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MANDATORY CONDITIONING REQUIREMENTS ON HYDROPOWER: HOW FEDERAL RESOURCE AGENCIES ARE DRIVING UP ELECTRICITY COSTS AND DECREASING THE ORIGINAL GREEN ENERGY

OVERSIGHT HEARING

BEFORE THE

COMMITTEE ON NATURAL RESOURCES
U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED TWELFTH CONGRESS

SECOND SESSION

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OVERSIGHT HEARING ON "MANDATORY CONDITIONING REQUIREMENTS ON HYDROPOWER: HOW FEDERAL RESOURCE AGENCIES ARE DRIVING UP ELECTRICITY COSTS AND DECREASING THE ORIGINAL GREEN ENERGY."

Wednesday, June 27, 2012
U.S. House of Representatives
Committee on Natural Resources
Washington, D.C.

The Committee met, pursuant to notice, at 10:02 a.m., in Room 1324, Longworth House Office Building, Hon. Doc Hastings [Chairman of the Committee] presiding.

Present: Representatives Hastings, McClintock, Thompson, Duncan of South Carolina, Tipton, Noem; Napolitano, Holt, Costa, Sablan, and Garamendi.

The CHAIRMAN. The Committee on Natural Resources will now come to order, and the Chair notes the presence of a quorum, which under Committee Rule 3(e) is two Members.

The Committee on Natural Resources meets today to hear testimony on "Mandatory Conditioning Requirements on Hydropower: How Federal Resource Agencies are Driving Up Electricity Costs and Decreasing the Original Green Energy." We will now begin with a five-minute statement of the Chairman and the Ranking Member. And I ask unanimous consent that if any other Members wish to have opening statements appear in the record, that they be submitted to the Committee prior to the close of business today.

So, I will recognize myself for five minutes.

STATEMENT OF THE HON. DOC HASTINGS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON

The CHAIRMAN. Today's hearing is another step by this Committee to restore the promise of hydropower, a renewable, emissions-free, and low-cost source of energy.

In the early part of the last century, visionary leaders and engineers constructed multi-purpose dams and reservoirs, like the Grand Coulee and Hoover Dams, to harness the energy of moving water and, in high-water periods, capture water for low-water periods. That, to me, is still a sound concept today.

In the Central Washington congressional district I have the honor to represent, we have both Federal and non-Federal hydroelectric dams. Together they produce more hydropower than any other congressional district in the Nation. Despite their success, hydropower is under assault from those bent on litigation and overregulation. This Committee has focused intensely on Federal dams and canals, but today's hearing takes a new turn. Instead, we will

examine Federal regulation on non-Federal dams, which account for over half of the Nation's hydropower production.

The resource agencies under the jurisdiction of this Committee, whether it's the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, the Forest Service, the National Park Service, or the Bureau of Land Management, all play a large role in the cost, size, and scale of non-Federal hydropower, and even play a role in whether some dams should exist through the mandatory conditioning authorities. It appears they do so in a vacuum that ignores economic, societal or environmental reality.

Current law enacted by the Energy Policy Act of 2005 allows hydropower developers to propose alternative to Federal regulations. But, like all laws, it has its shortcomings because of the interpretation and implementation of complex, conflicting Federal laws and regulations.

The re-licensing of hydropower dams is an opportunity to responsibly renew a clean, non-carbon-emitting, renewable energy source. But there have been abuses. The re-licensing process should not be a hostage-taking opportunity for Federal agencies to demand a ransom to be paid to fund their wish lists, or for Federal agencies to push a covert dam removal agenda by imposing conditions so onerous that hydropower licenses are surrendered instead of renewed.

Regrettably, what I just said is not hyperbole. It is happening. It is a reality. And I think it is unacceptable.

Some utilities and organizations are fearful to even discuss real and reasonable reforms out of a concern that that resource agency will punish them. For example, some agencies try to take another bite out of an apple during the rare occasion they don't get what they want. In my State, the Okanogan PUD in north central Washington is experiencing that right now with an agency that threatens to impose costly requirements not even related to dam licensing. The end result could be a financially infeasible project that will not generate power or provide jobs at a dam that has been there for almost a century.

We will hear today that, despite its longstanding success, hydropower remains a stagnant form of energy compared to other electricity resources. I believe that's because of lawsuits by taxpayer-funded litigants and because of Federal agencies that stifle innovation and energy growth.

We have heard of the vast potential for more hydropower development but to accomplish this we need to modernize and update our laws. This Committee has already acted on two bills, and had numerous oversight hearings, but more can and will be done. Some of that may be controversial, but I believe that that debate needs to start sooner, rather than later.

So, we are fortunate today to have the best and brightest here today who represent non-Federal power development, and thus, job creation. And I am very pleased that I have somebody from my State of Washington and somebody that will be in my district in the next Congress, and I will make that proper introduction.

And with that, I yield back my time, and I recognize the gentlelady from California.

[The prepared statement of Mr. Hastings follows:]

Statement of The Honorable Doc Hastings, Chairman, Committee on Natural Resources

Today's hearing is another step by this Committee to restore the promise of hydropower—a renewable, emissions-free and low-cost source of energy.

In the early part of the last century, visionary leaders and engineers constructed multi-purpose dams and reservoirs, like the Grand Coulee and Hoover Dams, to harness the energy of moving water and in high water periods capture water for low water periods. That is still a sound concept today.

In the Central Washington congressional district I have the honor to represent, we have both federal and non-federal hydroelectric dams. Together they produce more hydropower than any other congressional district in the nation.

Despite their success, hydropower is under assault from those bent on litigation and over-regulation. This Committee has focused intensely on federal dams and canals, but today's hearing takes a new turn. Instead, we will examine federal regulation of non-federal dams, which account for half of the nation's hydropower production.

The resource agencies under the jurisdiction of this Committee—whether it's the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, the Forest Service, the National Park Service or the Bureau of Land Management—play a large role in the cost, size and scale of non-federal hydropower and even play a role in whether some dams should exist through their mandatory conditioning authorities. It appears they do so in a vacuum that ignores economic, societal or environmental reality.

Current law enacted by the Energy Policy Act of 2005 allows hydropower developers to propose alternatives to federal regulations. But, like all laws, it has its shortcomings because of the interpretation and implementation of complex, conflicting federal laws and regulations.

The relicensing of a hydropower dam is an opportunity to responsibly renew a clean, non-carbon-emitting, renewable energy source. But there have been abuses. The relicensing process should not be a hostage-taking opportunity for federal agencies to demand a ransom to be paid to fund their wish lists, or for federal agencies to push a covert dam removal agenda by imposing conditions so onerous that hydropower licenses are surrendered instead of renewed. Regrettably, this is not hyperbole. It is happening. It is reality. And it is unacceptable.

Some utilities and organizations are fearful to even discuss real and reasonable reforms out of concern that the resource agencies will punish them. For example, some agencies try to take another bite out of the apple during the rare occasion they don't get what they want. Okanogan PUD in northeastern Washington is experiencing that right now with an agency that threatens to impose costly requirements not even related to dam relicensing. The end result could be a financially infeasible project that will not generate power and provide jobs at a dam that has been there for almost a century.

We will hear today that despite its longstanding success, hydropower remains a stagnant form of energy compared to other electricity sources. I believe that's because of lawsuits by taxpayer-funded litigants and because of federal agencies that stifle innovation and energy growth.

We have heard of the vast potential for more hydropower development. But to accomplish that, we need to modernize and update our laws. This Committee has already acted on two bills and had numerous oversight hearings, but more can and will be done. Some may be controversial, but this debate needs to start.

We are fortunate to have some of the best and brightest here today who represent non-federal power development and job creation. I particularly want to welcome John Grubich of the Public Utility District Number 1 in Okanogan County. I look forward to his and everyone's testimony.

STATEMENT OF THE HON. GRACE NAPOLITANO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mrs. NAPOLITANO. Thank you, Mr. Chairman. And sorry Mr. Markey wasn't here, so I am sitting in for him, and his introductory is what I am going to be reading.

President Teddy Roosevelt once said that our rivers are a public good, and that any permit to obstruct them for reasons and on conditions that seem good at the moment should be subject to revision

when changed conditions demand. In the early 20th century, Congress allowed hundreds of permits to build dams on public rivers. By 1986, the licenses were set to expire, and Congress decided that these licenses should reflect the public's interest through mandatory conditioning requirements, the subject of two days' of hearings.

For years, Congress found FERC had been far too deferential and unquestioning when it came to hydropower interests. FERC was not properly taking into account the full range of impacts of these dams on the environment, on the Tribes, and on recreational opportunities.

Under the leadership of Energy and Commerce Chairman Dingell and Subcommittee on Energy and Power Chair Markey, Congress passed in 1986—and President Reagan signed into law—the Electric Consumer Protection Act, required FERC to give equal consideration to recreation, to fisheries, to energy conservation and energy generation when issuing licenses. Legislation limited FERC's ability to reject the advice of expert agencies and Tribes concerning fish, wildlife, and tribal needs. It allowed for the operation and development of hydropower to be consistent with the public's interest, not just hydropower's interest.

The law passed in 1920 was amended by Congress in 2005, when it passed the Energy Policy Act. The bill included provisions that, in their final form, allowed for consideration of alternative conditions during re-licensing, as well as to consider any disputed facts relating to fish waste. Many Democrats, including Mr. Markey, had strongly opposed earlier versions. An equitable compromise was worked out in the end, and final provisions gave the industry some additional procedural options, and did not compromise the fundamental integrity of the environment.

The hydro industry was even satisfied with this final result. The National Hydropower Association said at the time that the 2005 hydropower licensing provision will result—and I am quoting—"in increased energy production and energy savings, all while preserving important environmental values."

So, what has happened since? Well, according to the data obtained from FERC, licenses filed after 2005 took a third of the 6-year process, compared to licenses filed prior to that. Now, it takes two years for FERC to act on completed application that promotes hydropower without compromising other public values. Two years for a license that lasts fifty years, half a century.

And why are we here today? Apparently, the 2005 reforms passed under a Republican Congress and signed by President George W. Bush did not go far enough. By its title, today's hearing suggests the hearing's outcome: allowing the resource agencies to have mandatory conditioning powers is a bad idea. I disagree. Next chapter in the history of hydropower will involve the industry working smarter, not harder. And we are already seeing this in transition. It will involve hydropower licensees using new technologies to get more power out of their existing dams.

We will hear from a witness today who will describe dam efficiencies that open 1,000 miles of river while increasing—I repeat—increasing power generation. The bill introduced today—actually, yesterday, along with Ranking Member Markey—called Hydro2.0

will help all of Bureau of Reclamation hydro facilities achieve a win-win outcome. The American people deserve nothing less.

And I look forward to hearing the testimony from the witnesses who have joined us this morning, and I yield back the balance of my time.

[The prepared statement of Mrs. Napolitano follows:]

Statement of The Honorable Grace F. Napolitano, a Representative in Congress from the State of California

Thank you Mr. Chairman.

In ancient Greece the basic unit of society was the "oikos". This word, which is the root of modern words like "economy" and "ecosystem," meant "household", "family", or "house".

Here in the House, we are charged with taking care of our household—the lands and waters of the United States—and in doing so, we take care of our family—the American people. Our family depends on a flourishing economy *and* healthy ecosystems. These concepts are rooted together.

Take for example the fact that our rivers, when healthy, generate economic benefits through fishing, recreation, *and* hydropower.

Teddy Roosevelt knew as much, insisting that rivers are a public good, and that "any permit to obstruct them for reasons and on conditions that seem good at the moment should be subject to revision when changed conditions demand."

Well, in 1986, changed conditions *did* make demands.

At the time, dam re-licensing represented very poor housekeeping. For years, FERC had been far too deferential and unquestioning when it came to hydropower interests. The agency was not properly taking into account the full range of impacts of these dams on the environment, on the Tribes, and on recreational opportunities.

So under the leadership of Energy and Commerce Chairman Dingell and Subcommittee on Energy and Power Chair Markey, Congress passed and President Regan signed into law the Electric Consumer Protection Act, which required FERC to give equal consideration to recreation, fisheries, energy conservation, and energy generation when issuing licenses. The legislation limited FERC's ability to reject the advice of expert agencies and tribes concerning fish, wildlife and tribal needs.

It allowed for the operation and development of hydropower to be consistent with public interests, not just hydropower's interests.

Congress next amended the hydropower licensing provisions of the Federal Power Act in 2005 when it passed the Energy Policy Act. This bill included provisions that, in their final form, allowed for consideration of alternative conditions during relicensing as well as a hearing to consider any disputed facts relating to fishways. Many Democrats, including Mr. Markey, had strongly opposed earlier versions. But an equitable compromise was worked out in the end.

The final provisions gave the industry some additional procedural options, but they did not compromise the fundamental integrity of the balancing system put in place in 1986.

The hydro industry was even satisfied with this final result. The National Hydropower Association said at the time that that the 2005 hydropower licensing provision "will result in increased energy production and energy savings, all while preserving important environmental values."

So, what has happened since? According to data that obtained from FERC, licenses filed after 2005 took a third of the time to process compared to licenses filed prior to that. It now takes about two years. Two years for FERC to act on a completed application that promotes hydropower without compromising other public values. Two years for a license that lasts half a century.

So, why are we here today? Apparently the 2005 reforms, passed under a Republican Congress and signed by President George W. Bush, don't go far enough. The biased title of today's hearing suggests that they have already decided that allowing the resource agencies to have mandatory conditioning powers is a bad idea. I think they are wrong.

The next chapter in the history of hydropower will involve the industry working smarter, not harder, and we are already seeing this transition. It will involve hydropower licensees using new technologies to get more power out of their existing dams. We will hear from a witness today who will describe dam efficiencies that opened 1,000 miles of river while increasing power generation. A bill I introduced yesterday along with the Ranking Member Markey, "Hydro 2.0" will help all Bureau of Reclamation hydro facilities achieve win-win outcomes. The American people deserve nothing less.

I look forward to hearing the testimony from the witnesses who have joined us this morning.

The CHAIRMAN. I thank the gentlelady for her statement. And we now have a panel of witnesses here, and I want to thank all of you for being here.

We have Mr. J. Mark Robinson, who is a Principal of JMR Energy Infra, LLC, in Reston, Virginia; Mr. Einar Maisch, the Director of Strategic Affairs for the Placer County Water Agency in Auburn, California—thank you for being here; Mr. Jeff Reardon, the Maine Brook Trout Campaign Director for Trout Unlimited, in Manchester, Maine; and, from my State of Washington, Mr. John Grubich, General Manager of the Okanogan PUD district in Okanogan, Washington.

If you haven't been here and testified in front of Congress before, let me tell you how it works. Your full statement will appear in the record, but you will have five minutes to make your oral statements. And I would ask you to keep your remarks to five minutes, if you can. The way the timing lights work, when the green light comes on, it means you are doing very well, and when the yellow light comes on, it means there is one minute to go. When the red light comes on, it means that your five minutes have expired. I would hope that you would try to wrap up your remarks in that time period.

So, with that, Mr. Robinson, we will start with you. And you are recognized for five minutes.

STATEMENT OF J. MARK ROBINSON, PRINCIPAL, JMR ENERGY INFRA, LLC, RESTON, VIRGINIA

Mr. ROBINSON. Thank you, Mr. Chairman, Members. I appreciate the opportunity to talk to you today about hydropower licensing and mandatory conditioning authority. But first I would like to identify my bias. I always do this whenever I testify or when I talk to groups. My bias is seeing energy from the ground up. Most people I dealt with at FERC, and a lot of people in the district, that matter, have their bias looking at energy from the markets back. You get very different answers on what the problems are, depending upon where your biases are. And I just wanted everybody to know mine consists of seeing what is necessary to get something built, how do you go about doing that.

Example of how that bias affects, if you ask people why aren't we building electric transmission in this country, the market people at FERC will say, "Well, we got to get cost allocation right, we have to get the incentives in place to make the markets—send the signals to get the transmission built." If you asked me when I was at FERC—and people did, believe it or not—I would say you don't have a regulatory process which allows for someone to be in charge of siting electricity transmission and navigating through all the problems that come up with any type of energy infrastructure siting. So that is my bias, and everything I say from here on out will reflect that.

Hydropower. It is in trouble. It has been in trouble for a long time. And nothing seems to be changing that. If you go back and look at the statistics for different forms of generation and their con-

tributions to our generation mix in this country—which is at about 1,000 megawatts, more or less—hydropower in 2000 was 79 gigawatts of power. And I think I said 1,000 megawatts; I meant 1,000 gigawatts. In 2000, hydropower was 79 gigawatts. In 2010 hydropower was 79 gigawatts, in terms of its net contribution to our electric generation.

Hydropower has been stagnant for the last decade, and probably much longer than that. I have been involved with hydropower for over 35 years, 31 of which at FERC. And once we left the mid-1980s, it has pretty much stayed the same since then.

If you look at other forms of generation during that same time period, natural gas in an example where hydropower gained nothing over that decade. Natural gas added 187 gigawatts of power. In fact, in just two years of that decade, natural gas added more generation than all of the current hydropower which exists today. And if you think it was because there was cheap gas back then, gas in those—in that two-year period hit $6.87. And during that 10-year decade it went over $10. So even though we are in a cheap gas phase now, during that period of building of natural gas, we were not.

Look at the nuclear power industry. Georgia Power right now is building the—I can't say that word—the Vogtle plants down in Georgia. They estimate that their cost of that facility is going to be $6,363 per installed kW. Now, hydro varies in terms of its capital outlay, and there is a fuel charge, of course, associated with nuclear, as well. But hydro, on average, is about $3,000 per installed kW.

And if you think that hydro just is not available, the reason we are developing nuclear plants that cost twice as much and gas fire generation that has a fuel charge associated with it, DOE, just a couple of months ago, came out with a report that said there was 12 gigawatts of available hydropower in the U.S. that didn't require any new dam construction.

So, hydropower suffers from an unlevel playing field. What can we do about it? The unlevel playing field is that we have distributed decision-making when it comes to hydropower, and you have concentrated decision-making when it comes to natural gas and nuclear. By distributed decision-making, what I mean there is that you have a number of agencies who can come in with mandatory conditions and decide whether or not something is in the public interest by how much they—burden they want to impose upon a particular project. The Klamath River Project is a perfect example where talked-about fish passage facilities were in the $200 million range. It is no wonder people started talking about how do we get rid of this project when they were faced with a $200 million bill, potentially, under section 18.

The way that we can fix that dispersed decision-making is with something called the Six Principles of Energy Infrastructure Development. I won't bore you with all six of those principles. But one of them in particular, I think, is significant, and that is to have an agency, a group, who is given that authority to make that public interest call. Other people can have mandatory conditioning authority. They can provide that input into that agency. But somebody has to be able to say this is in the public interest or not to

build this project. And it is not just a matter of I have a narrow focus, I have one aspect of the project that I want to make sure happens, and we are going to get that project, that aspect into this license, regardless of what the overall public interest determination is.

So, if I could make one recommendation to you, it is the same recommendation that FERC made to you in 2001 in a report that was filed pursuant to section 603 of the Energy Act of 2000, and that is that you need to curb the dispersed decision-making process, invest one agency with that overall public interest determination that looks across all aspects of the projects and decides, "Is this hydropower project in the public interest?"

Thank you very much. I appreciate the opportunity.

[The prepared statement of Mr. Robinson follows:]

Statement of J. Mark Robinson, Principal, JMR Energy Infra, LLC

Mr. Chairman and Members of the Committee:

My name is J. Mark Robinson and I am the Principal with JMR Energy Infra, LLC. In this role I advise clients on the development of major energy infrastructure including liquefied natural gas (LNG) export facilities, natural gas pipelines, electric transmission lines, and, more germane to this hearing, hydropower projects regulated by the Federal Energy Regulatory Commission (FERC). Prior to my current activities I was with FERC for 31 years starting as an aquatic ecologist in the hydropower program and finishing as the Director of the Office of Energy Projects (OEP) from 2001 to 2009. During that later period OEP was responsible for the licensing, administration, and safety of approximately 1,600 non-federal hydropower projects.

I would like to thank you for the opportunity to speak today on mandatory conditioning requirements and their impact on hydropower development. The comprehensive nature of FERC's licensing program addresses all siting and operational issues with the full participation of federal and state agencies while attempting to ensure the timely and cost effective development of hydropower projects found to be in the public interest. Timeliness and cost effectiveness, however, are virtues that with some regularity go by the wayside as a result of a widely dispersed decision making process exemplified by the mandatory conditioning authority given to multiple agencies.

The remainder of my testimony will describe the efforts that have been made to efficiently integrate mandatory conditions into the licensing process, the issues that still detract from the ability to move on hydropower projects that are in the public interest, and a rational approach to the licensing of hydropower that would improve all agencies' ability to reach a decision jointly on needed projects while including mandatory conditions.

I. Licensing Hydropower Projects and Mandatory Conditions

Mandatory conditions take several forms in the licensing of hydropower projects but in essence they all share one attribute—the condition is provided by a separate federal or state agency and the FERC must include the condition in any license issued giving that condition the protective umbrella of the Federal Power Act (FPA) in terms of enforcement. There are three mandatory conditions that are common to the licensing process as described here.

FPA Section 4(e)—In cases where the proposed licensed project would be located on a federal reservation, the federal agency responsible for managing that land, typically the Department of Agriculture and the Department of the Interior, can file conditions to protect the reservation. These conditions are required to be included in any license issued. For example, the Secretary of the Interior prescribes mandatory conditions for projects on Indian reservations, and the Secretary of Agriculture does so for projects in national forests.

FPA Section 18—The FPA of 1935 contained Section 18 that gave authority to the Secretary of Commerce to "prescribe" fishways. In 1970, Section 18 was amended to also give such authority to the Secretary of the Interior. The authority to prescribe fishways applies to new licenses as well as original licenses. Fishways can costs tens of millions of dollars and thus have a significant impact on the viability of not only new proposed projects but also existing projects up for relicensing. The

fishways prescribed by the Secretaries of Commerce and of the Interior must be included in any license issued.

Clean Water Act (CWA) Section 401—Under Section 401 of the CWA, a license applicant must obtain certification from the state or interstate pollution control agency verifying compliance with the CWA. Conditions included with the issuance of the 401 Certificate are considered conditions of any license issued by FERC. Although the CWA Section 401 conditions are frequently the most significant impediment to timely licensing of hydropower projects the focus of this testimony will be on FPA Section 4(e) and 18 mandatory conditions.

Although not a mandatory condition in the sense described above there are another set of conditions required by the FPA that should be noted here—Section 10(j) conditions. Section 10(j) of the FPA, requires fish and wildlife conditions included in licenses be based on conditions proposed by federal and state fish and wildlife agencies. If the FERC fails, in any respect, to adopt an agency's recommendation, it must explain not merely why it disagrees with the agency, but why the agency's recommendation is inconsistent with the FPA or other applicable law. This test of inconsistency with the law raises Section 10(j) conditions to near mandatory levels.

It should also be noted that in 2005 the Congress recognized a growing concern with the use of mandatory conditions and provided some relief. The Energy Policy Act of 2005 (EPAct) required the Departments of the Interior, Commerce, and Agriculture to provide for: 1) expedited trial-type hearings on contested mandatory conditions; and 2) alternatives to agency proposed mandatory conditions. Parties to a FERC license proceeding may request a trial-type hearing on mandatory conditions before an administrative law judge (ALJ). These hearings are limited to "sorting out the facts of a case" and are not used to decide whether a condition or prescription is appropriate for economic or policy reasons. The conditioning agency, however, must take into account the ALJ's opinion prior to issuing final conditions for inclusion in a FERC license. More significantly, the conditioning agency must accept proposed alternative mandatory conditions if they find: (1) that an alternative condition would adequately protect and use the reservation (federal lands) or that an alternative fishway would be as protective as a fishway initially prescribed, and (2) that an alternative condition would cost significantly less or would increase energy production. In making a decision, the conditioning agency must give equal consideration to the effects of the condition adopted and alternatives not accepted on certain energy and environmental criteria.

Under the FERC's Integrated Licensing Process, mandatory conditions are first provided to the parties after as much as three years of studies performed in cooperation with the conditioning agencies. Once the application for licensing is filed and found acceptable for processing the conditioning agencies file their "preliminary conditions" that are then available for review by the applicant and other parties. If a trial type hearing is requested pursuant to the Energy Policy Act of 2005 then that procedure is followed while the FERC prepares a draft National Environmental Policy Act (NEPA) document, either an environmental assessment or and environmental impact statement. Regardless of whether a trial type hearing is requested the conditioning agencies may file modified conditions after the draft NEPA document so they may be included in the final NEPA analysis.

As the FERC found in its 2009 review of the use of the trial type hearing most of these proceeding end with a negotiated settlement (13 of the first 16 requests for trial type hearing were settled and withdrawn). This process of providing preliminary and modified conditions provides an opportunity for the conditioning agencies to lead with what some may consider unreasonable conditions as a tool for providing leverage in any settlement discussions that are ongoing. Knowing that the applicant must affirmatively pursue a trial type hearing and that the agencies have an opportunity to provide modified conditions later in the FERC process places the conditioning agencies in a superior position during any negotiations. The playing field is significantly tilted in favor of the conditioning agencies.

II. Challenges to the Hydropower Development

The FERC's role in licensing hydropower has been diminished over the last few decades. Prior to the FPA of 1935 the only significant role played by other agencies was outlined in Section 4(e). Originally the FERC reviewed Section 4(e)'s conditions as advisory. However, in 1984, the Supreme Court's Escondido decision found that 4(e) conditions were mandatory. This left the FERC with a choice of either finding that the 4(e) conditions were in the public interest and include them unaltered in any license issued or find that the conditions were inconsistent with the broad public interest standard of FPA Section 10(a)(1) and decline to issue the license. Unlike the FERC and its requirements under Section 10(a)(1), agencies with 4(e) authority have no statutory obligation to adhere to the balanced development standard. The

more narrow focus and interests of conditioning agencies with 4(e) authority results in conflicts with the license applicant caught in the middle.

The 1935 passage of the FPA included Section 18 authority for the Secretary of Commerce to "prescribe" fishways.

In American Rivers v. FERC (9th Cir. 1999) the Court ruled that FERC lacked authority to determine whether Section 18 conditions were in fact fishways. As a result of these judicial rulings the FERC's only discretion with respect to mandatory conditions it might otherwise conclude are not in the public interest is simply to deny the license application. The conflict between a broad public interest determination by FERC and the more narrow purpose of mandatory conditions continues.

In May 8, 2001, the FERC filed a report with Congress pursuant to Section 603 of the Energy Act of 2000. This report entitled, "Report on Hydroelectric Licensing Policies, Procedures, and Regulations—Comprehensive Review and Recommendations", was prepared after consultation with conditioning agencies to determine how to reduce the cost and time of obtaining a license under the FPA and to propose needed legislative changes. A review of this report and recommendations indicate that not much has changed in the last 11 years.

The finding of the 2001 report included that the time from the filing of a license application to an order issuing license was slightly more than three and a half years with many proceedings taking substantially longer. A review of all 16 hydropower licenses issued in 2011 (the last full year available for comparison) by FERC shows that the average time from filing the application to licensing was 3.6 years with the longest being 8 years. The 2001 report also concluded that ". . .the underlying source of most delays was a statutory scheme that disperses decision-making among federal and state agencies acting independently of the FERC's proceedings." This dispersed decision-making remains the primary cause of not only delay but also additional costs associated with the preparation of the application and the cost of mandatory conditions.

The 2001 report captures the findings of the 100 pages of analyses with the following paragraph referring to dispersed decision making:

> "The same statutory scheme also ensures that the Commission has scant control over the costs of preparing a license application or of the costs of environmental mitigation and enhancement. These expenditures are frequently mandated in state water quality certification or mandatory federal agency conditions required pursuant to FPA Sections 4(e) and 18, and override the Commission's balancing of all relevant factors affecting the public interest."

A related issue in timely licensing can be described as extended agency authority. This is where agencies will take the authority they have been granted covering an aspect of the project (e.g., prescribing fishways pursuant to Section 18 of the FPA) and utilize that singular authority to duplicate the action of the siting agency to make an overall public interest determination. This unnecessary and counterproductive duplication of the public interest determination can results in regulatory uncertainty when an applicant does not know which forum will ultimately decide if a project should be constructed. This is not to say that the agencies with conditioning authority need to agree with the FERC's decision, but rather that those agencies should focus on their aspect of the project and condition accordingly while leaving the overall siting determination to the agency given that authority.

This dispersed decisional authority as represented by mandatory conditions does take its toll on hydropower development. A comparison among various electric power generation sources demonstrates the stagnation felt by the hydropower development community.

Between 2000 and 2010, according to the U.S. Energy Information Administration (EIA) Annual Generator Report, the net summer capacity for hydropower remained constant at 79 gigawatts (GW). No net increase in hydropower capacity for a decade. During this same period EIA reports that natural gas capacity increased by 187 GWs. In just two years between 2000 and 2002 more natural gas generation was added to the Nation's supply than all existing hydropower capacity today. It should be noted that according to EIA natural gas prices reached a high of $6.82 during this two year period and reached a high of $10.79 during the decade. Natural gas was not cheap but the market ignored hydropower and moved to natural gas.

Another comparison follows from the nuclear power industry. Utility executives are reasonably concerned with diversifying their generation sources. Georgia Power as an example is developing the Vogtle Nuclear Plant at an estimated cost of $6,363 per installed kilowatt. Hydropower projects vary in terms of their construction costs but EIA puts the average cost of construction at approximately $3,000 with no fuel costs. Utilities will pay twice the capital cost for generation and incur a fuel cost as well while available hydropower goes undeveloped.

The Department of Energy, in a report issued this year entitled, "An Assessment of Energy Potential at Non-Powered Dams in the United States," estimated that without building a single new dam there were 12 GWs of available hydropower ready for development. No new dams required, half the cost of constructing nuclear power, no cost fuel compared to the variable cost of natural gas and yet hydropower remains stagnant for at least the last decade. Certainly the issue of dispersed decision making, as represented by multiple agencies with mandatory conditioning authority and first identified by FERC in 2001, should be considered as a primary reason for the complete lack of progress in the development of this Nation's most significant, in terms of existing capacity, renewable resource.

III. A Rational Licensing Process with Mandatory Conditions

A rational process for the authorization of any energy infrastructure including hydropower development includes six basic principles:

1. Exclusive Jurisdiction—one lead agency that has been designated by congress as the only agency that has siting authority
2. Pre-filing—A system for quickly identifying issues and determining if there are any fatal flaws early in the process
3. One Federal Record—All agencies must work together to create one administrative record and all agencies are bound to that one record for judicial review
4. Disciplined Schedule—All agencies have to act within the time frame set by the lead agency with repercussions on authorities if an agency delays their decision
5. Expeditious Judicial Review—Failure of an agency to follow the schedule set by the lead agency or to provide conditions narrowly focused to their authorities results in immediate referral to the federal court system
6. Eminent domain

Designating one agency as having exclusive siting authority would not usurp the decisional authority of the mandatory conditioning agencies. Rather it recognizes that one agency has been vested with the authority to determine whether the proposal is in the public interest while others have been vested with authorities that go only to some aspect of the project. This would specifically address the issue of extended agency authority where mandatory conditions are used to achieve larger agency goals like basin-wide restoration. The Alaska Gas Pipeline Act of 2004 specifically addressed this issue by distinguishing between the lead agency and other agencies that are handling aspects of the project.

The development of one federal record for all agencies that are acting under federal law is at its core just a matter of good government. Currently, at times agencies go to the effort of developing records covering the same issues under different time frames. Requiring all agencies to work together under the schedule of the lead agency would reduce waste, improve decision making, and reduce the potential for conflicting conclusions. Finally, to provide discipline to the process the agencies need to know that, should they not meet the schedule or extend their authorities beyond designated aspect of the project, their actions would be reviewed by the federal court.

With these six principles in place, energy infrastructure has the potential for development. As an example the natural gas pipeline industry has a legislative/regulatory environment that encompasses all six principles. During the period from 2000 to 2010 more than 15,000 miles of new interstate pipeline were constructed. This included one 1,700 mile, 42 inch diameter pipeline across eight states that took only three and one half years to go from the application being filed at FERC to completing construction and natural gas flowing from the Rockies to the Pennsylvania border.

By comparison the hydropower industry only benefits from two of the six principles—pre-filing and eminent domain. As a consequence licensing can continue for excessive periods of time with associated costs. As an example the relicensing of the existing Orville hydropower project in California has been ongoing for nearly 10 years with many of those years directly related to the resolution of mandatory conditions. In practice there are no statutory curbs in the existing licensing process to the delays associated with resolving mandatory conditions and as a consequence no certainty in the regulatory process. Given these types of licensing uncertainties there is little incentive for the potential proponent for a new hydropower project to invest. The ability of a developer to see that the first dollar invested in pursuing a new hydropower project has a reasonable chance to result in a return is critical to infrastructure development. Hydropower suffers from lacking this legislative/regulatory environment that incorporates the six principles of energy infrastructure development.

IV. Conclusion

The FERC's licensing process is designed to ensure that all issues are carefully considered based on extensive input from all affected parties. Mandatory conditions can be integrated into this process without disruption or unnecessary costs. By developing a statutory/regulatory process based on the six principles of energy infrastructure development that restrains the abuse of the mandatory conditioning authority, developmental interests will once again turn to our Nation's original green energy.

The CHAIRMAN. Thank you very much, Mr. Robinson, for your testimony.

We have next Mr. Einar Maisch, Director of Strategic Affairs for the Placer County Water Agency in Auburn, California. Welcome, and you are recognized for five minutes.

STATEMENT OF EINAR MAISCH, DIRECTOR OF STRATEGIC AFFAIRS, PLACER COUNTY WATER AGENCY, AUBURN, CALIFORNIA

Mr. MAISCH. Thank you, Mr. Chairman, Ranking Member Napolitano. I appreciate the opportunity to be here today to talk to you. Placer County Water Agency owns and operates a hydroelectric project in the Sierra Nevada, just west of Lake Tahoe. It is a 224-megawatt, produces about a million megawatt hours a year. And we are—our license is up in 2013, so we have been very involved in the re-licensing of that project. We have also been very involved in the re-licensing of two neighboring projects, because of an interbasin transfer that provides water supply in Placer County that PG&E and Nevada Irrigation District own.

The role of hydro, I think, was summarized well in your opening statement. It is clean energy. It doesn't seem to make a lot of sense that we would be reducing clean energy in an era when we are trying to reduce greenhouse gas emissions, and taking other sources of generation offline.

I think, more importantly, besides the fact that it is clean energy, it is also critical to the regulation of the grid. It provides ancillary services that allow non-dispatchable, renewable energy sources to be integrated into the grid. I think up in your area, Bonneville Power has recently demonstrated the capabilities and the strains that excessive amounts of wind energy put on the system. So hydro is not only a clean energy source, it allows other clean energy sources to come into the system. And reducing hydro, I think, is not helpful to our overall goals in this country.

Re-licensing is long and expensive. You know, the history in our neighborhood is that folks are losing 8 to 10 percent of their generation. The ILP was intended to help that situation, impose deadlines. They thought deadlines would reduce costs and streamline the process. Unfortunately, all it does is end up with not enough information. And when you have not enough information, the mandatory conditioning authorities end up imposing more onerous conditions. They become overprotective, they do adaptive management, require ongoing studies. And what you end up with is license reopeners, and no real assurances and no quantifiable costs. It is a very difficult business model.

PCWA, in its experience, started well early. We started five years before our license conditions. We had a very collaborative process.

We put a lot of money into it overall. We spent $37 million on our re-licensing. We are going to lose 5 percent of generation, we are going to spend another $20 million on capital costs. Our O&M costs are going up by $2.4 million, and we are making cash payments to resource agencies of $1 million a year. These are things that we have agreed to in our new license.

The neighboring re-licensings in Nevada County, PG&E and NID, they are looking at much higher losses, roughly double the losses that we have. And because they have not exactly gone at it the way that we did, they just complied with the timelines required and the ILP, the process was much more contentious. We watched that. Resource agencies are much more aggressive.

What we need is we need ability to go back to balancing resources. You know, the Federal Power Act requires FERC to balance resources, but it doesn't require the resource agencies to do any balancing when they submit their mandatory conditions. And the Act of 2005 that amended the—and gave us the ability to file comments, that really hasn't worked out. Comments are routinely ignored. If you want to file alternative conditions, you do so completely on the resource agency's grounds. They make you submit all kinds of information about what effects it has, balancing resources, and yet they are not required to provide any of that information. They are not required to justify their conditions, state what the purpose of the conditions are, or any information regarding the balancing of the proposed conditions.

We think that the answer to this is either to make the resource agencies, as a condition of submitting mandatory conditions, do the balancing, do a NEPA process, go through an open and transparent process, or give up their mandatory conditioning and give it to FERC and let FERC do the balancing under their authorities under the Federal Power Act. Thank you.

[The prepared statement of Mr. Maisch follows:]

Statement of Einar Maisch, Director of Strategic Affairs, Placer County Water Agency

INTRODUCTION:

Chairman Hastings and Ranking Member Markey; My name is Einar Maisch; I am the Director of Strategic Affairs for the Placer County Water Agency (PCWA) located in Auburn, California. Thank you for the opportunity to address the Natural Resources Committee today on the important topic of Mandatory Conditioning Requirements on Hydropower.

PCWA is a public agency established by an Act of the California Legislature in 1957 to provide water and energy services within Placer County. PCWA is governed by a five-member elected Board of Directors.

PCWA is the owner and licensee of the Middle Fork American River Project (MFP), Federal Energy Regulatory Commission (FERC) Project No. 2079. The MFP is located in northern California, west of Lake Tahoe, on the west slope of the Sierra Nevada Mountains. The MFP serves as a multi-purpose water supply and hydroelectric project. The Project was licensed in 1963 and began operations in 1967. It has a generating capacity of approximately 224 megawatts (MW) and produces an average of 1,000,000 megawatt-hours (MWh) per year of clean, carbon-free energy. The MFP is also used to divert and store water to meet municipal, industrial, and agricultural demands in western Placer County.

PCWA's 50-year FERC license expires on February 28, 2013. In my capacity as Director of Strategic Affairs, in cooperation with the County of Placer, I have overseen the relicensing of the MFP. In addition, I have directed PCWA's active participation as a stakeholder in the relicensing of two FERC hydroelectric projects in the Yuba River Watershed, the next watershed north of the American River. These projects include Nevada Irrigation District's (NID) Yuba-Bear Hydroelectric Project,

FERC Project No. 2266 and Pacific Gas and Electric's (PG&E) Drum-Spaulding Project, FERC Project No. 2310. In these proceedings, PCWA's primary interest is to protect both current and future consumptive water deliveries for the residents of Placer County, from the Yuba-Bear/Drum-Spaulding projects.

PCWA has intimate knowledge of the FERC's Integrated Licensing Process (ILP) and the mandatory conditioning authority that certain resource agencies have under the Federal Power Act (FPA).

ROLE OF HYDRO IN THE NATION'S ENERGY PORTFOLIO:

Hydropower represents a source of clean, renewable energy, providing approximately 10% of the country's electric generating capacity. The energy produced from hydro-generation is not only emission-free, which facilitates the country's overall objective of reducing greenhouse gases, but is also one of the least-costly forms of energy available to consumers. Furthermore, due to its ability to be dispatched quickly, hydropower provides valuable ancillary services to support the overall quality and reliability of the electric grid.

Only recently, from the experiences in the Bonneville Power Administration's territory and others, have many come to understand that hydropower's grid regulation capability is critical to incorporating more non-dispatchable renewable energy sources (i.e., wind and solar) into the nation's energy portfolio.

RELICENSING PROCESS OVERVIEW:

The relicensing process is a long and expensive process with decision-making authority spread across a range of federal and state agencies pursuing different statutory missions. The relicensing of hydroelectric projects is resulting in an average loss of approximately 8–10% of the nation's hydropower. In addition, implementation of new license conditions has dramatically increased capital and operating costs. In some cases, the loss of generation revenue combined with increased costs has resulted in hydroelectric projects being deemed uneconomical, resulting in decommission.

The Integrated Licensing Process

As of July 23, 2005, the ILP is the default FERC process for the licensing of hydroelectric projects. The ILP offered several advantages over the previous licensing processes, most importantly defined deadlines for participation through the process associated with:

- Study plan determination;
- Requests for additional information; and
- Filing of terms and conditions by resource agencies.

Unfortunately, however, if the licensee strictly adheres to the ILP schedule, there may be insufficient time to complete the required studies and have sufficient information available to resolve conflicts with relicensing participants on potential new license conditions, prior to submittal of the License Application. While the ILP timeline may appear to confine the study activities and costs, it often results in FERC prolonging the licensing proceeding until studies are completed or encourages the resource agencies to mandate very conservative license conditions based on either a lack of information or insufficient time for the parties to jointly understand the implications of the study results. The resource agencies often also request license reopeners or impose conditions that require extensive studies after the license is issued and adaptive management that allows the agencies to modify their mandatory conditions over the term of the license, once study results become available.

Under these scenarios the licensee is left with uncertain costs and conditions for years into the new license, which makes efficient budgeting and planning exceedingly difficult.

PCWA's Relicensing Experience

For the relicensing of the MFP, PCWA made the strategic decision to invest in the development of the study plans and implementation of scientific studies early in the process. In fact, PCWA began relicensing activities five years prior to filing of the Notice of Intent (NOI) and Pre-Application Document (PAD). PCWA was the first license applicant to submit stakeholder-approved study plans in its PAD. PCWA also obtained FERC approval to expedite the study plan process. Early implementation of the study plans allowed PCWA to complete the studies in sufficient time for the results to be used by relicensing participants to collaborate on new license conditions. PCWA submitted a Final License Application (FLA) which included detailed management and monitoring plans. The resource agencies filed preliminary terms and conditions on August 2011 which were generally consistent with the FLA and subsequent negotiations between the parties. FERC's draft National

Environmental Policy Act (NEPA) document should be distributed for public review in mid-July 2012.

PCWA has worked collaboratively with resource agencies, non-governmental organizations (NGO), and other stakeholders for seven years on this project. Overall, we feel that the stakeholders in our relicensing have appreciated PCWA's approach, and they have been reasonable in setting conditions. We believe that this success was directly related to PCWA's early engagement in the process and active collaboration with relicensing participants.

PCWA has spent about $37 million on the relicensing of the MFP to date. Under the preliminary terms and conditions filed by the mandatory conditioning agencies, PCWA expects to lose about 5% of annual energy generation as a result of increased instream flows requirements. We expect to spend approximately $20 million on capital improvements; our annual operation and maintenance (O&M) costs will increase approximately $2.4 million per year and direct cash payments to resource agencies will amount to another $1 million per year. Believe me, under the current regulatory framework, this is what success looks like.

The PG&E and NID Relicensing Experience

In the northern adjacent watershed, the story is different. PG&E is relicensing its Drum-Spaulding Project (FERC Project No. 2310) collaboratively with NID's Yuba-Bear Hydroelectric Project, (FERC Project No. 2266). The Drum-Spaulding/Yuba-Bear projects are highly integrated, operating as a single system with over 50 individual diversions. It is one of the most complex hydropower systems in California, if not the nation. Many of its facilities date back to the California Gold Rush era and are used to support both power generation and delivery of consumptive water. However, complexity does not translate into high revenues from power generation.

PG&E and NID made the strategic decision to be less aggressive in the development of study plans and implementation of environmental studies compared to PCWA; however, they did comply with every ILP regulatory deadline. This approach was likely due to the overall complexity of the system, an order of magnitude more complex than PCWA's MFP, and the inability of the project revenues to support the scope of studies expected by resource agencies.

With less timely information available in the Yuba-Bear/Drum-Spaulding relicensing, resource agencies have been more aggressive, and their current proposal will result in a loss of approximately 10% of average annual generation, in addition to significant capital improvements, and increased operating costs. As a consequence, PG&E recently asked FERC to divide the Drum-Spaulding Project into more than one licensed project, because electric generation revenues may not be sufficient to support continued hydropower operations of the entire system.

The residents of Placer County are dependent upon operations of the Drum-Spaulding Project and its water conveyance facilities to deliver consumptive water. These conveyance facilities have provided water to the people of Placer County since the late-1800's. The new license conditions and the uncertainty about the fate of the project, now licensed to PG&E, are obviously of great concern to PCWA and its water customers.

RESOURCE BALANCING:

The FPA gives FERC legal authority to issue licenses for non-federal hydroelectric projects. During the relicensing process, FERC must give "equal consideration" to developmental and non-developmental values including:

- Utilization of the site's hydroelectric potential;
- Potential benefits to interstate or foreign commerce;
- Adequate protection, mitigation, and enhancement of fish and wildlife (including their spawning grounds and habitat); and
- Other beneficial public uses, including energy conservation, irrigation, flood control, water supply, recreational opportunities, and other aspects of environmental quality.

It is important to note that under FERC jurisdiction the baseline for the relicensing of a hydroelectric project is the existing environmental conditions associated with the current project facilities and on-going O&M.

Mandatory Conditioning

Under Section 4(e) of the FPA, resource agencies may establish mandatory conditions for lands within their federal reservation. Under Section 18, certain resource agencies can prescribe mandatory fishways prescriptions. However, the mandatory conditioning agencies are not required to give equal consideration to developmental and non-developmental values. The only requirement for mandatory conditions under Section 4(e) is that they do not interfere with the purpose for which the fed-

eral reservation was created or acquired, and that they are deemed necessary for the "adequate protection and utilization" of such reservation.

These resource agencies can impose mandatory conditions that result in substantial loss of hydropower generation, require costly infrastructure modifications, and increase O&M costs without considering the overall effects of the conditions on project economics, energy supply, water supply, and any other public benefits. The resource agencies are simply following their statutory mission. Although we can all cite examples where resources agencies have been overzealous in prescribing mandatory conditions, the problem lies in the guidance provided under current law. The resource agencies do not have to establish mandatory conditions with an eye toward balancing environmental and societal values.

Since the FPA does not allow FERC to modify or reject mandatory conditions filed by resource agencies, there is no mechanism to establish final license conditions that are balanced and provide for equal consideration of other developmental and non-developmental values. This directly conflicts with FERC's authority under the FPA.

In addition, the resource agencies do not consider filing of mandatory conditions to be a federal action requiring analysis under NEPA. We strongly disagree with this interpretation. Because these conditions are mandatory and must be accepted by FERC, the act of submitting the conditions should be considered a federal action, and therefore the resource agencies should be required to complete an independent review under NEPA that includes a detailed analysis of direct, indirect or cumulative effects of the federal action. The NEPA analysis conducted by FERC for issuance of the new license is completed after resource agencies have issued their mandatory conditions, and it therefore cannot satisfy NEPA for issuance of the mandatory conditions.

Challenging Mandatory Conditions

Under current regulations, the licensee and other parties have three options to respond to preliminary mandatory conditions including submitting: 1) comments; 2) alternative conditions; and/or, 3) requests for a trial-type hearing.

Experience shows that comments filed on mandatory conditions are routinely ignored and at best become a footnote in the administrative record.

Filing of alternative conditions is a more extensive process that requires the licensee to meet specific criteria. The alternative conditions must be submitted within 30 days following filing of the preliminary terms and conditions, including mandatory conditions, with FERC.

The filing of alternative conditions must include:

- A description of the alternative;
- An explanation of how the alternative will provide the adequate protection and utilization of the reservation;
- An explanation of how the alternative, as compared to the preliminary conditions, will
  - Cost significantly less to implement or
  - Result in improved operation of the project works for electricity production;
- An explanation how the alternative will affect (1) energy supply, distribution, cost, and use; 2) flood control; (3) navigation; (4) water supply; (5) air quality; (6) other aspects of environmental quality; and
- Specific citations to any scientific studies, literature, etc relied on to support proposal.

The party proposing an alternative condition must provide extensive evidence comparing its alternative to the resource agency's preliminary mandatory conditions across a range of different factors, both environmental and economic. In contrast, the mandatory conditioning agency itself, in developing and filing its preliminary mandatory conditions, is not required to consider or present evidence on any of those factors, or on the effects of the conditions it has mandated. Furthermore, alternative conditions are evaluated by the mandatory conditioning agency within the confines of "adequate protection and utilization of the reservation." This approach does not provide for equal consideration of other environmental and societal values. In other words, there is no balancing.

So what happens once resource agencies receive alternative conditions? Under the current regulations, the resource agencies are not obligated to respond in a timely manner or consult on the alternative conditions. The resource agencies are only obligated to provide an explanation of the rationale for rejecting the alternative conditions concurrent with the filing of their modified terms and conditions. At this point in the process, the licensee has no ability under the alternative condition process regulations to challenge the mandatory conditions.

The request for trial-type hearing on a mandatory condition is an even more arduous and expensive process. This request must also be made within 30 days following the filing of preliminary terms and conditions by the resource agencies. The request for hearing must be solely based on a "disputed issue of material fact." What constitutes an issue of material fact is ill-defined. The hearing process is focused on whether the mandatory conditions are supported by the record, in the context of the resource agencies' narrow objective—protection and utilization of the federal reservation. The hearing process does not evaluate the mandatory conditions in a broader perspective of balancing other environmental and societal values.

To further compound the problem, the resource agencies can issue modified mandatory conditions later, which can be substantially different from the preliminary conditions, with no clear process for requesting a trial-type hearing on the modified mandatory conditions.

RECOMMENDED PROCESS IMPROVEMENTS:

We urge Congress to revise the licensing regulations to incorporate greater balance in the development of license conditions for hydroelectric projects. Specifically, we present two options to revise the mandatory conditioning process.

Option 1 includes:

- Require resource agencies to broaden the scope of their analysis when developing mandatory conditions, beyond just the narrow mission of their respective agency and adhere to the broader requirement of balancing between developmental and non-developmental values that is currently required of FERC.
- Establish that agencies filing mandatory conditions with FERC are engaging in a "federal action" and require independent environmental review under NEPA; including a comprehensive analysis of the direct, indirect, and cumulative impacts of their action under the same public review process required for every other federal action.
- Require resource agencies to clearly define the objective of each mandatory condition with an accompanying rationale and disclosure of impacts in an open and transparent manner, thereby, adhering to the same standard of disclosure and explanation required of the licensee and other parties submitting Alternative Conditions.
- Require agencies to promptly consult and respond to Alternative Conditions prior to FERC's Draft NEPA document, rather than allowing the agencies to ignore the requests for months and only address them during the filing of modified terms and conditions, after the Draft NEPA document has been issued.
- Modify the hearing process regarding the basis for challenging mandatory conditions such that concerns over balancing between developmental and non-developmental values can be addressed, rather than restricting the hearing process to only "issues of material fact." Further, there should be a clear process for requesting a trial-type hearing on modified terms and conditions.

Option 2 includes:

- A more direct and cost-effective approach for revising the relicensing process—simply eliminate mandatory conditioning authority and have resource agencies use their authority to file recommendations under Section 10(a) and 10(j) of the FPA. This would allow FERC to fully evaluate and balance these recommendations in a broader context.

I would like to thank Chairman Hastings and Ranking Member Markey for allowing me to share my thoughts on this important topic with the Natural Resources Committee. Revising the mandatory conditioning process is paramount for the Nation's hydroelectric generation resources.

The CHAIRMAN. Thank you very much, Mr. Maisch, for your testimony.

Next we have Mr. Jeff Reardon, from the Maine Brook Trout Campaign Director for Trout Unlimited in Manchester, Maine. And, Mr. Reardon, you are recognized for five minutes.

STATEMENT OF JEFF REARDON, MAINE BROOK TROUT CAMPAIGN DIRECTOR, TROUT UNLIMITED, MANCHESTER, MAINE

Mr. REARDON. Chairman Hastings, Ranking Member Napolitano, thank you for the opportunity to testify today. I work for Trout Unlimited, a national non-profit conservation organization with more than 140,000 volunteers organized into 400 chapters from Maine to Alaska. Our mission is to conserve, protect, and restore North America's cold water fisheries and their watersheds. And our chapters annually invest over 600,000 hours of volunteer time to achieving this mission.

We believe strongly in working collaboratively to achieve meaningful conservation results that provide benefits to a variety of stakeholders, including hydropower generators and electric rate payers. I have worked for TU for 13 years. And increasingly, our work in Maine has succeeded in finding cooperative solutions to vexing challenges.

Trout Unlimited has consistently applied a collaborative approach to hydropower re-licensing. I have personally been involved in re-licensing more than 20 hydroelectric dams representing TU. Based on my experience, I believe the re-licensing process has gotten better over time at catalyzing solutions that balance the needs of the hydropower industry, fish and wildlife, and the citizens who use our nation's rivers. Mandatory conditioning authorities are critically important tools for achieving this balance. In our experience, the resource agencies have been sparing and judicious in how they apply these authorities.

For a time following passage of the Electric Consumers Protection Act, the new authorities, combined with a huge wave of project re-licensings in the early 1990s, strained FERC's effectiveness and the effectiveness of the resource agencies. Recognizing this, TU and other resource users worked very hard with FERC, the resource agencies, and the industry to seek improvements. One such improvement was the establishment of the cooperative licensing process in which stakeholders and the licensee worked cooperatively from study design through permit approval and, in many cases, through implementation to find common ground and durable solutions.

These cooperative processes have led to resounding successes, not just in Maine, but also in places like the Clark Fork Basin of Montana, with Avista Power, and the Deschutes River Basin of Oregon with Portland General Electric.

I would like to take a few minutes to highlight some successful projects I have worked on in Maine. The Kennebec River Basin, where I live and where I have done the bulk of my work, offers proof that power generation and fisheries can be better balanced. Between 1993 and 2006, FERC re-licensed 16 of the 25 dams in the basin. FERC approved surrender and removal of three of those dams, as well as approving operational changes at most of the remaining ones. The net result: in-basin hydro-generating capacity was reduced by less than three percent, and commercial and recreational fisheries have boomed. And I mean boomed.

The Sebasticook River, where sea-run fish were absent from 1837 through the 1990s, now supports the largest run of river herring

on the East Coast. And two Maine communities have regained historic commercial fishing rights they lost nearly 200 years ago.

This spring the fish lift at the Benton Falls Dam has passed over 1.7 million river herring, and we are midway through the run at this point. The Kennebec River supports a popular and growing recreational fishery for American shad—that is new—and striped bass, which now have access to 20 more miles of river, part of Maine's $257 million recreational fishing economy.

A more recent project on the Penobscot River may trump that. The Penobscot River Restoration Project is an unprecedented collaboration among the Penobscot Indian Nation, seven conservation groups, hydro companies, PPL, and Black Bear Hydro, and State and Federal agencies. The core of the project is a plan for the nonprofit Penobscot River Restoration Trust to purchase and decommission three dams, removing two of them. Combined with improved fish passage on the remaining dams owned by Black Bear, the project will improve access to over 1,000 miles of river habitat for 11 species of sea-run fish, 2 of them listed as endangered. Enhancements to the remaining hydropower dams will fully offset any power losses from the 3 decommissioned dams, and may actually result in a small net increase. Creativity by the dam operators, figuring out how to get more power out of fewer dams, was crucial to resolving decades of conflict over fish passage and other issues that go back to when I was in high school.

Since I started working on hydropower projects, re-licensing has become far more cooperative, with benefits for fish, anglers, hydropower production, and local communities. Our experience has demonstrated that where companies, agencies, and stakeholders work collaboratively, the re-licensing process results in positive outcomes for all involved.

Trout Unlimited urges the Committee to foster more of these successes by encouraging Federal resource agencies to seek collaborative approaches, and by helping to provide the resources to these agencies to do that difficult job well.

Thank you again for the opportunity to testify.

[The prepared statement of Mr. Reardon follows:]

Statement of Jeff Reardon, Maine Brook Trout Project Director, Trout Unlimited

Mr. Chairman:

Thank you for the opportunity to testify before the House Natural Resources Committee on the mandatory conditioning authorities afforded the federal resource agencies under the Federal Power Act (FPA). My name is Jeff Reardon. I am the Maine Brook Trout Project Director for Trout Unlimited (TU), a national non-profit conservation organization with more than 140,000 volunteers organized into 400 chapters from Maine to Alaska. Our mission is to conserve, protect and restore North America's coldwater fisheries and their watersheds. TU chapters invest thousands of volunteer hours on their local streams and rivers to restore habitat for trout and salmon fisheries, and they invest considerable time in conducting youth conservation camps and taking kids fishing.

TU works with partners to fulfill our mission. TU staff and volunteers work with state agencies to clean up pollution from abandoned mines, with farmers and ranchers to improve riparian habitat and restore stream channels, and with western irrigators to improve water management and restore stream flows. TU also works with sportsmen and -women who care about protecting great fishing and hunting places on public lands.

TU believes strongly in the principle of working collaboratively to achieve meaningful conservation results that provide benefits to a variety of stakeholders, includ-

ing hydropower utilities and electric ratepayers. I have been fortunate to work with TU for 13 years, and increasingly our work in Maine has succeeded in finding cooperative solutions to vexing challenges.

TU has consistently applied this collaborative conservation process to hydropower relicensing over the past 20 years. I have personally been involved in the relicensing of more than 20 hydroelectric dams. As a member of the Penobscot Trust, TU currently is an owner and operator of three dams in Maine as part of a project that will soon remove or decommission the dams, while our partner Black Bear Hydro, LLC will replace the lost power through hydropower enhancements at other dams.

Based on our experience, I believe that the relicensing process is getting better and better over time for catalyzing solutions that balance the needs of the hydropower industry, the fish and wildlife resources of our rivers, and most importantly, the citizens of our nation. Mandatory conditioning authorities are critically import tools for achieving this balance which, among other things, is essential for sustaining quality hunting and angling opportunities and the $76 billion in economic activity attributable annually to hunting and angling. Maine's sport fishing industry alone is valued at more than $257 million per year. In our experience, the resources agencies have been judicious in how they apply these valuable authorities.

Because there has been so much "water over the dam", let me take a few moments to describe how we got to where we are today.

The FPA, mandatory conditions and balancing river uses

Hydropower is an important source of energy for the nation. Among its strengths are that it does not cause air pollution or produce radioactive waste, such as other power sources do, and that fuel costs for the power producer are zero. But in many places hydropower development has devastated fisheries and other aquatic resources. Hydro dams block upstream and downstream fish migration; they alter upstream and downstream habitat; and they injure or kill fish that pass through turbines or over spillways. Construction and operation of private and public hydropower dams have been especially harmful to migratory fish such as salmon, river herring, shad, striped bass, and eels over the past 150 years.

For example, in a 2004 report on Atlantic Salmon in Maine, the National Research Council identified dams as "the single most important class of impediments to salmon recovery that can be influenced by human actions," and identified fish passage improvements as an "urgently needed action".

To attempt to provide some balance of river uses while encouraging and regulating hydropower, the Federal Power Act was established in 1920. The Act mandated the Federal Energy Regulatory Commission (FERC) to grant licenses for hydropower projects. Because of the poor record of success in mitigating losses to fisheries from hydro dam operation and construction, Congress passed the Electric Consumers Protection Act in 1986. Signed by President Reagan, the law amended the Federal Power Act. It required that FERC "give equal consideration to non-power generating values such as the environment, recreation, fish, and wildlife, as are given to power and development objectives when making hydroelectric project licensing decisions." The U.S. Fish and Wildlife Service (FWS), NOAA Fisheries and the Forest Service, with whom we commonly work, are three of the agencies which have the authority to impose conditions to require dams to allow fish passage and to mitigate fish population and fish habitat losses where needed. In exchange for abiding by these conditions, and the others placed on the projects by FERC, hydro dam operators get long term licenses to use the river to generate power, from 35 to 50 years. These long license terms, combined with no fuel costs, provide dam owners the opportunity to recover capital expenditures required as a condition of the license.

The new authorities, combined with a huge wave of project relicensings in the 1990's, strained the ability of FERC and resource agencies to make the law work effectively. There were some very positive outcomes, such as the Avista project on the Clark Fork which I will highlight in a moment. But some hydropower industry representatives, states, and conservationists had legitimate complaints about the way FERC and the resource agencies implemented the 1986 changes. TU and other river conservationists worked very hard with FERC and the resource agencies to seek improvements over the past 20 years.

One such improvement was the establishment of a cooperative licensing process, in which stakeholders and the licensee work together from the very inception of relicensing to the conclusion—from the early studies to permit approval—to find common ground and durable solutions. Nonetheless, some of the industry went to Congress seeking dramatic, weakening changes to the mandatory conditioning authorities. In 2005, Congress rejected substantial weakening of the mandatory conditions but did make changes to the law.

Provisions in the Energy Policy Act of 2005, signed into law by President Bush, generally place a higher burden of proof on the resource agencies to justify their conditions, and provided a "trial type" hearing mechanism to allow industry and other stakeholders to challenge the proposed conditions.

States also have mandatory conditioning authority through the Clean Water Act, through which they can protect their water quality standards by adding conditions to hydropower licenses. In states such as Maine, this authority has also proven to be very useful in mitigating damage to fish habitat and in catalyzing meaningful environmental improvements with little or no loss of generating capacity.

Clearly, fisheries and river recreation and local economies have benefited from the FPA. But have we lost generating capacity? In most places, no. According to FERC, changes required by the relicensing process, including mandatory conditions, result in an average per-project generating loss of only 1.6%. The Kennebec River basin in Maine, where I've done the bulk of my work, offers proof that power generation and fisheries can be better balanced. From 1993–2006 FERC relicensed 16 of 25 dams in the basin. FERC approved surrender and removal of 3 dams, as well as approving operational changes at most of the remaining dams. The net result? In-basin hydro generating capacity was reduced by about 3%.

And the environmental results have been dramatic. The Sebasticook River, a tributary to the Kennebec, which saw construction of two fishways and removal of the Fort Halifax Dam, now supports the largest run of river herring on the east coast, with more than 1.7 million river herring passed via the new fish lift at the Benton Falls this spring. Two Maine communities have already regained the historic alewife fishing rights they lost when Edwards Dam was constructed in 1837, and other communities are eager to join them. In addition to fish passed upriver at Benton Falls, these commercial fisheries harvested more than 500,000 herring for use as bait by Maine's lobster industry. The lower Kennebec River supports a popular and growing recreational fishery for American shad, and striped bass, once restricted to below the head of tide, now range more than 20 miles upstream to provide a new recreational fishery in the Kennebec and its tributaries. A unique salmon restoration program on the Sandy River, site of another dam removal, has generated the best egg-to-smolt yield of juvenile Atlantic salmon in the U.S.

For freshwater resident fish, improved minimum flows and habitat restoration projects funded by project licensees have resulted in improved production and growth of native brook trout, and better protection for native lake trout that spawn in some headwater reservoirs.

And for recreational anglers and other river users, there is vastly improved public access, and more predictable flow scheduling has enhanced recreational fishing opportunities by improving angler safety, while also providing more certainty for Maine's whitewater boating community.

All of these changes were achieved through settlement agreements with the dam owners that were designed to satisfy legal requirements, but also to maximize fisheries and recreation benefits while maintaining hydropower generation.

To repeat, despite the fact that these changes included decommissioning three dams, basin-wide loss of power was less than 3%—significantly less than year-to-year variation based on precipitation.

Cooperative licensing processes are on the rise

Over the past 10 years, relicensing has become a far more cooperative process, with great benefits to fish, fishing, hydropower production, and local economies. And at reasonable costs. TU is strongly supportive of the cooperative process. It requires a greater up-front investment in time and effort from all involved, especially the licensee, but the rewards can be great. The company, agencies, and river stakeholders can establish working relationships, implement mutually beneficial study and work plans, develop and consider options together, and together make mutually beneficial decisions.

Very simply, in our view the cooperative process is natural resources decision-making at its best. These are local solutions which benefit the companies, fish, recreation and local economies. We salute companies such as PPL in Maine, Portland General Electric in Oregon, and Avista in Montana and the Northwest for their willingness to show the way forward, and reap the rewards from it in terms of licenses granted by FERC in a timely manner, and holding costs down.

Local solutions, local successes

There are a growing number of significant project successes which demonstrate the benefits of the cooperative relicensing process.

Clark Fork Project in Western Montana (Avista Power)

In the Clark Fork basin, Avista worked with nearly 40 organizations, including TU staff and volunteers, over several years to create the Clark Fork Settlement Agreement. The agreement applies to the Clark Fork Project License, which includes the Noxon Rapids and Cabinet Gorge hydroelectric developments. The settlement agreement contained 26 protection, mitigation, and enhancement measures which Avista began implementing ahead of schedule. Likewise, FERC issued the new license one year before the existing licenses expired. The working relationships formed through the cooperative licensing process have endured through project implementation in the form of the Clark Fork Management Committee, which meets regularly to approve and monitor implementation efforts.

The Clark Fork Project has made great progress in protecting and restoring habitat in the basin, including:

- Transporting bull trout over Cabinet Gorge Dam for the first time in 50 years, in an attempt to reestablish historic migration routes.
- Restoring over a mile of Twin Creek (an important bull trout spawning stream) to its historic channel through a multi-party effort lead by TU and partially funded by Avista.
- Purchase of 871-acres of wetland and riparian habitat along Bull River, the largest tributary to Cabinet Gorge Reservoir. These purchases will allow preservation of existing wetland and riparian habitat.
- Obtaining more than $300,000 in grants to leverage existing funds.
- Receipt of the National Hydropower Association's Outstanding Stewardship of America's Waters Awards award in 2000, 2001, 2002, 2003, 2004, 2005, and 2006.
- Significant improvements to recreational facilities such as Pilgrim Creek Park.

Pelton Round Butte Project, Deschutes River, Central Oregon

The Portland General Electric Company and Confederated Tribes of the Warm Springs Indian Reservation, after initially competing against each other to relicense the 350 megawatt Pelton Round Butte Hydroelectric Project on the Deschutes River in central Oregon, convened a massive, multi-year, effort that brought together groups representing industry, tribal, conservation (including TU), agricultural, municipal, and county interests. Reintroducing ESA-listed salmon and steelhead in the Crooked, Metolius, and middle Deschutes rivers upstream of the project was the centerpiece of the new license and mitigation package. In 2009, PGE and the Confederated Tribes of the Warm Springs completed a fish intake and bypass project at the Pelton Round Butte Hydroelectric Project dam, which will enable Chinook salmon, sockeye salmon, and steelhead to complete their natural life cycle in the Deschutes River basin for the first time in 40 years.

Additional terms and conditions provided for recreation and enhanced sustainability in the rural communities located near the project. Further, the reintroduction effort has lead to additional resources being dedicated to the Deschutes River basin, and addressing watershed health issues for the benefit of small Oregon towns attempting to diversify their economies. Local entities like the Three Sisters Irrigation District have been able to secure mitigation dollars associated with the relicensing effort to modernize their water diversion, delivery, and use systems in a way that streamlines operations while at the same time providing additional streamflows and restored access to over 20 miles of historic steelhead habitat on Whychus Creek.

Penobscot River Project, PPL, Central Maine

Perhaps the most creative hydroelectric project that TU has worked on, the Penobscot River Restoration Project is an unprecedented collaboration among the Penobscot Indian Nation, seven conservation groups, hydropower companies PPL Corporation and Black Bear Hydro, LLC, and state and federal agencies. On the Penobscot, a Multiparty Agreement resolved decades of arguments over fish passage, hydropower, and issues important to the Penobscot Indian Nation. The core of the project is a plan for the Penobscot River Restoration Trust, the non-profit organization charged with implementing the agreement, to purchase and remove the two lowermost dams on the Penobscot River, and purchase and decommission a third dam at the mouth of the Penobscot's largest tributary, where a fish bypass will be constructed. Combined with improved fish passage on the remaining dams, the project will improve access to over 1,000 miles of river habitat for 11 species of sea-run fish. Enhancements to the remaining hydropower dams will offset any power losses from the three decommissioned dams.

Conclusion

These examples show that where companies, agencies, and stakeholders work collaboratively, the relicensing process can result in outcomes that meet the needs of the hydropower industry, the fish and wildlife resources of our rivers and the industries they support, and the public. TU urges the committee to foster more of these successes by:

1. Encouraging the federal resource agencies to seek cooperative approaches to solving hydropower relicensing challenges, and
2. Helping to provide the resources that the agencies need to get the job done well.

Thank you for the opportunity to testify.

The CHAIRMAN. Thank you, Mr. Reardon, for your testimony.

And last, and certainly not least, from my home State of Washington we have Mr. John Grubich, who is the General Manager of the Okanogan PUD district in Okanogan, Washington. Mr. Grubich, you are recognized for five minutes.

STATEMENT OF JOHN GRUBICH, GENERAL MANAGER, PUBLIC UTILITY DISTRICT #1 OF OKANOGAN COUNTY, OKANOGAN, WASHINGTON

Mr. GRUBICH. Thank you, Mr. Chairman and Committee members. I appreciate the opportunity to visit with you today.

One of my business school professors was famous for saying, "Theory is great, but where does the rubber meet the road?" I hope I can illustrate that point to you today.

Okanogan PUD is a small, publicly owned utility, consumer-owned utility, in the State of Washington governed by three locally elected officials. It has assets of just about $1 million, annual revenues of about $40 million, just under 100 employees, and it is not a deep pocket.

We have a hydro structure in Okanogan County, Enloe Dam, that was put into service in 1906. It operated until 1958. And it is a run-of-the-river project. It provides 9 megawatts of capacity and 4.5 average megawatts of generation. Okanogan began this process in 2005, when it filed its preliminary license permit application. It filed the final license application in August of 2008. So we are closing in on four years of regulatory oversight and trying to figure out if we have a project or not.

Enloe Dam is going to generate, as I said, 4.5 average megawatts of energy. But it is going to be renewable, green energy, which everyone in the region is looking for. As Mr. Robinson indicated, hydropower provides additional benefits that other alternative sources don't. It provides a reliable, predictable source of energy when we need it.

The benefits of this project are going to be that it will increase construction jobs in the area for about 300 construction jobs, should meet the Washington State renewable energy portfolio standard. It will provide energy to the north part of Okanogan County, sufficient to service 3,000 residential homes, and it will add reliability to our distribution system.

Our concern is that the time it takes, and the individual agencies' ability to add additional requirements to this project makes it—could possibly make it economically unfeasible.

One of the agencies, the Bureau of Land Management, has attempted to make mandatory conditions—not through the FERC

process, FERC has already evaluated those and said that the vast majority of those requirements were not essential to the project and not related to the project. However, because we need a right-of-way from the Bureau of Land Management, they are saying those conditions will be part of the right of way. That will increase the project cost by approximately $6 million. So we go from a $31 million project cost to now a $37 million project cost, 20 percent increase.

Again, the timing of it. Once FERC issues a license, BLM has now said it will take them an additional 18 months to issue the right of way. That is problematic for us. These two pictures show that, of anything, this is a no brainer. This is an existing dam that is a run of the river, that all it takes is re-establishing the generation capacity to provide hydroelectric power to citizens of Okanogan County. Thank you.

[The prepared statement of Mr. Grubich follows:]

Statement of John R. Grubich, General Manager, Public Utility District No. 1 of Okanogan County

Introduction

Good morning, Mr. Chairman and Members of the Committee. I appreciate the opportunity to speak with you today about the mandatory conditioning authority of federal natural resource agencies and their effect on the Enloe Hydroelectric Project (Enloe Project). My name is John Grubich, and I am the General Manager of the Public Utility District No. 1 of Okanogan County (District), in Washington. Thank you very much for the opportunity to come before you to provide a background on the Enloe Project, describe its potential for generating green renewable power, the local benefits of construction of the Enloe Project, and our issues with the federal resource agencies holding mandatory unilateral conditioning authority over the Enloe Project. I will address these topics in the order just given.

Background on Enloe Hydroelectric Project

The proposed Enloe Project is a 9 MW hydroelectric facility on the Similkameen River, near the Canadian border in North Central Washington. In 2005, the District renewed its efforts to obtain a Federal Energy Regulatory Commission (FERC) license to restore the Enloe Project. The history of hydropower development at the Enloe site spans the last century. Originally developed in 1906, the Enloe Project ceased operation in 1958 and most of the equipment was removed. The District's proposed design for redeveloping the Enloe Project would provide important environmental benefits and, with the restoration of crest gates, more than double the previous project's generating capacity to 9 MW.

Utilizing the FERC's Traditional Licensing Process, the District filed the license application with FERC in August, 2008. Throughout the licensing process, the District has consulted with many federal and state entities including: Native tribes in Washington and Canada; the Department of Interior's Bureau of Land Management (BLM, the underlying landowner); National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) and the Fish and Wildlife Service (under Section 7 of the Endangered Species Act); U.S. Army Corps of Engineers (under Section 404 of the Clean Water Act); Washington State Department of Ecology (Ecology) (under Section 401 of the Clean Water Act and state law); Washington Department of Fish and Wildlife; Washington Department of Natural Resources; Washington State Historic Preservation Office (under Section 106 of the National Historic Preservation Act); and Okanogan County.

FERC issued a Final Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) on August 31, 2011. The Final Programmatic Agreement under the National Historic Preservation Act was issued on January 30, 2012. The District and Ecology continued efforts to complete a Clean Water Act Section 401 water quality certification. On February 24, 2012, Ecology published a draft 401 certificate with a 30 day comment period. Ecology is reviewing and responding to comments in anticipation of issuing Final 401 Water Quality Certification. The District expects a FERC license after finalization of the Section 401 Water Quality Certification and the issuance of a Biological Opinion by NOAA Fisheries. After issuance of the FERC license, the District will need to finalize the right-of-way

(ROW) authorization with the BLM, which is required under the Federal Land Policy and Management Act (FLPMA).

Enloe as a Source of Green, Renewable Power

Located at an existing dam and reservoir and operating on a run-of-river basis with virtually no measurable effects on the hydrologic regime of the Similkameen River, the Enloe Project will be a model of green, carbon-free hydropower design and operation. The Protection, Mitigation, and Enhancement Measures (PM&E's) identified in the Enloe License Application together with the mitigation measures identified in FERC's EA under NEPA will meet or exceed the scientific principles and technical requirements generally specified for "green hydro" certification. Leading environmental organizations have identified six key goals which provide a reasonable determination of whether a hydropower facility has low impacts on the environment. These concern fish populations, river flow, water quality, flooding of wildlife habitats, cultural resources and recreation. They have also established objective criteria to address these six goals. Internationally, European and Canadian criteria for green hydro include such considerations as: minimum flow regulations; hydro operations (e.g., peaking); reservoir management; bedload management; power plant design; hydrological character; connectivity of river systems; sediment budget and geomorphology; and landscape and biotypes. By all such measures and criteria, the Enloe Project would strongly qualify as an appropriate, green hydro project.

The Enloe Project is located above Similkameen Falls, a barrier to anadromous fish passage, and above critical habitat designated by the NOAA Fisheries. It incorporates a significant package of beneficial measures to enhance and protect downstream fish. The District has agreed to provide fisheries and aesthetic flows required by Ecology to protect aesthetic and instream values, as will be embodied in the 401 Water Quality Certification in final preparation by Washington State.

When licensed, the District will spend approximately $2.4 million of the total estimated project cost of $30.9 million on construction and implementation of the PM&E's over 40 years, a significant portion of which will employ local community professional services, vendors and contractors. These "ecological investments" to protect, mitigate and enhance the physical and human environment of the Enloe Project are equivalent to those widely required for "green hydro certification." They include:

- Enhancement of fish habit far exceeding the minimal fisheries impacts of the Project. A cold water spawning and rearing refuge will be built out of an existing side channel, 15,000 cubic yards of spawning gravels will be added to the gravel-poor Similkameen River, and large woody debris will be transported beyond the existing dam, among other things.
- A comprehensive vegetation and wetland management program, providing restoration, mitigation, and monitoring.
- Protection of water temperature, dissolved oxygen, total dissolved gas, and other water temperature parameters.
- Recreation amenities that greatly exceed the measurable effects of the project, including substantial access improvements and interpretation.
- Protection of local wildlife through project design and construction as well as construction of enhancements to benefit bald eagles.

The Development of the Enloe Project is Consistent with National Policy

The Enloe Project has been developed consistent with the recent interest in adding hydropower development to existing dams. Currently, only 3 percent of the nation's 80,000 dams generate electricity.[1] A study by the Department of Energy, National Oak Ridge Laboratory estimated that approximately 12.6 GW of new, renewable power can be generated at existing dam sites.[2] This study also found that a majority of these sites can be developed on federal land, not disturbing tribal sites, critical habitat, or national parks and wilderness areas.

A Memorandum of Understanding (MOU) was signed on March 24, 2010 between the Department of the Interior (DOI), the Department of Energy (DOE) and the Department of Army, implemented through the U.S. Army Corps of Engineers (USACE). The purpose of the MOU is to develop reliable, affordable, and environmentally sustainable hydropower by building a long-term working relationship, prioritizing similar goals, and aligning ongoing and future renewable energy development efforts between DOE, DOI, and USACE. In its 2-year progress report, DOE,

[1] *National Hydropower Association,* http://hydro.org/tech-and-policy/developing-hydro/powering-existing-dams/.

[2] *National Hydropower Association,* http://hydro.org/wp-content/uploads/2011/04/ORNL–Hydro-Factsheet-final.pdf

DOI and USACE stated that one of the goals of the MOU was to investigate the facilitation of the permitting process for federal and non-federal hydropower generation.

Benefits of the Enloe Project to Washington State

The District believes that hydropower is a clean renewable resource with significant untapped job-creating and environmental benefits, and potential for expansion that should be strongly encouraged by Congress. Specifically, the 2010 American Recovery and Reinvestment Act stimulus package included a $6 million allotment to train low-income, Veteran, and disabled workers in Washington State to perform energy-efficient construction jobs.[3] The Enloe Project is an example of a construction project that could use these skilled "green" workers and create other economic benefits in the area. In April-May 2012, the unemployment rate in Washington State was 8.3%,[4] and specifically it was 10.2% in Okanogan County.[5] The Enloe Project is projected to employ at least 20–25 percent of the personnel needed for the construction of the project from the local impacted area. In addition, the remainder of the construction personnel would temporarily relocate to the construction area, benefiting local businesses, retail and housing providers during the length of construction and compliance.

The Enloe Project is expected to generate an average of 45.0 GWh annually, and the total value of the power produced by the Enloe Project is estimated to be $2.6 million annually. This generation and revenue represent a source of clean, renewable and sustainable hydropower that will be used by and benefit the residents of Okanogan County. Overall, the District's power portfolio is based on 88 percent hydropower (from other sources), with the remainder being wind, nuclear and a small amount of other energy sources. To meet increased demand for power, if unable to develop the project due to the cost of requirements placed on it by federal agencies, the District would be forced to forego the local economic and environmental benefits of this green generation and obtain the replacement power from natural gas or coal fired generation.

Issues with BLM's Authority to Issue Mandatory Conditions in its ROW

Developing the Enloe Project with the PM&E's proposed in the license application (which are based on extensive consultation with most federal and state resource agencies, as well as the additional measures recommended by FERC in the Final EA), would represent an environmentally beneficial and economically viable project. However, the prospect of further mandatory enhancement measures poses a potential jeopardy that could destroy the economic viability of the project. Notwithstanding the positive project attributes of the Enloe Project and outcomes of the FERC NEPA process, the BLM has proposed further onerous environmental recommendations in the FERC licensing process which are unnecessary and unjustified. These recommendations would accomplish BLM programs and objectives that are not directly related to project impacts. Enloe is a very small project, with a total budget of approximately $30.9 million (of which about $2.4 million is committed to environmental mitigation). BLM's program would increase total project cost by 20 percent.

BLM's recommendations would not only raise the cost of the PM&E's from **$2.4 million** to an estimated **$8.7 million**, but also would expose the District to future open-ended cost increases because BLM's requirements would reserve to BLM the discretion to increase requirements and costs still further in the future. BLM's modified recommendations all go well beyond the level of mitigation considered sufficient by FERC in its EA; they are therefore unnecessary to mitigate project impacts, and lack any objective justification. It is also important to understand that the District's proposed PM&E program, as enhanced by FERC's mitigation requirements, already offers significant beneficial enhancements of the human and physical environments, beyond the mere mitigation of Project effects.

The BLM's many additional recommendations would restore recommendations previously considered and rejected by FERC in its EA. FERC received these recommendations from BLM at least twice, explicitly considered each of them in its EA, and rejected them. Although BLM has declined to formally impose these requirements as mandatory conditions under Section 4(e) of the Federal Power Act (FPA), BLM has stated that it plans to achieve the same result by unilaterally imposing these recommendations as requirements of its ROW, regardless of FERC's

[3] http://seattletimes.nwsource.com/html/localnews/2010846442_recoveryjobs21m.html.
[4] http://www.bls.gov/lau/.
[5] https://fortress.wa.gov/esd/employmentdata/eeis-tools/labor-area-summaries.

considered opinion. This approach to the license and ROW conditions disregards and subverts the purpose of the FERC licensing process.

These BLM unjustified and unnecessary recommendations include requirements that the District:

- Spend an amount equivalent to nearly 80 percent of the entire existing mitigation program to move spoils primarily composed of native rock off site.
- Be responsible for a program of recreation improvements that has no relationship to project impacts or needs, and would triple the District's recreation mitigation cost.
- Rebuild an expensive footbridge that FERC concluded was not necessary due to the lack of public facilities and recreation opportunities (existing or proposed) on the west side of the river.
- Conduct studies leading toward aesthetic flows that BLM would set itself, ignoring flow agreements that have been negotiated through the Washington State 401 Water Quality Certification process, and exposing the project to an open-ended financial risk.
- Comply with more extensive vegetation management requirements than BLM has imposed on any other project of which we are aware, potentially increasing mitigation costs for these resources by more than 150 percent.
- Increase fisheries mitigation to 150 percent of the planned program to address impacts unrelated to the project, ignoring the extensive and well-supported fisheries mitigation program negotiated with agencies and Tribes that already fully mitigates impacts.

Any process that allows a federal resource or land management agency to unilaterally impose its "wish list" of PM&E's on a project without regard to actual project impacts and the economic feasibility of such conditions on the project represents an invitation to arbitrary, project-crippling requirements. What is required is a process that requires or at least encourages federal resource or land management agencies to participate in developing a consensus of interested federal and state agencies with respect to what constitutes a reasonable level of project-related PM&E's. Parceling out unilateral authority to impose PM&E requirements on a project—as is currently the case with mandatory conditioning authority under FPA Section 4(e) and independent conditioning authority exercised by federal land management agencies under FLPMA—is potentially disastrous, saddling such projects with needless costs or, in too many cases, thwarting needed development altogether.

Conclusion

The District is hopeful that BLM may yet reconsider its intent to overreach with these excessive license and ROW conditions and thereby preserve the economic viability of our proposed beneficial green hydropower project. We applaud the Committee for looking into the impact of federal resource agencies' mandatory conditioning authority on the economics of projects such as the Enloe Project. In closing, I would like to thank the Committee for this opportunity to speak today and address the very important and potentially project-crippling requirements posed upon the District in its pursuit of licensing a clean renewable power project. The District looks forward to working cooperatively with the Committee as it moves forward with its assessment of federal natural resource agency conditioning authority. I will be happy to answer any questions.

The CHAIRMAN. Thank you, Mr. Grubich, for your testimony. We will now begin the question period for Members, and I will recognize myself for five minutes.

Mr. Grubich, let me follow up with what you said. And this is the time line that I understand. On August 8, 2011, it was after FERC had issued its draft environmental assessment, after that for the Enloe Dam. That is when the Secretary of the Interior, through BLM, filed their 36 pages of recommendations for the right of way. Now, this is just the right of way, it has nothing to do with the physical aspect of the dam. Is that correct?

Mr. GRUBICH. That is correct.

The CHAIRMAN. OK. Now, why—I guess I am—where I am puzzled is why would an Interior Department need to conduct additional NEPA review when the FERC process went through a NEPA review.

Mr. GRUBICH. That is an excellent question, and that is one we have posed to the agency.

The CHAIRMAN. And they have said what?

Mr. GRUBICH. They have not articulated the reason why at this point.

And to be fair, Mr. Chairman, we are in dialogue with the agency, trying to resolve this. My concern is that the timeliness of the resolution is of the utmost importance before our board makes the decision to go forward with the project or not.

If you look, BLM has 45 acres of land around this land, 45 acres of land. And yet they want to impose an additional $6 million of project costs that have nothing to do with this project, based on FERC's analysis.

The CHAIRMAN. Let me ask. Going through this process with FERC, you obviously had to have a lot of stakeholders involved with that. Give me an idea of what the stakeholders and—what consensus that they came through in the FERC process.

Mr. GRUBICH. And we had all the stakeholders, including BLM, in the process, although BLM is the only one who didn't support the outcome of the process. We had the Colville Indian Tribe, we had the Lower and Upper Similkameen Band from Canada supporting the project. We had the Washington State Department of Ecology, the Washington Fisheries, all of the Federal agencies involved in the FERC process. And when FERC came out with their final EA, BLM at that point chose to take exception to FERC's evaluation of their recommendations.

The CHAIRMAN. Well, that kind of leads in to another observation. Mr. Reardon just testified prior to your testimony that the status quo works when you have a collaboratory process. And you just—I don't want to put words in your mouth, so confirm that I said this correctly—you said that all the stakeholders, with the exception of BLM, was pretty much in agreement with the project.

And so, I had made an observation in my opening statement that it appears some agencies step in for a second bite. Is that an accurate assessment of what you are doing? In other words, the project itself, the Enloe project itself, going through FERC, there is broad consensus with the exception of one agency. Now this agency, because it doesn't agree with it, is imposing different requirements totally unrelated to energy production. Is that a fair assessment of what is going on?

Mr. GRUBICH. Yes, that is a fair assessment. And second bite of the apple is a very appropriate illustration.

It is frustrating, from a small utility's perspective, to go through this process and believe that you have the boundaries of the project done, and then have one agency hold the hammer over your head as to can you go forward with the project. And I can tell you, from a financing standpoint, that is my biggest concern. Not only are our local officials going to have to make a decision potentially without full knowledge, but when we go to finance a project, the construction risk component adds either cost to the project or interest to the project or to the bonds. That is another huge concern that I have when it comes time to package this and go forward with the project.

The CHAIRMAN. Now, just briefly, put that in perspective. What did you say your revenues are, roughly, a year?

Mr. GRUBICH. A little over $40 million.

The CHAIRMAN. A little over $40 million. And this project could cost in upwards of over 30, three-quarters of your total revenues for 1 year.

Mr. GRUBICH. Well, it is estimated at $31 million right now, which is about equal to our retail sales. And then any additions are going to be at least as much as our total annual sales.

The CHAIRMAN. Well, Mr. Grubich, thank you very much. I was made aware of this some time ago, and I have to say I shook my head when I heard what you said, because this is totally unrelated to power production. It is simply ancillary, and it—I very much appreciate your testimony.

My time has obviously expired. I recognize the gentlelady from California.

Mrs. NAPOLITANO. Thank you, Mr. Chairman. And, Mr. Reardon, with a simple yes or no, do any of the Federal agencies have the authority to tell FERC they cannot construct a license project?

Mr. REARDON. No. Sorry. No.

Mrs. NAPOLITANO. Thank you. In Mr. Robinson's testimony it states mandatory conditions have taken a toll on hydropower development, sending a market signal that it is bad business to pursue new hydropower projects. Yet in testimony from FERC Commissioner Phil Moeller, he estimates that pending hydropower license applications propose almost 2,500 additional megawatts of new capacity, and applications for another 5,580 megawatts expected to be filed in the next 5 years. Sound like an industry that is deterred by environmental conditions?

Mr. REARDON. No, and I just add that what we see is a number of existing projects looking at incremental increases in generation on both of the big basins I have worked in, the Penobscot and the Kennebec.

Mrs. NAPOLITANO. Developers are not doing it for the benefit of environment. They are going to make money out of it. Would they pursue projects or proposals if they did not make economic sense?

Mr. REARDON. I assume not.

Mrs. NAPOLITANO. I would hope not. In Mr. Maisch's testimony, he states the resource agencies can impose mandatory conditions that result in substantial loss of hydropower generation, require costly infrastructure modifications, and increase O&M costs. There are other costs associated with hydropower that are borne by other users of the river, whether it is the fishermen, downstream water users, everybody who benefits from the healthy ecosystems. These costs come in the form of fewer fish, less and lower water quality, and fewer recreational opportunities. Doesn't a true balancing of interests require that, one, getting the benefit from altering a natural river environment should have to pay the cost of degrading it?

Mr. REARDON. Yes. And I think the example on the Kennebec is a great one. You know, those fish runs were destroyed by a dam that was built when there was no fish passage authority, and not restored until after ECPA and fish passage authority went to the Federal agencies.

Mrs. NAPOLITANO. So there is a cost borne by others that is not always——

Mr. REARDON. There certainly is.

Mrs. NAPOLITANO. Thank you. Mr. Maisch, your testimony indicates that your agency expects to lose about five percent of the annual energy generation as a result of increased in-stream flow requirements, and will spend approximately 20 million on capital improvements, with an increase in O&M costs of 2.4 million per year, an impressive amount. But did your agency recoup its initial investment in the project over the prior license term?

Mr. MAISCH. Well, our agency was in a partnership project with Pacific Gas and Electric Company, so they got all of the energy and paid all of the operation and maintenance costs and the bond indebtedness. So we have received the full benefit of all of the water supply. And so, yes, there have been benefits over the 50-year license, no doubt at all.

Mrs. NAPOLITANO. Well, then, in the same token, what is your estimate with the net revenue from the project's power generation and the water delivery over the next 30 to 50 years, when the license period—time where these new investments in the project will give your agency the exclusive right to use this public waterway to generate hydroelectricity?

Mr. MAISCH. Yes. We expect the project to produce in the neighborhood of $45 million a year in energy benefits.

Mrs. NAPOLITANO. Forty-five. Thank you very much.

And, Mr. Reardon, just a question for Maine. How many Mainers went dark with the removal of the Fort Halifax Dam and the Edwards Dam?

Mr. REARDON. None.

Mrs. NAPOLITANO. Any consumers will lose access to power with the decommission of the Great Works Dam and the Veazie Dam?

Mr. REARDON. No. And, in fact, one of the elements of that project is that the energy enhancements started being implemented before the dam removals, which haven't occurred yet.

Mrs. NAPOLITANO. I see. Mr. Robinson, you say hydropower is in trouble. And just—my common sense tells me that those that do hydropower would normally have their ducks set up when they go for licensing, or at least they should. And it is an unlevel playing field. I have visited a couple of the PMAs, and first time I think anybody has really gone and talked to them. And I am wondering. Why have they not been vocal, if there have been issues?

And I can certainly see that what they charge for the electricity does not take care of the infrastructure issue.

Mr. ROBINSON. Yes. I think one of the reasons our—FERC's licensees and applicants are not vocal in this, and they have some difficulty in expressing their concerns, is that they know that they are going to have to work with these agencies, and they know that the playing field is not level, and they will be the recipient of those mandatory conditions. And so they do their best. And I feel for them. They do their best to try to work within the system that Congress has laid out for them and that FERC regulates to get an equitable decision.

Unfortunately, with regularity, they do not get that equitable decision out of the resource agencies, and they get mandatory deci-

sions that are not consistent with where even the Commission has found the public interest.

Mrs. NAPOLITANO. Thank you, Mr. Chairman, for your indulgence.

The CHAIRMAN. The time of the gentlelady has expired. The Chair recognizes the gentlelady from South Dakota, Mrs. Noem.

Mrs. NOEM. Thank you, Mr. Chairman. My question would be for Mr. Robinson. We have heard testimony today and some of the conversation that we have already had that FERC may have its own set of guidelines that it follows, while the resource agencies have another set of requirements or rules all together.

So, FERC has to look at hydropower re-licensing in a multi-dimensional manner, where some of these resource agencies may look at them one dimensionally, through environmental protection rules without taking into consideration costs or benefits. And so, I was curious if in your evaluation of this, does Federal law create this conflict, and create these two different sets of rules that are looked at by the agencies and FERC?

Mr. ROBINSON. Well, in my history at FERC—and I started in 1978 and was there through 2009—originally it was not a problem, because FERC interpreted the 4(e) conditions and the section 18 conditions as basically advisory. But through a number of court decisions that occurred starting in about 1983, I think, with Escondido, those conditions were made mandatory without FERC having any ability to modify or consider those conditions.

What that did for the process—and we had hydropower development through the 1980s. We had as many as 500 applications per year for new projects—not the kind of projects that we were hearing about here a minute ago—new projects on rivers prior to 1983. But what happened then was it became apparent that the Commission could not move forward without an agency deciding whether or not elk habitat was critically important for their purposes, and imposing those conditions on a hydropower project that had no relationship to elk habitat.

That started sort of the unfolding of the hydropower program, and it has just continued through the years, to the point now where we essentially, for decades have had no net development of hydropower in this country, while other forms of generation have continued to grow. Nothing has happened since 2001, when the Commission staff recommended to Congress that we had a problem. Those problems are just as significant today as they were over a decade ago, and we still do not continue to develop the hydropower potential of this country.

Mrs. NOEM. So what would your recommendation be?

Mr. ROBINSON. Pure and simple. Those conditions—the distributed decision-making process, or dispersed decision-making process, has to have the discipline of an agency that is vested with the authority and the responsibility and reviewable by the courts to exercise the laws—the Endangered Species Act and others—and make decisions across the spectrum of issues on what is in the public interest.

That does not happen now. It happens in the natural gas industry. The six principles I mentioned earlier are all evident in the natural gas industry. That is why we put 1,500 miles of natural

gas pipeline in the ground every year. The equivalent of that on hydro just doesn't exist. They only have two of the six principles covered, and nothing can get done.

Mrs. NOEM. Mr. Maisch, would you like to weigh in on this topic, and your experience that you have had through the process?

Mr. MAISCH. Yes. Thank you very much. The—I agree with Mr. Robinson whole-heartedly. The resource agencies don't have the responsibility to balance across diverse interests. And it makes total sense. I mean the resource agencies have their narrow view of resources that they are charged with protecting. And that is their only view of the world. And the fact that reducing hydro means we can't have as much wind or solar generation added to the—you know, just is not in their purview. And they are not capable, I don't think, of balancing across those lines. And you need someone like FERC, who has a central decision-making authority that can take into account a diverse environmental as well as economic interests, and make a final decision. And we don't have that.

Mrs. NOEM. So what do you believe would be the best method of reconciliation between the resource agencies and FERC to come to that decision? Do you believe that FERC needs to have that ability to move forward?

Mr. MAISCH. I think that that would be the simplest and best solution, yes.

Mrs. NOEM. OK, thank you. Mr. Chairman, I yield back.

The CHAIRMAN. Would the gentlelady yield to me? Would the gentlelady yield to me——

Mrs. NOEM. Certainly.

The CHAIRMAN [continuing]. For the balance of time?

Mrs. NOEM. Certainly.

The CHAIRMAN. I just want to ask a question here. Mr.—and to Mr. Robinson is this question.

Mr. Reardon said that—in his testimony, that there is only a small loss of hydropower. And yet Mr. Maisch testified that one facility in California loses 10 percent. My question to you is are there examples where this conditioning could cause a dam to be removed?

Mr. ROBINSON. Yes. I mentioned one earlier, with the Klamath project in California. There the section 18 prescription is estimated to cost somewhere on the order of $200 million. And that, of course, moved that applicant into a position of saying, "What can we do to get out from under that burden?" And that is dam removal. I can't remember exactly, but I think it is over 100 megawatts that is represented by that 1 project.

The CHAIRMAN. Right. I think Mr. McClintock knows all the figures on that.

Mr. ROBINSON. Yes.

The CHAIRMAN. I would just say—I would just make this observation—and I thank the gentlelady for yielding—that equates 100 percent loss of power.

Mr. ROBINSON. It does.

The CHAIRMAN. Yes.

Mr. ROBINSON. And you can find examples on either side. But the overall statistics on hydropower is that it has been stagnant for more than a decade——

The CHAIRMAN. Right.

Mr. ROBINSON [continuing]. While other generation sources continue to grow.

The CHAIRMAN. My time has expired. The Chair recognizes the gentleman from California, Mr. Garamendi.

Mr. GARAMENDI. Thank you, Mr. Chairman. And thank you for the hearing. Very, very important issues to be discussed here. And it is going to take us some time to get through all of this, probably multiple hearings.

Just a couple of things. Most of the witnesses have made recommendations about how to move things forward. Among those are streamlining the processes and, I understand, giving one agency authority. I think this was, Mr. Robinson, one of your recommendations. Could you expand on that for, like, maybe 30 or 40 seconds, and try to tell us what—how you would—who that would be?

Mr. ROBINSON. I will try real hard. I have been through four iterations of trying to modify the regulations at FERC to make things quicker, more efficient, the whole bit. What I have concluded—and I was responsible for the last iteration, the ILP, that was——

Mr. GARAMENDI. I understand.

Mr. ROBINSON [continuing]. My responsibility. I take full blame for it. What happens is the more we try to make it—recognizing the disperse decision-making process and make it more efficient, the more opportunities we have given people over time to leverage that process to get what they want with a singularity of focus. As long as that exists, then the first dollar for infrastructure development is not going to be spent.

Developers are going to go in and look at that process and say, "I can put my money somewhere else and have a better chance of return on it," and that is why you have a stagnant hydropower program. You need to have an agency who can guide the process, and has the ultimate control responsibility authority for making the decision. Is it in the public interest? And then they have to defend that decision, as well. Right now, there is just too many cooks in the kitchen.

Mr. GARAMENDI. So who should that agency be?

Mr. ROBINSON. Well, I have a bias there, because I worked for FERC for 31 years, and I think we were very capable of doing that. We have—they have, I'm sorry—they have the expertise, the knowledge, the resources. They know hydro and they know the resources. What the——

Mr. GARAMENDI. OK, so you—so, for example, NMFS would provide information to FERC, and then FERC would use that information and make a decision.

Mr. ROBINSON. They can provide the mandatory conditions to FERC, but FERC has to have the ability to look at those conditions and say that "They are mandatory as long as they are consistent with our determination of the public interest." It wouldn't be a matter of FERC just not looking at the conditions.

Mr. GARAMENDI. OK. So what it basically does is it takes the resource agency's authority, transfer it over to FERC. FERC then has the dual responsibilities—that is, the environmental as well as the

development responsibilities—and would have to find the common ground.

Mr. ROBINSON. They have that right now.

Mr. GARAMENDI. I understand. But the resource agencies do not. They have——

Mr. ROBINSON. The resource agencies do not. They have the responsibility—there are provisions in EPAC 2005 which tried to impose the overall look onto the agencies. Basically it is the fox in the chicken coop.

Mr. GARAMENDI. OK. That is very helpful, thank you. Also, I think your testimony picked up the issue of eminent domain. And that would be the Federal Government using its eminent domain power to provide acquisition of private property for a private developer to develop a hydro project.

Mr. ROBINSON. That is correct. And, in fact, of the six principles, that is the last principle for successfully building energy infrastructure. That is one of the two of the six principles that hydro already has, and has had since 1920. They have the eminent domain authority under the Federal—I can't remember the name of it now, but it was enacted in 1920.

Mr. GARAMENDI. As I think we know, eminent domain——

Mr. ROBINSON. Yes.

Mr. GARAMENDI [continuing]. Using eminent domain for the purposes of a private party has been rather controversial in recent years.

Mr. ROBINSON. And that is why the Commission historically has done everything they can to try to not impose that. But it—the natural gas industry has that as well, the eminent domain authority.

Mr. GARAMENDI. Well, obviously, that will become a controversial issue.

Mr. ROBINSON. It has been.

Mr. GARAMENDI. Fifty-one seconds. Many reasons why new projects have not gone forward, the licensing is one of them. There are also opportunity—geographic opportunity issues. Run-of-the-river projects are being proposed. Is there any specific—major dams is a big issue, I understand that. But run-of-the-river is another area. In that realm, what kind of problems may exist?

And I think I will ask the rest of the crew here to answer, and—well, I will just let the question hang. Thank you very much, Mr. Chairman.

The CHAIRMAN. Well, you can always ask that question in writing and get a response. We would all like to hear that. And if the gentleman wants to follow up, he certainly can.

Mr. GARAMENDI. Or if somebody else could ask the question and get a response.

The CHAIRMAN. The Chair recognizes the gentleman from South Carolina, Mr. Duncan.

Mr. DUNCAN OF SOUTH CAROLINA. Well, thank you, Mr. Chairman. You know, it baffles me that when we can grant licenses for 30 or 50 years, but—we have a long track record with the countries that are running these hydroelectric projects, but then we require something that is so complex, expensive, and lengthy in the re-licensing process.

You have a track record. You know what has been going on for the last 30 or 50 years. And so this is an important issue. The re-licensing process, in my opinion, takes far too long, especially when you have a wide agreement among environmental and industrial stakeholders and state resource agencies.

And I will give you an example. That is the Catawba-Wateree Project in North Carolina managed by Duke Power. They had the North Carolina Department of Natural Resources and a wide variety of other agencies on board with them and in agreement, and it still took way too long, and it cost the rate payers way too much money. I have talked about this a number of occasions in here. This project is a project where the applicants sought to re-license a facility well before its license expired. It took significant steps prior to filing its re-licensing application to gain the support from over 69 stakeholders.

When it filed with FERC, the process was continually delayed because the National Marine Fisheries Service, they would not engage in the process. In fact, FERC asked them to initiate a formal consultation back in 2009, and was rebuffed. FERC then issued a final Environmental Impact Statement for the project and asked for Marine Fisheries to issue a biological opinion for the project by the end of February 2010. However, the Marine Fisheries continued to drag the process out and just recently, within the last two months, issued the draft biological opinion.

Now, this was about a sturgeon that hadn't been seen in this part of that river system in over 70 years. Seventy years. And so, while there seemed to be some good points, there are also some bad points like the excessive sturgeon monitoring requirements and adaptive management provisions for the whole term of the new license. Adaptive management is especially troublesome, since it would allow the Marine Fisheries to change the applicants' hydro operations as frequently as every year, asking for increased flow releases from the Wateree hydro station, and upsetting the water use balance achieved by the stakeholders.

Now, I am going to take that and I am going to think about the Savannah River basin and Lake Hartwell and what not FERC is doing, but the Corps of Engineers is doing with downstream flows for sturgeon when current flows, which are, I think, excessive, put more water in the river than was in the river before the lakes were ever built, all because of a sturgeon downstream.

So, what is additionally troubling, and something Marine Fisheries did not take into account is that upsetting the stakeholder agreement can void the basis for the South Carolina vs. North Carolina Supreme Court case settlement agreement regarding water appropriations or apportionment rights, inter-basin transfers, and everything that is going on there.

So, in response to some of the suggestions by Marine Fisheries in the draft biological opinion, the applicant has offered an alternative monitoring program that is much more reasonable and does not include adaptive management. Hopefully this is something that Marine Fisheries will appreciate, pursue, and act on expeditiously. It is just another cog in the wheel that creates a system and a process that is too expensive for the rate payers and the companies, and it is too lengthy.

So, Mr. Robinson, I ask you this. In your testimony you talked about the excessive delays by these coordinating agencies. What would you think if the coordinating agencies like Marine Fisheries were given a drop-dead date, a definitive time frame on which to act, and if they didn't, then they are out of the picture, they have had their opportunity? What would you think about that?

Mr. ROBINSON. I would say that you just named the third principle of the six principles of effective infrastructure development, a disciplined schedule. If you don't have the ability, if that agency with authority does not have the ability to discipline the schedule that is set in consultation with all the agencies, then that increases the leverage for those resource agencies to extend it, to get more in negotiations out of their terms and conditions, and hold the process up.

It also basically eliminates the ability of anybody to come in and say, "I want to develop a new project," that they can't stand that indefinite risk. That regulatory uncertainty stops the investment. So it is something that needs to be applied to the hydropower licensing process. It is currently not there.

Mr. DUNCAN OF SOUTH CAROLINA. Yes. I appreciate it. That was my follow-up question about the uncertainty, and you touched on that.

I would just end with this, Mr. Chairman. As we have allowed a number of different groups and agencies to hijack the whole process with regard to the rivers and lakes and the hydro projects, which are seen as green energy—their base load 24/7 power supplies that could supplement all this other green energy that we are pursuing with wind and solar—it is the right thing to re-license these in a timely fashion. And it is the right thing to keep costs down for the rate payer and the companies. And with that, I will yield back.

The CHAIRMAN. I appreciate the gentleman, and his time has expired, and the Chair recognizes the gentleman from California, Mr. Costa.

Mr. COSTA. Thank you very much, Mr. Chairman. I want to continue to proceed along the line of questioning that we have been engaged in today.

But I do want to point out that it is important to note here we are not only talking about when we look at re-licensing operations, units that are held privately by utility companies, but also public utility companies as well, that are held by the public in trust to provide energy for that public purpose.

Mr. Robinson, with your past experience on FERC, typically how long would you say a re-licensing—a facility that has been built, that has been operating for 30, 50 years, whatever, takes to be re-licensed?

Mr. ROBINSON. Beyond way too long.

Mr. COSTA. "Way too long" is defined by what? Four to six years? That seems to be——

Mr. ROBINSON. When we put our regs in place in 2005 for the ILP, the integrated licensing process, which was supposed to provide discipline, we recognized there that it would be five to five-and-a-half years to re-license existing projects——

Mr. COSTA. OK. Did the rest of you concur with that? Is it five years, plus or minus, about average?

Mr. MAISCH. In our project we started three years before that. So actually, eight years.

Mr. COSTA. So you are eight years at Placer.

Mr. MAISCH. Right.

Mr. COSTA. And anybody else take issue with that time line?

Mr. GRUBICH. We are seven years——

Mr. COSTA. You are seven years.

Mr. GRUBICH [continuing]. Today, and we are still——

Mr. COSTA. OK.

Mr. GRUBICH [continuing]. Not in the final license.

Mr. COSTA. And, Mr. Reardon, you have a different perspective?

Mr. REARDON. I have applied for one set of licenses from FERC, and I think we were two-and-a-half years from application to receipt.

Mr. COSTA. You better give an inside track to these others. Obviously, you——

Mr. REARDON. The other thing I might say, though, is that it depends a lot on the project. Complicated——

Mr. COSTA. No. Obviously, it does, and that is an average. But that is my experience, four to six years.

My—it appears under section 18 of the Federal Power Act that the National Marine Fisheries Service, otherwise known as NMFS, seems to have absolute, unfettered discretion when it comes to relicensing to impose conditions, and that FERC has no discretion to modify these conditions. Would—Mr. Robinson, Mr. Maisch, you care to comment quickly?

Mr. ROBINSON. Yes, quickly, you are correct. But beyond that, depending upon where you are in the National Marine Fisheries Service around the country, they will use that authority and they will leverage that to try to take on larger agency interests like basin restoration on the back of a single project.

Mr. COSTA. And shouldn't FERC be able to balance the competing interests on energy supply and water supply, flood control? I mean to the degree that you draw the process out, to the degree that you take—I mean these projects are built for power purposes, but they are—also sometimes provide a flood control component as well as water supply. And to the degree that they leverage, as you put it, and now the water is reduced for the other purposes, but they don't have to pay for those, it is the rate payers that are paying for that, is that not the case?

Mr. MAISCH. That is exactly the case. You are exactly right. FERC—excuse me, the National Marine Fisheries Service, as well as the——

Mr. COSTA. If the benefits are so important to the increased—for the fisheries, it seems to me that it shouldn't come out of the rate payers that are paying for the increased benefits.

Mr. MAISCH. Well, there is no place else for it to come.

Mr. COSTA. Mr. Grubich, you have a comment there?

Mr. GRUBICH. Yes. When we make our rates, we use a philosophy called cost-causer/cost-payer, in that the cost associated with serving a group of customers should be paid by that group of customers.

It seems to me, in this process, the individual agencies don't adhere to that same philosophy. If the project drives the cost, the project should pay for the cost. But if the agencies want ancillary benefits out of that project, it shouldn't come out of the cost of the project, and it shouldn't——

Mr. COSTA. No, I concur. And we even have some projects that I am familiar with in which, on flow requirements that they have leveraged, or attempted to leverage, that they are—by their own admission, has been a case where anadromous fish have not—never, may never, ever existed in the waterways. But——

Mr. GRUBICH. Case in point is Enloe Dam.

Mr. COSTA. In where?

Mr. GRUBICH. Enloe Dam, the project that we are licensing.

Mr. COSTA. Well, same thing in the Tuolumne River.

Mr. GRUBICH. Right.

Mr. COSTA. And—but they don't care, because they have the leverage. And under section 18 under the Federal Power Act, they use it.

So, it seems to me that balance has to be achieved here. We even have a more difficult circumstance—and my time has expired—where hydropower in California, under the Renewable Energy Act, is not included or counted as renewable, which is beyond my comprehension.

But, nonetheless, Mr. Chairman, I think this is an area that we need to continue to try to refine, and see if there is something that we can do to make some sense out of this. Because these are projects that were built for the purpose of providing public power for the people in this country. And the re-licensing is critical to continue that effort. And being held up at the pass, so to speak, because there is an opportunity for re-licensing, when the whole financial structure for these projects was based upon a certain amount of power being able to be generated based upon water supply and flood control, and now you change the equation with no cost—with rate payers having to pay all the cost, is unfair and inappropriate, I think.

The CHAIRMAN. The time of the gentleman has expired. The Chair recognizes the gentleman from Pennsylvania, Mr. Thompson.

Mr. THOMPSON. Thank you, Chairman, and thanks for having this hearing, as well. I associate myself with my good friend from California and his comments. I had the opportunity just a matter of weeks ago to visit a hydropower generation plant that was built and attached to a flood control dam that was built, and was very, very impressed, actually. We are talking about clean, affordable energy, kind of a win-win for everyone.

Obviously, the dam has, without a doubt, has saved countless lives and property over the decades that it has been there. And the power plant is generating electricity that is—it is operated, owned and operated, by a rural electric cooperative. It is just one part of their portfolio for producing energy. But, you know, I think because of smart decisions like that, I believe that their energy costs are among the lowest rates in the State of Pennsylvania.

And, frankly, I am a sportsman. And I was very impressed with, frankly, how—this plant and how they operate, the partnership that they have, the fishing. And some of the fishing facilities, actu-

ally, that this company, this organization has provided, just very, very positive.

Mr. Robinson, the Federal Energy—FERC—Regulatory Commission once suggested that a one-stop shop would be set up to—should be set up to re-license non-Federal hydropower projects. You know, I happen to believe that the bureaucracy created with the current silo process is tremendous and, frankly, serves to drive up costs. And that is cost that is borne on the backs of those who purchase the electricity, in the end. And, you know, I think all of our goal—at least my goal, obviously, and I know many of the folks I work with are dedicated to affordable and reliable energy, and hydro does that.

You also—you referenced that FERC be given exclusive authority to site projects, and that there should be one Federal record on each project. Would this undermine the environmental protections? And is there a precedent?

Mr. ROBINSON. No, I don't believe it would undermine the environmental protections. Where an agency has exclusive authority—and that does exist in other generation sources—that agency is still responsible for all the laws that are there to protect the environment. And they have to coordinate and cooperate with the resource agencies on what they believe is important under the Endangered Species Act and others.

So, even though you say "exclusive"—or I say "exclusive authority," it doesn't mean that somebody has dictatorial authority. It just means there is a recognition that one agency is called on to make the public interest determination after gathering all the information from everybody else and deciding is this in the public interest or not, and how should it be constructured.

Mr. THOMPSON. So, in other words, in your opinion, this would truly increase efficiency, not skip any steps, but improve efficiency in determining the cost benefits of the proposed project.

Mr. ROBINSON. Absolutely.

Mr. THOMPSON. Right. In April of 2012, the Department of Energy issued a report showing that the U.S. has 12 gigawatts of untapped hydropower potential in existing dams that are not currently producing power. In addition, there are other locations that may have potential for dam or run-of-river development.

What single regulatory change—and I will open this up to the panel—do you think would have the largest impact when it comes to developing this potential? And we will start with Mr. Robinson.

Mr. ROBINSON. Just quickly, having that agency that has the authority to make the decision.

Mr. THOMPSON. That lead——

Mr. ROBINSON. Right.

Mr. THOMPSON [continuing]. Lead agency with—OK, thank you.

Mr. MAISCH. I would concur. The problem that you have now is that you can't get on the record what it is the resource agencies are trying to accomplish with their mandatory conditions. You have to try to second-guess it, and you don't get a final answer. Or at least it is very difficult to get a final answer. And streamlining that would be the secret to achieving the means—the ends you are talking about.

Mr. THOMPSON. Now, I have to assume, with all these—what I would call the silo approach that we have now, you almost have to feel like a ping pong ball getting bounced back and forth between agencies that probably don't communicate real well together.

Mr. MAISCH. Well, no. Actually, the resource agencies have done a good job of coming together and presenting a united front. That doesn't seem to be the problem. The problem is that you have no leverage in the situation. You can try to cajole, you can try to persuade, you can provide science. But in the end, the resource agencies get to make the final decision, regardless of what you present.

Mr. THOMPSON. Thank you. It looks like my time has expired. But if there is an opportunity to get some input from you two gentlemen, either in writing or after the hearing, I look forward to doing that.

So thank you, Chairman.

The CHAIRMAN. Well, if either one want to answer very briefly——

Mr. THOMPSON. Thank you.

The CHAIRMAN [continuing]. We have gone over on others. So, real quickly, I think that question is—should be answered by all.

Mr. REARDON. I don't have anything to add, except that in Maine I think those opportunities are mostly very small dams, and I don't think the obstacles are regulatory.

Mr. GRUBICH. There is nothing I would add to Mr. Robinson's. I believe a centralized system makes most sense.

Mr. THOMPSON. Great. Thank you, gentlemen. Thank you, Chairman.

The CHAIRMAN. I thank the gentleman from Pennsylvania. And the Chair recognizes the gentleman from California, Mr. McClintock.

Mr. MCCLINTOCK. Thank you, Mr. Chairman. About 15 years ago I asked the California Energy Commission for its estimate of the cost of various sources of power for electricity generation. They came back with a report that indicated that hydropower was the very cheapest form of electricity that we had. They were estimating at the time about a half-a-cent a kilowatt hour. At a half-a-cent a kilowatt hour, an average household's electricity bill would come to about $30 a year. That was operations and maintenance and amortized capital. But now we are told that hydroelectricity is just too expensive.

Mr. Robinson, to what extent is Government to blame for that increase in the cost of hydroelectricity?

Mr. ROBINSON. Well, I think, if I remember correctly, back when we did a study in the early 2000s we looked at something like 30 percent of all the costs associated with a re-license that went to the benefit of the environment were incurred as just the application costs.

Mr. MCCLINTOCK. Just the application cost. But that doesn't——

Mr. ROBINSON. Just the application cost——

Mr. MCCLINTOCK [continuing]. Include all of the capital costs to meet other regulatory requirements.

Mr. ROBINSON. Right.

Mr. MCCLINTOCK. The Chairman mentioned the Klamath Dam situation, which is just an incredible scandal.

Mr. ROBINSON. Right.

Mr. MCCLINTOCK. Four perfectly good hydroelectric dams on the Klamath River, capable of generating 155 megawatts of the cleanest and cheapest electricity on the planet, and there is a concerted effort to tear them down. Why? Because, we are told, they are contributing to a catastrophic decline of salmon on the Klamath River.

When I was up there—that is up on the north end of my district—I said, "Well, why doesn't somebody build a fish hatchery?"

And there was an awkward silence around the table, and finally somebody volunteered, "Well, we do have a fish hatchery at the Iron Gate Dam. It produces 5 million salmon smolts a year; 17,000 of them return every year as fully grown adults to spawn. They won't let us include them in the population counts."

How are we going to be able to meet our future electricity needs with that kind of lunacy dominating our public policy? I suppose that is more of a rhetorical question than a technical one. So let me go to the technical side of it.

They then tell us, "Oh, don't worry, we will replace this with wind and solar." Well, on the same energy commission study wind and solar were named as the two most expensive possible ways of producing electricity.

And, on top of that, as you know, they are intermittent, meaning that they have to constantly—because of a cloud passing over a solar ray or a sudden drop off in the wind at a solar farm brings the electricity generation to zero, and because we have to constantly match the electricity going on the grid with the electricity being drawn off or the grid collapses, we have to be ready to, at a moment's notice, replace that lost wind and solar power with reliable electricity. We either do that through hydroelectricity through dams, we just open a valve, or we have to pay to keep turbines constantly spinning with gas or coal-fired plants to meet that sudden loss.

Is that a rational policy, to tear down hydroelectric dams and replace them with wind and solar?

Mr. ROBINSON. In my opinion, no. Hydropower not only provides that black start capability of coming online immediately when you do have intermittent energy sources—that problem, but you also have—if you take a hydro project out, to replace a 500-megawatt hydropower project with wind, you need about 30,000 to 35,000 acres of land with wind turbine, 1.5 megawatt wind turbines on it. Wind does not come environmentally without cost. So you have an existing project, some costs have incurred. Some benefits have occurred to the environment, as well, with those projects recreation-wise, fishery-wise. But you are eliminating that, and you are incurring new costs with new lands being dedicated to wind. That just doesn't make sense to me.

Mr. MCCLINTOCK. Mr. Maisch, in our neck of the woods is the site for the Auburn Dam. The most expensive part of that construction was done in the 1970s, the actual cutting of the footing for that facility. It is estimated to produce 800 megawatts of the cleanest and cheapest electricity on the planet, but it was abandoned in the 1970s.

If that dam had been constructed, what would that have meant for your rate payers?

Mr. MAISCH. The—it would have allowed us to get our water out of the system in a much more economical manner. As it is, we are having to pump it up. The energy would have gone into the grid. It probably would have reduced overall cost to operate the electric grid in California.

Mr. MCCLINTOCK. Well, especially if it was coming off that dam at a half-a-cent a kilowatt hour, as it was before the Government came here to help us.

Mr. Robinson, do you have an estimate of the undeveloped hydropower potential of this country?

Mr. ROBINSON. It does exist. The most recent estimate was by DOE for existing dams, and it was 12 gigawatts of available power.

Mr. MCCLINTOCK. No, I am talking about potential dam sites. Do we have any study on that?

Mr. ROBINSON. Potential dam sites, it has been done. I don't remember the exact number any longer, I am sorry.

The CHAIRMAN. The time of the gentleman has expired. I want to thank all the Members, and I want to thank all the panel here for their testimony.

What—this may be the first in a series of future hearings, because what we have—what has at least come to light that hasn't come to light here before is that there is certainly a lot of uncertainty in the re-licensing. I think that is pretty obvious. But there are many statutes that come into play that causes the process to slow down. I mean coming from the Northwest, I am painfully aware. And that is why we have had hearings on the Endangered Species Act, for example. Mr. McClintock alluded to that in his remarks.

But I want to thank the panel for being here. As usual, there generally are questions that may come up and we will write to you if those questions come up. And if you have additional views you would like to present, the record will be open for 10 days.

So, once again, I want to thank all of you for your testimony here. And if there is no further business to come before the Committee, the Committee stands adjourned.

[Whereupon, at 11:22 a.m., the Committee was adjourned.]

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