



Infrastructure Bill Incentives for Hydro, Dam Safety, and Dam Removal

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- Over 25 years experience in Washington, DC providing federal program development services to clients.
- SMI supports well over 100 clients per year and maintains an active network of 500+ companies and organizations comprised of former clients, supply chain partners of current and former clients, national labs, universities, technology providers, and more.

Infrastructure Investment and Jobs Act

- Historic investment in our nation's core infrastructure priorities – including roads and bridges, rail, transit, ports, airports, broadband, but also electric grid, water systems, dams, and hydropower generation.
- Provides for **\$1.2 trillion** in spending, **\$550 billion** of which would be new federal spending allocated over the next 5 years.
- Bipartisan legislation passed by a vote of 69-30 in Senate on August 10. Passed the House of Representatives by a vote of 228 – 206 on November 5. Signed by President Biden on November 15.
- Hydropower industry, environmental NGOs, and dam safety advocates, all worked together to develop and push a funding package for inclusion in the bill for hydropower and dams, the “3Rs” – retrofits, rehabilitation, and removal.

The 3Rs Explained

- As part of Stanford University's Uncommon Dialogue process, the 3Rs is the unifying concept by which the participating groups sought to find common ground **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.**

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.

Original Uncommon Dialogue Parties

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



Overview of Hydro, Dam Safety, and Dam Removal Funding

Roughly **\$2.4 billion** of hydro, dam safety, and dam removal funding that was included in the IJA.

Hydropower incentives received **\$753 million**, with additional funds for R&D activities for hydropower and marine energy technologies (closer to \$900 million when these are included).

Dam safety and removal received **\$1.6 billion** (in addition to other programmatic funding).

Comments/Q&A

Questions?

Hydropower Incentive Programs

- The IJA provides funds for 2 existing hydro incentives: 1) the EAct of 2005 Section 242 hydroelectric production incentive payment program; and 2) the EAct of 2005 Section 243 hydroelectric efficiency improvement incentive payment program.
- The IJA also creates a new incentive payment program adding Section 247 to the Energy Policy Act of 2005 for “maintaining and enhancing hydroelectricity.”
- All incentive programs are administered by the **Department of Energy**.
- Section 242 funded at **\$125 million**.
- Section 243 funded at **\$75 million**.
- Section 247 funded at **\$553 million**.
- Total funding for 3 incentives programs is **\$753 million**.

Section 242 Details

- Provides a **1.8 cents per kilowatt hour** payment (adjusted for inflation).
- Qualifying projects include:
 - Adding generation to an **existing dam**.
 - Adding generation to an **existing conduit**.
 - New **greenfield projects** that are 20 MW or under, have received a construction authorization from FERC, and are constructed in an area of inadequate electric service.
- Existing dam or conduit – must have been built before **November 15, 2021**.
- Payments to a qualified facility are capped at **\$1 million a year** and can be claimed for **10 years**.
- Eligibility window is open through **September 30, 2027**.

Section 243 Details

- Provides a payment to hydropower owners/operators at existing dams for capital improvements in the facilities that are directly related to improving the efficiency of such facilities by at least **3 percent**.
- Incentive payment shall not exceed **30 percent** of the cost of the capital improvement and is capped at **\$5 million** to a single facility in any one fiscal year.

Section 247 Details

- This is the new incentive program.
- Provides a payment to owners/operators of qualified hydroelectric facilities for capital improvements directly related to: **improving grid resiliency; improving dam safety; or environmental improvements.**
- Incentive payment shall not exceed **30 percent** of the cost of the capital improvement and is capped at **\$5 million**. And there shall not be more than 1 payment made at a single qualified hydroelectric facility in any 1 fiscal year.
- Hydro facilities must have been placed in service before November 15, 2021.

Section 247 Details continued...

- **Specific grid resiliency language in the IJA Section 247 program:**

“(1) improving grid resiliency, including—

“(A) adapting more quickly to changing grid conditions;

“(B) providing ancillary services (including black start capabilities, voltage support, and spinning reserves);

“(C) integrating other variable sources of electricity generation; and

“(D) managing accumulated reservoir sediments”

Section 247 Details continued...

- **Specific dam safety language in the IJA Section 247 program:**

“(2) improving dam safety to ensure acceptable performance under all loading conditions (including static, hydrologic, and seismic conditions), including—

“(A) the maintenance or upgrade of spillways or other appurtenant structures;

“(B) dam stability improvements, including erosion repair and enhanced seepage controls; and

“(C) upgrades or replacements of floodgates or natural infrastructure restoration or protection to improve flood risk reduction”

Section 247 Details continued...

- **Specific environmental improvements language in the IJA Section 247 program:**

“(3) environmental improvements, including—

“(A) adding or improving safe and effective fish passage, including new or upgraded turbine technology, fish ladders, fishways, and all other associated technology, equipment, or other fish passage technology to a qualified hydroelectric facility;

“(B) improving the quality of the water retained or released by a qualified hydroelectric facility;

“(C) promoting downstream sediment transport processes and habitat maintenance; and

“(D) improving recreational access to the project vicinity, including roads, trails, boat ingress and egress, flows to improve recreation, and infrastructure that improves river recreation opportunity.”

Implementation Status

February 10: Applications closed for Section 242 program for calendar year 2020 generation. (CY 2021 applications in fall 2022.)

March 10: Semiannual WPTO stakeholder webinar

Spring/Summer 2022: Specific 242, 243, 247 webinars
Notice of proposed rulemakings (NOPRs)
Requests for Information (RFIs)
Guidance document issuance

Spring/Summer 2023: Announcement of funding opportunities for 243/247 programs

DOE Proposed Timeline

Section 243 / 247 Timeline

Tentative Section 243 / 247 Timeline.

*these dates are subject to change.

	<u>Near Term</u>				<u>Long Term</u>		
	<u>May 2022</u>	<u>June 2022</u>	<u>July 2022</u>	<u>August 2022</u>	<u>Fall 2022</u>	<u>Winter 2023</u>	<u>Spring 2023</u>
Section 243	Publish RFI (60 days)	Hold Public Workshop	Review Public Comments	Draft Interim guidance	Issue FY22 Interim guidance	Draft NOPR	Publish NOPR
Section 247	Publish RFI (60 days)	Hold Public Workshop	Review Public Comments		Draft guidance	Public Comment on draft Guidance	Issue guidance

Comments/Q&A

Questions?

Hydropower Tax Incentives

Under current law, certain hydropower facilities are eligible for the production tax credit (PTC) and Investment tax credit (ITC). These include:

- incremental hydropower production attributable to efficiency improvements or additions of capacity;
- adding generating facilities to non-hydroelectric dams, with certain limitations; and
- marine and hydrokinetic energy facilities (including conduit power applications).

New greenfield hydropower projects that involve new dam construction or new diversions are currently not eligible.

PTC and ITC Details

PTC rate: When passed the rate was 1.5 cents per kWh produced, adjusted for inflation. For 2021, the adjusted rate is 2.5 cents per kWh. However, for hydropower facilities, and some other renewables, the rate is reduced by half. For 2021, it was **1.3 cents per kWh**.

PTC length: The credit is taken annually for 10 years.

ITC Eligibility: Based off the PTC. If you are eligible under the PTC, you can elect to take the ITC.

ITC Rate: Is a one-time **30%** credit based on the cost of the project.

NOTE: Both the PTC and ITC expired at the end of December 2021.

Reconciliation Bill and Potential Changes

Congress is working on a “budget reconciliation” bill that contains a significant renewable and clean energy tax package that would extend and make changes to the existing PTC and ITC. Potential changes include:

- 5-year extension of the existing credits, with transition to new clean energy tax credit system for an additional 5 years.
- Reduction of credit rate, but option to receive full credit and bonus credits if prevailing wage, apprenticeship and domestic content requirements are met.
- Creation of a “direct pay” mechanism monetizing the credits.

Hydro-Specific Changes

The current Senate version of the reconciliation tax package as developed by Senator Wyden (D-OR) includes:

- Eliminating the ½ credit limitation for hydropower facilities.
- A new ITC for **hydropower environmental improvement property** at existing dams. Eligible investments would include:
 - 1) adding or improving safe and effective fish passage;
 - 2) maintaining or improving the quality of the water retained or released by a dam; or
 - 3) promoting downstream sediment transport processes and habitat maintenance.

Next Steps

Senate negotiations were on hold, but now restarting.

Uncommon Dialogue partners still pushing for dam safety, dam removal costs to be included under the new hydro ITC.

Congress has until the end of the 2022 fiscal year (end of September) in order to pass the reconciliation bill.

If bill does not pass, may only see a short-term extension of existing credits at the end of the year.



Questions?
Thank you!

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