National Hydropower Association
25 Massachusetts Ave. NW, Ste. 450, Washington, D.C. 20001 • Tel 202-682-1700 • Fax 202-682-9478 • www.hydro.org

November 1, 2016

The Honorable Gina McCarthy
Administrator, Environmental Protection Agency
1200 Pennsylvania, Ave., NW
Washington, D.C. 20460

RE: National Hydropower Association Comments on Docket No. EPA-HQ-OAR-2016-0033, *Clean Energy Incentive Program Design Details; Proposed Rule*

Administrator McCarthy:

On Thursday, June 30, 2016, the Environmental Protection Agency (EPA) published in the Federal Register a proposed rule entitled *Clean Energy Incentive Program and Design Details* (CEIP) and requested comment by September 2, 2016. Subsequently, on August 31, EPA extended the comment period by 60 days and established a new comment deadline of November 1, 2016. The National Hydropower Association (NHA)[1] submits the following comments and recommendations for your consideration.

I. Recognizing Hydropower as an Eligible Technology under the CEIP

NHA applauds and supports the EPA's proposal to include hydropower as an eligible renewable energy resource under the CEIP. This is an important modification, which is consistent with the final Clean Power Plan (CPP), and sends an important signal to states, the investment community, and the industry that hydropower is a key resource in meeting the goals of the CPP and helping states in meeting their carbon emissions reduction targets. Further, by including hydropower, additional baseload capacity and generation will be added to the grid to help ensure reliability throughout the CPP and into the future.

However, NHA seeks EPA's clarification and affirmation that efficiency and capacity uprates at existing facilities, and marine, wave, tidal and hydrokinetic projects are also recognized and eligible activities under the CEIP. Including these activities aligns with the intent and maintains consistency with the final CPP, which states, "A capacity uprate at an existing RE facility…is eligible to adjust a CO_2 emission rate. The capacity uprate must occur after 2012. Such uprates to capacity represent incremental capacity added

[1] NHA is a national non-profit association dedicated exclusively to advancing the interests of the U.S. hydropower industry, including conventional, pumped storage, and new marine and hydrokinetic technologies. NHA's membership consists of over 220 organizations, including consumer-owned utilities, investor-owned utilities, independent power producers, project developers, equipment manufacturers, environmental and engineering consultants, and attorneys.

after 2012."[2] And, "As used in this section, RE includes electric generating technologies using RE resources, such as… wave and tidal power."[3] In relation to capacity and efficiency uprates specifically, this is new generation that the CEIP is specifically intended to incent.

In taking into account NHA's earlier comments on the CEIP, EPA acknowledged that hydropower, "like wind and solar" is "capable of contributing to long-term climate strategies, and can be implemented on the time-scales relevant to the CEIP."[4] Tremendous growth opportunities exist for hydropower, which are highlighted in a first-of-its-kind Department of Energy report released this past July, *Hydropower Vision: A New Chapter for America's First Renewable Electricity Source* (DOE Hydropower Vision).[5] The DOE Hydropower Vision report found that domestic hydropower could sustainably grow by nearly 50,000 MWs by 2050 (including new pumped storage projects critical to grid integration and reliability) and add more than 195,000 jobs. Over 11,000 MWs of this new renewable energy capacity would utilize and reinvest in existing infrastructure, such as powering non-powered dams, and efficiency uprates and capacity additions at existing hydropower facilities.

In addition to new renewable capacity and generation, the DOE Hydropower Vision report also explains the significant social and environmental benefits that would flow from increasing hydropower's contribution. For example, between now and 2050, hydropower operations from both the existing fleet and new development could reduce cumulative greenhouse gas (GHG) emissions by 5,600,000,000 metric tons CO2, the equivalent of saving $209 billion in avoided damages from GHGs, $58 billion in avoided healthcare costs and economic damages due to air pollution from sulfur dioxides (SO_2), nitrous oxides (NO_x) and particulate matter, and 30 trillion gallons of water that would otherwise be used for steam generation or power plant cooling.[6]

II. CEIP Design Details

The EPA is specifically soliciting comments on a number of CEIP design details, and NHA offers the following recommendations to improve the program and to create additional certainty for project proponents. NHA also directs your attention to the comments of our member companies, which can provide additional

[2] Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Rule, 80 Fed. Reg. 64662, 64899 (October 23, 2015).
[3] Id.
[4] Clean Energy Incentive Program Design Details; Proposed Rule, 81 Fed. Reg. 42940, 42965 (June 30, 2016).
[5] *Hydropower Vision: A New Chapter for America's First Renewable Electricity Source*, http://energy.gov/eere/water/articles/hydropower-vision-new-chapter-america-s-1st-renewable-electricity-source (last visited November 1, 2016).
[6] Id.

details and highlight considerations of importance to their individual interests in particular regions of the country.

A. Commence Commercial Operations

Under the original CEIP proposal, EPA proposed that to be eligible to receive Emission Reduction Credits (ERC) or allowances, renewable energy projects must "commence construction" following the submission of a final state plan to the EPA, or after September 6, 2018, for a state that chooses not to submit a complete state plan by that date. However, under the current CEIP proposed rule, EPA proposes to replace the term "commence construction" with "commence commercial operations",[7] and proposes to change the date of eligibility to January 1, 2020. Therefore, projects that commence commercial operations on or after January 1, 2020 will be eligible for matching ERC's or allowances.

NHA supports the use and definition of "commence commercial operations" as the first prong of eligibility. However, we urge the EPA to revisit the proposed new eligibility date of on or after January 1, 2020. NHA believes that by establishing the commence commercial operations eligibility date as the same date as the start of the CEIP, the CEIP's objective to encourage "additional renewable deployment" will not be met to the fullest extent possible.[8] Among all eligible technologies, very few projects, if any, will be timed and coordinated to commence commercial operations on January 1, 2020; therefore, many projects will not receive the entire two year benefit of the CEIP. The proposal, although an improvement, still creates a perverse incentive to delay commercial operation of projects that could be placed on-line earlier than the proposed January 1, 2020 timeframe.

NHA recommends modifying the eligibility date for hydropower projects to on or after September 6, 2018, which is the same eligibility date established for low-income community demand-side efficiency projects. For low-income community demand-side efficiency projects the EPA recognized a need for an expanded ramp-up period in order to adequately design and target these projects, but also because "EE projects need ramp-up time to ensure that they realize the full benefits of the CEIP following project deployment."[9] Hydropower projects experience similar issues that warrant an expanded eligibility period in order to realize the full benefit of the CEIP. For example, after receiving a license from the Federal Energy Regulatory Commission (FERC), the project proponent must select an engineering firm to develop design documents required to gain FERC approval for construction, which includes turbine selection, turbine

[7] EPA defines "commence commercial operation" as "to have begun to generate electricity for sale, including the sale of test generation." Clean Energy Incentive Program Design Details; Proposed Rule, 81 Fed. Reg. at 42964.
[8] Clean Energy Incentive Program Design Details; Proposed Rule, 81 Fed. Reg. at 42964.
[9] Id.

design, and civil engineering design of the powerhouse, among others. Further, for projects that will be constructed on U.S. Army Corps of Engineers infrastructure, additional engineering design is required prior to construction through the section 408 permit under the Rivers and Harbors Act of 1899. Finally, following construction, FERC requires significant testing and project commissioning. Based on these design and ramp-up challenges, NHA encourages the EPA to reevaluate and expand the eligibility period for hydropower projects in order to maximize the full benefit of the CEIP.

B. Low-Income Community Program

Under the original CEIP proposal, participation in the low-income community program was limited to energy efficiency projects. In the CEIP proposed rule, EPA proposes to expand participation in this program to solar technologies and projects in low-income communities, but EPA is also soliciting comments on whether the low-income community program should also be expanded to other CEIP eligible technologies. NHA supports the inclusion of hydropower in the low-income community program.

A critical criterion for this program is that eligible projects must "provide direct electricity bill benefits to low-income ratepayers…"[10] While it may be difficult for any project to demonstrate compliance with this criterion, it is not a valid reason to exclude technologies from participating, as broader inclusion could spur innovative approaches and techniques to serving low-income communities. As such, NHA offers, at a minimum, the following examples that could be considered eligible under the low-income community program:

- Power purchase agreements with commercial buyers that directly benefit low-income communities and ratepayers, like schools and hospitals.
- Projects that directly benefit tribal communities.
- Projects that qualify for the United States Department of Agriculture's Rural Energy for America Program (REAP).
- Community hydropower projects recognized under state law or community projects that pay for a federal hydropower system uprate.
- Projects completed under Colorado's Department of Agriculture's ACRE3 program.[11]

[10] Clean Energy Incentive Program Design Details; Proposed Rule, 81 Fed. Reg. at 42966.
[11] ACRE3 – Agricultural Hydro, https://www.colorado.gov/pacific/agconservation/agriculturalhydro (last visited November 1, 2016).

In addition to the new renewable energy capacity and generation that flows from these examples, many of these projects offer a dual benefit by reinvesting in and improving existing water infrastructure, such as mitigating the impacts of drought and groundwater recharge operations, to name a couple.

Finally, NHA asks EPA to clarify whether 100 percent of a project under the low-income community program must provide a direct electricity bill benefit to low-income ratepayers, or whether projects can be broken down into smaller segments that can meet the criterion.

C. Metering Requirements

Under the original CEIP proposal, the EPA proposed that renewable energy projects, under a rate-based plan, must "generate metered MWh..." Under the current proposed rule, EPA proposes that renewable energy projects, under a rate-based plan, must generate electricity measured in MWh consistent with requirements of 60.5830(c)(1) of the final CPP, which states, "for RE resources, your [State] plan must include requirements discussing how the generation data will be physically measured on a continuous basis using, for example, a revenue-quality meter."[12]

NHA reiterates our earlier comments related to metering requirements as it applies to efficiency and capacity uprates at existing facilities, as the electricity resulting from these activities cannot be separately measured because there is only one meter that measures total output for each unit. In our earlier comments, we noted a similar issue arose in the context of certifying hydropower project upgrades for eligibility under the federal Production Tax Credit (PTC), and FERC developed a guidance document that could prove instructive on this issue.[13] A second example EPA may want to consult is Washington State's approach to documenting generation gains related to hydropower uprates.[14] As such, NHA recommends EPA to provide additional guidance on the implementation of the metering requirement under the CEIP as it relates to hydropower and we offer to work with EPA in developing an appropriate solution, as efficiency and capacity uprates at existing facilities will be an important component of the CEIP and for states in meeting their emission reduction goals.

---

[12] Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, Final Rule; 80 Fed. Reg. at 64952.

[13] *Renewable Energy Production Tax Credit: Instructions for Requesting Certification of Incremental Hydropower Production Pursuant to the Energy Policy Act of 2005*, http://www.ferc.gov/industries/hydropower/gen-info/comp-admin/credit-cert.pdf (last visited November 1, 2016).

[14] Wash. Admin. Code 194-37-130, http://app.leg.wa.gov/wac/default.aspx?cite=194-37-130 (last visited November 1, 2016).

D. Production Tax Credit & Investment Tax Credit Considerations

The EPA is soliciting comments on whether and how to implement limitations on CEIP participation for wind and solar resources that receive the federal Production Tax Credit (PTC) and Investment Tax Credit (ITC). This potential limitation is in response to the 2015 end-of-year omnibus and tax extenders package that extended the PTC for wind through 2019 and the ITC for solar through 2021, with a reduced, but permanent, ITC for solar thereafter. Hydropower, along with other baseload renewable technologies, received only a two-year PTC extension expiring in 2016 (one year retroactive for 2015), and we continue to receive only half the rate under the PTC compared to wind and other technologies. For reasons outlined below, NHA recommends crediting hydropower projects with 2 credits for every MWh of eligible generation under the CEIP.

EPA has raised concern over the PTC and ITC extensions for wind and solar because "one of the objectives of the CEIP is to incentivize reductions in emissions that might not otherwise have occurred, and projects receiving tax credits may already be induced by those incentives rather than the CEIP."[15] In other words, the CEIP is designed "primarily to encourage *additional* renewable deployment."[16] Both the PTC and ITC extensions for wind and solar will continue to drive investments in these technologies through the early phases of the CPP, in addition to the incentive provided under the CEIP.

NHA notes that under the PTC, the rate differential has placed the hydropower industry at a significant competitive disadvantage over the past decade in responding to state-level solicitations for renewable electricity contracts in states with renewable energy portfolio standards. In addition, the recent PTC and ITC extension for wind and solar have further exacerbated the competitive imbalance as those industries now also have the certainty that their tax incentives will be in place over a longer term.

This competitive disadvantage could have a dramatic negative impact on investment in hydropower over the coming decades. The Energy Information Administration's Annual Energy Outlook 2016 Early Release[17] estimates that with the CPP in place, in combination with the long term extension of the wind credit, wind generation will grow by nearly 150% over the period from 2015-40. Examining the impact of the tax credits

[15] Clean Energy Incentive Program Design Details; Proposed Rule, 81 Fed. Reg. at 42965.
[16] Id. at 42964 (emphasis added).
[17] U.S. Energy Information Administration, *Annual Energy Outlook 2016 Early Release: Annotated Summary of Two Cases*, May 17, 2016, p. 30.

alone, wind will still grow by 110% over the same period. Solar generation will grow by nearly 12-fold over the period between 2015-40 if the CPP remains in place or by 9-fold due to the incentives alone.

On the other hand, EIA estimates that electricity from baseload renewables (hydropower and others) will remain relatively flat in comparison. As such, the recognition and inclusion of hydropower in the CEIP is an important incentive for the industry. Therefore, instead of limiting wind and solar's participation in the CEIP, NHA recommends crediting hydropower projects with 2 credits for every MWh of eligible generation under the CEIP.

III. The Federal Hydropower System

One issue that NHA has raised but has not been addressed is the eligibility of new federal hydropower generation, such as capacity and efficiency uprates, under both the final CPP and as a compliance option in state plans, and under the CEIP. For example:

- Many of NHA's members have contracts for power from the federal system today or may enter into new contracts for power from the federal system in the future.
- The Bureau of Reclamation, the Army Corps of Engineers, the Tennessee Valley Authority, and the Power Marketing Administrations are re-investing in the federal system. Reclamation alone reports nearly 3000 MWs of new capacity brought on-line through capital investments in the last several years.
- Preference customers who work with federal hydropower operators sometimes provide the funding for the federal uprates and receive bill credits or other payback in return for their investment.

Are these activities recognized under the CPP and CEIP, and if so, to whom will the ERCs or allowances be awarded? NHA encourages the EPA to provide guidance on the eligibility of the federal hydropower system.

IV. Conclusion

NHA appreciates the opportunity to provide comments and recommendations on the CEIP and we recognize the importance of this incentive program in encouraging additional renewable energy deployment. We look forward to working with the EPA and the states in implementing both the CEIP and the CPP, and the hydropower industry as a whole looks forward to playing a significant and meaningful role

in helping states meet their carbon emissions reduction targets – both through the deployment of new generation and the continued operation of the existing hydropower fleet.

Respectfully submitted,

Linda Church Ciocci
Executive Director