

TRANSFORMING AMERICA'S ENERGY INFRASTRUCTURE



2017 ANNUAL REPORT

Key Facts: Hydropower/ Pumped Storage Facts/Marine Energy

Hydropower In America

- Over approximately 25,000 MW across 138 projects of new hydropower projects are in the FERC regulatory pipeline.
- Hydropower provides over 30 million American homes with affordable power each year.
- Hydropower currently supports over 140,000 American jobs annually and over 2,500 supply chain companies from coast to coast.
- Hydropower capacity, including pumped storage, exceeds 100,000 MW in the U.S. and generates nearly half of the nation's renewable electricity.
- New investment committed to rehabilitations and upgrades in 2016 was \$1.2 billion.
- Non-Powered Dam (NPD) projects account for 64% of projects and 52% of proposed capacity in 2016.

Hydro and the Economy

- New investment committed to rehabilitations and upgrades (R&U) in 2016 with a total estimated value of \$1.2 billion; the largest in the last decade—42 new R&U projects at 34 existing hydropower plants
- The value of tracked R&U investment since 2007 is \$8.5 billion distributed among 143 hydropower plants

Waterpower's Potential

- Only 3% of the 80,000 dams in the U.S. generate electricity.
- The Department of Energy's Hydropower Vision report finds that hydropower can sustainably grow by 50 GW by 2050 estimates.
- Energy Department reports show that 12,000 MW of capacity could be added to the nation's non-powered dams and 65,000 MW of potential exists in the nation's stream-reaches.
- Recent studies found that America's technically recoverable wave energy resource is estimated to range between 898 and 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

- By increasing hydropower's capacity by 50 gigawatts by 2050 we can:
 1. Reduce greenhouse gas emissions by 5.6 billion metric tons
 2. Save \$209 billion in avoided global damages from greenhouse gas emissions
 3. Reduce cases of acute respiratory symptoms by 5 million
 4. Reduce cases of childhood asthma by 750,000
- 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 13 years, 400 projects with approximately 18,000 MW of capacity will come before FERC for relicensing.
- 45% of the projects up for relicensing have a capacity between 1 and 10 MW, while 85% of the total capacity are projects ranging in size greater than 100 MW.

KEY FACTS



LETTER FROM THE PRESIDENT & EXECUTIVE DIRECTOR



Herbie Johnson
NHA President

Shortly after the 115th Congress was convened last year, NHA testified before the U.S. Senate Energy and Natural Resources Committee on improving America's energy infrastructure. This hearing served as a catalyst for legislative and regulatory activity on hydropower in the nation's Capital.

In fact, in Congress, 40 bills have been introduced with impacts on hydro, ranging from conduit and canal hydropower to closed-loop pumped storage. Most notably, NHA's efforts to bring the licensing process into the 21st century saw significant progress. In addition to the bipartisan comprehensive Senate energy bill (S.1460), which includes hydro licensing provisions, being fast-tracked for Senate floor consideration, the U.S. House passed Rep. Cathy McMorris Rodgers' (R-WA) Hydropower Policy Modernization Act (H.R. 3043).



Linda Church Ciocci
NHA Executive Director

Congress, however, isn't just hearing from NHA. It's hearing directly from you—our members. NHA is thrilled to report that in 2017 representatives from Chelan County PUD, Rye Development, Southern Company, Voith and Brookfield, among others, testified on the Hill. Each and every voice from our industry helps us to achieve our policy goals.

In 2017, NHA made major strides in protecting our existing hydropower fleet, particularly as it relates to relicensing. As you may recall, in 2016, NHA convened a national relicensing summit, where a proactive administrative-focused action plan was developed. These recommendations were presented to the Federal Energy Regulatory Commission (FERC). And as a result of a Trump Administration Executive Order to review burdensome regulation, FERC adopted new policy that establishes a 40-year default license term for original and new licenses under the Commission's jurisdiction.

While our legislative and regulatory efforts often get the most attention, a great deal of our efforts are aimed at enhancing our member programs. Our Operational Excellence program (OpEx), which provides the industry with a forum to learn from one another, debuted a half-day workshop entitled Human Performance Fundamentals. At the workshop, attendees received human performance training and then applied that training to actual case studies from the OpEx database.

From a communications perspective, member engagement was at the top of the NHA's list. As such, NHA launched a new advocacy platform to bolster greater member involvement and draw in new supporters for NHA policies and priorities.

Perhaps one of the most important things we do at NHA is bring our industry together through our regional meetings. To that end, we are pleased to announce that our 2017 California Regional Meeting was the most attended meeting in NHA history, with 173 attendees. Meanwhile, two regional meetings broke attendance records as well. As a dynamic and growing association, we also welcomed 24 new member organizations last year.

For NHA, 2017's theme was: *A Vision for Growth and Value*. Recognizing that hydropower is undervalued for the services we provide to the grid, we initiated a study to identify the gaps in environmental markets. With over 400 facilities up for relicensing, we brought the industry together to identify ways to protect our existing fleet. And on the heels of the U.S. Department of Energy's Hydropower Vision Report, we began to effectively communicate our industry's course for growth.

As an industry we are united. We encourage you to continue supporting NHA's work and urge you to take an active role in helping us move the industry's agenda forward.

Sincerely,
Herbie Johnson
NHA President

A handwritten signature in black ink that reads "Herbie Johnson".

Linda Church Ciocci
NHA Executive Director

A handwritten signature in black ink that reads "Linda Church Ciocci".



TOP OF THE HILL

LEGISLATIVE & REGULATORY EFFORTS



U.S. Congressman Scott Perry (PA-4) speaking at NHA's 2017 Waterpower Week in Washington, DC.

Legislative Efforts

In 2017, NHA continued to make strides in modernizing the licensing process. Congress not only recognized that our licensing process is outdated and outmoded, it took steps to make significant improvements.

The U.S. House passed Rep. Cathy McMorris Rodgers' (R-WA) Hydropower Policy Modernization Act (H.R. 3043). And on the other side of the Capitol, the U.S. Senate fast-tracked the bipartisan comprehensive energy bill (S.1460), led by Senators Lisa Murkowski (R-AK) and Maria Cantwell (D-WA), which includes hydro licensing provisions, for Senate floor consideration.

In total, over 40 hydro bills have been introduced. For example, for small hydropower, a bill that would lift the 5-MW limitation for conduit and canal hydropower projects under the fast-track procedure passed the House. At the other end of the spectrum, two other bills introduced would create expedited processes for closed-loop pumped storage and non-powered dam projects.

On the tax policy front, NHA continued fighting to end the disparity that puts hydropower development at a significant competitive disadvantage, particularly in the eyes of investors who are seeking clarity and certainty. While Congress passed a one-year retroactive extension of the hydropower and marine energy tax credits through 2017 in the Bipartisan Budget Act of 2018, it will not provide any future certainty for project developers who are seeking to finance their projects right now. NHA continues working to level the playing field by passing an immediate long-term extension of the incentives, such as that contained in H.R. 4137, the Renewable Electricity Tax Credit Equalization Act, sponsored by Rep. Elise Stefanik (R-NY).

NHA also led a successful effort to increase funding for research and development for all water power technologies in 2017 culminating in a historic level of funding in FY 2018 for the DOE Water Power Program of \$105 million. The Office supports R&D initiatives and other activities to promote hydropower, marine energy and pumped storage development.

Regulatory Efforts

Hydropower licensing and relicensing reform from a proactive administrative-focused approach was a top priority for NHA in 2017. Because of NHA's advocacy, the industry is now benefiting from a new Federal Energy Regulatory Commission (FERC) License Term Policy, which adopted a 40-year default license term for original and new licenses, superseding its long-standing license term policy adopted over four decades ago. In response to the Trump Administration's Executive Orders related to reviewing burdensome regulations, NHA has proposed additional regulatory reforms to FERC, the U.S. Army Corps of Engineers, and the Department of Interior, among others, to further improve hydropower regulations without undermining environmental protections.

Under those same Executive Orders, FERC also identified a number of regulations and policies that are unnecessarily burdensome and recommended their removal, including:

- Removing the Integrated Licensing Process as the default licensing process,
- Revising its regulations to make the pre-filing draft license application (DLA) or preliminary licensing proposal optional, and
- Revising the requirement that an existing licensed project must "propose to install/increase the total capacity of a project" in order to qualify for, or migrate to an exemption, and allowing exemption applicants to more easily convert to a license application.

NHA also advanced our hydropower valuation initiative. Recognizing that hydropower is undervalued in both environmental and power markets, we commissioned an Environmental Value of Hydropower study that identified a \$1.5 billion annual compensation gap between hydropower and other renewable resources, such as wind and solar.

We also responded to various administration opportunities, such as the Department of Energy's Grid Reliability study and FERC's Resiliency NOPR, and continued to build and strengthen relationships within the Trump administration. We look forward to advancing our initiatives in 2018 and securing additional regulatory reforms to benefit the industry.



NHA's Jeff Leahey testifying before Congress.

2017 LEGISLATIVE AND REGULATORY TIMELINE

Hydropower Licensing Reform and Improvements

January—NHA sends letter to President-elect Trump and Vice President-elect Pence on NHA priority issues, including licensing reform. NHA meets with transition officials.

March—NHA (Leahey) testifies before the U.S. Senate Energy and Natural Resources Committee re: a "Hearing to Receive Testimony on Opportunities to Improve American Energy Infrastructure".

March—NHA (Rye Development) testifies before U.S. House Energy Subcommittee re: a hearing on "Legislation Addressing Pipeline and Hydropower Infrastructure Modernization".

March—FERC holds workshop on 2-year licensing process.

May—NHA (Leahey) testifies before U.S. House Energy Subcommittee re: a hearing on "Legislation Addressing Pipeline and Hydropower Infrastructure Modernization".

May—NHA (Herbie Johnson, NHA President) testifies before U.S. House Subcommittee on Water, Power and Oceans re: a hearing on "The Challenges of Keeping Hydropower Affordable and Opportunities for New Development". Several other NHA members also testified.

May—Rep. Peters (D-CA) introduces the Hydropower Permit Extension Act, H.R. 2274 providing for extended periods relating to preliminary permits and commencement of construction.

June—Rep. McMorris Rodgers (R-WA) introduces the Hydropower Policy Modernization Act, H.R. 3043. Reported out of Subcommittee by voice vote.

June—Senators Murkowski (R-AK) and Cantwell (D-WA) reintroduce the comprehensive Senate energy bill, S.1460, which includes hydro licensing provisions. Bill is fast-tracked for Senate floor consideration.

June—H.R. 2274 reported out of full Committee and passes the House by voice vote.

June—Several individual hydropower project extension bills pass the House by voice vote.

July—NHA issues joint letter to Congress in support of hydro licensing reform signed by 15 renewable energy groups, trade associations and labor unions.

October—NHA (Chelan County PUD) testifies before U.S. House Energy Subcommittee re: a hearing "Part II: Powering America: Defining Reliability in a Transforming Electric Industry".

October—H.R. 3043 reported out of full Committee by voice vote.

November—NHA issues second joint letter to Congress in support of hydro licensing reform signed by 14 renewable energy groups, trade associations and labor unions.

November—H.R. 3043 passes out of the House by a vote of 257-166 with over 2 dozen Democrats joining nearly all Republicans voting in favor.

Tax Incentives

January—NHA sends letter to President-elect Trump and Vice President-elect Pence on NHA priority issues, including tax reform and extension of hydropower and marine energy tax incentives.

April—Baseload Renewables Coalition (NHA, ABC, BPA, GEA, ERC) letter to House and Senate Finance and Ways and Means Committee leadership on extension of the tax incentives.

August—NHA signs joint industry letter to Congress on the need to extend the hydropower and marine energy tax credits (46 organizations).

October—Rep. Stefanik (R-NY) introduces the Renewable Electricity Tax Credit Equalization Act, H.R. 4137, which extends the hydropower and marine energy tax credits.

October—Sen. Heinrich (D-NM) introduces the Energy Storage Tax Incentive and Deployment Act of 2017, S. 1868, which establishes an investment tax credit (ITC) for business and home use of energy storage, including pumped storage.

November—Baseload Renewables Coalition sends joint letter to House and Senate tax committee leadership urging action on tax parity for all renewable energy technologies in tax reform bill.

December—NHA signs multi-industry trade association letter to Congress on the need to pass an extenders bill—61 trade associations support the letter.

December—Sen. Hatch (R-UT) introduces the Tax Extender Act of 2017, S.2256, which includes the extension of the hydropower and marine energy PTC and ITC. However, the bill was not included in the comprehensive tax reform bill adopted at the end of the month.

Department of Energy Funding

April—NHA submits statement for the record to House Appropriations Committee.

April—NHA submits statement for the record to Senate Appropriations Committee.

April—A bipartisan group of 33 House members send a joint letter to House Appropriations Committee leadership supporting greater funding for the DOE Water Power Technologies Office (WPTO).

July—House passes bipartisan amendment (Reps. Bonamici (D-OR), Perry (R-PA) and Pingree (D-ME)) adding \$15 million to the proposed FY 2018 WPTO funding level.

December—Congress passes FY 2018 CR that continues funding for the Water Power program at FY 2017 level.

Promotion of Small Hydropower

January—DOE issues \$9.8 million in funding to develop innovative technologies that will reduce capital costs and deployment timelines for pumped-storage hydropower and non-powered dams.

January—Corps of Engineers reissues nationwide permit (NWP) program, including hydro-specific NWPs, for five years.

April—National Hydropower Association's Comments on the Effectiveness of the Tested Two-Year Process for Licensing Non-Powered Dams and Closed-Loop Pumped Storage Projects, Docket No. AD13-9-000.

June—Senators Murkowski (R-AK) and Cantwell (D-WA) reintroduce the comprehensive Senate energy bill, S.1460, which includes a reauthorization of the EPAAct of 2005 Section 242 and 243 hydro incentives. Bill is fast-tracked for Senate floor consideration.

June—Sen. Gardner (R-CO) introduces the Reliable Investment in Vital Energy Reauthorization Act of 2017, S. 1336. The bill reauthorizes the EPAAct 2005 Section 242 and 243 hydropower incentives.

June—Reps. Hudson (R-NC) and DeGette (D-CO) introduce H.R.2786, a bill to amend the Federal Power Act with respect to the criteria and process to qualify as a qualifying conduit hydropower facility. Reported out of Subcommittee by voice vote.

July—H.R. 2786, the conduit bill, reported out full Committee by voice vote. Also, passes out of the House by an overwhelming bipartisan vote of 420—2.

June—Rep. Bucshon (R-VA) introduces the Promoting Hydropower Development at Existing Nonpowered Dams Act, H.R. 2872.

July—Rep. McKinley (R-WV) and a group of bipartisan House members introduce the Reliable Investment in Vital Energy Reauthorization Act of 2017, H.R. 3256. The bill reauthorizes the EPAAct 2005 Section 242 and 243 hydropower incentives. Companion bill to the legislation by Senator Gardner.

December—H.R. 2872 amended and passed out of House Energy and Commerce Committee and passed the House by voice vote. NHA is reviewing amendments to the bill.

Promotion of Pumped Storage

December 2016—NHA comments in response to Docket No. AD16-20-000 - Electric Storage Participation in Regions with Organized Wholesale Electric Markets.

December 2016—NHA comments in response to the technical conference in Docket No. 16-25-000—Utilization in the Organized Markets of Electric Storage Resources as Transmission Assets Compensated Through Transmission Rates, for Grid Support Services Compensated in Other Ways, and for Multiple Services.

January—DOE issues \$9.8 million in funding to develop innovative technologies that will reduce capital costs and deployment timelines for pumped-storage hydropower and non-powered dams.

February—NHA comments on Docket Nos. RM16-23-000 and AS16-23-000—Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators on DOE request for information (RFI) on pumped storage development.

March—NHA files pumped storage comments to WA Utilities and Transportation Commission.

April—NHA submits Comments on the Effectiveness of the Tested Two-Year Process for Licensing Non-Powered Dams and Closed-Loop Pumped Storage Projects, Docket No. AD13-9-000.

June—Rep. Griffith (R-VA) introduces the Promoting Closed-Loop Pumped Storage Hydropower Act, H.R. 2880.

December—H.R. 2880 amended and passed out of House Energy and Commerce Committee and passed the House by voice vote. NHA is reviewing amendments to the bill.

December—NHA signs joint letter of 3 dozen organizations supporting the creation of an energy storage ITC, including for pumped storage projects.

Throughout 2017—NHA develops 2018 Pumped Storage Report.

Promotion of Marine Energy and Hydrokinetics

January—NHA/Marine Energy Council issues White Paper on ARPA-E Programmatic Support for Marine Energy Technology Commercialization.

January—Corps of Engineers reissues nationwide permit (NWP) program, including hydro-specific NWPs, for five years. The Corps also expands NWP 52 (Water-Based Renewable Energy Generation Pilot Projects) to recognize wave energy pilot projects and their attendant features.

May—Sen. Wyden (D-OR) and several other Democrats introduce the Marine Energy Act, S. 1036.

June—Senators Murkowski (R-AK) and Cantwell (D-WA) reintroduce the comprehensive Senate energy bill, S.1460, which includes marine energy provisions. Bill is fast-tracked for Senate floor consideration.

October—NHA/MEC issues recommendations for federal R&D funding to commercialize marine renewable energy technologies.

Throughout 2017—MEC holds a series of webinars by the national laboratories updating the industry on marine energy R&D initiatives.

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 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.

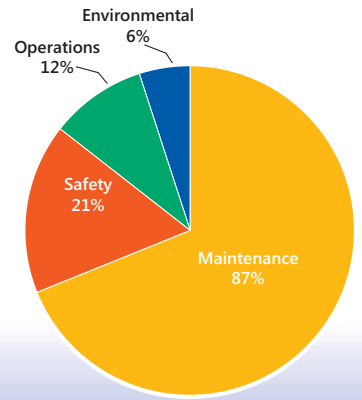
OpEx is also expanding into new areas. At the 2017 HPC Fall Retreat, OpEx debuted a half-day workshop entitled Human Performance Fundamentals.

Attendees received human performance training and then applied that training to actual case studies from the OpEx database. With the positive response the workshop received, it

was replicated at Yuba County Water Agency training jamboree later in the year.

Is your company signed up for OpEx? Learn how to participate at www.hydroexcellence.org.

In 2017, OpEx experienced significant growth. The database now boasts over 125 Event Reports.



2017 Waterpower Week panel on hydropower infrastructure



Professionals present posters at the 2017 Marine Energy Technology Symposium

CONNECTING THE HYDROPOWER INDUSTRY

NHA prides itself on being in 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. To that end, we worked hard to provide members with a multitude of opportunities to learn, network and share best practices.

The 2017 Waterpower Week in Washington brought in hundreds of members of the hydropower and marine energy industry. The Conference was accompanied by two co-located events: International Marine Renewable Energy Conference (IMREC) and the Annual Marine Energy Technology Symposium (METS).

NHA's regional meetings program continues to be an essential part of the hydropower industry's calendar every year. In 2017, we held meetings in California,

Alaska, Iowa, Georgia, and Maine, with panels on issues ranging from fish passage to dam safety. And we are pleased to announce the California Meeting was the most attended regional meeting in history, with 173 attendees.



NHA board member Kirby Gilbert introduces a panel on the threat of mussels at NHA's Southwest Regional Meeting

Are you interested in attending a regional event? Go to Hydro.org for more information.

COMMUNICATING HYDROPOWER'S MESSAGE

MESSAGE

In 2017, NHA worked to take the Association's communications efforts to another level. First, we developed a **new NHA website** to transform the site from static to content driven. Next, we launched a **new advocacy platform** to reach a new level of engagement—attracting greater member involvement and drawing in new supporters, and supporting NHA policies and priorities.

To support the organizations goals and priorities, NHA created a **digital ad campaign** to generate awareness for NHA's efforts on tax incentives, targeted members and staff on the Hill. And with the Congress and the Administration working to pass infrastructure legislation, in 2017 we began developing a new communications campaign entitled **HydroWorks**.

The overarching message of the campaign: **Any infrastructure bill before Congress that fails to modernize the hydropower licensing process is losing an opportunity to create thousands of jobs and more clean energy.** Indeed, HydroWorks to create jobs. Every megawatt we add to an existing non-powered dam means welders, electricians and equipment suppliers. For every reinvestment in an efficiency upgrade we employ engineers, machinists and metal fabricators.



LEARN HOW

NATIONAL HYDROPOWER ASSOCIATION

Hydropower is the backbone of America's electrical grid

TELL CONGRESS

NATIONAL HYDROPOWER ASSOCIATION

Hydropower isn't just clean energy

Dear Congress, HydroWorks... If You Let It

Pumped storage accounts for 97% of America's utility-scale energy storage infrastructure. We can do more. Modernize the licensing process.

SOURCE: Common Sense



NATIONAL HYDROPOWER ASSOCIATION

HydroWorks to Upgrade America's Energy Infrastructure

Upgrading existing hydropower facilities can add over 6,000 MWs of power. Efficiency upgrades means: welders, equip suppliers, construction workers.

These are real jobs. Reinvest in hydropower.

SOURCE: U.S. Department of Energy Hydropower Vision Report



NATIONAL HYDROPOWER ASSOCIATION

In Eugene, Ore., Columbia Industrial Products (CIP) Composites employs 19 people who manufacture environmentally friendly, self-lubricating composite bearing products for hydropower equipment.

CIP Composites' diverse group of professionals and skilled tradesman include men, women and military veterans who supply hydropower producers all over the world.

These are HydroWorks jobs that strengthen America's energy infrastructure. And we can create more by modernizing the licensing process.

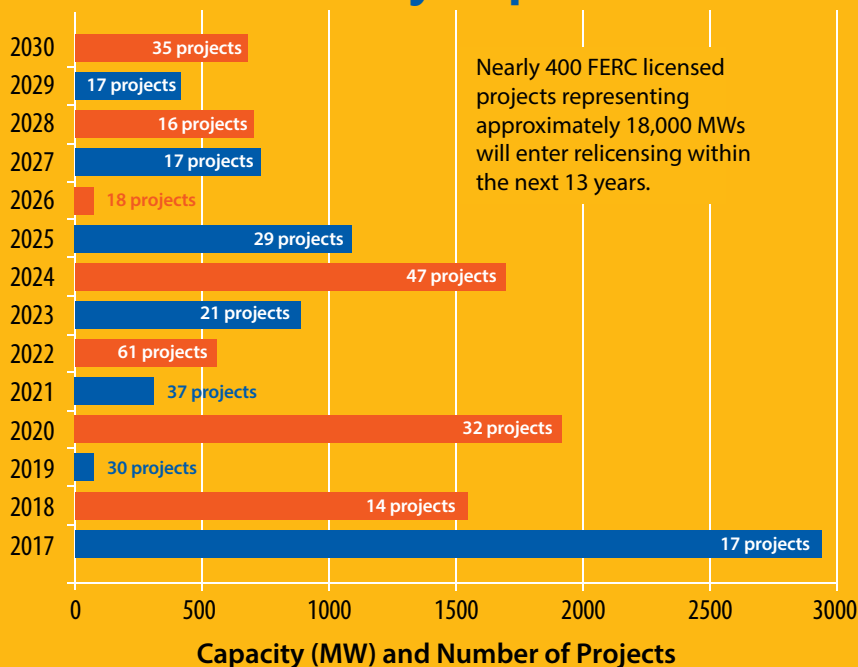


By the Numbers

Hydropower in 2017



At a Glance: U.S. Hydropower Relicensing



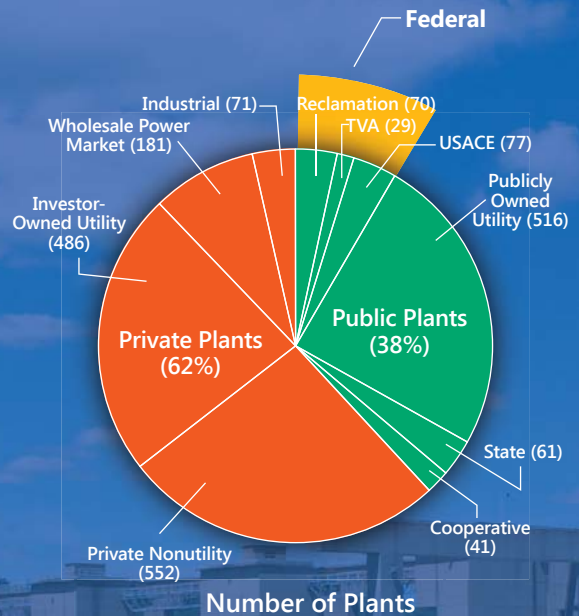
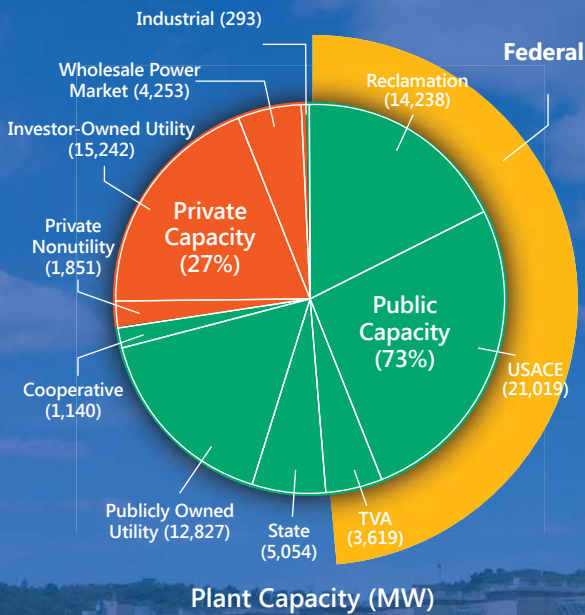
Economic Activity

Today, hydropower supports **143,000 jobs** with over **\$20 billion** in economic output.

Source: Department of Energy Hydropower Vision

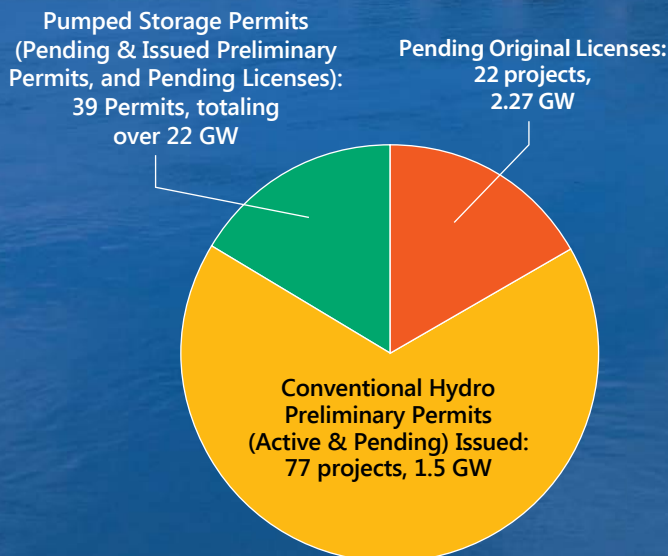
U.S. Hydropower Fleet Ownership Mix

- 176 plants owned by federal agencies account for 49% of the capacity but only 8% of the plants.
- Publicly owned utilities, state agencies, and cooperatives own an additional 24% of total capacity.
- The remaining quarter of installed capacity belongs to private owners and corresponds to 62% of hydropower plants.



In the FERC Pipeline 138 projects

(conventional & pumped storage)
totaling approximately 25GW



Conduit Hydropower

In 2017, 18 conduit hydropower projects qualified for the Federal Energy Regulatory Commission expedited process for projects less than 5MW, expediting the otherwise notoriously lengthy hydropower permitting process. Since passage of the Hydropower Regulatory Efficiency Act of 2013, more than 98 projects representing over **20 megawatts of capacity** have qualified for a federal exemption, only requiring state and local permits to be constructed.

2017 Hydropower Development FERC Issued:

- **14 projects licensed** representing 258.9 MW
- **5 project capacity amendments** totaling 5.46 MW

OUTLOOK

What a difference a year makes. Just one year ago, we were asking ourselves: why isn't hydropower being valued properly? With so many upcoming relicensings, how can we improve the process? And in the span of one year, we've made an enormous amount of progress.

While compensation for hydropower generation in power and environmental markets is critically important, as an industry, we didn't have the information that we needed to begin to make gains on this issue. Fast forward one year, and we are unveiling a comprehensive report that identifies barriers and gaps in environmental markets. Moreover, the U.S. Department of Energy has launched a study into power markets.

And when it comes to relicensings and protecting our existing assets, we've made great strides. The results and recommendations from our Relicensing Summit are bearing fruit at FERC and in the Administration. Not only has FERC adopted a 40-year licensing term, but it is considering, among other recommendations, the removal of the requirement that an existing licensed project must "propose

to install/increase the total capacity of a project" in order to qualify or migrate to an exemption, and allowing exemption applicants to more easily convert to a license application.

On all fronts, as an industry, we believe 2018 will be even more successful. We continue to make headway on modernizing the licensing process. Our communications efforts are in full swing, with a brand new infrastructure campaign, HydroWorks, and an advocacy platform to get our message heard on the Hill. We have a new 2018 Pumped Storage report slated for release that will detail the importance of the nation's most important grid scale storage technology. We're also focused on expanding member services, including a new online State Regulatory Tracker

We've seen what can happen in just year, and we intend to build on the gains we've made. As always, we encourage you to be involved in every aspect of NHA's work in 2018, as we look forward to another exceptional year for the industry.



MEMBERS

2017 NEW MEMBERS

Alaska Power & Telephone Company
Ballard Marine Construction
BBA
Bergmann
BioSonics, Inc.
City of Hamilton
Clear Power North America, LLC
Hydrokinetic Energy Corp
Integrated Power Services

Litostroj Power Group
Littoral Power Systems, Inc.
Lori Pickford
Mechanical Solutions Inc.
Michael N. McCarty Law Office PLLC
National Grid
Nline
Northern Wasco County PUD
Ocean Energy

Ontario Power Generation
OpenHydro
Scott Flake Consultant
Telesystem Energy Ltd.
U.S. Army Corps of Engineers
UOR Technology LLC
Wenkus Energy

2017 AWARDS

Outstanding Stewards of America's Waters

Avista Corporation: Long Lake Dam Spillway Modification Project

Whooshh: Upstream Fish Passage System

Brookfield Renewables: Innovative Efforts To Cease Herbicidal Spraying

PacifiCorp: Land Acquisition for Wildlife Habitat Mitigation in the North Fork Lewis River Basin

Seattle City Light: Five Year Plan for Wildfire Mitigation to Protect Historical and Critical

Grand River Dam Authority: Rush for Brush: Aquatic Resource Enhancement Program

NHA Past Presidents' Legacy Scholarship

Jeremy Price, University of Massachusetts – Amherst



NHA President Herb Johnson presents David Moller with the 2017 Dr. Kenneth Henwood Award

2017 NHA LEADERSHIP

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HERBIE JOHNSON, Southern Company Generation

Vice President

DEBBIE MURSCH, GE Renewable Energy

Secretary

JOHN SULOWAY, Gomez and Sullivan Engineers

Treasurer

ALVIN THOMA, Pacific Gas & Electric Co.

Past President

JOHN MCCORMICK, Tennessee Valley Authority

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STEVE WENKE, Avista Utilities

PAMELA WILLIAMS, Santee Cooper

KRISTINA JOHNSON, Cube Hydro Partners, LLC (Advisory)

CHARLES SENSIBA, Van Ness Feldman, LLP (Advisory)

2018 NHA MEETINGS

NHA CONFERENCES & SYMPOSIUMS

2018 Waterpower Week in Washington • April 30–May 2

NHA Annual Conference

International Marine Renewable Energy Conference (IMERC)

Marine Energy Technology Symposium (METS)

2018 NHA REGIONAL MEETINGS

NHA Southwest Regional Meeting • Austin, TX—March 1

NHA Northeast Regional Meeting • Albany, NY—July 24–25

NHA Alaska Regional Meeting • Ketchikan, AK—September 11

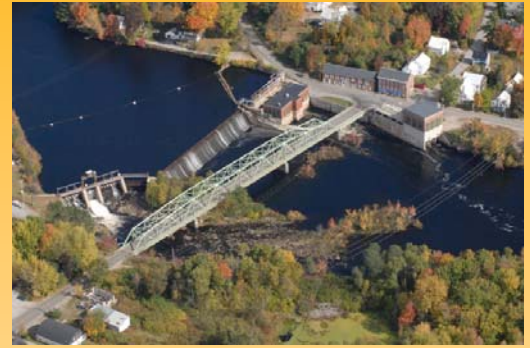
NHA Midwest and MHUG Regional Meeting • Ludington, MI—Oct 24

NHA California Regional Meeting • Los Angeles, CA—Dec 4

2018 NHA HYDRAULIC POWER COMMITTEE (HPC)

HPC Fall Retreat & NWA Technical Meeting

Walla Walla, WA—October 2–4



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Hydro.org

