National Hydropower Association
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April 13, 2015

The Honorable Orrin G. Hatch
Chairman
Committee on Finance
United States Senate
219 Dirksen Senate Office Building
Washington, DC 20510

The Honorable Ron Wyden
Ranking Member
Committee on Finance
United States Senate
219 Dirksen Senate Office Building
Washington, DC 20510

The Honorable John Thune
Co-Chair, Business Income Tax Working Group
United States Senate
511 Dirksen Senate Office Building
Washington, DC 20510

The Honorable Benjamin Cardin
Co-Chair, Business Income Tax Working Group
United States Senate
509 Hart Senate Office Building
Washington, DC 20510

The Honorable Dean Heller
Co-Chair, Community Development & Infrastructure Working Group
United States Senate
324 Hart Senate Office Building
Washington, DC 20510

The Honorable Michael Bennet
Co-Chair, Community Development & Infrastructure Working Group
United States Senate
458 Russell Senate Office Building
Washington, DC 20510

Dear Senators:

On behalf of the members of the National Hydropower Association (NHA), we appreciate this opportunity to submit comments to the Senate Finance Committee's Business Tax and Community Development & Infrastructure Working Groups on fundamental tax reform. We look forward to working with the Committee and the Congress on approaches that can achieve the goals of reform while also continuing to support new project development in the hydropower industry.

The National Hydropower Association is a nonprofit national association dedicated to promoting the growth of clean, affordable U.S. hydropower. [1]

Hydroelectric power is the nation's largest source of renewable electricity, generating close to 50 percent of renewable power in the U.S. In addition to its clean energy profile, hydropower projects provide a number of additional benefits, such as flood control, irrigation, and water supply.

[1] NHA represents more than 200 companies in the North American hydropower industry, from Fortune 500 corporations to family-owned small businesses. Our members include both public and investor-owned utilities, independent power producers, developers, manufacturers, environmental and engineering consultants, attorneys, and public policy, outreach, and education professionals. NHA members are involved in projects throughout the U.S. hydropower industry, including both federal and non-federal hydroelectric facilities. NHA members own and operate the majority of the non-federal waterpower generating facilities in the United States.

Though a tremendous existing resource, hydropower has substantial potential to grow. Of the 80,000 dams in the United States only 3 percent have power generating facilities. The rest were originally built for the other purposes outlined above. However, new studies and reports have demonstrated new project opportunities throughout the hydropower sector including, adding new generation equipment to existing non-powered infrastructure, upgrades and efficiency increases at operating facilities, pumped hydropower storage, conduit and marine energy projects, and even new stream reach deployments. Sustainable hydropower projects can be built to access this untapped hydropower capacity if the Congress provides the right market signals through smart tax policies.

Expanding renewable energy production and manufacturing in the United States are among NHA's top priorities. The U.S. has long used targeted tax incentives to leverage investment and innovation in the energy sector. This is true for fossil and renewable resources alike. Hundreds of thousands of jobs and billions of dollars in private investment across industries — not to mention gigawatts of affordable, reliable, and renewable power — have been driven by tax policies. Given the extraordinary potential for expansion of hydro deployment and job creation, NHA supports these common-sense energy incentive reforms:

**Extending the Production Tax Credit**. NHA supports a long-term extension of the Section 45 Production Tax Credit (PTC) for hydropower facilities, which were only included under the program in the Energy Policy Act of 2005 (effective beginning in 2006) and marine and hydrokinetics in 2008. Long-term extensions of the Production Tax Credit and Investment Tax Credit (ITC) for hydropower projects are needed to accommodate the longer regulatory and development lead time associated with these larger, highly capital intensive projects, which averages between 5-6 years. While some have proposed phasing out the PTC for wind facilities based on the fact that the wind industry has qualified for the PTC almost continuously since 1992, the hydropower industry believes that it is inappropriate to phase out the credit given the short time period that the PTC has applied to hydropower and marine energy and the significant potential for building new facilities that exists.

**Equalizing the Production Tax Credit**. Currently hydropower and marine energy receives only half the credit available to other renewable energy sources. There is no tax or energy policy justification for placing hydropower at a competitive disadvantage with other renewable electricity technologies. Equalizing the tax credit for hydropower will create a burst of investment and unlock the huge job and energy potential of this technology.

**Extending the Investment Tax Credit**. Another important tax policy for the growth of America's renewable hydropower resources is the Investment Tax Credit. New hydropower facilities are often highly capital intensive and the ITC is an important tool for attracting tax equity capital investments to such projects.

**Clean Renewable Energy Bonds (CREBs) Program**. A significant portion of hydropower projects in the U.S. are owned by public power providers, electric cooperatives and state and local governments. CREBs, first created in 2005, were a very effective tool that helped these entities to grow America's hydropower resources, with little cost to the taxpayer. NHA supports extending the CREBs program.

**Allowing Pumped Storage to Qualify for the Investment Tax Credit and Clean Renewable Energy Bonds (CREBs) Program**. Expanding our nation's energy storage capacity is essential to ensuring a secure and stable grid as well as integrating more renewable energy — and today, pumped storage technology is the only cost-effective, large-scale energy storage method. Currently, there are no incentives for energy

storage project development, including pumped storage, which hinders deployment and further innovation. NHA supports an ITC and CREBs eligibility for all energy storage technologies, which will help drive pumped storage projects and help America deploy an even wider array of clean, renewable power across the grid.

**Preserving Tax Exempt Financing for Municipalities.** State and local governments and governmental entities, including public power utilities, have utilized municipal bonds as a financing tool for new infrastructure projects, including hydroelectric and other renewable energy projects. Historically, interest paid on municipal bonds is exempt from federal tax, which allows these entities to issue bonds at reasonable rates and assists in meeting their capital needs. NHA, on behalf of our public power utilities, believes the interest exclusion should be preserved. To do otherwise, would impose higher borrowing costs that will limit investment in critical infrastructure, including energy infrastructure like hydro projects.

Once again, NHA appreciates this opportunity to discuss the importance of continued federal tax policy to the hydropower sector as a means to support project deployment. In addition to these comments, NAH attaches its March 30, 2015 presentation to the Community Development and Infrastructure Working Group Staff Roundtable.

If you have any questions, please feel free to contact me at 202.682.1700 x. 220 or NHA's Jeff Leahey, Deputy Executive Director, at x.150.

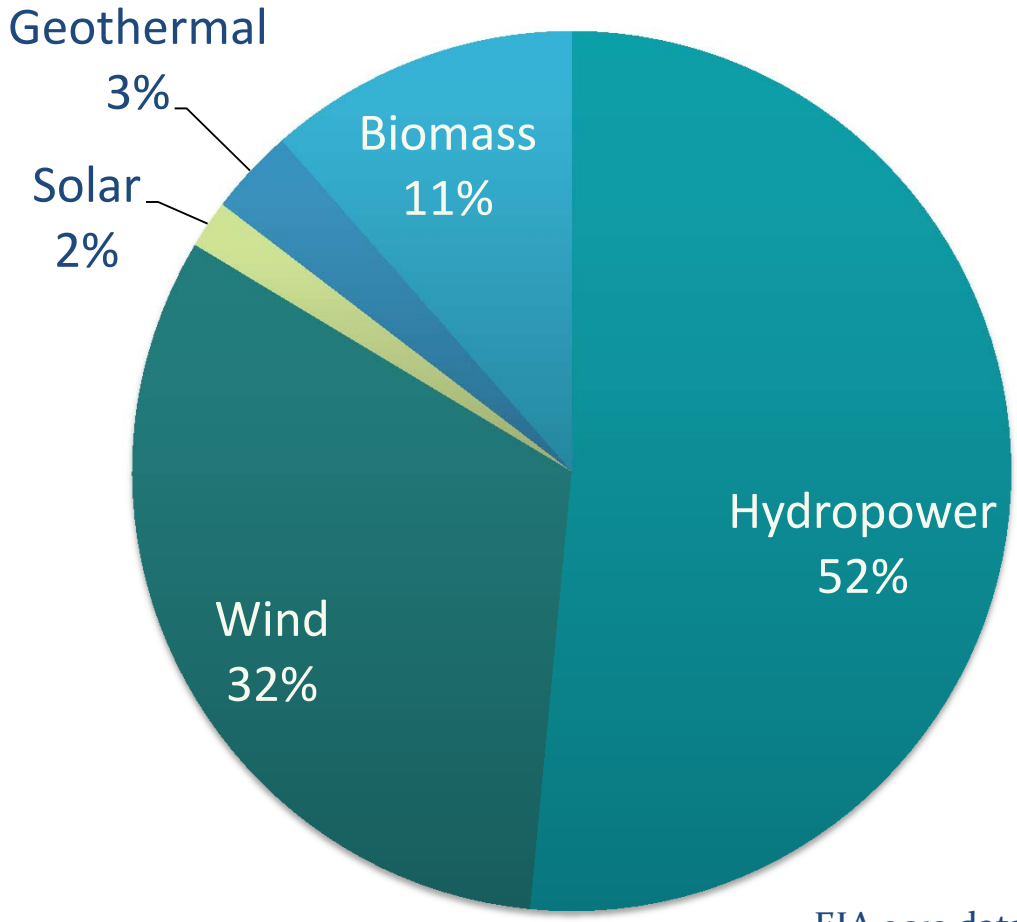
Sincerely,

Linda Church Ciocci
Executive Director

# National Hydropower Association

## Community Development and Infrastructure Working Group
## Staff Roundtable
## March 30, 2015

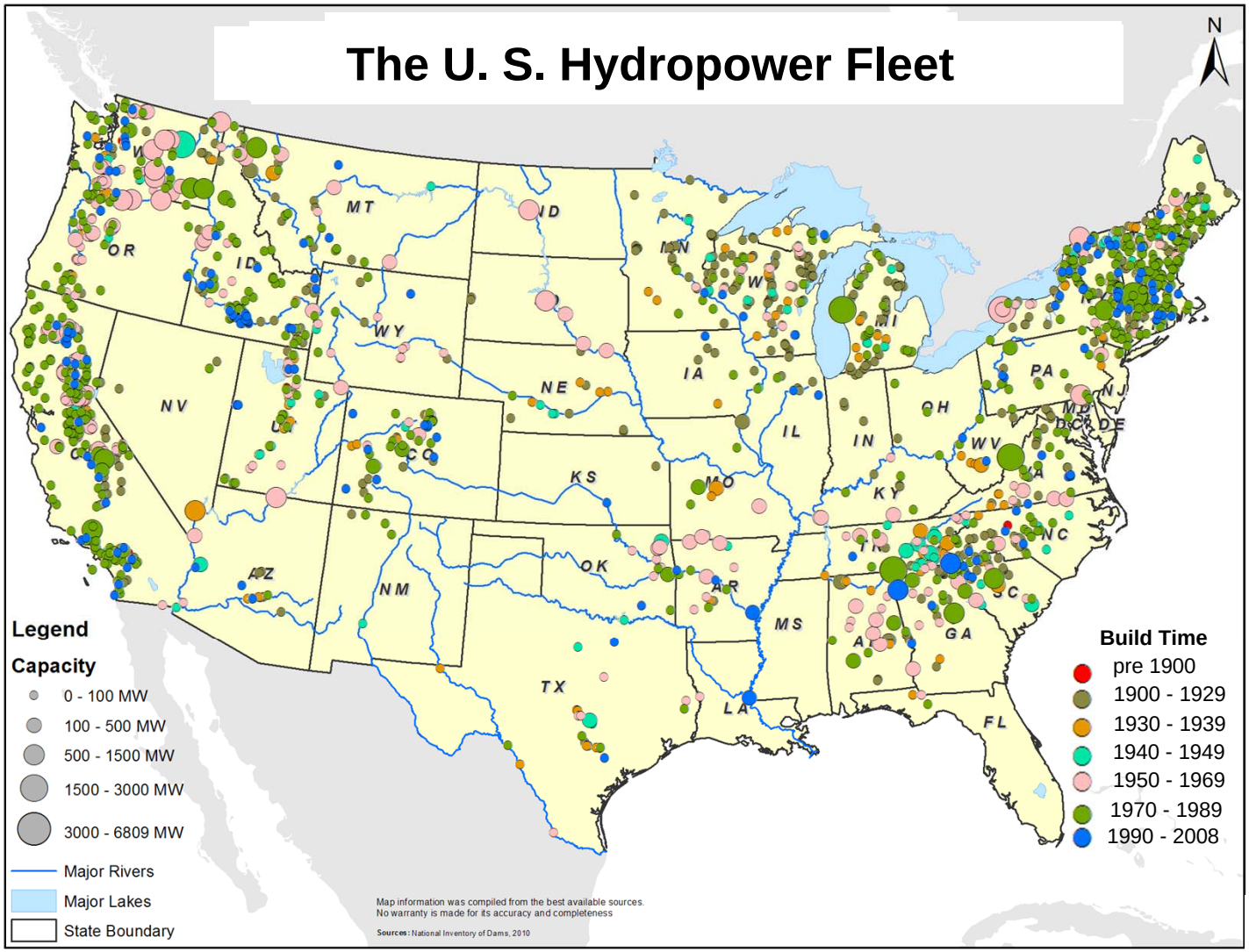
## U.S. Renewable Electricity Generation 2013




EIA 2013 data

Hydropower is the largest single source of renewable electricity in the U.S., making up **7%** of total electricity generation and the majority of renewable electricity in 2013.

Approximately **100GW** of existing capacity, includes **22GW** of pumped storage.




*Sources: ORNL, NID*

# Additional Hydro Industry Information

Of total U.S. hydro generation – roughly 50 percent comes from the federal hydropower system (USACE, BuRec, TVA) and the other half from non-federal projects.

Of the non-federal hydro generation, approximately half comes from facilities of private owners (IOUs, IPPs, industrial) and half from facilities owned by public utilities, state agencies and cooperatives.

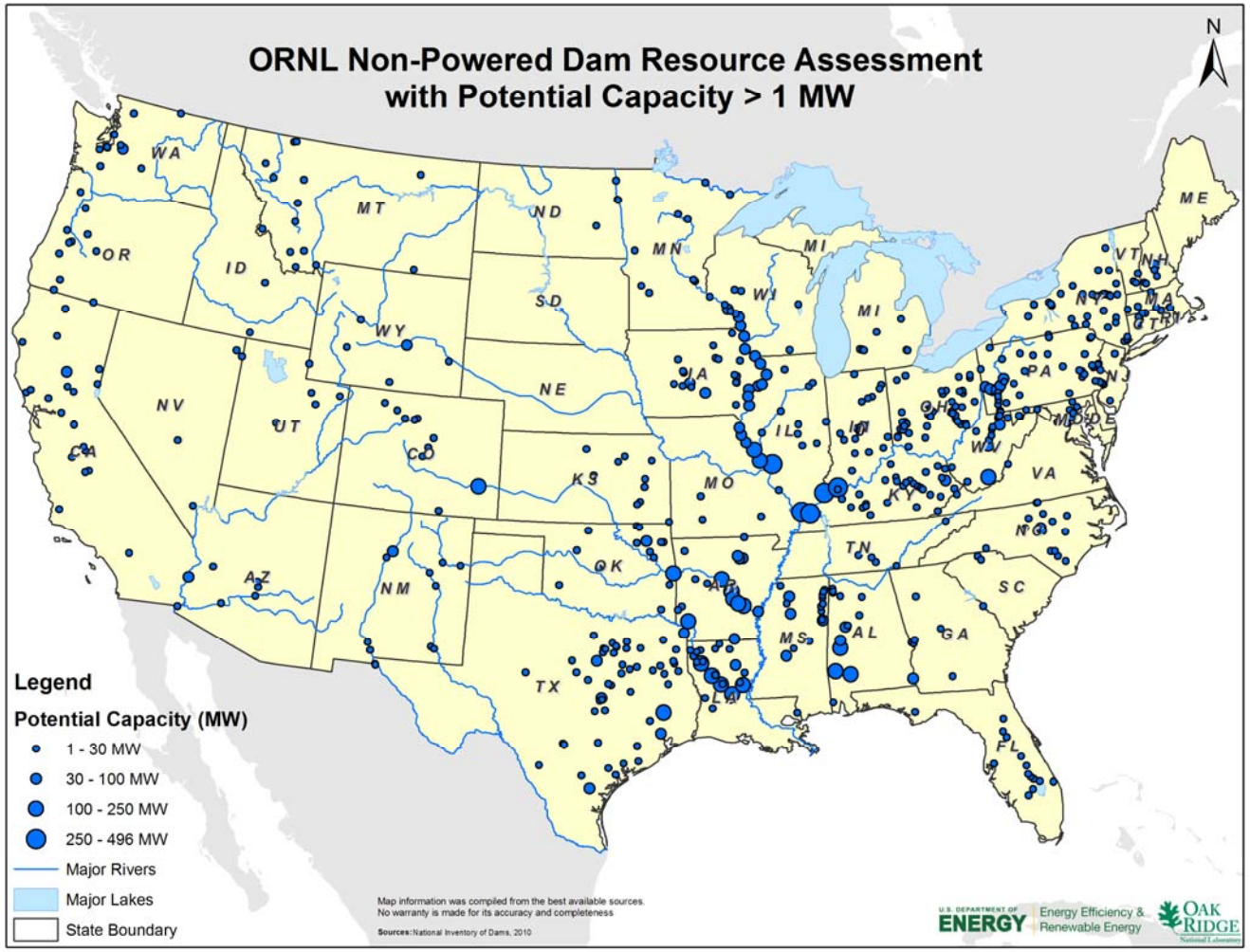
Federal projects tend to be larger with Grand Coulee being the largest electric generating asset in the country at almost 7,000 MW of capacity.

The private projects tend to be smaller, with 71 percent of FERC-licensed projects under 5 MW of capacity.

# DOE/ORNL: 12 GW at over 54,000 sites

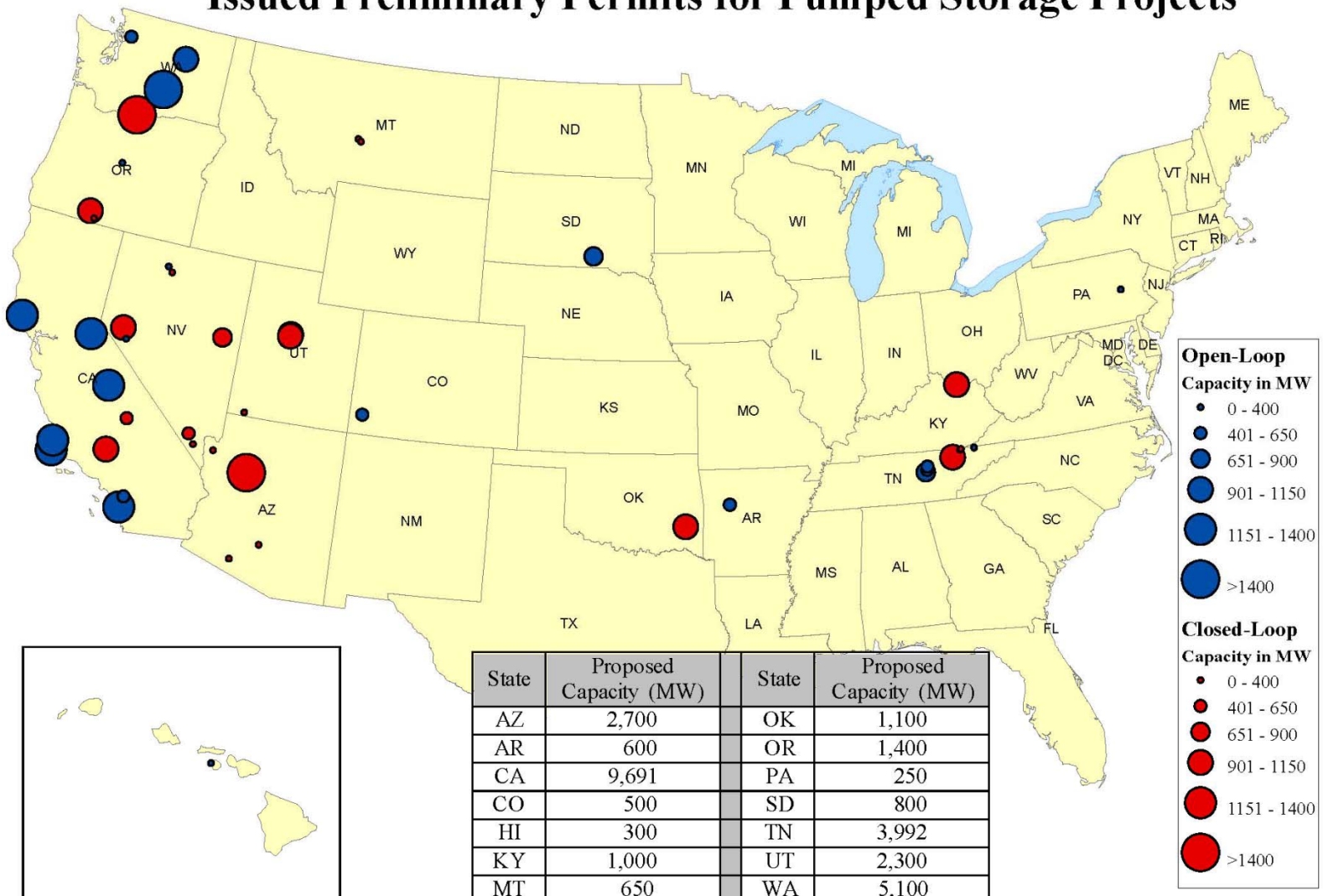
8 GW in top 100 sites

81 of top 100 sites are dams owned by the U.S. Army Corps of Engineers




*Source: DOE/ORNL*

# Issued Preliminary Permits for Pumped Storage Projects






| State | Proposed Capacity (MW) | | State | Proposed Capacity (MW) |
|---|---|---|---|---|
| AZ | 2,700 | | OK | 1,100 |
| AR | 600 | | OR | 1,400 |
| CA | 9,691 | | PA | 250 |
| CO | 500 | | SD | 800 |
| HI | 300 | | TN | 3,992 |
| KY | 1,000 | | UT | 2,300 |
| MT | 650 | | WA | 5,100 |
| NV | 3,650 | | | |
| **TOTAL CAPACITY** | | | | **34,033 MW** |

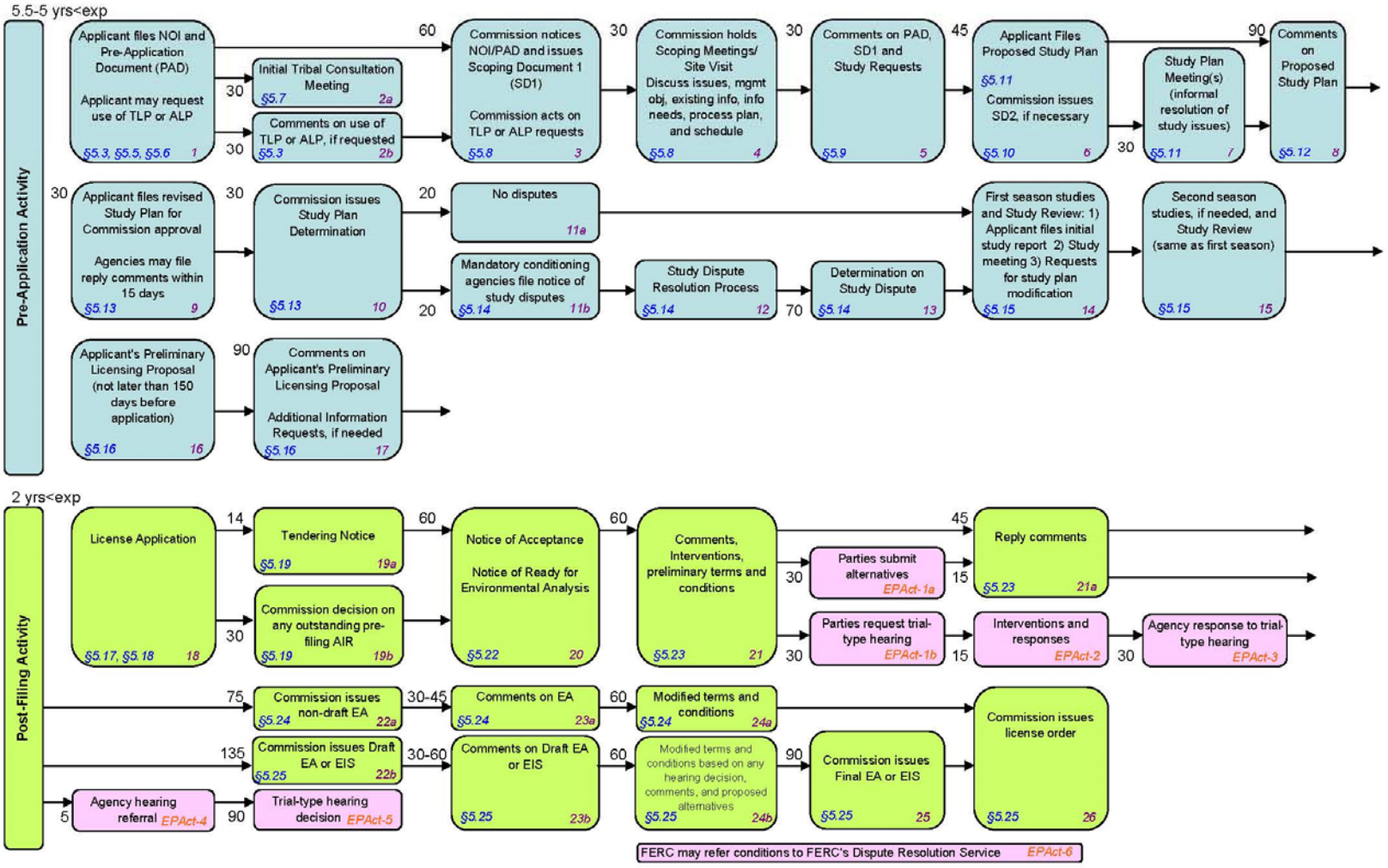
Note: Preliminary determination of open- vs. closed-loop classification based on preliminary permit application.

Source: FERC Staff, October 1, 2014

# Challenges to Growth

| | |
|---|---|
| **Long development lead times** | • Permitting and licensing can take over 5 years, followed by construction.<br>• Incentives generally extended only on a short-term basis.<br>• Numerous stakeholder involvement can add to time and cost.<br>• Can be hard to attract investment. |
| **Large up-front capital investment required** | • In addition to licensing costs, study costs, projects can require significant up front capital. (New pumped storage projects can cost $1-2 billion).<br>• Projects are very economic over their long life, but high immediate start-up costs affect competitiveness with other resources. |
| **Uncertainty re: support, incentives, and regulatory policy** | • Financial community concerned that incentives for hydro will not be available or renewed before project comes online.<br>• Long regulatory process in comparison to other resources a disadvantage.<br>• Affects both utilities and small developers abilities to pursue projects (conventional and new). |

# Integrated Licensing Process and Section 241 of the Energy Policy Act of 2005



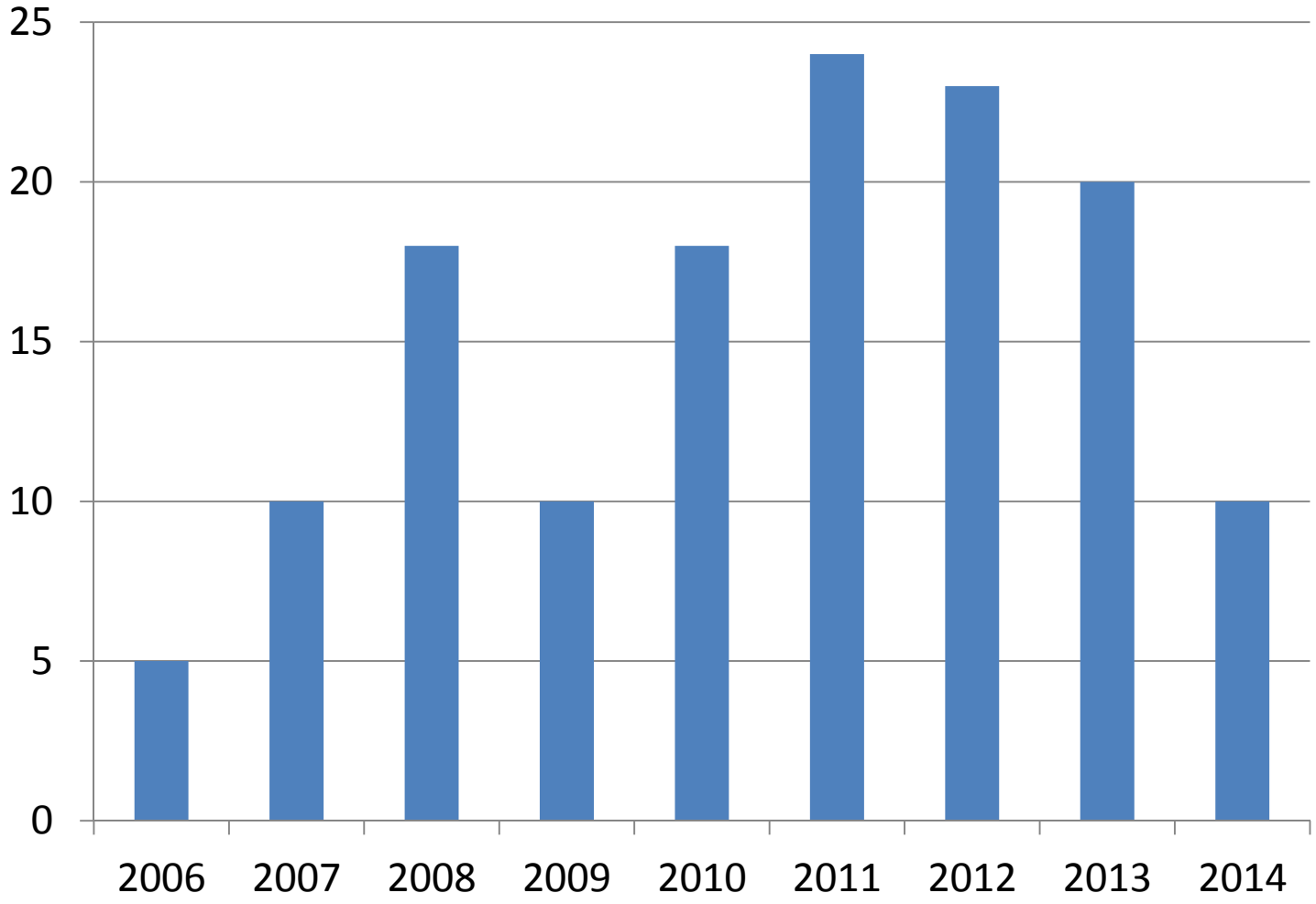

*Section 241 of the Energy Policy Act of 2005 in pink.

# Tax Policies Needed

Given the extraordinary potential for new hydro deployment and job creation, NHA supports these common-sense energy incentive reforms:

- Long-term Extension of the Production Tax Credit for Hydropower (conventional, conduit, MHK resources).
- Equalizing the Production Tax Credit for Hydropower.
- Extending the Investment Tax Credit for Hydropower.
- Extending the Clean Renewable Energy Bonds (CREBs) Program.
- Allowing Pumped Storage to Qualify for the Investment Tax Credit and Clean Renewable Energy Bonds (CREBs) Program.
- Preserving Tax Exempt Financing for Municipalities.

# PTC Certifications




138 projects with over 9 percent average generation increase

FERC January 2015 data

## Contact

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# Questions?