River Energy Services
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Herbie Johnson, Southern Company
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Chuck Sensiba, Van Ness Feldman
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Diane C. Lear, Director of Member Services
David Zayas, Esq., Sr. Manager of Regulatory Affairs and Technical Services
Matthew Nocella, Manager of Strategic Communications
Francesca Blanco, CMP, Manager of Meetings and Events
Kimberly Costner, Executive Assistant
Luciana Ciocci, Staff Assistant

NHA Executive Director Linda Church Ciocci participates in the grand opening of Kaukauna Utilities’ Badger Hydro.
Save the Dates! Upcoming NHA Events

NHA CONFERENCES & SYMPOSIA
April 27–29, 2015, Washington, DC:
• 2015 NHA Annual Conference
• 2015 International Marine Renewable Energy Conference (IMREC)
• 2015 Marine Energy Technology Symposium (METS)

2015 NHA REGIONAL MEETINGS AND WORKSHOPS
May 19–20: NHA Midwest/MHUG Regional Meeting, Duluth, MN
June 23–24: NHA Negotiation Workshop, Lakewood, CO
August 18–20: NHA Alaska Regional Meeting, Anchorage, AK
August 27–28: NHA Southeast Regional Meeting, Charlotte, NC
September 23–24: NHA Northeast Regional Meeting, Burlington, VT (tentative)
October 14–15: NHA Northwest/NWHA Regional Meeting, Eugene, OR
November 5–6: NHA California Regional Meeting, Sacramento, CA (tentative)

2015 NHA HYDRAULIC POWER COMMITTEE (HPC) MEETINGS
April 29: HPC Spring Annual Meeting, Washington, DC
October 4–7: HPC Fall Retreat, Birmingham, AL

2015 NHA EVENTS AT HYDROVISION
July 14: NHA Town Hall Meeting and NHA Booth (#5059), Portland, OR