NHA Support for MD SB316 (2021).pdf
Uploaded by: Cakert, Dennis
Position: FAV

National Hydropower Association
601 New Jersey Ave. NW, Suite 660, Washington, DC 20001 • Tel 202.682.1700 • Fax 202.682.9478 • www.hydro.org

Senate Bill 316
Position: SUPPORT

Testimony of Dennis Cakert, on behalf of National Hydropower Association, to members of the Senate Finance Committee on SB316 *Renewable Energy Portfolio Standard – Hydroelectric Power*

National Hydropower Association (NHA) thanks Chair Kelley, Vice Chair Feldman, and members of the Senate Finance Committee for the opportunity to provide comments and testify in support of SB316 and the continuation of Maryland's Tier 2 RPS program.

NHA is a non-profit trade association dedicated to promoting hydropower as a renewable, zero-carbon, reliable energy resource that can help states achieve emissions reductions at least cost to consumers. NHA represents more than 68,000 workers at more than 245 organizations nationwide, many of which are located in Maryland and other PJM states.

1. Environmental Conservation Groups and the Hydropower Industry Agree – Hydropower is an Important Part of Addressing Climate Change

A multi-year dialogue between major environmental conservation groups and the hydropower industry last year concluded that hydropower is an important renewable energy resource, both in terms of its baseload renewable generation and its flexibility to integrate higher levels of wind and solar (see appendix).[1] At the same time, the hydropower industry is committed to restoring healthy rivers and supporting the biodiversity and recreational opportunities provided by our nation's waterways.

Reauthorization of Maryland's Tier 2 RPS program aligns with the mission of this partnership between industry and conservation groups and will advance both renewable energy generation and environmental restoration.

2. Wind, Solar, Hydropower and Storage Form the Backbone of a Renewable and Reliable Electric Grid

Within the next decade, more than half of the electricity generated in the United States can come from wind, solar, hydropower and energy storage.[2] The different clean energy industries have agreed to build a more resilient, efficient, sustainable and affordable grid, reduce carbon emissions, and increase competition through fair market rules.

Reauthorization of Maryland's Tier 2 RPS program will ensure hydropower is included as a part of Maryland's clean energy goals.

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[1] U.S. Environmental Community and Hydropower Industry Issue Joint Statement of Collaboration, Stanford Woods Institute for the Environment (October 2020). Available here.
[2] U.S. Renewable and Clean Energy Industries Set Sights on Market Majority (June 2020). Available here.

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3. While NHA Favors a Technology-Neutral Clean Energy Standard that Treats All Zero-Carbon Generation Sources Equally, Reauthorization of the RPS Tier 2 Program is Necessary at This Time

RPS laws passed by this Committee and by other states over the past two decades deserve credit for transforming the electricity system by driving multi-billion markets for wind, solar, and other nascent renewables. However, as these technologies have matured and the climate change crisis has become more urgent, a new goal has emerged: the transition to a 100% clean energy grid at lowest cost to consumers. An outcome-based target that values the performance of zero and low emission generation resources enables greater competition than antiquated RPS programs that artificially pick winners and losers.[3]

While NHA supports a clean energy standard for Maryland, we understand that such a proposal is still being evaluated and is unlikely to be enacted during this legislative session. As such, reauthorization of Maryland's Tier 2 RPS program is a critical step in the right direction.

Conclusion:

Hydropower is more than merely cement in the ground; it is a vibrant industry that provides zero-carbon electricity to an estimated 30 million Americans and has grown more than 2,000 megawatts since 2005 through upgrades to existing facilities and non-powered dams.[4] Reauthorization of Maryland's Tier 2 RPS program is essential to ensure ongoing maintenance and improvements are made to these zero-carbon resources, both related to power generation and environmental and recreational improvements.

NHA supports SB316, thanks the Committee again for the opportunity to speak today, and is happy to respond to any questions.

Sincerely,

Dennis Cakert
Senior Manager of Regulatory Affairs and State Policy
National Hydropower Association
601 New Jersey Ave NW
Washington, D.C. 20001
Email: Dennis@hydro.org

[3] "America's 'First' Renewable Resource Overlooked as States Embrace Clean Energy" by Malcolm Woolf, Greentech Media (January 2020). Available here.
[4] Department of Energy Hydropower Market Report (2017). Available here.

Executive Summary

U.S. Hydropower: Climate Solution and Conservation Challenge

Stanford University Uncommon Dialogue

October 13, 2020

The *"Joint Statement of Collaboration on U.S. Hydropower: Climate Solution and Conservation Challenge"* (Joint Statement), represents an important step to help address climate change by both advancing the renewable energy and storage benefits of hydropower and the environmental and economic benefits of healthy rivers.

The *Joint Statement* is the result of a two-and-a-half-year dialogue, co-convened by Stanford University's Woods Institute for the Environment, through its Uncommon Dialogue process, Stanford's Steyer-Taylor Center for Energy Policy and Finance, and the Energy Futures Initiative, to bring together the U.S. hydropower industry and the environmental and river conservation communities. The parties, listed on page three of this executive summary, are motivated by two urgent challenges. To rapidly and substantially decarbonize the nation's electricity system, the parties recognize the role that U.S. hydropower plays as an important renewable energy resource and for integrating variable solar and wind power into the U.S. electric grid. At the same time, our nation's waterways, and the biodiversity and ecosystem services they sustain, are vulnerable to the compounding factors of a changing climate, habitat loss, and alteration of river processes. Our shared task is to chart hydropower's role in a clean energy future in a way that also supports healthy rivers.

There are more than 90,000 existing dams throughout the country, of which about 2,500 have hydropower facilities for electricity generation. In the next decade, close to 30 percent of U.S. hydropower projects will come up for relicensing. As such, the parties focused on three potential opportunities:

- *Rehabilitating* both powered and non-powered dams to improve safety, increase climate resilience, and mitigate environmental impacts;
- *Retrofitting* powered dams and adding generation at non-powered dams to increase renewable generation; developing pumped storage capacity at existing dams; and enhancing dam and reservoir operations for water supply, fish passage, flood mitigation, and grid integration of solar and wind; and
- *Removing* dams that no longer provide benefits to society, have safety issues that cannot be cost-effectively mitigated, or have adverse environmental impacts that cannot be effectively addressed.

The potential development of new "closed loop" pumped storage to increase capacity to store renewable energy, including variable solar and wind, was also a focus of the dialogue. Closed

loop pumped storage systems do not involve construction of a new dam on a river, but they may have other impacts that need to be avoided, minimized or mitigated, including to surface and ground water.

The parties found inspiration in the precedent-setting 2004 agreement involving Maine's Penobscot River where the Penobscot Nation, the hydropower industry, environmentalists, and state and federal agencies agreed on a "basin-scale" project to remove multiple dams, while retrofitting and rehabilitating other dams to increase their hydropower capacity, improve fish passage and advance dam safety. After project completion in 2016, total hydropower generation increased, more than 2,000 miles of river habitat had improved access for the endangered Atlantic salmon and other species of sea-run fish, and the Penobscot River again helps support the realization of treaty rights and other aspects of tribal culture for the Penobscot Nation.

Driven by the urgent need to address the twin challenges of climate change and river conservation, the parties have identified seven areas for joint collaboration, detailed in the Joint Statement:

1. Accelerate Development of Hydropower Technologies and Practices to Improve Generation Efficiency, Environmental Performance, and Solar and Wind Integration

2. Advocate for Improved U.S. Dam Safety

3. Increase Basin-Scale Decision-Making and Access to River-Related Data

4. Improve the Measurement, Valuation of and Compensation for Hydropower Flexibility and Reliability Services and Support for Enhanced Environmental Performance

5. Advance Effective River Restoration through Improved Off-Site Mitigation Strategies

6. Improve Federal Hydropower Licensing, Relicensing, and License Surrender Processes

7. Advocate for Increased Funding for U.S. Dam Rehabilitation, Retrofits and Removals

Over the next 60 days, the parties have agreed to invite other key stakeholders, including tribal governments and state officials, to join the collaboration, and to address implementation priorities, decision-making, timetables, and resources.

In sum, the parties agree that maximizing hydropower's climate and other benefits, while also mitigating the environmental impact of dams and supporting environmental restoration, will be advanced through a collaborative effort focused on the specific actions developed in this dialogue. The parties commit themselves to seizing these critical and timely opportunities

Parties to the Joint Statement of Collaboration

American Rivers

World Wildlife Fund

Union of Concerned Scientists

Great River Hydro

American Whitewater

Natel Energy

National Hydropower Association

Eagle Creek Renewables

Low Impact Hydropower Institute

Rye Development

Hydropower Reform Coalition

Hydropower Foundation

Conveners of the Joint Statement of Collaboration

Stanford Woods Institute for the Environment

Steyer-Taylor Center for Energy Policy and Finance

Energy Futures Initiative

SB0316 - FAV.pdf
Uploaded by: Fahrig, Landon
Position: FAV

Maryland Energy Administration

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor
Mary Beth Tung, Director

TO: Members, Senate Finance Committee
FROM: Mary Beth Tung – Director, MEA
SUBJECT: SB0316 – Renewable Energy Portfolio Standard - Hydroelectric Power
DATE: January 21, 2021

MEA POSITION: FAV

The proposed legislation indefinitely extends the applicability of Tier 2 renewable sources within Maryland's Renewable Portfolio Standard (RPS).

Governor Hogan has promoted a more technology-inclusive approach when it comes to promoting clean energy; an "all-of-the-above" approach. Senate Bill 316 is a step in the right direction, recognizing the benefit of carbon-free electricity generation provided by certain hydroelectric resources.

MEA notes that a more technology-inclusive approach promotes competition to produce, and increases the available supply of, renewable energy credits (RECs). This leads to lower costs of compliance for the RPS programs. Because the cost of RPS compliance is ultimately borne by ratepayers, this in turn helps suppress the overall ratepayer impact of the program, while still offering the same carbon-free benefits.

For these reasons, MEA urges a **favorable report** for SB 316.

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Senate Bill 316

Position: SUPPORT

Testimony of Christopher Ercoli, on behalf of Brookfield Renewable Partners L.P. to members of Senate Finance on SB316 *Renewable Energy Portfolio Standard – Hydroelectric Power*

Brookfield Renewable thanks Chair Kelley, Vice Chair Feldman, and members of the Committee for the opportunity to provide comments on SB316. Brookfield supports SB316 and requests the continuation of Maryland's existing Tier 2 RPS program which has expired at the end of last year. This extension allows clean, reliable, and renewable baseload hydropower resources to continue contributing to Maryland's renewable energy and carbon reduction goals.

Brookfield Renewable Partners L.P. ("Brookfield Renewable") has a substantial presence in PJM, including nearly 1,251 MW of renewable hydroelectric resources, 386 MW of wind resources, and 133 MW of distributed solar resources. In Maryland, Brookfield Renewable's nearly 40 MW of renewable resources (20 MW Deep Creek hydroelectric facility and 15 MW of distributed solar) powers the equivalent of 60,000 Maryland homes, provides local tax revenue, offers over 60 recreational areas for families to enjoy, and creates direct jobs with over 70 vendor partners in the state.

The extension of Tier 2 is important for the following reasons:

- First, Tier 2 hydroelectric resources are the most cost-effective way of meeting Maryland's clean energy targets. In the past three compliance years (2018-2020) the Tier 2 obligation represented less than 1% of total compliance costs. Further, the fiscal note attached to SB316 affirmed there would be negligible effect on Maryland's ratepayers.

- Second, without an extension these resources will unjustly lose the ability to sell their electricity as 'renewable' to Maryland customers. Hydropower electricity is an important low-cost source of clean, non-emitting electricity for Maryland. Without action, these resources will be forced to export their environmental attributes to neighboring states and Maryland will lose the ability to count these cost-effective resources towards its renewable energy and carbon reduction goals in the future. This will increase costs for Maryland ratepayers.

- Third, as Maryland and the Mid-Atlantic region increasingly interconnect intermittent renewable resources, hydropower provides the flexibility and resiliency needed by grid

operators to help meet variable real-time electricity demand and balance the intermittency of wind and solar resources.

- Lastly, while many hydropower assets are existing, long-life resources, they require substantial capital expenditures over their lifetime to maintain and periodically undergo relicensing by the Federal Energy Regulatory Commission (FERC). Typically spanning 5-7 years and requiring millions in additional capital investments, FERC relicensing brings a facility up to the highest and best environmental standards of the day, allowing them to effectively operate as new resources. These ongoing reinvestments in renewable, clean, and carbon-free electricity is critical to Maryland's carbon reduction goals and should be reflected in the state's renewable portfolio standard.

In short, SB316 will ensure that hydropower continues to provide Maryland with all their energy, environmental, and grid reliability benefits. Brookfield Renewable thanks the Committee again for the opportunity to speak today and would be happy to respond to any questions.

SB 316_CBF_SUPPORT_DougMyes.pdf
Uploaded by: Myers, Doug
Position: FAV

CHESAPEAKE BAY FOUNDATION

Environmental Protection and Restoration
Environmental Education

Senate Bill 316
Renewable Energy Portfolio Standard – Hydroelectric Power

Date: January 21, 2021
To: Senate Finance

Position: **Support**
Contact: Doug Myers, dmyers@cbf.org

Chesapeake Bay Foundation (CBF) **SUPPORTS SB 316** which freezes hydropower at 2.5% of the current Renewable Portfolio Standard mix through time as wind and solar become a larger percent of the mix.

SB 316 is a prudent approach in transitioning the energy portfolio so that any reliance Maryland currently has on hydropower for electricity generation now won't be lost as new technology is developed and deployed.

CBF remains concerned that large scale hydropower generation facilities, while renewable, tend to come with unintended consequences such as the blockage of upstream fish migration leading to diminished populations of those species over time. Dams also cause unnatural capture and storage of bedload sediments while continuing to bypass nutrient pollution in dissolved form. This creates a dynamic where the scouring of bedload sediments following storm events delivers additional pulses of nutrients that can create phytoplankton blooms leading to depressed dissolved oxygen in the Bay.

Finally, as climate warms, hydropower reservoirs heat up and evaporate more than rivers. This dynamic has the potential to exacerbate water shortages during drought conditions and may stress sensitive species of fish. CBF appreciates the pragmatic approach SB 316 provides to transitioning our energy portfolio while incentivizing more renewable power and the jobs that will emerge through an energy transition responsive to the climate crisis.

CBF urges the Committee's FAVORABLE report on SB 316.

Maryland Office ▪ Philip Merrill Environmental Center ▪ 6 Herndon Avenue ▪ Annapolis ▪ Maryland ▪ 21403
Phone (410) 268-8816 ▪ Fax (410) 280-3513

SB316 CHESSA FWA.pdf
Uploaded by: Murray, David
Position: FWA

Before the General Assembly of the State of Maryland
Senate Finance Committee
January 21, 2021

Testimony of David W. Murray
Executive Director
Chesapeake Solar & Storage Association
SB 316: Renewable Energy Portfolio Standard - Hydroelectric Power
FAVORABLE WITH AMENDMENTS

Thank you for the opportunity to provide testimony on SB 316. I serve as Executive Director of the Chesapeake Solar & Storage Association, CHESSA, formerly known as the Maryland-DC-Virginia Solar Energy Industries Association (MDV-SEIA). CHESSA is the local trade association representing over 4,500 solar installers, developers, manufacturers, and other solar workers in Maryland. It is the recognized state affiliate of the Solar Energy Industries Association.

SB 316 extends Tier 2 eligibility to certain hydroelectric facilities in Maryland in the state's Renewable Portfolio Standard. CHESSA is unaffected by this change and appreciates the sponsors' willingness to include a friendly amendment to her bill. The amendment also makes a minor change to the state's Renewable Portfolio Standard, resulting in ratepayer savings.

The Maryland General Assembly should be justifiably proud in passing The Clean Energy Jobs Act (CEJA) in 2019. CEJA's approach of gradually increasing deployment of solar energy resources through 2030 did not, however, anticipate the onset of a global pandemic and the economic disruption it has caused, as well as permitting challenges that inhibited project deployment. While economic recovery may be in sight, the rate of solar deployment increase in CEJA – the ramp rate - will be significantly out of balance in the near future.

Through a proposed amendment to SB 316, CHESSA addresses this imbalance. To account for the unforeseen challenges chilling local solar project deployment in 2020 and 2021, the solar industry is proposing to "tweak" the ramp rate by moving the 14.5% target currently in the law from 2028 to 2030. This modest change will provide a reasonable approach that will still achieve the CEJA policy goal of 50% clean power by 2030.

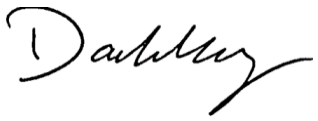
The proposed amendment simply injects a slower ramp rate in the earlier years, and accelerates in later years. This will accommodate both the impacts of the pandemic and the longer development cycle of projects. The amendment also adjusts the Alternative Compliance Payment (ACP) schedule to incentivize additional solar deployment in the medium term.

Based on the two adjustments, the amendment will result in actual ratepayer savings each year. According to the Chesapeake Solar & Storage Association's modeling, average monthly ratepayers savings will be $0.20 as a result of this change, with savings starting in 2023.

1425 K St NW #1000
Washington, DC 20005
Chesapeake Solar & Storage Association
director@mdvseia.org
(202) 780-9563

Thank you for your consideration.

Sincerely,



David Murray
Executive Director
Chesapeake Solar & Storage Association (CHESSA, formerly MDV-SEIA)

1425 K St NW #1000
Washington, DC 20005

Chesapeake Solar & Storage Association

director@mdvseia.org
(202) 780-9563