Statement for the Record

Senate Finance Committee, Subcommittee on Energy, Natural Resources, and Infrastructure

Hearing on Alternative Energy Tax Incentives: The Effect of Short-Term Extensions on Alternative Technology Investment, Domestic Manufacturing, and Jobs

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Statement for the Record of the National Hydropower Association on Alternative Energy Tax Incentives: The Effect of Short-Term Extensions on Alternative Technology Investment, Domestic Manufacturing and Jobs

The National Hydropower Association[1] (NHA) appreciates this opportunity to comment on the effects of short-term energy tax incentive extensions on alternative technology investment, domestic manufacturing and jobs.

Summary
Today, hydropower is the country's largest renewable electricity technology, generating approximately 7 percent of total electricity in the United States in 2009. This represents about two-thirds of total U.S. renewable electricity generation. Successful federal tax incentive programs have helped developers bring new facilities online, and with these incentives the industry is poised for ongoing growth.

However, hydropower has the longest development time frame of all the renewable technologies due in part to the scale of the facilities, but also do to the extensive multi-year federal and state licensing process. For federal tax incentives to motivate developers and investors to place these capital-intensive facilities in service, Congress should provide certainty and stability by enacting multi-year extensions of the incentives for hydropower facilities.

Comments
NHA strongly supports federal policy that provides a predictable market signal in support of renewable energy project development, which in turn leverages significant private investment and stimulates job creation and local economic benefits across the country.

We urge the Congress to continue its bipartisan support for renewable energy incentives, such as the production tax credit (PTC) and clean renewable energy bonds (CREBs) program, and provide the hydropower industry the certainty needed to compete for investment, complete project construction and begin operation over the next several years.

The inclusion of hydropower resources under the various federal tax incentive programs has kicked off a resurgence in growth of responsible, sustainable projects – growth the industry has not seen in nearly two decades, with tens of thousands of megawatts under consideration before the Federal Energy Regulatory Commission (FERC) today. Long-term extension of these growth policies, along with additional improvements to the provisions, will ensure that these projects move from proposals to actual deployment.

Hydropower's Contribution and Impact of Tax Incentives
Increased renewable electricity generation supports a variety of important short and long-term national energy goals including: energy independence; diversity of the nation's generation mix; and the environmental benefits associated with the greater use of clean energy resources. However, to meet

[1] NHA is the non-profit national association dedicated exclusively to advancing the interests of the U.S. hydropower industry, including conventional, pumped storage and marine and hydrokinetic technologies. NHA's 180 members includes public utilities, investor owned utilities, independent power producers, project developers, equipment manufacturers, environmental and engineering consultants and attorneys.

these goals and reap the benefits, federal policy support, particularly in the form of extended and expanded tax incentives, is needed.

Today, hydropower is the country's largest renewable electricity provider, generating approximately 7 percent of total electricity in the United States in 2009.[2] This represents about two-thirds of U.S. renewable electricity generation.

The U.S. hydropower industry currently employs up to 300,000 workers from project development to equipment manufacturing to facilities' operations and maintenance. With the right tax policies in place, hydropower can expand its American workforce.

NHA estimates that 1.4 million cumulative direct, indirect and induced jobs could be created by the hydropower industry by 2025 through capacity additions and efficiency improvements at existing hydropower facilities, the deployment of projects to convert non-powered dams to electricity generating assets[3], pumped storage projects, and marine and hydrokinetic technologies.[4]

However, throughout the 1990s and 2000s, the hydropower industry experienced a period of minimal growth. This has changed dramatically with the inclusion of hydropower technologies under the production tax credit (PTC) and clean renewable energy bonds program (CREBs) in 2005, and other incentives, such as the investment tax credit (ITC) and Section 1603 program, in 2009.
From the enactment of the Energy Policy Act of 2005 through July 2011, FERC has certified approximately 83 hydropower projects in 23 states for the PTC.[5] These projects, involving capacity additions and technology or efficiency improvements at existing hydropower facilities, have resulted in an average increase in generation of close to 11 percent for a total generation increase of 954,312 megawatt hours. This is enough energy to power 87,583 homes.[6]

Looking to the public power sector, hydropower developers received 24 percent of the $2.2 billion in bonds allocated under the Clean Renewable Energy Bonds program in 2009. This amounted to approximately $531 million in funding for hydropower projects, several of which have already begun construction and will be brought online in the next couple of years.
In fact, there is over 85,000 MW of proposed conventional hydropower, pumped storage and marine and hydrokinetic projects under consideration before FERC today.[7] And a recent study by Navigant Consulting determined that up to 60,000 MW of capacity by 2025 is possible.[8]

With the proper support, including continued economic incentives, NHA believes the U.S. hydropower industry is primed for responsible growth and can play a significant role in the effort to increase renewable electricity generation. Numerous opportunities are available to expand this country's

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[2] http://www.eia.gov/cneaf/electricity/epa/epa_sum.html
[3] Approximately three percent of the nation's 80,000 dams currently produce power.
[4] See http://hydro.org/why-hydro/job-creation/navigant-study/ where a cumulative job is a job-year, defined as one person working full-time for 12 months.
[5] The 22 states in which hydropower projects have received PTC certification are: Arkansas, California, Georgia, Idaho, Indiana, Kansas, Maine, Maryland, Massachusetts, Michigan, Montana, New Hampshire, New York, North Carolina, Oregon, Pennsylvania, South Carolina, Vermont, Virginia, Washington, West Virginia and Wisconsin.
[6] See http://www.eia.gov/tools/faqs/faq.cfm?id=97&t=3 for EIA data on average residential annual electricity consumption.
[7] See http://ferc.gov/industries/hydropower/gen-info/licensing.asp
[8] See http://hydro.org/why-hydro/job-creation/navigant-study/

hydropower base while at the same time provide responsible environmental stewardship of the nation's waters.

Need for Certainty

To realize the substantial new capacity highlighted above, the hydropower industry requires stable and predictable support policies. Extension of existing tax policies is needed, as well as several substantive improvements, along with new policies for technologies, such as hydropower pumped storage, that are not currently covered under the existing programs.

Of all renewable technologies, hydropower has the longest development time frames due, in part, to the extensive multi-year federal and state licensing process.[9] In addition, these projects are capital-intensive, with significant up-front costs. Without the long-term certainty and predictability provided by consistent federal support policies, developers will be unable to attract the financing needed to support this considerable investment and utilities will be driven by default to other resources with shorter development timelines, such as wind and natural gas, resulting in a less diverse generation mix.

Specific NHA Tax Agenda Items

- ***Extension of the PTC and ITC.*** Congress has extended the renewable energy PTC and ITC through 2013 for hydropower and marine and hydrokinetic technologies. As stated above, this multi-year extension has been critical for the hydropower industry to utilize the credits as the deployment timeline of larger, more capital-intensive hydropower projects is longer than that of other renewables.

  NHA strongly supports further extension of the PTC and ITC through 2018. The conventional hydropower industry faces significant challenges to development, challenges at least on par with those experienced by other renewable industries that have been the focus of legislative efforts to extend these programs.

- ***Additional Funding of CREBs*.** For the public power community, which represents a substantial portion of hydropower facility ownership in the United States, the CREBs program is an important corollary to the PTC for this industry sector. Even with the allocations already made, the CREBs program is oversubscribed. Demand continues to outpace the size of the allocations awarded and is again in need of significant additional funding.

- ***New Pumped Storage Investment Tax Credit and CREBs Eligibility.*** Pumped storage of electricity is a proven, viable, large-scale method of storing energy and is an ideal option for firming the variability of other renewable energy resources, such as wind and solar. Pumped storage also provides several grid reliability benefits, including energy storage, load balancing, frequency control, and others.

[9] The integrated licensing process (ILP), the default federal process for hydropower development takes 5-5.5 years. While FERC is the lead agency, the process can also involve federal hydropower project owners, such as the Bureau of Reclamation and the Army Corps of Engineers, federal resource agencies, state resource agencies, tribes, and interested stakeholders and the public. This complex, comprehensive process is intensive, multi-layered and can take up to 26 steps as outlined at: http://ferc.gov/industries/hydropower/gen-info/licensing/ilp/flowchart.pdf.

There are a number of new pumped storage projects under consideration across the country. Of these, several may be brought online in the next 5-8 years, totaling about 3400 MW of capacity. These proposed facilities are situated in key areas where new development of variable resources is occurring at a rate that will challenge the capabilities of the transmission system and existing flexible generation resources to manage. Without the stability and reliability services new pumped storage can provide, the grid system will be more vulnerable to increased disruptions in the future and the negative economic impacts and losses that result.

Currently, there is no federal incentive that supports the development of energy storage resources, including pumped storage. Pumped storage projects are large capacity projects ranging in size from several hundred MW to 1500 MW, which can cost billions of dollars to build and take much longer to construct. NHA supports enactment of a new energy storage ITC and CREBs eligibility for pumped storage, as proposed in several pieces of recent legislation.

- ***Additional Funding of the Section 48C Advanced Manufacturing Credit.*** The manufacturers' ITC has been a valuable program that supported investment for the U.S. hydropower manufacturing sector. In fact, three hydropower equipment manufacturers received awards to support new facilities or facility upgrades located in Pennsylvania, Tennessee, Ohio, and Washington.

  Funding for the 48C program was completely allocated in the first round of awards announced in January 2010. Additional funding is needed to meet the pent-up demand from renewable energy equipment and component manufacturers as evidenced by the fact that the program was significantly oversubscribed.[10]

- ***Extension of Direct Payment in lieu of Tax Credits*.** NHA supports extension of the direct payment in lieu of tax credit program that was created by Section 1603 of the *American Recovery and Reinvestment Act of* 2009 (ARRA) for renewable energy facilities, including hydropower. NHA has seen the Section 1603 grant program provide access to financing for qualified energy facilities during the nation's economic downturn, extension of the grant program would ensure the creation of additional facilities to expand production of renewable energy and create thousands of new jobs in the renewable energy sector.

  As an example, one NHA member company has moved forward with a 125 MW expansion of their existing hydropower facility because of the availability of the Section 1603/ITC programs. This $450 million project, with its 200 construction jobs, was temporarily shelved at the end of 2008 and only moved forward after the passage of the ARRA. In addition to the extension, NHA also recommends adoption of a mechanism that allows public power to utilize this program.

- ***Parity for Hydropower and Marine and Hydrokinetic Resources under the PTC*.** Internal Revenue Code Section 45 provides for a PTC for electricity produced from renewable resources. Under current law, the PTC prescribes different tax credit rates, discriminating between technologies and picking winners and losers. Certain renewable facilities, such as wind and

[10] The Department of Energy confirmed the need for additional funding in testimony before the Senate Finance Committee on May 20, 2010 stating that the Section 48C program was "oversubscribed 3:1 with qualifying projects" and that "extending and expanding the 48C program would allow the U.S. to accelerate this manufacturing expansion."

geothermal power, are eligible to receive the full PTC, while other qualified facilities, including qualified hydropower, small irrigation power and marine and hydrokinetic power receive only 50 percent of the full PTC rate. Congress has never articulated a rationale for this disparate treatment.

All of the technologies that qualify possess unique energy attributes and generation benefits that play an important role in expanding the nation's use of renewable electricity and addressing climate change. In an environment where utilities require competitive bids for renewables, a higher PTC for some technologies results in unequal playing field and affects competition. The disparity distorts market dynamics and makes it difficult for facilities that receive only a 50 percent credit to compete with those that receive the full amount of the credit. Congress should provide technology-neutral tax incentives to promote the growth of all clean electricity resources.

In ARRA, Congress unambiguously endorsed the doctrine of tax parity for renewables by allowing all qualifying facilities to receive the 30 percent ITC. NHA applauds this recognition and encourages Congress extend the same treatment to the PTC, which would harmonize the policies and ensure there is no slanting of investment in favor of any one technology over another.

As the largest trade association that exclusively represents all sectors of the waterpower industry, NHA appreciates the opportunity to submit these comments on the importance of renewable energy tax incentives to support project development.

We believe tremendous opportunities exist to accelerate deployment of hydropower resources to realize our national clean energy, jobs, and environmental goals by utilizing the benefits hydropower provides. NHA would be pleased to meet with Committee staff to discuss the comments and recommendations contained in this statement in more detail.

Sincerely,

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