

Testimony of

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Oversight Hearing on

***Investment in Small Hydropower: Prospects of Expanding Low-Impact and
Affordable Hydropower Generation in the West***

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I. Introduction

Chairwoman Napolitano and Members of the Subcommittee:

My name is Jeff Wright and I am the Director of the Office of Energy Projects at the Federal Energy Regulatory Commission (Commission or FERC). I appreciate the opportunity to appear before you to discuss prospects for advancing small hydropower development in the West. As a member of the Commission staff, the views I express in this testimony are my own, and not those of the Commission or of any individual Commissioner.

II. Background

The Commission regulates over 1,600 hydropower projects at over 2,500 dams pursuant to Part I of the Federal Power Act (FPA). Together, these projects represent 54 gigawatts of hydropower capacity, more than half of all the hydropower in the United States (U.S.). Hydropower is an essential part of the Nation's energy mix and offers the benefits of an emission-free, renewable, domestic energy source with public and private capacity together totaling about nine percent of the U.S. electric generation capacity.

Under the FPA, non-federal hydropower projects must be licensed by the Commission if they: (1) are located on a navigable waterway; (2) occupy lands of the U.S.; (3) use surplus water from a federal dam; or (4) 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.

There is great potential for the development of additional hydropower resources,

including small projects. A Department of Energy study conducted in 2006 estimated that about 60 GW of potential hydropower capacity could be developed in the U.S. using existing dams alone, which would more than double the capacity currently under the Commission's jurisdiction.

III. Small Hydropower Options

The majority of the hydropower projects regulated by the Commission are small projects, with about 71 percent having an installed capacity of 5 megawatts (MW) or less. Small hydropower is an important part of the nation's energy mix, and offers the potential to add a substantial amount of renewable, flexible capacity. This is particularly true in the West, where the large number of irrigation, water supply, and similar systems offers many potential small hydropower project sites. As I discuss below, there are a number of options for developing these projects.

A. Preliminary Permits

In some circumstances a hydropower developer with an interest in a particular site may want to study the technical, environmental, and financial aspects of the project before applying for a license. In such instances, the developer may seek a preliminary permit. Preliminary permits, issued for up to three years, maintain priority of application while the permittee studies the site and develops its license or exemption application. Preliminary permits do not authorize construction or entry onto land, and are not required before the filing of a license or exemption (development) application. The benefit of permits is that they give the permittee the right to be the first to file a development application during the permit term. Thus, no other entity can file a development

application while the permittee is still studying its potential project. Permit applications are simple and inexpensive to prepare.

B. Development Applications

When a potential developer is ready to seek Commission authorization to site a hydropower project, there are several options available, as discussed below. Commission staff works with potential applicants during the term of a preliminary permit (or at a potential applicant's request if no permit is involved) to help the applicant determine which option is best suited for the project in question. The first two options involve exemptions, which are authorizations involving waiver by the Commission of various otherwise-applicable sections of Part I of the FPA. Exemptions are issued in perpetuity (that is, there is no need for exempted projects to be relicensed), but require applicants to hold all necessary property rights (they cannot use federal eminent domain to acquire necessary property, as is the case with licensed projects). Exemptions are not subject to the comprehensive development standard of FPA section 10(a)(1); mandatory conditions under FPA sections 4(e) and 18; and the eminent domain authority of FPA section 21. However, exemptions are subject to mandatory fish and wildlife conditions under FPA section 30(c); the public safety requirements of FPA section 10(c); and the dam safety requirements of Part 12 of the Commission's regulations. The third option is application for a standard license. I will discuss these options in turn.

1. Conduit Exemptions

Under section 30 of the FPA, the Commission can issue an exemption for a project that develops power from the hydroelectric potential of a conduit that has been or

is proposed to be constructed for non-power purposes, such as tunnels, canals, pipelines, aqueducts, flumes, ditches, or similar manmade water conveyances that distribute water for agricultural, municipal, or industrial consumption. Section 30 requires that the hydropower facilities subject to a conduit exemption be located on non-federal lands. As noted above, conduit exemptions are issued in perpetuity. They may be issued to private developers for projects with a generating capacity of up to 15 MW; municipalities may receive conduit exemptions for projects up to 40 MW.

Section 30(c) provides that conduit exemptions are subject to mandatory fish and wildlife conditions provided by federal and state fish and wildlife agencies. Due to the fact that most conduit exemptions do not significantly affect environmental resources, the Commission does not prepare an environmental document for these projects, thus allowing for expedited processing. Because of these circumstances, the Commission generally does not impose substantial environmental conditions on conduit exemptions, thus keeping the cost of these projects to a minimum. However, section 30(c) requires the Commission to include in conduit exemptions fish and wildlife conditions provided by federal and state fish and wildlife agencies.

As I have noted above, there are many irrigation, municipal, and industrial water conveyance systems throughout the West. Thus, conduit exemptions may offer the best opportunity for the development of additional small hydropower projects in this region. As discussed later, the Commission has been able to issue conduit exemptions in less than three months from filing of the application.

2. Five-megawatt Exemptions

Under the authority of section 405 of the Public Utility Regulatory Policies Act of 1978, the Commission has established a program for issuing exemptions for projects of 5 MW or less. These exemptions are available to projects that would be located at an existing, non-federally-authorized dam or would use a natural water feature. Like conduit exemptions, these exemptions are issued in perpetuity and are subject to mandatory fish and wildlife conditions provided by federal and state fish and wildlife agencies pursuant to FPA section 30(c). Because these projects are located on waterways and therefore may have environmental impacts, the Commission typically issues an environmental assessment for them.

There are likely many potential sites for potential 5-MW exemptions in the West, as in the rest of the county. However, because, unlike most conduit exemptions, these projects have more potential to raise environmental and other issues, they may not, in individual cases, be suitable for expeditious approval. As with other types of projects, Commission staff is available to work with potential applicants early on, to help them determine if a 5-MW exemption is appropriate and to understand what the exemption process will entail. As discussed later, the Commission has been able to issue 5-MW exemptions in less than 4 months from application filing.

3. Standard Licensing

If a small hydropower project is not eligible for either of these exemptions, developers can apply for a license. Licenses are typically issued for 30 to 50 years and can be of any size. Applicants that receive a license obtain eminent domain authority under section 21 of the FPA, allowing them to acquire property needed for the project.

The Commission sets the conditions of the license, is required to include in licenses any mandatory conditions that are provided by other federal, state, and tribal authorities pursuant to a number of statutes, including FPA sections 4(e) and 18, section 401 of the Clean Water Act, and section 7 of the Endangered Species Act. For licenses, the Commission prepares an environmental assessment or environmental impact statement pursuant to the National Environmental Policy Act (NEPA) prior to acting on the license application. There is significant variation in how long and expensive the standard licensing process is, generally dependent on the complexity of the issues raised.

IV. Increased Interest in Small Hydropower

The Commission has seen increased interest in small hydropower in recent years. Much of this interest has been from developers in the western U.S. The number of preliminary permits issued by the Commission for small hydropower projects has steadily increased each year since 2007 when we issued 15 permits compared to 2009 when we issued 50 permits. Currently, there are 157 permits in effect for small hydropower projects that, if constructed, would have a total capacity of 257 MW. This increased interest may have been generated, at least in part, by state renewable portfolio standards, renewable energy incentives, and an interest in promoting distributed generation.

In 2007, in order to provide personalized, responsive service to entities seeking to develop small hydropower projects, Commission staff established a dedicated phone line and email address for inquiries on small hydropower, developed a brochure to provide guidance to potential developers of small, low impact hydropower projects, and put these resources and a list of frequently-asked questions on the Commission's website. The

dedicated phone line and email has been well-utilized. In 2009, staff responded to over 150 phone calls and email inquiries, almost double the number from the previous year. In the first six months of this year, staff has responded to almost 90 calls.

Commission staff also has implemented measures to expedite review of small hydropower applications. The Commission's existing hydropower licensing and exemption procedures are extremely flexible, and allow Commission staff to simplify and shorten the process in appropriate cases. For example, the Commission staff has waived some pre-filing requirements (with federal and state resource agency concurrence); combined our public environmental scoping with the applicant's pre-filing efforts or eliminated formal public scoping; combined public noticing requirements; shortened comment periods; issued a single environmental assessment in lieu of draft and final documents; and issued license and exemption orders concurrent with a single environmental assessment. Examples of projects that have benefitted from expedited review include: two conduit exemptions, the Plateau Creek Project in Colorado and the Santa Fe Canyon Project in New Mexico that were processed in less than three months; the Potter Creek Project, a 5-MW exemption on Potter Creek in Montana that was processed in less than four months; and the license for the Culinary Water Supply System Project located in the Town of Afton, Wyoming, which was processed in five months.

V. Recent Small Hydropower Initiatives

In light of the growing interest in small hydropower development, the Commission held a technical conference on December 2, 2009, at its Washington, D.C. headquarters to explore issues related to licensing, and exempting from licensing, small non-federal

hydropower projects in the U.S. At the December technical conference, two panels, each with representatives from the hydropower industry, federal and state agencies, and the environmental community, discussed issues related to the pre-filing and post-filing process for small hydropower projects. Specifically, the panelists discussed the Commission's program for granting licenses and 5-MW and conduit exemptions for small, conventional projects, and answered questions from the Commissioners.

The December technical conference generated discussion on recommendations that could improve the process for authorizing small hydropower projects. In addition to insights received from the panelists and attendees at the December conference, written comments were solicited and over 40 comment letters were received from industry representatives; federal, state, and local agencies; private citizens; and non-governmental organizations.

While some commenters said the FERC licensing process is appropriate and should not be changed, others said that changes are needed for small projects. Some of the suggested statutory changes include eliminating FERC jurisdiction over certain types of small hydro projects, or expanding the definition of conduit exemptions to include projects on federal lands. Some commenters, who expressed concern about losing priority for site development after investing several years and considerable capital in pre-filing studies, because they could not complete the pre-filing steps of the licensing process within the three-year preliminary permit term, recommended extending the maximum term for preliminary permits (another statutory change).

Some commenters suggested expanding the definition of 5-MW exemptions to

include projects at federal dams or creating an automatic approval process for projects that meet certain criteria. Others expressed concerns with reducing Commission oversight, in part because the size of projects does not necessarily dictate the level of environmental impact. Some suggested creating an entirely new process for licensing small hydro projects, while others said that the Commission has sufficient latitude under the existing regulations to expedite project authorizations.

At the Commission's April 15, 2010 meeting, staff reported on the conference and the comments received, and presented an action plan to assist and expedite the review of small hydropower proposals. The action plan adopted the following immediate changes: (1) adding new web-based resources to the Commission's website (www.ferc.gov) to make it easier for applicants to understand and complete the licensing process; (2) updating or creating Memoranda of Understanding (MOUs) with other agencies to improve coordination; (3) continuing our small hydropower hotline and email address to answer applicant questions; and (4) educating potential small hydropower developers through a new education and outreach program. Collectively, these measures should help developers understand the FERC licensing process, help improve coordination with other agencies, and help license and exemption applicants complete the process in a timely and efficient manner

A. New Web-based Resources

One of the most important steps is the addition of new web-based resources. We are making the website more user-friendly with simple, plain-English tools to help applicants understand and complete the licensing and exemption processes expeditiously.

The website will provide a “roadmap” that walks applicants through: selecting a good project site, determining if a project is jurisdictional, selecting an application process, consulting with stakeholders, and finally, preparing a license or exemption application. New tools on the website that will make it easier for applicants to apply for a license or exemption include: license and exemption application templates that allow the user to input data, information on how to obtain waivers of Commission processes, and ways applicants can expedite the process. These new web-based resources should be on the Commission’s website by the end of August of this year.

B. Memoranda of Understanding

An important tool for ensuring that review of proposed hydropower projects is as expeditious as possible is the execution of MOUs among federal and state agencies with roles in the regulatory process. The Commission currently has in place a number of such MOUs with its federal and state partners. Commission staff is working with the U.S. Army Corps of Engineers (Corps) on updating our 1981 MOU regarding non-federal hydropower development at Corps facilities and Corps review of projects that may affect Corps activities, and has initiated similar discussions concerning existing MOUs with the Bureau of Reclamation. In addition, we are currently working with the state of Colorado on crafting a MOU that would simplify procedures on both the state and federal levels for authorizing small-scale projects in Colorado. We expect the MOU to be signed by the State of Colorado and FERC Chairman Jon Wellinghoff in the near future.

C. Education and Outreach

Commission staff is committed to providing education and outreach regarding

small hydropower development. A number of resources will be made available through the Commission's small hydro website, including links to the Department of Energy's Hydropower Prospector, a tool for identifying potential new hydropower sites; links to a database of state incentives for renewables and efficiency; and links to state program websites such as the Colorado Governor's Energy Office's small hydropower program. This fall, Commission staff will host a webinar to walk applicants through the licensing and exemption process and discuss ways that applicants can expedite the process. Webinar technology will allow potential developers to communicate with Commission staff directly from their place of business. In addition, Commission staff will host regional outreach meetings at locations where there has been an increased interest in small hydropower development.

VI. Key Considerations

It is extremely important to note that project developers, not the Commission, in most instances play the leading role in determining project success and whether the regulatory process will be short or long, simple or complex. The first key issue is site selection and proposed project operation. For example, the processing of applications tends to be expedited when applicants propose projects that: (1) are located at an existing dam where hydropower facilities don't currently exist, (2) would result in little change to water flow and use, (3) are unlikely to affect threatened and endangered species and are unlikely to need fish passage facilities, and (4) involve lands and facilities that are already owned by the applicant. To the extent that a proposed project, even one of small size, raises concerns about water use and other environmental issues, it will be difficult

for the Commission to quickly process an application. It is important to remember that the small capacity of a proposed project does not necessarily mean that the project has only minor environmental impacts.

Another, and related, factor is the extent to which project developers reach out to affected stakeholders. If a developer contacts concerned citizens, local, state, and federal agencies, Indian tribes, and environmental organizations, and works with them to develop consensus as to what information is needed to understand the impacts of a project and what environmental measures may be appropriate, and to develop support for the project, the application and review process is likely to be simpler and quicker. Where a project comes as a surprise to affected entities or where a developer does not respond to expressed concerns, the Commission's job becomes much more difficult.

A final, and again related, matter is the development of the full record that the Commission needs to act on an application. A potential applicant should work with Commission staff and with federal and state resource agencies and other stakeholders to determine what information is needed to support an application, and to provide the Commission with a complete application. Where Commission staff is required to ask an applicant to provide information that is missing from an application, or to seek additional information from an applicant, either at its own behest, or based on concerns raised by other stakeholders, the regulatory process slows down.

The other entities with roles in the licensing and exemption process regarding small hydropower projects are also key to its success. The optimum process can be achieved only where federal and state agencies devote the resources early on to help

project review move ahead, and where they display the flexibility to look at the merits of individual projects and the willingness to shorten the process in appropriate cases. The same is true of other stakeholders. Commission staff is dedicated to making the regulatory process as efficient as possible. We can only do that where applicants, resource agencies, and other stakeholders serve as willing partners in the process.

VI. Conclusion

There is a great deal of potential for the development of additional small hydropower projects in the West, and throughout the country. Working within the authority given it by Congress, the Commission continues to adapt its existing, flexible procedures to accommodate the proposals of hydropower project sponsors in order to realize the potential of western small hydropower projects. Commission staff remains committed to exploring with private developers, its sister federal agencies, and the states every avenue for the responsible development of our nation's hydropower potential.

This concludes my remarks. I would be pleased to answer any questions you may have.