112TH CONGRESS
2d Session
HOUSE OF REPRESENTATIVES
REPORT
112–563

HYDROPOWER REGULATORY EFFICIENCY ACT OF 2012

JUNE 29, 2012.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. UPTON, from the Committee on Energy and Commerce, submitted the following

R E P O R T

[To accompany H.R. 5892]

[Including cost estimate of the Congressional Budget Office]

The Committee on Energy and Commerce, to whom was referred the bill (H.R. 5892) to improve hydropower, and for other purposes, having considered the same, report favorably thereon without amendment and recommend that the bill do pass.

C O N T E N T S

PURPOSE AND SUMMARY

H.R. 5892, the "Hydropower Regulatory Efficiency Act of 2012," was introduced by Rep. Cathy McMorris Rodgers (together with Reps. DeGette, Dingell, Latta, Markey, Matheson, L. Smith, and Terry) on June 5, 2012. The legislation facilitates the development of new hydropower resources in the United States by streamlining the federal licensing requirements for small hydropower projects

and qualifying conduit hydropower facilities. The legislation also requires the Federal Energy Regulatory Commission to study ways to improve federal hydropower licensing for non-powered dams and closed-loop pumped storage facilities.

BACKGROUND AND NEED FOR LEGISLATION

Hydropower is the nation's largest renewable energy generation resource, providing nearly 8 percent of the electricity generated in the United States. Including pumped storage facilities, there are approximately 100,000 megawatts (MW) of current installed hydropower capacity in the United States. The hydropower sector employs approximately 200,000–300,000 workers across the United States and nearly 2,500 U.S. companies participate in the development, licensing, construction, and operation of hydropower projects.[1]

Ninety-three percent of U.S. hydroelectric facilities are operated by the private sector, public utilities, and state or local governments.[2] According to the Federal Energy Regulatory Commission (FERC), which regulates non-federal projects, these entities operate 1,645 hydropower facilities in every region of the U.S.[3] Many of these facilities are much smaller than the large federal dams typically associated with hydropower. FERC records show that approximately 71% of non-federal hydropower facilities have a capacity of less than 5 MW, demonstrating the importance of small hydropower projects to the nation's energy portfolio.[4]

Hydropower's Potential

Despite abundant resources, the production of electricity from water resources is not fully utilized. With the right federal policies in place, it may be possible to double hydropower capacity and create thousands of new domestic jobs. For instance, a study completed on behalf of the National Hydropower Association (NHA) concluded that by utilizing currently untapped resources, the United States could add approximately 60,000 MW of new hydropower capacity by 2025, potentially creating as many as 700,000 jobs in the process.[5]

A significant amount of new hydroelectric generation could come from maximizing existing infrastructure, particularly non-powered dams. For example, only about 3 percent of the nation's approxi-

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[1] National Hydropower Association, "Job Creation Opportunities in Hydropower," Final Report (September 20, 2009), available at: http://hydro.org/wp-content/uploads/2010/12/NHA_JobsStudy_FinalReport.pdf; NHA, "U.S. Hydropower Supply Chain Snapshot," available at: http://hydro.org/why-hydro/available/hydropower-supply-chain-snapshot/.

[2] Idaho National Laboratory, "A Study of United States Hydroelectric Plant Ownership" (June 2006), available at: http://hydropower.inl.gov/hydrofacts/pdfs/a_study_of_united_states_hydroelectric_plant_ownership.pdf.

[3] *See* FERC, "Issued Licenses," available at: http://ferc.gov/industries/hydropower/gen-info/licensing/licenses.xls; and "Issued Exemptions," available at: http://ferc.gov/industries/hydropower/gen-info/licensing/exemptions.xls.

[4] *See* Testimony of Jeff C. Wright, Director, Office of Energy Projects, FERC, before the Subcommittee on Energy and Commerce (May 9, 2012).

[5] National Hydropower Association, "Job Creation Opportunities in Hydropower," Final Report (September 20, 2009), available at: http://hydro.org/wp-content/uploads/2010/12/NHA_JobsStudy_FinalReport.pdf; Final Report Update with state breakdowns (April 26, 2010), available at http://hydro.org/wp-content/uploads/2011/02/NHA-Annual-Conf-Frantzis-pres-Final-7.pdf.

mately 80,000 dams currently generate hydropower.[6] The U.S. Department of

There also is significant growth potential in the small hydropower and conduit power sectors of the industry, as numerous project developers and local governments across the country consider retrofitting local dam infrastructure or investing in irrigation power projects and other conduit applications. For instance, the U.S. Bureau of Reclamation released a study identifying 373 existing canals and conduits that have the combined potential of generating over 365,000 MW-hours of additional hydropower annually.[8]

Additional Hydropower Benefits

Hydropower is a clean, renewable, and zero-emission electricity source; its utilization currently avoids 225 million metric tons of carbon dioxide in the U.S. each year—equal to the output of approximately 42 million passenger cars, according to NHA. Hydropower facilities also can provide grid reliability and stability services, such as the ability to quickly meet changing demand in electric load, firming for intermittent variable resources, such as wind and solar, and black start capability in times of an outage.

Regulation of Hydropower Development

Hydropower developments face a comprehensive regulatory approval process that involves many participants, including FERC, federal and state resource agencies, local governments, tribes, nongovernmental organizations and the public. The regulatory process to license and construct a hydropower facility can be considerably longer than the process for other renewable energy resources. For example, FERC's Integrated Licensing Process established specifically for hydropower projects is structured to be completed in 5 years, while the development timeline for wind and solar projects can be as short as 18–24 months.

Developers of small hydropower projects told the Committee that, due to the lack of economies of scale with smaller projects, the costs associated with the licensing process serve as a financial disincentive to pursue these facilities. In recent years, FERC has taken steps to improve the licensing process of small hydropower projects. However, FERC exemption applications can be lengthy and time consuming to prepare. For very small projects, the cost of FERC compliance can potentially exceed the cost of hydro equipment.

According to the Colorado Small Hydro Association, a typical exemption application for a small hydropower system may be on the order of 100 pages, including all the necessary explanatory text, diagrams, maps, letters and appendices. Compiling all the necessary information can take months, requiring expensive consulting assistance from engineers, attorneys, professionally-licensed surveyors and environmental consultants. Hiring consultants to complete FERC small hydro exemptions for small projects may typi-

[6] U.S. Army Corps of Engineers, National Inventory of Dams, chart: "Dams by Primary Purpose," available at: http://geo.usace.army.mil/pgis/f?p=397:5:48574067111801::NO.Energy and Oak Ridge National Laboratory recently released a report identifying 12,000 MW of new hydropower that could be developed at existing non-powered dams.[7]

[7] U.S. Department of Energy, "An Assessment of Energy Potential at Non-Powered Dams in the United States" (April 2012), available at: http://www1.eere.energy.gov/water/pdfs/npd_report.pdf.

cally cost somewhere between $10,000 and $30,000—a price tag that often outweighs the total hydro equipment installation cost for a typical small (1–2 kilowatt) residential micro-hydro system.

FERC currently reports 578 proposed projects with pending license and license exemption applications, as well as issued and pending preliminary permits.[9] This represents over 76,000 MW in new hydropower capacity pending at FERC.[10] By improving the hydropower licensing process, H.R. 5892 could facilitate the development of many of these and future hydropower projects.

Supporters of the Legislation

Supporters of the legislation include NHA, American Rivers, the Colorado Small Hydropower Association, and Voith Hydropower.

HEARINGS

On May 9, 2012, the Subcommittee on Energy and Power held a legislative hearing on a discussion draft of the "Hydropower Regulatory Efficiency Act of 2012" and received testimony from:

- Mr. Jeffrey C. Wright, Director, Office of Energy Projects, Federal Energy Regulatory Commission;
- Mr. Andrew Munro, Director, Customer Service Division, Grant County Public Utility Commission, on behalf of the National Hydropower Association;
- Mr. Matthew Rice, Colorado Director, American Rivers; and,
- Mr. Kurt Johnson, President, Colorado Small Hydro Association.

COMMITTEE CONSIDERATION

A discussion draft of the "Hydropower Regulatory Efficiency Act of 2012" was released on May 2, 2012 by Representatives Cathy McMorris Rodgers and Diana DeGette.

On May 9, 2012, the Subcommittee on Energy and Power held a legislative hearing on the discussion draft.

On June 5, 2012, H.R. 5892, the "Hydropower Regulatory Efficiency Act of 2012," was introduced by Representative Cathy McMorris Rodgers (together with Representatives DeGette, Dingell, Latta, Markey, Matheson, L. Smith, and Terry).

On June 7, 2012, the Subcommittee on Energy and Power met in open markup session to consider H.R. 5892. No amendments were offered during the markup and the subcommittee ordered H.R. 5892 favorably reported, by voice vote, to the full committee.

On June 19 and 20, 2012, the Committee on Energy and Commerce met in open markup session. No amendments were offered during the markup and the Committee ordered H.R. 5892 favorably reported, by voice vote, to the House of Representatives.

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[9] These pending projects include all hydropower technologies: conventional, conduit, pumped storage, and new marine hydrokinetic. Arrived at by combining project figures from FERC generated spreadsheets. *See* "Pending Licenses, Relicenses and Exemptions" (total projects: 62 equaling 3,658.753 MW), available at: http://ferc.gov/industries/hydropower/gen-info/licensing/pending-lre.xls; "All Issued Preliminary Permits" (total projects: 433 equaling 60,679.366 MW), available at: http://ferc.gov/industries/hydropower/gen-info/licensing/issued-pre-permits.xls; and "All Pending Preliminary Permits" (total projects 83 equaling 12,211.573 MW), available at: http://ferc.gov/industries/hydropower/gen-info/licensing/pending-pre-permits.xls.

[10] *Id.*

COMMITTEE VOTES

In compliance with clause 3(b) of rule XIII of the Rules of the House of Representatives, H.R. 5892 was reported by voice vote with a majority quorum present. There was no request for a recorded vote.

COMMITTEE OVERSIGHT FINDINGS

Pursuant to clause 3(c)(1) of rule XIII of the Rules of the House of Representatives, the Committee made findings that are reflected in this report.

STATEMENT OF GENERAL PERFORMANCE GOALS AND OBJECTIVES

H.R. 5892 facilitates the development of new hydropower resources in the United States by streamlining the federal licensing requirements for small hydropower projects and qualifying conduit hydropower facilities. The legislation also requires the Federal Energy Regulatory Commission to study ways to improve federal hydropower licensing for non-powered dams and closed-loop pumped storage facilities.

NEW BUDGET AUTHORITY, ENTITLEMENT AUTHORITY AND TAX EXPENDITURES

In compliance with clause 3(c)(2) of rule XIII of the Rules of the House of Representatives, the Committee finds that H.R. 5892, the "Hydropower Regulatory Efficiency Act of 2012," would result in no new or increased budget authority, entitlement authority, or tax expenditures or revenues.

EARMARKS

In compliance with clause 9(e), 9(f), and 9(g) of rule XXI of the Rules of the House of Representatives, the Committee finds that H.R. 5892, the "Hydropower Regulatory Efficiency Act of 2012," contains no earmarks, limited tax benefits, or limited tariff benefits.

COMMITTEE COST ESTIMATE

Pursuant to clause 3(c)(3) of rule XIII of the Rules of the House of Representatives, the following is the cost estimate provided by the Congressional Budget Office pursuant to section 402 of the Congressional Budget Act of 1974.

JUNE 27, 2012.

Hon. FRED UPTON,
Chairman, Committee on Energy and Commerce,
House of Representatives, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the enclosed cost estimate for H.R. 5892, the Hydropower Regulatory Efficiency Act of 2012.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Megan Carroll.

Sincerely,

DOUGLAS W. ELMENDORF.

Enclosure.

H.R. 5892—Hydropower Regulatory Efficiency Act of 2012

Under the Federal Power Act, the Federal Energy Regulatory Commission (FERC) issues licenses and regulates hydroelectric facilities, regardless of size. H.R. 5892 would amend current law to allow FERC to extend certain permits related to hydroelectric facilities and exempt small hydroelectric facilities with generating capacity of 10 megawatts or less from FERC's licensing requirements. In addition, the bill would direct the Secretary of Energy to study the feasibility of generating hydroelectric power using water flowing through conduits or at facilities that store water. Finally, the bill would authorize FERC to carry out pilot projects to demonstrate the potential of generating hydroelectric power at nonpowered dams and water storage facilities.

Based on information from FERC and the Department of Energy (DOE), CBO estimates that implementing H.R. 5892 would have no significant impact on the federal budget. CBO anticipates that the proposed changes to FERC's permitting and licensing requirements would reduce the commission's workload. We also estimate that FERC would spend about $1 million on pilot projects authorized under the bill, assuming appropriation of necessary amounts. However, because FERC recovers 100 percent of its costs through user fees, any change in the agency's costs (which are controlled through annual appropriation acts) would be offset by an equal change in fees that the commission charges, resulting in no net change in federal spending. Finally, CBO estimates that any increased costs to DOE to prepare the study required under H.R. 5892 would be negligible. Enacting H.R. 5892 would not affect direct spending or revenues; therefore, pay-as-you-go procedures do not apply.

H.R. 5892 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act and would impose no costs on state, local, or tribal governments.

The CBO staff contact for this estimate is Megan Carroll. The estimate was approved by Theresa Gullo, Deputy Assistant Director for Budget Analysis.

FEDERAL MANDATES STATEMENT

The Committee adopts as its own the estimate of Federal mandates prepared by the Director of the Congressional Budget Office pursuant to section 423 of the Unfunded Mandates Reform Act.

ADVISORY COMMITTEE STATEMENT

No advisory committees within the meaning of section 5(b) of the Federal Advisory Committee Act were created by this legislation.

APPLICABILITY TO LEGISLATIVE BRANCH

The Committee finds that the legislation does not relate to the terms and conditions of employment or access to public services or accommodations within the meaning of section 102(b)(3) of the Congressional Accountability Act.

SECTION-BY-SECTION ANALYSIS OF LEGISLATION

Section 1—Short title; table of contents

Section 1 provides the short title of "Hydropower Regulatory Efficiency Act of 2012" and provides a table of contents.

Section 2—Findings

Section 2 sets forth findings on the potential power generation and economic benefits resulting from increased hydropower development in the United States.

Section 3—Promoting small hydroelectric power projects

Section 3 increases the licensing exemption threshold for small hydropower projects from 5 megawatts (MW) to 10 MW.

Section 4—Promoting conduit hydropower projects

Section 4(a) provides that a "qualifying conduit hydropower facility" is not required to obtain a FERC license. The term is defined as a hydropower project that (1) uses a non-federally owned conduit, (2) has an installed capacity of 5 megawatts or less, and (3) does not currently have a license or exemption. An entity proposing to construct a qualifying conduit hydropower facility is required to file a notice of intent with FERC that includes sufficient information to demonstrate that the facility meets the qualifying criteria. If FERC makes an initial determination that the proposed project meets the criteria, it shall publish public notice of the notice of intent to construct the project. If no entity contests that the project meets the criteria within 45 days, the project is deemed to meet the criteria. If an entity contests whether the project meets the criteria, FERC is required to promptly issue a written determination as to whether the facility meets the criteria. Section 4(a) also expands eligibility for the existing conduit exemption to facilities with an installed capacity of up to 40 megawatts.

Section 4(b) makes conforming amendments to section 405 of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2705).

Section 5—FERC authority to extend preliminary permit periods

Section 5 allows FERC to extend the term of a preliminary permit for up to 2 years, for a total of 5 years if FERC finds that the permittee has carried out activities under the permit in good faith and with reasonable diligence.

Section 6—Promoting hydropower development at non-powered dams and closed-loop pumped storage projects

Section 6 directs FERC to study the feasibility of establishing a 2–year licensing process for hydropower development at non-powered dams and closed-loop pumped storage projects. The results of the program shall be reported to Congress.

Section 7—DOE study of pumped storage and potential hydropower from conduits

Section 7 directs the Secretary of Energy to complete a study of: (1) the technical flexibility and potential of certain new and existing pumped storage facilities to support intermittent renewable

generation and provide grid reliability benefits; and (2) the range of opportunities for hydropower from conduits in the United States.

CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

In compliance with clause 3(e) of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman):

PUBLIC UTILITY REGULATORY POLICIES ACT OF 1978

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TITLE IV—SMALL HYDROELECTRIC POWER PROJECTS

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SEC. 405. SIMPLIFIED AND EXPEDITIOUS LICENSING PROCEDURES.

(a) * * *

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(d) EXEMPTIONS FROM LICENSING REQUIREMENTS IN CERTAIN CASES.—The Commission may in its discretion (by rule or order) grant an exemption in whole or in part from the requirements (including the licensing requirements) of part I of the Federal Power Act to small hydroelectric power projects having a proposed installed capacity of [5,000] *10,000* kilowatts or less, on a case-by-case basis or on the basis of classes or categories of projects, subject to the same limitations (to ensure protection for fish and wildlife as well as other environmental concerns) as those which are set forth in subsections (c) and (d) of section 30 of the Federal Power Act with respect to determinations made and exemptions granted under [subsection (a) of such section 30] *subsection (b) of such section 30*; and subsections (c) and (d) of such section 30 shall apply with respect to actions taken and exemptions granted under this subsection. Except as specifically provided in this subsection, the granting of an exemption to a project under this subsection shall in no case have the effect of waiving or limiting the application (to such project) of the second sentence of subsection (b) of this section.

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FEDERAL POWER ACT

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PART I

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SEC. 5. *(a)* Each preliminary permit issued under this Part shall be for the sole purpose of maintaining priority of application for a license under the terms of this Act for such period or periods, not exceeding a total of three years, as in the discretion of the Commission may be necessary for making examinations and surveys, for

preparing maps, plans, specifications, and estimates, and for making financial arrangements.

(b) The Commission may extend the period of a preliminary permit once for not more than 2 additional years beyond the 3 years permitted by subsection (a) if the Commission finds that the permittee has carried out activities under such permit in good faith and with reasonable diligence.

(c) Each such permit shall set forth the conditions under which priority shall be maintained.

(d) Such permits shall not be transferable, and may be canceled by order of the Commission upon failure of permittees to comply with the conditions thereof or for other good cause shown after notice and opportunity for hearing.

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SEC. 30. [(a) Except as provided in subsection (b) or (c), the Commission may grant an exemption in whole or in part from the requirements of this part, including any license requirements contained in this part, to any facility (not including any dam or other impoundment) constructed, operated, or maintained for the generation of electric power which the Commission determines, by rule or order—

[(1) is located on non-Federal lands, and

[(2) utilizes for such generation only the hydroelectric potential of a manmade conduit, which is operated for the distribution of water for agricultural, municipal, or industrial consumption and not primarily for the generation of electricity.

[(b) The Commission may not grant any exemption under subsection (a) to any facility the installed capacity of which exceeds 15 megawatts (40 megawatts in the case of a facility constructed, operated, and maintained by an agency or instrumentality of a State or local government solely for water supply for municipal purposes).] *(a)(1) A qualifying conduit hydropower facility shall not be required to be licensed under this part.*

(2)(A) Any person, State, or municipality proposing to construct a qualifying conduit hydropower facility shall file with the Commission a notice of intent to construct such facility. The notice shall include sufficient information to demonstrate that the facility meets the qualifying criteria.

(B) Not later than 15 days after receipt of a notice of intent filed under subparagraph (A), the Commission shall—

(i) make an initial determination as to whether the facility meets the qualifying criteria; and

(ii) if the Commission makes an initial determination, pursuant to clause (i), that the facility meets the qualifying criteria, publish public notice of the notice of intent filed under subparagraph (A).

(C) If, not later than 45 days after the date of publication of the public notice described in subparagraph (B)(ii)—

(i) an entity contests whether the facility meets the qualifying criteria, the Commission shall promptly issue a written determination as to whether the facility meets such criteria; or

(ii) no entity contests whether the facility meets the qualifying criteria, the facility shall be deemed to meet such criteria.

(3) For purposes of this section:

(A) The term "conduit" means any tunnel, canal, pipeline, aqueduct, flume, ditch, or similar manmade water conveyance that is operated for the distribution of water for agricultural, municipal, or industrial consumption and not primarily for the generation of electricity.

(B) The term "qualifying conduit hydropower facility" means a facility (not including any dam or other impoundment) that is determined or deemed under paragraph (2)(C) to meet the qualifying criteria.

(C) The term "qualifying criteria" means, with respect to a facility—

(i) the facility is constructed, operated, or maintained for the generation of electric power and uses for such generation only the hydroelectric potential of a non-federally owned conduit;

(ii) the facility has an installed capacity that does not exceed 5 megawatts; and

(iii) on or before the date of enactment of the Hydropower Regulatory Efficiency Act of 2012, the facility is not licensed under, or exempted from the license requirements contained in, this part.

(b) Subject to subsection (c), the Commission may grant an exemption in whole or in part from the requirements of this part, including any license requirements contained in this part, to any facility (not including any dam or other impoundment) constructed, operated, or maintained for the generation of electric power which the Commission determines, by rule or order—

(1) utilizes for such generation only the hydroelectric potential of a conduit; and

(2) has an installed capacity that does not exceed 40 megawatts.

(c) In making the determination under **[**subsection (a)**]** *subsection (b)* the Commission shall consult with the United States Fish and Wildlife Service and the State agency exercising administration over the fish and wildlife resources of the State in which the facility is or will be located, in the manner provided by the Fish and Wildlife Coordination Act (16 U.S.C. 661, et seq.), and shall include in any such exemption—

(1) * * *

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(d) Any violation of a term or condition of any exemption granted under **[**subsection (a)**]** *subsection (b)* shall be treated as a violation of a rule or order of the Commission under this Act.

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