

**Statement of Kerry McCalman, Senior Advisor for Hydropower
Bureau of Reclamation
U.S. Department of the Interior
before the
Committee on Natural Resources
Subcommittee on Water and Power
U.S. House of Representatives**

**Hearing: “Keeping Hydropower Affordable and Reliable: The Protection of Existing
Hydropower Investments and the Promotion of New Development.”
September 19, 2013**

Chairman McClintock, Ranking Member Napolitano and members of the Subcommittee, I am Kerry McCalman, Senior Advisor for hydropower at the Bureau of Reclamation (Reclamation). I am joined here today by Mr. Tim Spisak, Deputy Assistant Director for Minerals and Realty Management for the Bureau of Land Management (BLM) to address any questions with respect to the BLM’s activities involving the Enloe Hydropower Project (Enloe Project) in the state of Washington. I am pleased to provide the views of the Department of the Interior (Department) on our efforts to protect existing investments in hydropower and promote the development of new hydropower, both by Reclamation, BLM, and our non-federal partners. We share the Subcommittee’s interest in this resource, and my statement will detail what we believe is a strong Reclamation track record in the promotion of sustainable and renewable hydropower development.

Bureau of Reclamation

As you know, Reclamation is the second largest producer of hydropower in the country. Reclamation owns and operates 53 hydroelectric plants, comprising over 14.6 million kilowatts of installed capacity. Annually, Reclamation plants generate more than 40 billion kilowatt hours of electricity (enough to serve approximately 3.5 million homes), yield nearly one billion dollars in power revenues, and offset approximately 27 million tons of carbon dioxide.

My testimony will first address on-going efforts to protect the existing federal hydropower investment, followed by an overview of on-going efforts to promote new hydropower development. For context, the average Reclamation hydroelectric plant is over fifty years old.¹ To ensure the continued reliability, efficiency, and safety of our aging hydropower assets, Reclamation’s operation, maintenance and replacement program continually looks for opportunities to upgrade and modernize our assets through capital improvements. For example, Reclamation has replaced 20 turbines since 2009, yielding an approximate three percent efficiency increase at each affected unit, resulting in an additional 200 million kilowatt hours of annual generation.

¹ <http://www.usbr.gov/power/data/recl-wid.pdf>

Moving forward, Reclamation has identified an additional 30 plants that could potentially increase their annual generation by greater than three percent (some as much as 6.7 percent) through efficiency improvements (i.e. turbine replacements/refurbishments). In total, these improvements could result in an additional 337 million kilowatt hours of annual generation. Capital improvements have been scheduled for four of the additional 30 plants by FY2017.

Reclamation works closely with its federal power customers, who in many instances fund these improvements to time the replacements where they make the most economic sense.

Another way Reclamation is protecting the existing federal hydropower investment is through the deployment of computer-based unit dispatch optimization programs, which allow plants to maximize generation per acre foot of water by operating more efficiently. Optimization systems have been studied and tested at a handful of Reclamation plants, including Grand Coulee, since 2006, and we have utilized the lessons learned to build a standardized optimization system that will be deployed at all of Reclamation's hydropower plants. The first standardized system was installed in August 2013 at the Black Canyon Control Center and will provide dispatch recommendations for Black Canyon, Palisades, Minidoka, and Anderson Ranch plants. The system is expected to facilitate an additional 10 to 30 million kilowatt hours of annual generation. Installations at Reclamation's remaining power facilities have been scheduled through FY2016, and it is estimated that when standardized optimization systems are installed at all Reclamation plants, 400 to 1,200 million kilowatt hours of additional annual generation could be achieved.

Transitioning to new hydropower development, Reclamation has worked aggressively to identify opportunities for new development at existing Reclamation facilities pursuant to a 2010 Memorandum of Understanding (MOU) entered into by the Secretaries of Energy and the Interior, and the Assistant Secretary of the Army (Civil Works)². The MOU has been described previously before this Subcommittee, and consistent with its provisions, Reclamation in March 2011 released the "Hydropower Resource Assessment at Existing Reclamation Facilities"³ study that identified technical hydropower potential at existing Reclamation facilities, namely dams. The report identified over 268 megawatts of potential capacity and over 1.165 million megawatt-hours of potential annual generation on 191 existing Reclamation sites. Building on the 2011 report, Reclamation released the "Site Inventory and Hydropower Energy Assessment of Reclamation Owned Conduits"⁴ study in March 2012. The 2012 report, focused on conduits, identified over 100 megawatts of potential capacity and over 365,000 megawatt-hours of potential annual generation on 373 existing Reclamation conduit sites.

In total, the two studies revealed that an additional 1.5 million megawatt-hours of renewable energy could be generated at existing Reclamation sites. The two assessments are translating

² <http://www.usbr.gov/power/SignedHydropowerMOU.pdf>, 2010

³ <http://www.usbr.gov/power/AssessmentReport/index.html>

⁴ <http://www.usbr.gov/power/CanalReport/index.html>

into work at 27 facilities, comprising over 100 MW in new capacity, capable of generating over 300,000 megawatt-hours, annually (enough to serve approximately 27,000 homes). Based on industry averages, an estimated 200-300 full time employees will be needed to operate and maintain the 27 facilities and ensure regulatory compliance.

All of this is underway while we implement recently improved guidelines on the issuance of Lease of Power Privileges (LOPPs) for non-federal hydropower on Reclamation facilities. Beginning in 2011, Reclamation worked diligently with our power, water and environmental stakeholders and the hydropower industry to improve our LOPP process. This collaboration culminated in the release of an updated LOPP directive and standard in September 2012.⁵ The updated directive and standard establishes a more coherent and transparent LOPP process, designed to support sustainable, non-federal hydropower development. To complement the updated directive and standard, Reclamation has made an assortment of resources available for prospective developers and stakeholders on the LOPP website available at:

<http://www.usbr.gov/power/lopp>.

Our new LOPP process is also being applied alongside recently enacted legislation, now Public Law 113-24, the ‘Bureau of Reclamation Small Conduit Hydropower Development and Rural Jobs Act.’ As the Subcommittee is well aware, among the provisions of PL 113-24 is language clarifying that the development of new hydropower on federal conduit facilities is to be licensed by Reclamation pursuant to its authorities, rather than by the Federal Energy Regulatory Commission (FERC) under the Federal Power Act. This language will streamline the issuance of LOPP contracts by eliminating the Reclamation-FERC jurisdictional consultation that has occurred on some conduit hydropower proposals in the past. On the whole, PL 113-24’s provisions are consistent with Reclamation’s existing processes, and should serve to facilitate prospective development of new conduit hydropower.

Bureau of Land Management

Although the Bureau of Land Management (BLM) does not have management authority for hydropower projects, the BLM administers withdrawals of public lands, manages land that hosts hydropower projects, and can offer stipulations and protections through the FERC licensing process. One such hydropower project with which the BLM has recently been involved is the Enloe Project in Washington. The BLM Wenatchee Field Office manages the project area for resource protection and sustainability as directed by its resource management plan (RMP).

The BLM Wenatchee Field Office has been working with the Okanogan Public Utility District (PUD) on the right-of-way (ROW) grant required to move forward with the project. During review of the final FERC Environmental Assessment (EA) and resulting FERC license, the BLM identified a number of measures that needed to be addressed in order for the BLM to meet the resource protection and sustainability goals of the RMP. The BLM discussed these issues with

⁵ <http://www.usbr.gov/recman/fac/fac04-08.pdf>

the PUD, and both parties agreed to add the required measures to the Enloe Dam Plan of Development as well as the BLM's ROW grant. Following issuance of the FERC license in July 2013, the BLM moved forward to finalize the ROW grant, including using the NEPA analysis provided in the FERC Final EA to meet its NEPA responsibilities without duplicating analyses and ensure an expeditious and effective environmental review. Earlier this month, the BLM presented the ROW grant documents to the Okanogan PUD. The ROW grant documents include the additional terms and conditions mutually developed and agreed upon by both parties. The BLM and the PUD continue to build on their positive working relationship through improved communications for the term of the license and beyond.

In closing, I would like to affirm that the Department will continue to review and assess potential new hydropower projects that provide a high economic return for the nation, are energy efficient, and can be accomplished in accordance with protections for fish and wildlife, the environment, or recreation.

Thank you for the opportunity to discuss our work to protect and promote sustainable hydropower. Mr. Spisak and I are pleased to answer questions at the appropriate time.