



MEMORANDUM

September 17, 2023

TO: Members of the Subcommittee on Energy, Climate, and Grid Security

FROM: Committee Majority Staff

RE: Hearing entitled “American Hydropower: Unleashing Reliable, Renewable, Clean Power Across the U.S.”

---

## I. INTRODUCTION

On Wednesday, September 20, 2023, at 10:00 a.m. in 2123 Rayburn House Office Building, the Subcommittee on Energy, Climate, and Grid Security will hold a hearing. The title of the hearing is “American Hydropower: Unleashing Reliable, Renewable, Clean Power Across the U.S.” Witnesses are by invitation only. The hearing will review the following legislation:

- **H.R. 4045**, the “Hydropower Clean Energy Future Act”

## II. WITNESSES

- **Terry Turpin**, Director of the Office of Energy Projects, Federal Energy Regulatory Commission;
- **John Hairston**, Administrator, Bonneville Power Administration;
- **Thomas P. Smith**, Chief of Operations and Regulatory Division, Army Corps of Engineers; and
- **Matt Lee-Ashley**, Chief of Staff, Council on Environmental Quality.

## III. BACKGROUND

Hydropower is an essential component of an “all of the above” energy strategy for the United States. In 2022, hydropower accounted for 6.2 percent of total U.S. electricity generation and 29 percent of electricity generation from renewables.<sup>1</sup> There is tremendous opportunity to expand hydropower production. However, less than 3 percent of the dams in the U.S. – approximately 2,200 dams – produce electricity. A report by the Department of Energy (DOE) found that U.S. hydropower production could grow by almost 50 percent from current levels by 2050 from a combination of upgrading existing hydropower facilities, adding generation capacity to existing non-powered dams and canals, and developing new hydropower facilities.<sup>2</sup>

---

<sup>1</sup> [U.S. Energy Information Administration, U.S. Electricity Generation by Energy Source.](#)

<sup>2</sup> [U.S. Department of Energy, Hydropower Vision \(2016\).](#) DOE found that U.S. hydropower could grow from 101 gigawatts (GW) of combined generating and storage capacity to nearly 150 GW by 2050, with more than 50 percent of this growth realized by 2030.

The benefits of clean, baseload hydropower to the nation's economy and energy security are numerous. The hydropower industry employs a workforce of over 70,000 workers, which, combined with the affordable electricity produced by hydropower projects, brings multiple economic benefits to the communities in which they are located and those that they serve.<sup>3</sup> Hydropower also contributes to flexible and reliable operations of the electric grid by providing energy, capacity, and ancillary services, as well as offering peaking flexibility, load-following, energy storage, and black-start capability.

### *Hydropower Licensing Under the Federal Power Act*

The Federal Energy Regulatory Commission (FERC) has jurisdiction over non-Federal hydropower projects. FERC is authorized under Part I of the Federal Power Act (FPA) to review applications for the construction of hydropower projects and oversee their operation and safety. Licensing new hydropower facilities and relicensing existing facilities requires extensive consultation with multiple Federal, State, and local government entities to balance a wide range of issues, including potential impacts on the natural environment, wildlife, recreation, aesthetics, cultural resources, and land use. FERC regulates over 1,600 non-Federal hydropower projects at over 2,500 dams, which together represents about 56 gigawatts of hydropower capacity, more than half of all the hydropower capacity in the United States. Under the FPA, non-Federal hydropower projects must be licensed by FERC if they are located on a navigable waterway; occupy Federal land; use surplus water from a federal dam; or are located on non-navigable waters over which Congress has jurisdiction under the Commerce Clause, involve post-1935 construction, and affect interstate or foreign commerce.

The FPA authorizes FERC to issue licenses for projects within its jurisdiction, and exemptions for projects that would be located at existing dams or within conduits that meet specific qualifying criteria. Licenses are generally issued for terms of between 30 and 50 years, and are renewable. Exemptions are perpetual, and thus do not need to be reviewed.<sup>4</sup>

In 2017 and 2018, the Committee held hearings and passed permitting reforms to expand the production of hydropower development that became law. The Water Resources Development Act of 2018 (WRDA) contained several bills to identify non-powered dams suitable for hydropower production and to incentivize environmental protections and upgrades to existing hydropower facilities. WRDA also contained bipartisan provisions that would allow for an expedited 2-year licensing program for qualifying non-powered dams and closed-loop pumped storage projects.<sup>5</sup> While FERC has issued guidance to fulfill its requirements under WRDA, testimony before the Committee has revealed that the program has not worked as intended because FERC does not have the ability to hold other agencies participating in the licensing process accountable to FERC's schedule.<sup>6</sup>

---

<sup>3</sup> [National Renewable Energy Laboratory, U.S. Hydropower Workforce: Challenges and Opportunities \(2022\).](#)

<sup>4</sup> [Federal Energy Regulatory Commission, Hydropower Primer, A Handbook of Hydropower Basics.](#)

<sup>5</sup> See [S. 3021, the America's Water Infrastructure Act of 2018 \(P.L. 115-270\)](#)

<sup>6</sup> See [Subcommittee on Energy, Climate, and Grid Security Hearing: "Oversight of FERC: Adhering to a Mission of Affordable and Reliable Energy for America, held on June 13, 2023.](#)

*Cooperating Agencies for Environmental and Resource Reviews*

While the FPA is the primary statute governing the regulation of non-federal hydropower projects, there are numerous other laws and regulations that require the cooperation of additional Federal agencies and States acting pursuant to federally-delegated authority. For example, the Rivers and Harbors Act authorizes the Secretary of the Army to grant the use of Army Corps of Engineers properties and dams. The National Environmental Policy Act (NEPA), and guidance issued by the Council on Environmental Quality (CEQ), directs Federal agencies to develop methods and procedures to consider environmental impacts of hydropower projects. The Clean Water Act (CWA) regulates the discharge of waters of the United States. The Endangered Species Act (ESA) requires agencies to ensure actions are not likely to jeopardize endangered or threatened species or habitat. There are also several other laws that require FERC to consult with other agencies to take environmental and resource matters into consideration.

#### **IV. LEGISLATION**

H.R. 4045, the “Hydropower Clean Energy Future Act” would amend the FPA to modernize the hydropower licensing process and promote next-generation hydropower projects. The legislation would expedite the non-Federal hydropower licensing process by requiring FERC, and all resource agencies with responsibilities in the licensing process, to establish a schedule and coordinate reviews, subject to interagency dispute resolution by CEQ and penalties for failure to meet scheduled deadlines. The legislation also contains an expedited 2-year licensing process for next-generation hydropower facilities and regulatory exemptions for small hydropower projects unlikely to threaten protected species.

#### **V. ISSUES**

The following issues may be examined at the hearing:

- Challenges and opportunities to expand hydropower production in the United States;
- Improving interagency cooperation and coordination to license hydropower projects; and
- Legislative recommendations to expand hydropower production.

#### **VI. STAFF CONTACTS**

If you have any questions regarding this hearing, please contact Brandon Mooney, Elise Krekorian, or Mary Martin of the Committee staff at (202) 225-3641.