AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

H.R. 6247, SAVING OUR DAMS AND NEW HYDROPOWER DEVELOPMENT AND JOBS ACT OF 2012

LEGISLATIVE FIELD HEARING

BEFORE THE

COMMITTEE ON NATURAL RESOURCES
U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED TWELFTH CONGRESS

SECOND SESSION

Wednesday, August 15, 2012, in Pasco, Washington

Serial No. 112–125

Printed for the use of the Committee on Natural Resources

Available via the World Wide Web: http://www.fdsys.gov
or
Committee address: http://naturalresources.house.gov

U.S. GOVERNMENT PRINTING OFFICE

75–703 PDF WASHINGTON : 2013

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2104 Mail: Stop IDCC, Washington, DC 20402–0001

COMMITTEE ON NATURAL RESOURCES

DOC HASTINGS, WA, *Chairman*
EDWARD J. MARKEY, MA, *Ranking Democratic Member*

Don Young, AK
John J. Duncan, Jr., TN
Louie Gohmert, TX
Rob Bishop, UT
Doug Lamborn, CO
Robert J. Wittman, VA
Paul C. Broun, GA
John Fleming, LA
Mike Coffman, CO
Tom McClintock, CA
Glenn Thompson, PA
Jeff Denham, CA
Dan Benishek, MI
David Rivera, FL
Jeff Duncan, SC
Scott R. Tipton, CO
Paul A. Gosar, AZ
Raúl R. Labrador, ID
Kristi L. Noem, SD
Steve Southerland II, FL
Bill Flores, TX
Andy Harris, MD
Jeffrey M. Landry, LA
Jon Runyan, NJ
Bill Johnson, OH
Mark Amodei, NV

Dale E. Kildee, MI
Peter A. DeFazio, OR
Eni F.H. Faleomavaega, AS
Frank Pallone, Jr., NJ
Grace F. Napolitano, CA
Rush D. Holt, NJ
Raúl M. Grijalva, AZ
Madeleine Z. Bordallo, GU
Jim Costa, CA
Dan Boren, OK
Gregorio Kilili Camacho Sablan, CNMI
Martin Heinrich, NM
Ben Ray Luján, NM
Betty Sutton, OH
Niki Tsongas, MA
Pedro R. Pierluisi, PR
John Garamendi, CA
Colleen W. Hanabusa, HI
Paul Tonko, NY
Vacancy

Todd Young, *Chief of Staff*
Lisa Pittman, *Chief Counsel*
Jeffrey Duncan, *Democratic Staff Director*
David Watkins, *Democratic Chief Counsel*

CONTENTS

	Page
Hearing held on Wednesday, August 15, 2012	1
Statement of Members:	
Hastings, Hon. Doc, a Representative in Congress from the State of Washington	1
Prepared statement of	4
McClintock, Hon. Tom, a Representative in Congress from the State of California	5
Statement of Witnesses:	
Flint, Thomas W., President of the Board of Commissioners, Grant County Public Utility District, and Founder, Save Our Dams, Ephrata, Washington	8
Prepared statement of	9
Heffling, Jack W., President, United Power Trades Organization, West Richland, Washington	14
Prepared statement of	15
Miles, Rebecca A., Lapwai, Idaho	30
Prepared statement of	32
Rowe, Kara, Director of Affairs & Outreach, Washington Association of Wheat Growers, Ritzville, Washington	10
Prepared statement of	11
Sanders, James W., General Manager, Benton County Public Utility District, Kennewick, Washington	18
Prepared statement of	19
Spain, Glen H., Northwest Regional Director, Pacific Coast Federation of Fishermen's Associations (PCFFA), Eugene, Oregon	21
Prepared statement of	23
Voigt, Chris, Executive Director, Washington State Potato Commission, Advisory Board Member, Family Farm Alliance, Moses Lake, Washington	38
Prepared statement of	40
Yost, James A., Idaho Council Member and Chairman of the Power Committee, Northwest Power and Conservation Council, Boise, Idaho	35
Prepared statement of	36

LEGISLATIVE HEARING ON H.R. 6247, TO PROTECT THE FEDERAL COLUMBIA RIVER POWER SYSTEM, POWER MARKETING ADMINISTRATION CUSTOMERS, AND BUREAU OF RECLAMATION DAMS AND OTHER FACILITIES AND TO PROMOTE NEW FEDERAL AND OTHER HYDROPOWER GENERATION. "SAVING OUR DAMS AND NEW HYDROPOWER DEVELOPMENT AND JOBS ACT OF 2012."

Wednesday, August 15, 2012
U.S. House of Representatives
Committee on Natural Resources
Pasco, Washington

The Committee met, pursuant to call, at 8:58 a.m., in Room 2, TRAC Center, 6600 Burden Boulevard, Pasco, Washington, Hon. Doc Hastings [Chairman of the Committee] presiding.

Present: Representatives Hastings and McClintock.

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

The CHAIRMAN. The Committee on Natural Resources will come to order.

The Committee on Natural Resources today meets to hear testimony from our panel on H.R. 6247, the Saving Our Dams and New Hydropower Development and Jobs Act of 2012.

To begin today's hearing, I would like to introduce members of the Yakima Composite Squadron, Civil Air Patrol Color Guard—it is a team to post the colors—consisting of Cadet Chief Master Sergeant Cody Bates with the American flag, Cadet Master Sergeant Adrian Rivera with the Washington State flag; two riflemen, Cadet Staff Sergeant Jacob LeMay, and Cadet Chief Master Sergeant Brittany Bates. And leading the Pledge of Allegiance will be Cadet Second Lieutenant Daniel Brooks. And representing the Tri-Cities Composite Squadron is Major Debra Calagochi.

Please stand and I ask they post the colors.

[Presentation of colors and the Pledge of Allegiance.]

The CHAIRMAN. Thank you and as a token of our appreciation for participating, I would like to present an American flag to the composite squadron.

The process of Committee hearings is, first of all, we note the presence of a quorum, which we have a quorum of the Committee. And in the process that we will follow today, I will make an opening statement. My colleague from California, Mr. McClintock, will make an opening statement. And then we will introduce the panel-

ists and they will have an opportunity to make an opening statement. Then Mr. McClintock and I will ask questions, various questions of all of them.

And for all of you that are here that aren't part of the panel but you would like to comment on the proceedings today, I invite you to do so. It will all be part of the Committee record. Right outside, there is all the information on how you can submit your testimony.

So I want to thank all of you for being here. But that is the procedure by which we will work today.

I will now recognize myself for my opening statement.

This hearing comes just weeks before Bonneville Dam, the first major Northwest Federal dam built, celebrates its 75th anniversary with its dedication by then President Franklin Roosevelt. And several hundred miles upstream, Ice Harbor Dam, right up here on the Snake River, recently celebrated its 50th anniversary.

For decades, these and many other Federal and non-Federal hydropower dams, 11 right here in central Washington, were constructed to harness the cleanest, most efficient form of energy. Regionally, Northwest dams produce over 70 percent of power in Washington, 80 percent in Idaho, and about 60 percent in Oregon. These dams produce about 14,000 megawatts of electricity every year. That is the equivalent of power needed for 11 cities the size of Seattle every year. So dams help make possible intermittent sources of energy like wind and solar, and help keep our electric transmission system reliable.

These dams were also built for other important reasons, including flood control, irrigation for hundreds of thousands of acres of farms, recreation, and for navigation and transportation of goods to markets around the world.

There is no disagreement about the importance of salmon recovery, but it must be clearly stated that dams are helping that recovery. With significant improvements to Columbia and Snake River dams, more fish are in the river than before the dams were built, and fish survival past these dams are much higher than ever before, up to 98 percent in some cases. So while some insist that the choice is dams or fish, it has been proven we can have dams and fish.

Our current Northwest dam infrastructure provides energy to our industries, businesses, and our families, and it does so at a low cost. But we must not be satisfied with the status quo. With ongoing threats to these dams and future development of hydropower as a renewable resource, we simply cannot take the status quo for granted. That is the purpose of both this legislation that I have proposed and for this hearing: to protect and promote our Nation's valuable hydropower assets.

The bill I introduced 2 years ago shines a bright light on the enormous benefits and potential of Federal and non-Federal hydropower dams, both in the Northwest and across the Nation. The bill, as with all legislation, is a starting point for a discussion and contains common sense actions to protect this renewable energy resource.

For example, this bill, plain and simple, declares that hydropower is a renewable source of energy.

[Applause.]

The CHAIRMAN. Amazingly, some of the loudest advocates for increasing our Nation's renewable energy supply refuse to recognize that hydropower is renewable.

The bill also states that no Federal dam breaching activities, including costly studies, can occur without the express approval of Congress. No single person, be they an unelected bureaucrat or a Federal judge, should ever have authority to initiate such actions.

The bill would also block the imposition of the Chu Memo that would force power rate increases by BPA and other power marketing authorities across the country.

This bill would ensure that common sense guides decisions on costly spill of water past turbines, an often wasteful policy that has continued even when science shows that spill harms fish more than the transportation of fish.

The bill would provide that families and businesses served by BPA and the other power marketing authorities receive transparent, honest information on how much of their power goes to fish recovery and how much of their cost of energy supports alternative sources of energy such as wind power.

The bill would also prohibit groups filing lawsuits against the Government from collecting Federal funds or grants. Why should a group that gets Federal funds, when they sue the Government and the taxpayer is acting as the defendant—why should the taxpayer also be funding the plaintiffs? And that is what this bill corrects.

[Applause.]

The CHAIRMAN. And the bill would ensure accountability from Federal agencies to ensure they don't use the Federal dam relicensing process as a hostage-taking exercise to bleed dam operators for money or unjustifiable policies. And it does this very simply: it requires agencies to justify their actions in the light of day, not behind closed doors and it establishes FERC as the referee to decide which mandatory conditions sought by another Federal agency or bureaucracy has any merit.

So these are just some, but not all of the bill's highlights.

Again, the purpose of this bill is to protect and promote the clean, green, renewable hydropower that is generated from dams and the many benefits that provides.

A little history. Back in 2000, the campaign to tear out the Snake River dams was waged as a full public debate, but the dam removal extremists lost that battle. They lost because the people of the Pacific Northwest know that removal of these dams would be an extreme action that would cost jobs, increase power rates, and harm our region's economy. And they lost because the science doesn't even show that removal of dams will actually recover fish.

This defeat, however, didn't end the single-minded agenda of the dam removal extremists. Over the past decade, they have changed their tactics from an overt to a more covert way, but they are as committed and as well funded as ever. They have poured their money into lawyers and lawsuits aimed at pressuring Federal agencies and seeking to advance their agenda in the courts, and we in the Northwest know that this particularly happened in a courtroom of a Portland judge who has now admitted his anti-dam bias. The threat of the Snake River and other dams is very real, and the

common sense actions in this straightforward bill are intended to shine a light on these tactics to help stop this wasteful and extreme campaign and to protect these assets and our renewable energy sources.

So that is the subject of today's hearing. I look forward to hearing the testimony of our witnesses.

And with that, I will recognize my colleague from California, the Chairman of the Water and Power Subcommittee on the Committee of Natural Resources, Tom McClintock. Tom?

[The prepared statement of Mr. Hastings follows:]

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

This hearing comes just weeks before Bonneville Dam—the first major Northwest federal hydropower dam to be built—celebrates the 75th anniversary of its dedication in 1937 by President Franklin Roosevelt. Several hundreds of miles upstream, Ice Harbor Dam, one of the lower Snake River dams, recently celebrated its 50th anniversary.

For decades, these and many other federal and non-federal hydropower dams—11 alone right here in central Washington—were constructed to harness the cleanest, most efficient form of energy. Regionally, Northwest dams produce over 70 percent of the power in Washington, 80 percent in Idaho, and about 60 percent of Oregon. These dams produce about 14,000 average megawatts of electricity every year—equivalent to the power needed for 11 cities the size of Seattle every year. Dams help make possible intermittent sources of energy like wind and solar, and help keep our electric transmission system reliable.

These dams were also built for other important purposes, including flood control, providing irrigation for one of the most productive agricultural areas of the nation, for recreation, and to provide a vital navigation link to transport billions of dollars worth of wheat, grains and goods to markets around the world.

There is no disagreement about the importance of salmon recovery, but it must be clearly stated that dams are helping recovery. With significant improvements to Columbia and Snake River dams, more fish are in the river than before the dams were built—and fish survival past the dams are much higher than ever before—up to 98 percent in some cases. While some insist the choice is "dams or fish", it's been proven we can have "fish and dams."

Our current Northwest dam infrastructure cleanly powers our industries, businesses, jobs and families—and at low cost. But we must not be satisfied with the status quo. With ongoing threats to these dams and future development of hydropower as a renewable resource, we simply cannot take the status quo for granted. This is the purpose of the legislation that I've proposed and this hearing: to protect and promote our valuable hydropower assets.

The bill I introduced two weeks ago shines a bright light on the enormous benefits and potential of federal and non-federal hydropower dams, both in the Northwest and across the nation. The bill, as with all legislation, is a starting point for discussion and contains common sense actions to protect this renewable energy source.

For example, the bill, plain and simple, declares that hydropower is a renewable source of energy. Amazingly, some of the loudest advocates for increasing our nation's renewable energy supply refuse to recognize hydropower as renewable.

The bill also states that no federal dam breaching activities, including costly studies, can occur without the express approval of Congress. No single person, be they an unelected bureaucrat or federal judge, should ever have authority to initiate such an action.

The bill would also block imposition of the "Chu Memo", ordered by the Secretary of Energy, that could force power rate increases by BPA and other power marketing administrations (PMA's).

The bill would ensure common sense guides decisions on the costly spill of water past dam turbines—an often wasteful policy that has continued even when science shows spill harms fish more than the transportation of fish.

The bill would provide that families and businesses served by BPA and other PMA's receive transparent, honest information on how much of their power bill goes to fish recovery and how much supports wind power development.

The bill would prohibit groups filing lawsuits against the government from collecting federal funds and grants with the other hand. Why should taxpayers fund both defendants and plaintiffs?

And the bill would ensure accountability from federal agencies to ensure they don't use the federal dam relicensing process as a hostage-taking exercise to bleed dam operators for money or unjustifiable policies. It does this very simply: it requires agencies to justify their actions in the light of day, not behind closed doors, and establishes FERC, the Federal Energy Regulatory Commission, as the referee to decide which mandatory conditions sought by a federal bureaucracy have merit.

Those are some, but not all of the bill's highlights.

Again, the purpose of this bill is to protect and promote the clean, green, renewable hydropower generated from dams, and the many other benefits they provide.

Back in 2000, the campaign to tear out the Snake River dams was waged as a full public debate, but the dam removal extremists lost that battle. They lost because the people of the Pacific Northwest know that removal of these dams would be an extreme action that would cost jobs, increase power rates, and harm the region's economy. And they lost because the science doesn't even show removal will actually recover fish.

This defeat didn't end the single-minded agenda of the dam removal extremists. Over the past decade, they changed their tactics from the overt to the more covert—but they are as committed and well-funded as ever. They've poured their money into lawyers and lawsuits aimed at pressuring federal agencies and seeking to advance their agenda in the courts, and particularly in the courtroom of a Portland judge who's now admitted his anti-dam bias. The threat to the Snake River and other dams is very real—and the common sense actions in this straightforward bill are intended to shine a light on these tactics, help stop this wasteful and extreme campaign, and protect these valuable assets and renewable energy sources.

These are the subjects of today's hearing and I look forward to hearing the testimony of the witnesses.

STATEMENT OF HON. TOM McCLINTOCK, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. McCLINTOCK. Thank you, Mr. Chairman. Thank you for your leadership on this issue. Thank you especially for introducing H.R. 6247 and for holding this hearing to examine and expose the continuing drive of the environmental left to destroy our Nation's system of dams.

You know, like the people here, the people in my district have awakened to the threat that this political extremism poses to their prosperity and their quality of life. The people of my district, as the people of yours, understand the vital role that our dams play not just in assuring abundant supplies of clean water, not just in supplying clean, cheap, and plentiful electricity and critically important flood controls, but also they understand the major contribution that these dams make to protecting our environment.

Some people seem to have forgotten that before the era of dam construction, the endless cycle of withering droughts and violent floods constantly plagued our watersheds. Our dams tamed these environmentally devastating events. They assured abundant water in dry years and protected against the ravages of floodwaters. By conserving water that would otherwise have been lost to the ocean, they turned deserts into oases and laid the foundation for a century of growth and prosperity for the American West.

But over the last few decades, a radical and retrograde ideology has seized our public policy. It springs from the bizarre notion that "mother earth" must be restored to her pristine, prehistoric condition even if it means restoring the human population to its pristine, prehistoric condition.

[Applause.]

Mr. MCCLINTOCK. They are not satisfied with merely blocking construction of new dams. They are now seeking to destroy our existing facilities.

My district touches the Klamath Valley where the environmental left seeks to spend well over a quarter billion dollars tearing down four perfectly good hydroelectric dams that are capable of producing clean and inexpensive electricity for the equivalent of 150,000 homes. Now, at a time when California is using less electricity per capita than any other State, when we are already paying among the highest electricity prices in the Nation, when we can't guarantee enough electricity to keep people's refrigerators running—we are currently under the threat of rolling blackouts—when we are facing a crushing budget deficit, I submit to you that this proposal is simply insane. We are told that it is necessary to——

[Applause.]

Mr. MCCLINTOCK. And by the way, I am told if they succeed on the Klamath, the Snake River is next.

We are told that this is necessary to save dwindling populations of salmon on the Klamath. Yet, the Iron Gate Fish Hatchery produces 5 million salmon smolts a year, 17,000 of which return to the Klamath as fully grown adults to spawn, but they are not included in the population count. And to add insult to insanity, when they tear down the Iron Gate Dam, the Iron Gate Fish Hatchery goes with it.

Now, we are going to hear a representative sampling of the arguments made in support of this lunacy in the next few minutes. We will be told, for example, that well, most of these dams are aging and obsolete and far too expensive to maintain and operate. But it is not the maintenance and operation of the dams that is becoming cost prohibitive. It is the outrageously excessive bureaucratic regulations that these groups have successfully imposed upon the operations and maintenance. They impose the costs and then they complain that it is just too expensive to run these dams anymore.

[Applause.]

Mr. MCCLINTOCK. Well, not once will you hear them propose replacing a purportedly aging dam with a new one. Their agenda is not to maintain or improve the dams. Their agenda is to destroy them.

Now, they claim they want abundant salmon populations, but they seek to destroy our salmon hatcheries that produce a staggering abundance of salmon. They even oppose measures to control invasive, non-native predators like bass that consume a vast proportion of the juvenile salmon population before it reaches the ocean.

To me, these glaring hypocrisies destroy their credibility and reveal an unabashedly nihilistic agenda. The future they advocate is one of increasingly severe Government-induced shortages, higher and higher electricity and water rates, skyrocketing grocery prices and spreading food shortages, massive taxpayer subsidies to politically well-connected industries, and a permanently declining quality of life for our families will be required to stretch and ration every drop of water and every watt of electricity in their bleak and stifling and dimly lit homes, homes in which gravel has replaced green lawns and toilets constantly back up.

Mr. Chairman, I believe that your bill, H.R. 6247, offers us a very different future for our Nation, a future of clean, cheap, and abundant hydro electricity, great new reservoirs to store water in wet years and to protect us from shortages in dry ones. It envisions a future in which families can enjoy the prosperity that plentiful water and electricity provide. It envisions a Nation whose families can look forward to a green front law, a lush garden in the back, inexpensive and reliable air conditioning in the summer and heating in the winter, brightly lit homes in cities, and abundant and affordable groceries from America's agricultural cornucopia.

This is one of the many clear choices the American people will make in coming days. From what I have seen and heard across the country and in my district and now here in yours, I believe our brightest days are yet ahead.

[Applause.]

The CHAIRMAN. Tom, thank you very much for your opening statement.

And I now want to introduce the panel. We have, starting from my left—that would be your right obviously—Mr. Tom Flint who is the President of the Board of Commissioners of the Grant County PUD from Ephrata. Tom, thank you for being here. Ms. Kara Rowe, Director of Affairs and Outreach with the Washington Association of Wheat Growers in Ritzville; Mr. Jack Heffling, President of the United Power Trades Organization in West Richland; Mr. Jim Sanders, General Manager of the Benton County PUD here in Kennewick; Mr. Glen Spain, the Northwest Regional Director of the Pacific Coast Federation of Fishermen's Associations out of Eugene, Oregon; Ms. Rebecca Miles from Lapwai, Idaho; Mr. Jim Yost, the Idaho Council Member and Chairman of the Power Committee, Northwest Power and Conservation Council out of Boise, Idaho; and Mr. Chris Voigt, Executive Director of the Washington Potato Commission out of Moses Lake.

Let me explain how the lighting works. You have all submitted testimony to the Committee, and some of it is more than 5 minutes in length. That we know and that is fine. But we have timing lights here, right here in front of me. And when the green light goes on, it means that your 5 minutes has started. When the yellow light goes on, that means you have used 4 minutes. And I would ask you to try to wrap up, and when the red light goes on, you don't want to know what happens.

[Laughter.]

The CHAIRMAN. I will just ask you to try to finish your thoughts in that timeframe. And then after each of you have completed your testimony, Mr. McClintock and I do have some questions.

Again, for any of you that want to participate with your thoughts, outside there are directions on how you can communicate with the Committee.

So with that, I am very pleased to introduce Mr. Tom Flint, the Chairman of the Grant County PUD. Tom, you are recognized for 5 minutes.

STATEMENT OF THOMAS W. FLINT, PRESIDENT OF THE BOARD OF COMMISSIONERS, GRANT COUNTY PUBLIC UTILITY DISTRICT, EPHRATA, WASHINGTON

Mr. FLINT. I want to thank you, Doc, for this opportunity to testify. It seems like it was about—what I hear earlier today—13½ years ago that we were on the cable suspension bridge and I see a lot of familiar faces. It was a cold and windy evening, but our message was well heard like I think our message is well heard today as well.

I would like to start by letting you know a little about myself. My family came here in 1955 from Scottsbluff, Nebraska. We were dry land dirt farmers there. I am a fifth generation farmer. I am a second generation farmer to the Columbia Basin Project. We came here because of the Grand Coulee Dam and the irrigation project, and it has been a very good project and most of us would not be here today if it wasn't for that project. And it also had some national defense attributes that a lot of times gets overlooked.

My wife and I—Kathy who is here today—farm a diversified family farm in Grant County, Washington. I happen to be the tenured Commissioner of the Grant County PUD, and we have two hydro projects on the Columbia River, Wanapum and Priest Rapids Dams.

As many of you know, a few years ago, there was a movement to breach dams on the Snake River, and as a result of that, I started a grassroots Save Our Dams campaign, an organization to help educate and provide information that was not being presented in this process. With a lot of your help and from volunteers, we started the Save Our Dams petition, and remarkably we collected over 880,000 signatures in support of keeping Snake River dams. And that would be approximately 13 years ago.

The justification for keeping the dams are as important today as it was a few years ago. As a society, we deal with our economy, global warming, irrigated agriculture, endangered species, and renewable energy.

As many of you might recall, the dam breaching proponents focused a lot around the poster child, salmon, Lonesome Larry from Redfish Lake, Idaho. The rational being that the Snake River dams had destroyed the salmon runs and that he was the sole surviving fish.

But there is a lot more to this story. What you did not hear was that the Idaho Department of Fish and Game poisoned Redfish Lake in the mid-1970's to change it into a pristine trout fishing lake. However, a few salmon survived the poisoning.

To say that the Snake River dams are completely responsible for the demise of salmon runs is not entirely correct and has been the catalyst for this issue between fish and dams. Today we know that with the use of fish-friendly technology, the salmon, Lonesome Larry, is not so lonesome anymore, and the fish runs are improving becoming better and better as time goes on.

As a farmer and a Grant County PUD Commissioner, today I can tell you we look for win-win opportunities for fish and dams. Grant PUD is a consumer-owned utility that serves rural and predominantly agricultural populations. We own and operate significant electric generation assets, all of which are 100 percent renewable.

Hydropower, small irrigated canal hydro, and wind power comprise our total combined generating capacity of 2,000 megawatts, with the vast majority of the capacity coming from our two hydropower projects, Priest Rapids and Wanapum Dams. These valuable renewable resources support reliable electricity delivery, clean air, and significant economic benefits for millions of families and businesses throughout the Pacific Northwest.

At our Wanapum Dam, we are installing more efficient, fish-friendly, advanced hydro turbines and generators that will boost the project generation by 12 percent. And I see I have the red light there.

The CHAIRMAN. Finish your thought.

Mr. FLINT. OK.

Essentially what we have done is we have used this technology for increasing the survival rate to 95 percent of the salmon that come down the river. Our goal was 95 percent, and we have done something that is extremely unique. We have actually cut a hole in the dam about 20 feet wide by 40 feet deep, and it is a salmon slide, if you will. It is a bypass system, and it has a 99 percent survival rate.

[The prepared statement of Mr. Flint follows:]

Statement of Tom Flint, Founder of Save Our Dams

Thank you for this opportunity to Testify at this field hearing. I would like to start by letting you know a little about me and how I got here. My family came here in 1955 from Scottsbluff Nebraska to Quincy Washington to farm in the Columbia Irrigation Project that was created by Grand Coulee Dam. I am a fifth generation Farmer and second generation farmer in the Columbia Basin, operating a irrigated diversified family farmer near Ephrata Washington. I am also the tenured Commissioner on the Grant County Public Utility District which has two Hydro protects, Wanapum and Priest Rapids dams on the Columbia River.

As many of you know a few years ago there was a movement to Breach the Dams on the Snake River and as a result of that I started a grass roots Save Our Dams organization to help educate and provide information that was not being presented in the process. With a lot of your help from volunteers we started the Save Our Dams petition and collect over 880,000 signatures in Support of keeping the Snake River Dams. The justification for keeping the dams are as important today as it was a few years ago. as a society we deal with our economy, global warming, irrigated agriculture and renewable energy.

As many of you might recall the Dam Breaching proponents focused a lot of around the salmon Lonesome Larry from Redfish Lake in Idaho. The rational being that the Snake River Dams had destroyed the salmon runs and he was the sole surviving fish. What you did not hear was that the Idaho Department of Fish and Game poisoned Redfish lake in the mid 70's to change it into a pristine Trout fishing Lake and a few Salmon survived the poisoning. To say that the Snake River Dams are completely reasonable for demise of the Salmon run in not entirely correct and has been the catalyst for this issue between fish and dams. Today we know with the use of fish Friendly Technology Lonesome Larry is not so lonesome and the fish runs are improving and becoming better and better as time goes on.

As a farmer and Grant County PUD Commissioner today I can tell u we look for win win opportunities for fish and dams today. Grant Pud is a consumer-owned utility that serves rural, predominantly agricultural population. We won and operated significant electric generation assets, all of which are 100 percent renewable. Hydropower, small irrigation canal hydro and wind power comprised our total combined generating capacity of 2,000 megawatts, with the vast majority of capacity coming from our two hydropower projects, Priest Rapids and Wanapum Dams. These valuable renewable resources support reliable electricity delivery, clean air and significant economic benefits for millions of families and businesses throughout the Pacific Northwest. At our Wanapum Dam, we are installing more efficient fish friendly generating equipment with environmental enhancement technologies. The Advanced-design

Hydropower turbines and generators will boost the projects generation capacity by 12 percent, and has fish passage survival rate of 97 percent which is above our goal of 95 percent. We also built and innovative $35 million fish slide or fish bypass, which studies show a fish survival rate of 99 percent for steelhead and salmon,

We are committed to maximize renewable hydropower generation and environmental performance goes hand-in-hand at Grant PUD. As challenging as it is to manage both efforts, we operate with the belief that balancing these important outcomes can be compatible and sustainable.

As I conclude I would I would like to say we with the use of fish friendly technologies, We can have fish and new sustainable hydropower and I and the Commissioners at Grant PUD support H.R. 6247 that Doc Hastings has presented.

Thank You.

The CHAIRMAN. Thank you very much for your testimony.

And now I will recognize Ms. Kara Rowe, who is the Outreach Director of the Washington Association of Wheat Growers out of Ritzville. You are recognized for 5 minutes.

STATEMENT OF KARA ROWE, DIRECTOR OF AFFAIRS AND OUTREACH, WASHINGTON ASSOCIATION OF WHEAT GROWERS, RITZVILLE, WASHINGTON

Ms. ROWE. Thank you, Doc. Good morning.

In addition to being the Affairs and Outreach Director for the Wheat Growers, I am also a fourth generation farm kid and an outdoor enthusiast. So thank you for giving me the opportunity this morning.

As farmers, we have learned that we need both progress and stewardship in order to survive. One cannot come without the other. The same can be said of the Columbia/Snake River system we have today, each component as vital as the other.

The irrigation provided by the canal system of the Columbia Basin Project cannot be replaced. The food grown in this region cannot be grown as efficiently anywhere else. There just simply isn't enough arable land.

Also, the canal system using water from the Columbia takes pressure off deep well irrigation and our declining aquifers. That is how my family benefits from the Columbia Basin Project. We are not in the basin and we do not irrigate. However, we do know that these canals in our basin project take pressure off of our declining aquifers. If you remove that, our lakes, our towns, and our farms will dry up at an increased rate. In fact, the Washington Wheat Growers support increasing the canal system in order to take pressure off our Odessa Aquifer.

The transportation benefit provided by the Columbia/Snake River system gives us the most clean and efficient way to get our products to market. Without the barges, more than 700,000 trucks would be on our highways. Simply put, the Columbia/Snake River system and the infrastructure we have in place saves lives every day.

The infrastructure of our river system uses barges and our barges simply use less fuel than our trains. It is the most effective way we have to get our products to market.

Hydropower, I could go on for hours and hours about the benefits of hydropower, but there are much smarter people here than I to talk to you about that today. Simply put, the Washington Wheat Growers support hydropower as a renewable energy resource.

As we find and we struggle to find and replace fossil fuels, we have the cleanest, most efficient way to produce electricity in this Nation in our own back yard. Hydropower provides such a small portion of our Nation's electricity. I am not a rocket scientist, but that simply does not seem right. I have lived without power. Living without power in our rural communities is simply a way of life. I am tough, but it is not fun.

We have learned to incorporate progress and stewardship on our farms. We have also learned how to do the same thing on our Columbia/Snake River system. Record numbers of fish are returning. Between the climatic atmosphere and our oceans and the efforts that we have done here inland, we have not only increasing numbers, but we have record numbers of fish coming in.

Every day my job with the Wheat Growers, I open up the paper and I read what is wrong with America. I am so proud to be here as an outdoor enthusiast, as a farm kid to say that our farms and the Columbia/Snake River system is an example of what is right.

Thank you for the opportunity this morning.

[Applause.]

[The prepared statement of Ms. Rowe follows:]

Statement of Kara Rowe, Director of Affairs & Outreach, Washington Association of Wheat Growers

Chairman Hastings, Ranking Member Markey and Members of the Committee, thank you for the opportunity to address you today. My name is Kara Rowe, and I am the Affairs and Outreach Director for the Washington Association of Wheat Growers. I am an outdoor enthusiast and also a 4th generation farm kid from Creston, Wash., where my family raises soft white winter wheat, dark northern spring wheat and beef cattle.

Our family has personally benefitted from the irrigation, hydropower and infrastructure created by the Columbia Snake River System. On behalf of all American taxpayers, I thank you for looking at this vital system that sustains our nation.

When my great grandfather settled in Eastern Washington in 1887, he longed for an honest, responsible and clean way of life to raise his family. He worked for years in the mines of Anaconda and Butte, Mont., long before the days of OSHA and greenhouse gas emissions. He sewed his life savings into his boots and moved his family east away from the mining camps. He traded mining soot for some of the most fertile soil in the Western Hemisphere. By horse and plow he grew a generation. Today, he would be both proud and amazed at the stewardship practices we as his heirs have developed to grow our crops in the most safe, efficient and environmentally sound ways possible. Our ability to feed our neighbors and the world safely and competitively was only made possible through great progress and great stewardship.

The same can be said for a major component we as Washington farmers rely heavily on: the Columbia River.

Watching the desert bloom

My grandfather, watched as President Roosevelt developed one of the greatest infrastructure designs in American history. As he farmed along the Big Bend plateau west of Spokane, he watched the colossal undertaking of the mighty Grand Coulee Dam. After the Grand Coulee was built, he watched the desert south of our home bloom. The irrigation canals of Roosevelt's Columbia Basin Project (CBP) allowed for progress, and it gave hope to the helpless. It still does. The CBP is vital not only to the farmers of Washington, but to every American. According to the federal Bureau of Reclamation the yearly value of the irrigated crops within the CBP is $630 million. The food grown in this area includes everything from potatoes and apples to wheat and barley.

Without the supplemental irrigation provided by the CBP, this area would again become desert. Tens of thousands of people would lose their way of life. Vibrant towns would become as dry as the dirt below them. Pressure on other areas to replace the agricultural value of the Basin will increase emissions and the carbon footprint. Arable land that can produce the same amount of food on so few acres so effi-

ciently simply does not exist. The efficiencies and technology in irrigation now available to farmers allows them to grow their crops using water more effectively.

While our family does not irrigate, we do have pasture and natural habitat that relies on healthy underground aquifer levels to provide water to our homes and herd. The current and future canal system of the CBP provides irrigation water to many farmers who may otherwise use deep well irrigation. Deep wells pull their water from the same aquifer that supplies our lakes, towns and homes with water. Without the canal system irrigation, deep well irrigation would deplete our aquifer at a drastically increased rate. With a vibrant canal system using a portion of the renewable river resource, deep well irrigation and aquifer depletion can be kept to a minimum.

In fact, as an industry, the Washington wheat growers support continuing development of the Columbia Basin Project in order to minimize groundwater declines within the Odessa Groundwater Management Subarea.

Saving lives and saving export vitality

The infrastructure provided by the Columbia Snake River System keeps American agriculture competitive, but it also saves lives. The Columbia Snake River System is the largest U.S. wheat and barley export gateway in the country, and the third largest in the world. Half of the wheat exported from the system moves by barge. Barging along the 365—mile inland waterway is the cleanest and most fuel efficient mode of transportation—four times better than trucking. Breaching dams would end barge navigation, and put up to 700,000 more trucks on the highways and increase greenhouse gas emissions. The cargo capacity of one barge alone on the river is equal to 134 large semi trucks. That's a lot of big rigs and tires running on the highway. Having the choice to barge our grain and other commodities simply keeps our highways safer.

Barging is also cheaper. Shipping farm products with the river system uses 40 percent less fuel per ton-mile than a rail system.

Without barging along the Columbia Snake River system, our American agricultural system would suffer consequences affecting every American citizen. Trade would be slowed and economic impacts would be felt beyond our country's heartland. Hundreds of thousands of jobs are tied directly to the river system's activity, trade and commerce.

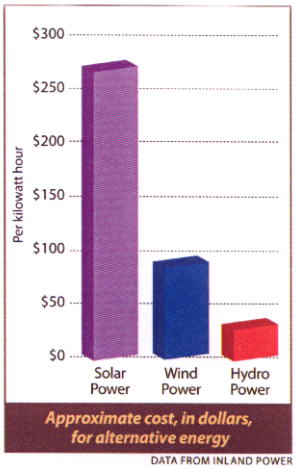
More than $900 million has been spent on new investment in the Pacific Northwest because of the safe, clean and effective transportation system provided by the rivers. A new $200 million grain terminal just opened in Longview, Wash., allowing the Pacific Northwest to increase it's global competitiveness. American wheat farmers are known for growing the highest quality grain in the world. The fact that our customers are investing in terminals within the Pacific Northwest is not only good for the farmers, it's good for the nation. A thriving agricultural sector will lead our nation out of its recession. Safe, sound and efficient infrastructure allows us to be the best in the world.

Hydropower is more than a renewable resource

During the bone-chilling winters in Eastern Washington, I grew up knowing that at least two or three days of the year our family homestead would be without power. We always had spare water jugs in the basement and the wood stove was ready to replace our electric furnace. I know the hardships of living without power only on the superficial surface. This summer, millions of people in the East Coast suffered multiple days without power during one of the worst heat waves in years. Even California has dealt with more "brown outs" than they care to handle in recent years. Imagine if we lost 40 percent of our nation's cleanest energy supply?

Hydropower is inexpensive, sustainable and renewable. The power generated by the powerhouses on the lower Snake River generate enough power to supply a city the size of Seattle.

Hydropower turbines convert 90 percent of available energy into electricity. This is more efficient than any other form of generation. Comparatively, wind has about 30 percent efficiency. Those hydro kilowatts are created in the cleanest way possible and all of that power, if taken off line, would have to be created in another way. The alternative options are coal-fired, gas-fired or nuclear.



The hydropower on our rivers is not only the cleanest energy source, it's also the cheapest. According to Inland Power and Light, a local Washington electric utility that serves Eastern Washington, wind generation costs anywhere from $89 to $129 per kilowatt hour. This isn't cost effective compared to hydro, which costs Inland Power $30 per megawatt hour (solar currently costs $280 per megawatt hour). Hydropower is the cleanest and cheapest form of power generation that exists.

Final thoughts

My father taught me and my siblings at an early age that we, as farmers, are the true environmentalists. Taking care of our land is vital to our heritage and success. If we don't take care of our dirt, we will have nothing to pass along to our children and grandchildren. We, in Washington, feel the same about our water and natural resources. I grew up recreating in Lake Roosevelt and look forward to passing that tradition on to my child. As an outdoor enthusiast, I am thrilled that NOAA Fisheries has determined fish survival through the river system is higher today than it was before the Snake River dams were built. In fact, all the dams have highly effective juvenile passage systems. The increasing salmon numbers in our rivers illustrate that the targeted efforts of concerned individual landowners, Tribes, federal agencies, state governments and businesses are working to produce the improvements needed.

It is incomprehensible to suggest elimination of infrastructure already in place. The U.S. Army Corps of Engineers has documented the devastating impact on agriculture, power, regional communities, and even the uncertainty to fish populations if the dams were breached.

The Washington wheat growers supports an Endangered Species Act baseline that includes dams.

I appreciate the opportunity to address you today, and look forward to working with you in the future.

The CHAIRMAN. Thank you. Without realizing, you just yielded time to Tom Flint.

[Laughter.]

The CHAIRMAN. I now want to introduce Mr. Jack Heffling, the President of United Power Trades Organization out of West Richland. Mr. Heffling, you are recognized for 5 minutes.

STATEMENT OF JACK W. HEFFLING, PRESIDENT, UNITED POWER TRADES ORGANIZATION, WEST RICHLAND, WASHINGTON

Mr. HEFFLING. Chairman Hastings, I am honored to speak on behalf of the United Power Trades Organization which represents over 600 highly skilled operations and maintenance employees who work at U.S. Army Corps of Engineers hydroelectric projects in the Portland, Seattle, and Walla Walla districts of the Northwest Division.

The dams of the Columbia/Snake River system are considered multi-purpose in that they provide hydropower, flood control, navigation, irrigated agriculture, and recreation to the areas where they are located.

Hydropower is clean, renewable and plays a significant role in Pacific Northwest power production. The dams of the Columbia/Snake River system alone produce enough power to meet the needs of more than 13 million homes and only hydropower has the instantaneous capability to meet peak demands. Hydropower costs much less to produce than any other source and is pollution-free with zero emissions. The firm power alone provided by the dams of the Columbia/Snake River system keeps close to 30 metric tons of CO_2 out of the air, equivalent to taking nearly 6 million cars off the road.

Considering the four Lower Snake River dams alone, which are continually the subject of dam breaching, it has been estimated that the cost to replace these dams with a combination of wind, natural gas, and energy efficiency would cost between $759 million to $837 million per year.

Navigation is a major benefit of the Columbia/Snake River system of dams and provides a vital transportation link for the States of Idaho, Montana, Oregon, and Washington. The economies of these four States rely on the trade and commerce that flows up and down the most important commercial waterway of the Northwest. Tens of thousands of jobs are dependent on this trade and local economies benefit from $15 million to $20 million in annual revenue from the 15,000 passengers yearly on 5- to 7-day cruise tours.

Irrigated agriculture is the economic powerhouse of the West, with a net value to all western States over $60 billion. It is the dams that provide the water for irrigation and as a direct result help sustain the economy of the Northwest.

Removal of the Snake River dams would be a detriment to a large amount of irrigated agriculture, would eliminate barging from Pasco to Lewiston, Idaho, and would damage the electrical infrastructure that relies on the generating units not only for power production, but for reactive support that helps to stabilize the electrical grid of the Northwest.

It is a proven fact that science does not support the position that lower Snake River dams need to be removed in order to aid fish migration. Recent studies have shown that the survival rate of salmon migrating through the lower Snake dams is identical to that of those migrating from the Yakima drainage and even with those migrating from Fraser River in British Columbia that has no dams. These studies have shown that juvenile salmon transported

by fish barges survive at five times the rate of those that were not barged.

The facts speak for themselves. Dam removal will not increase fish survival and would have a significant impact on the Northwest economy and the environment.

The United Power Trades Organization supports H.R. 6247 in that it sustains the job security of our workforce and thousands of employment opportunities that dams provide. It also ensures that the focus of salmon and steelhead recovery is on actions that actually work and help fish.

Mr. Chairman, thank you for this opportunity to testify before this panel.

[The prepared statement of Mr. Heffling follows:]

Statement of Jack W. Heffling, President, United Power Trades Organization

Chairman Hastings, Ranking Member Markey and Members of the Committee, thank you for this opportunity to testify and share the United Power Trades Organization's perspective on hydropower in our region. My testimony will primarily focus on the Columbia-Snake River system and more specifically on the four dams of the Lower Snake River Project.

The United Power Trades Organization represents the Trades and Crafts non-supervisory employees at U.S. Army Corp of Engineers hydroelectric projects in Washington, Oregon, Idaho and Montana. These hydroelectric projects make up a portion of the Northwest Division of the Army Corps of Engineers and are divided up into the Portland, Seattle and Walla Walla Districts. The Walla Walla District includes four hydroelectric projects on the lower Snake River that seem to be the target of most dam removal proponents.

The Northwest Division of the U.S. Army Corps of Engineers is a major employer and a huge contributor to the economy of the Pacific Northwest with an annual budget of over $3 billion and a professional workforce of nearly 4,800. The members of the United Power Trades Organization include the men and women who maintain and operate the equipment at the hydroelectric projects and number over 600. But this number doesn't include the engineers, administrators, biologists, park rangers and the hundreds of others whose jobs are directly connected to the dams, associated lands and reservoirs. Nor does it include the many private companies who by contract, also rely on the existence and operation of the dams for their employment.

The dams of the Columbia-Snake River system are multipurpose in that they provide hydropower, flood control, navigation, irrigated agriculture and recreation. The benefits of the dams cannot be measured by megawatts alone but in the overall value they provide a region.

Hydropower is clean, renewable and plays a significant role in Pacific Northwest power production. Northwest residents and businesses enjoy lower power bills when compared to other regions of the United States which is directly attributable to hydropower. The dams of the Columbia-Snake River system alone produce enough power to meet the needs of more than 13 million homes with the surplus exported, providing additional economic importance to the Northwest. Only hydropower has the instantaneous capability to meet peak demands and provide power for heat when temperatures are frigid or sustain power for cooling on exceptionally hot days. Hydropower costs much less to produce than any other source such as nuclear, coal or natural gas and is pollution free, with zero emissions. The firm power alone provided by the dams of the Columbia-Snake River system keeps close to 30 metric tons of CO_2 out of the air. This is similar to taking nearly 6 million cars off the road.

Hydropower is clean, carbon-free, renewable and reliable. Hydro supports wind and other renewables by providing the peaking power necessary to meet demand. Hydropower turbines are capable of converting 90 percent of available energy into electricity, which is more efficient than any other form of generation. Even the best fossil fuel power plant is only about 50 percent efficient. Wind has about 30 percent efficiency. After hydropower, 83 percent of the region's energy production is from fossil fuels coal or natural gas.

Considering the four Lower Snake River dams alone, it would take 2 nuclear, 3 coal-fired, or 6 gas-fired power plants to replace their annual power production. It would take 3 nuclear, 6 coal-fired, or 14 gas-fired power plants to provide the peak-

ing capacity of these four dams. It has been estimated that the cost to replace these dams with natural gas-fired generation would be $444 million to $501 million a year. It has also been estimated that it would cost $759 million to $837 million a year If these dams were replaced with a combination of wind, natural gas and energy efficiency.

Navigation is a major benefit of the Columbia-Snake River system of dams. They provide 365 miles of navigable water from Portland/Vancouver to Lewiston, Idaho. Barging is the lowest cost, most fuel efficient and least polluting transportation mode. Each year, barging keeps 700,000 trucks off the highways through the Columbia River Gorge. The facts speak for themselves. The Columbia-Snake River system is the number one wheat export gateway in the United States and the second largest wheat corridor in the world. It is the number one barley export gateway in the United States. It is number one in West Coast paper and paper products exports. It is number one in West Coast mineral bulk exports and number one in West Coast auto imports. Ten million tons of commercial cargo travel through the system annually with a value around two billion dollars.

Navigation through the Columbia-Snake River system provides a vital transportation link for the states of Idaho, Montana, Oregon and Washington. The economies of these four states rely on the trade and commerce that flows up and down the most important commercial waterway of the Northwest. Navigation is fuel efficient. A ton of commodity goods can move 524 miles by barge on one gallon of fuel, compared to 202 miles by rail and 59 miles by truck. The average barge can transport 3500 tons of wheat which would require 35 jumbo rail cars or 134 trucks. The economic benefit of the Columbia-Snake River system cannot be doubted. Tens of thousands of jobs are dependent on this trade and local economies benefit from $15–20 million in annual revenue from the 15 thousand passengers yearly on 5–7 day cruise tours.

Irrigated Agriculture is the economic powerhouse of the West. The net value of irrigated agriculture to all western states is over $60 billion. Net earned income from agricultural production in the three Northwest states exceeds $8 billion annually. Northwest states are the leading U.S. producers of apples, potatoes, raspberries, blackberries, asparagus, currants, hops, lentils, concord grapes, sweet cherries, spearmint and peppermint oil, pears, sweet corn, and frozen peas. All of these crops are grown on irrigated land. Northwest exports of irrigated agricultural products exceed $1.4 billion annually. Food processing in the Northwest adds another $6 billion in sales value just for fruit, vegetables and specialty products. Food processing is the largest manufacturing employment sector in the state of Idaho and the second largest in both Washington and Oregon. The net direct value to the economy of one-acre foot of water, when used for irrigation is over $50 per acre-foot. The Columbia Basin Project alone supplies about 2.6 million acre feet per year. It is the dams that provide the water for irrigation and as a direct result help sustain the economy of the Northwest.

The Walla Walla District employs over 800 people, with over 400 working at the hydroelectric projects McNary, Ice Harbor, Lower Monumental, Little Goose, Lower Granite and Dworshak. In addition to being a major employer, the District pumps millions of dollars into the local economies. The anticipated fiscal year 2012 budget for the District is $193 million with 57 percent of this funding coming directly from the Bonneville Power Administration (BPA). The power produced by the District dams, like other projects in the Northwest, is sold by BPA who, in turn, direct funds the operation and maintenance of the dams, plus provides additional funding for major work. This means that over $100 million annually is provided the area economy as a result of the power sales of these District hydroelectric projects.

Removal of the Snake River dams would be a detriment to a large amount of irrigated agriculture, would eliminate barging from Pasco to Lewiston, Idaho, and would damage the electrical infrastructure that relies on these generating units not only for power production, but for reactive support that helps to stabilize the electrical grid of the Northwest. While BPA markets power from 31 federal dams, only the 10 largest dams keep the federal power system operating reliably through Automatic Generation Control (AGC) which includes the four Lower Snake River projects. Under AGC, when total generation in the power system differs from the total load being consumed, automatic signals go to these few dams to increase or decrease generation. This is especially critical when generating facilities are suddenly added or dropped from the system. Removal of the dams would cost hundreds if not thousands of jobs. Jobs at the dams themselves would be lost, contracting jobs would be lost, farm jobs would be lost as a result of a large decrease in the amount of irrigated agricultural lands, and jobs related to the barging of commodities would be lost. The impact on the region would be devastating.

The fact is that science does not support the position that the lower Snake River dams need to be removed in order to aid in fish survival. Scientists using special acoustic tags planted in fish found that the survival rate of Idaho juvenile salmon reaching the ocean identical to migrating salmon that originate in the Yakima drainage in Washington. In other words, juvenile salmon passing through the four Snake River dams suffered no higher mortality rate than those that did not. Even more surprising is findings that show the survival rate of both Yakima and Clearwater fish was the same as survival measured in the Fraser River in British Columbia, a river with no dams. In addition, another finding from the research revealed that juvenile salmon transported by fish barges survived from Lower Granite Dam to the northern tip of Vancouver Island at five times the rate of fish that were not barged. This information strongly contradicts any claims by environmental groups that the removal of the dams is necessary for fish to survive and that barging juvenile salmon through the dams is ineffective.

It is time to eliminate dam removal from the discussion on the best way to support migrating fish. Studies have shown that adult fish have no problem passing through the dams at extremely high survival rates. Studies have also shown that the vast majority of juvenile fish migrating downstream are near the surface, so screens at the intakes of generators are positioned to direct them into bypass channels where they are collected for barge transport or bypassed back to the river. Weirs are in place on the spillways that allow for spilling water directly from the surface, thus providing another effective bypass for juvenile fish traveling downstream. It is the existence of these spillway weirs that make any additional spilling unnecessary and, in fact, can have an adverse affect on fish due to the increase in dissolved gases that result when spilling from bays that don't have the spillway weir. Fish passage plans are in place at each facility and overseen by federal and state biologists to assure that hydro plants are operated in criteria most advantageous to fish passage.

"The utter disappearance of the salmon fishery of the Columbia is only a question of a few years." That prediction was made by Hollister McQuire, Oregon Fish and Game Protector in '94. What makes this quote newsworthy is that it was made in 1894, long before the first dam was constructed on the Columbia-Snake River system. The decline of Columbia River salmon began in the 1800's and was originally attributed to two factors: over fishing and environmental degradation from such human activities as mining and logging. Millions of dollars have been spent during the last couple of decades studying the problem and millions more have been spent on making hydroelectric facilities as fish friendly as possible, even though studies have shown very little difference, if at all, between the decline of salmon runs on rivers with and without dams. Too much blame has been placed on the dams when it is obvious that no single factor caused the salmon decline. And no single factor will solve the problem. Solutions must look at all factors impacting salmon decline, including dam operations, fish harvest levels, hatchery practices, degradation of habitat where salmon lay their eggs and the impact of ocean conditions. R. Hilborn from the University of Washington was quoted as saying "Any attempts to understand the impact of in-river action on survival will be confounded by changes in ocean conditions. The poor returns of Chinook salmon in the early 1990's are to a large extent almost certainly due to poor ocean survival, whether or not they encounter dams." My point here is that increasing and maintaining fish runs is a multifaceted problem that requires solutions to many different factors. Since studies have shown that the survival rate of migrating fish is the same on rivers with dams as they are without, the focus should be on ocean conditions and their impact rather than dam removal which would provide no benefit.

The dams have been upgraded extensively at great cost and the improvements work. Dam operation now maximizes attraction water for adult fish and improves downstream migration due to flow augmentation that also serves to cool the reservoirs during low water months. Rotating screens at the turbine intakes direct fish to bypass channels where they are collected for barging or bypassed back to the river. And spillway weirs are strategically placed to provide a gentle "slide" for juvenile fish to travel downstream unharmed. Since removal of the dams would provide no benefit to fish survival, it makes absolutely no sense to continue studying a nonsolution.

A poll taken by Northwest voters indicate the people of the Northwest value clean, reliable, renewable, climate friendly hydropower. Key findings of the poll include that 88% of the poll's respondents view hydro as a renewable resource similar to wind and solar sources, 69% understood that wind is less reliable than hydro, 75% recognize that hydro does not contribute to global warming and 79% support designation of hydro as a renewable resource by the U.S. Congress and state legislatures. Additionally, 71% agree that removing the lower Snake River dams would be

an extreme solution, 65% believe that the billions planned to be spent to improve salmon runs is enough; removing dams is unnecessary and 75% are unwilling to further reduce electricity generated by hydropower to help salmon if it means fossil fuels replace the lost hydropower.

In conclusion, the facts speak for themselves. Dam removal will not increase fish survival and would have a significant negative impact on our economy and environment by eliminating about 1,020 average megawatts of carbon-free energy, increasing greenhouse gasses by 4.4M tons/yr and reducing navigation capacity. H.R. 6247, by enacting funding prohibitions on dam removal ensures that the focus of salmon and steelhead recovery is on actions that actually work and help fish.

Thank you again for this opportunity to testify before the committee.

The CHAIRMAN. Thank you very much, Mr. Heffling. I appreciate your testimony.

And now I recognize Mr. Jim Sanders, who is General Manager of the Benton County PUD. Jim.

STATEMENT OF JAMES W. SANDERS, GENERAL MANAGER, BENTON COUNTY PUBLIC UTILITY DISTRICT, KENNEWICK, WASHINGTON

Mr. SANDERS. Good morning, Chairman Hastings and Representative McClintock. Welcome to the tri-cities.

My name is Jim Sanders. I am the General Manager of Benton PUD across the river here. We serve some 48,000 customers in Benton County, and over 70 percent of our power comes from hydro. We are a Bonneville Power Administration customer.

The topic of this hearing is very important to Benton PUD and our customers. As has been mentioned, I want to thank you, Congressman Hastings, for your persistent work on the issues that continue to plague our important hydro system. In 1999 you were on that bridge with a lot of us freezing our butts off, but it was good. You know, it is hard to believe that we still have to defend the economic and environmental benefits of the dams, but that is why we are here.

Federal regulations, administrative decisions, and court orders all threaten hydropower. The proposed act addresses these concerns in several ways, including specifying hydro as a renewable resource and prohibiting funding to agencies that seek to remove or study the removal of hydropower-producing dams without clear authorization or congressional approval.

The bill helps by limiting the endless litigation, judicial orders, proposed regulations, and arbitrary agency mandates that, in the end, diminish the value of hydro.

Hydropower provides many benefits to the Pacific Northwest. Hydro provides 90 percent of the region's renewable energy, can be called on to serve load at any time it is needed, and is less costly than any other form of generation.

But there are challenges. When the idea of breaching dams was introduced, there were few, if any, renewable resources such as wind connected to the Northwest electric system. Today, BPA's system alone has over 4,700 megawatts of wind connected. Wind turbines produce electricity about a third of the time because, on average, the wind only blows adequately a third of the time. And generally during the hottest times and coldest times of the year, when demand for electricity is highest, the air is dead calm.

As we continue to diversify the electric power supply in the region by adding these variable resources, the capability of the hydro system is needed even more than ever to firm up the output of these resources and help maintain the reliability of our electric system.

Hydro is a flexible renewable power source that can be used any time to firm up other renewable energy sources. You know, it does not get any greener and cleaner than that. If the dams are removed, wind energy will still need to be backed up and that resource would be fueled by natural gas. That would cause an increase in the greenhouse gas produced in the Pacific Northwest.

Hydro and wind can be a partner, but from time to time, there are conflicts. When there is too much power from both resources, wind developers want first rights to delivery to ensure their tax credits. And at a State level, because of the mandates of the Energy Independence Act, utilities, including Benton PUD, have to purchase wind to meet the requirements of that law even though they have enough hydropower to meet customers' needs.

We appreciate that the bill addresses Energy Secretary Steven Chu's memorandum that proposed more renewables and more conservation. The bill prohibits Federal funding for these new activities and mandates for BPA until an agency report is completed to justify and Congress authorizes the new activities.

In addition, H.R. 6247 rightly addresses transparency on costs related to Federal environmental laws and regulations, specifically fish and wildlife.

The comprehensive plan for fish mitigation has proven itself over the years. High fish returns today are due to installations of new technology, modified operations, and improved habitat.

But all this comes at a cost. Since 1978, utility customers in the Northwest have funded more than $12 billion on fish and wildlife mitigation actions for the impacts of the Federal dams. This last year alone, programs for fish have cost Benton PUD customers nearly $18 million through our wholesale power rates. It costs our residential customers about $200 a year and our large irrigators hundreds of thousands of dollars.

The provisions of H.R. 6247 address issues that are important to our overall quality of life. We have taken on the obligation for new renewable resources and we continue to meet fish and wildlife obligations. But we have to be careful that the growing costs of these often conflicting obligations don't jeopardize our economy or compromise the system's reliability.

Thank you for the opportunity.

[The prepared statement of Mr. Sanders follows:]

Statement of James (Jim) Sanders, General Manager, Benton PUD, Kennewick, Washington

Good morning Chairman Hastings and members of the committee. My name is Jim Sanders and I am the general manager for Benton PUD. Our public utility district serves 48,000 customers in the Benton County area with over 70 percent of our power coming from hydro. The topic of this hearing is very important to Benton PUD and our customers.

First, I want to thank you—Congressman Hastings—for your tenacity and persistent work on the issues that continue to plague our important hydro system.

In 1999, you joined our community at a 'Save Our Dams' rally on the bridge over the Columbia River to highlight the many benefits of the dams. Thirteen years

later, we are still defending the dams and all of the benefits they bring to the region.

Today, we are here to discuss the new bill—"The Saving Our Dams and Hydropower Development and Jobs Act" which will protect existing hydro resources and enhance the ability to pursue new hydropower development.

At times it is hard to believe that we have to defend the economic and environmental benefits of the dams—but we do. Hydropower is getting squandered away through federal regulations, administrative decisions and court orders. The proposed act addresses these concerns in several ways including the specification of hydro as a renewable resource and prohibiting funding to agencies that seek to remove or study the removal of hydropower producing dams without clear authorization or congressional consent.

Some clear facts about hydro power and our dams that we cannot let others forget—

> Hydro electricity is the original northwest renewable resource—it's fueled by water. It produces no carbon emission making the Northwest carbon foot print half of other parts of the country.
>
> Northwest dams produce nearly 60 percent of the region's electricity and 90 percent of the region's renewable energy. The federal dams produce about 14,000 average megawatts of electricity every year under normal precipitation—that is equivalent to powering over 11 cities the size of Seattle on an average year. The four dams on the Snake River alone generate enough power to serve one city about the size of Seattle.
>
> The power produced by the dams is dispatchable, that is, it can be called on to serve load at anytime it is needed.
>
> The Northwest has some of the lowest electricity rates in the country, thanks to low cost hydro. While regulatory costs placed on hydro are increasing, its base cost of production is significantly less than nuclear, coal, natural gas, wind, and solar.

The list of the benefits of the hydro system is long, but so is the list of its challenges. This bill will help shine a light on the challenges and limit some of the endless litigation, judicial orders, proposed regulations and arbitrary agency mandates that, in the end, diminish the value of hydropower.

Our customers expect, and rightly so, that their electric service will be reliable, and will be there when they need it at a price they can afford. Much has changed since the "Save Our Dams" rally. When the idea of breaching dams was introduced, there were few, if any, variable renewable resources such as wind connected to the northwest electric system.

Today, Bonneville Power Administration's (BPA) system alone has over 4,700 megawatts of wind connected and expects to have 5,000 megawatts of this variable resource connected to its system by 2013. Power from the dams provides the means to firm up the output of these variable resources while maintaining reliability of the electric system. As we continue to diversify the electric resources in the region by adding other renewables, the hydro system is needed even more than ever before to help maintain the reliability of our electric system.

Wind turbines in the Pacific Northwest have an availability factor of around 33 percent. That is, they produce electricity a third of the time because on average the wind only blows adequately a third of the time. Put another way, wind generation will not produce electricity two-thirds of the time. And generally during the hottest or coldest times of the year, when demand for electricity is highest, the air is dead calm.

The power produced at the dams is a flexible resource with an availability factor of 100 percent. The power is available to serve loads that are constantly changing any time of the year.

Hydro is a renewable power source that can be used to firm up other renewable energy sources. It doesn't get any greener and cleaner than that. If the dams are removed, wind energy will still need to be backed up by a firm resource. Today that resource would be fueled by natural gas. Removing the dams and firming wind with natural gas resources will cause an increase in the amount of greenhouse gas produced in the Pacific Northwest.

Hydro and wind can be a partner but sometimes there are conflicts. When there is too much power from both resources, wind developers want first rights to delivery to ensure their tax credits. And at the state level, because of the mandates of the Energy Independence Act (Initiative 937), utilities, including Benton PUD, have to purchase wind to meet the requirements of the law even if they have enough hydropower to meet customers' need.

The cost of various new and unnecessary proposals involving conservation and more renewables proposed in Energy Secretary Steven Chu's memorandum in March will be paid for by our customers. We appreciate that the bill addresses this and prohibits federal funding for new activities and mandates for Power Marketing Administrations such as BPA until an agency report is completed to justify such activities and Congress authorizes the new activities. The response by Congress and the power marketing agency customers to Secretary Chu's memo has been refreshingly unified. Public Power Council (PPC), and Northwest Public Power Association (NWPPA) are carrying the message about our concerns with Secretary Chu's memo as it relates to BPA customers.

In addition, the bill before us, H.R. 6247, rightly addresses transparency on costs related federal environmental laws and regulations, specifically fish and wildlife.

It is frustrating we are still defending the Biological Opinion in the court system. The comprehensive plan for fish protection, mitigation and enhancement has proven itself over the years. New fish protection technologies have been installed, operations have been modified, and habitat improvements have been made—all adding to the success of fish returns.

But this comes at a cost. Since 1978, utility customers in the Northwest have funded more than $12 billion on fish and wildlife mitigation actions for the impacts of the federal dams in the Columbia River Basin. This last year alone, programs for fish have cost Benton PUD customers nearly $18 million through our wholesale power rates. That means about 18% of an average residential customer bill goes to fish and wildlife programs. Our customers are able to determine the impact of the fish costs on their power bill by using a calculator on our website. Most of our customers will find that fish programs are costing them about $200 per year.

I appreciate that the bill also limits and/or prohibits federal funding to non-governmental organizations that have engaged, or are currently engaged, in dam removal or hydropower decreasing litigation against the federal government.

The provisions of H.R. 6247 are important to the overall quality of life we enjoy in the Pacific Northwest. We have taken on the obligation for the development and integration of new renewable resources and we continue to meet fish and wildlife obligations. We have to be careful that these growing costs associated with meeting these obligations don't jeopardize our overall economy, and that the growing mandates don't compromise the reliable operation of the system. There is an inherent conflict with operating hydro to integrate wind and operating hydro to meet fish obligations, while at the same time serving our customers reliable, affordable power. We are glad to see legislation that is trying to help resolve some of the many challenges facing our hydropower system.

Thank you for the opportunity to testify today. I am available for any questions.

The CHAIRMAN. Thank you very much for your testimony.

And now I am pleased to recognize Mr. Glen Spain, the Northwest Regional Director of the Pacific Coast Federation of Fishermen's Association out of Eugene, Oregon. Mr. Spain, you are recognized for 5 minutes.

STATEMENT OF GLEN H. SPAIN, NORTHWEST REGIONAL DIRECTOR, THE PACIFIC COAST FEDERATION OF FISHERMEN'S ASSOCIATIONS (PCFFA), EUGENE, OREGON

Mr. SPAIN. Thank you, Mr. Chair, Mr. McClintock. Thanks for the opportunity to testify.

I am going to put this in a bit of a different perspective. We are coastal folks. We are coastal fishermen. PCFFA is the largest organization of commercial fishing families on the west coast. And why we care about what goes on in the Columbia should be obvious, but for those who are not aware of it, about 58 percent of the salmon harvested as far north as Southeast Alaska come from the Columbia. Columbia fish also migrate far down south into California and the status, the health of the Columbia River stocks determines in many years whether we fish or do not fish, and that means whether we have jobs or do not have jobs. So it is of vital importance.

But I want to put this in a bigger perspective rather than talk about the Columbia River dams. There is a much bigger story here because your bill will—and we share, by the way, your desire to encourage hydropower development. It is, generally speaking, a low emissions power. We are very much concerned about that kind of issue.

There are some problems with the bill, however, and I have gone into some of those problems in my written testimony. I won't burden you with that now. It is in my written testimony.

But to put this in some perspective—since your bill will have national implications, it is applicable nationwide in many of its provisions. If you look at the number of dams—I appreciate the reference to common sense. Right now, as we speak, there are about 84,000 dams in the Corps of Engineers' dam inventory nationwide. Of those, some 5 percent, some 4,400 of them have been declared as safety hazards. They have been essentially condemned by State and Federal dam safety engineers because they are obsolete and are public safety hazards. The task force called the Task Committee of the Association of State Dam Safety Officials in a report cited in my written testimony estimated that there are now or just in the past few years there were 566 major dam incidents that could lead to failure. That is decrepit infrastructure. Keep in mind that 84,000 dams is one dam for every day since the signing of the Declaration of Independence and a few left over. That is a lot of dams. It is a big, major national infrastructure problem.

The Committee on Safety Engineers estimated that the total cost to the Nation of repairing and upgrading just that 5 percent of aging dams is more than $51 billion. To deal with the most critical ones, the ones that may fail—there have been many failures in the past few years, 132 dam failures that risk public health and public safety. The cost to repair and upgrade just the ones that may fail in the next 12 years is $16 billion. The States do not have that money. Many of those dams are abandoned. Many of them cannot be rehabilitated. The effort to prevent either State officials or private owners from retrofitting or removing, when necessary, those dams is not good public policy. There are a number of those dams, including a number of hydropower dams, that are simply no longer cost-effective.

The Klamath is a good example. Mr. McClintock raised it, so I will address that. Here you have four dams that produce on average only about 82 megawatts. I drove up the Columbia Gorge. The wind project there is slated for 1,000 turbines. It would take 50 of those turbines and only 50 of those turbines to fully replace all the power that the four dams in the Klamath combined generate. That one wind farm will be 20 times that amount of power.

The dams in the Klamath are estimated by FERC—and FERC does know a few things about dams—to need to operate at a $20 million a year loss if they are relicensed. In addition, it will cost about $500 million to retrofit them. If you do those numbers, it means that relicensing those dams costs seven and a half times more than their removal. That is not cost-effective.

That is not true of every dam. Every dam must be considered on its own merits. Every single one was a constructed project. They

are built for a specific lifespan. Beyond that lifespan, they become safety hazards.

So one of the things that I would urge you to do is look at addressing those issues. There is a bill that would cost-effectively deal with and help develop more hydropower. That is the Rodgers-McMorris bill that is 5892, as you know. And it passed in the House with not a single dissenting vote. That may be the only bill this session that passed with no "No" votes. That is in the Senate now for consideration and it is something we would back as well.

[The prepared statement of Mr. Spain follows:]

Statement of Glen H. Spain, on Behalf of the Pacific Coast Federation of Fishermen's Associations (PCFFA)

Thank you for the opportunity to testify. I am the Northwest Regional Director for the Pacific Coast Federation of Fishermen's Associations (PCFFA), which is the largest trade organization of commercial fishing families in the western U.S. PCFFA represents thousands of working men and women in the U.S. Pacific commercial fishing industry, and has member fishermen's associations and individual members in every seaport from San Diego to Alaska.

Commercial fishing is a major U.S. industry, generating billions of dollars annually to this region's economy, and supporting hundreds of thousands of family-wage jobs in this region as well as providing high quality seafood for America's tables and for export.

In Washington State alone, our seafood industry supports more than 58,000 family-wage jobs—and more than 1,000,000 family-wage jobs nationwide. Salmon fishing is one of the most important components of our commercial fishing industry, generating more than $369 million/year in direct landings sales at the docks, which in turn supports more than $1.25 billion in related economic impacts to this region's economy (see Fisheries Economics of the United States, 2009, available on the Internet at: www.st.nmfs.noaa.gov/st5/publication/fisheries_economics_2009.html).

The valuable Pacific salmon fishery—and tens of thousands of jobs in our industry—is also greatly influenced by the health of the remaining salmon stocks in the Columbia River, which even greatly diminished from its historic productivity (originally with runs of between 10 to 30 million salmonids/year) still remains the single most productive salmon-producing river in the lower 48 states. Even so, current salmon numbers today are only at best about 10 percent of what a restored Columbia River could potentially generate. More than 50 percent of that productive potential lies in the Snake River, the Columbia's largest tributary.

Columbia River salmon abundances influence harvest allocations all the way from central California to well into Alaska. In fact, approximately 58 percent of all salmon harvested commercially in Southeast Alaska come originally from the Columbia. This is why the health of the Columbia salmon stocks is so important to our industry—it's all about jobs!

Severe salmon run declines in the Columbia over the past several decades have had devastating impacts on the economies of many western states. In an economic study by the Institute for Fisheries Resources (The Cost of Doing Nothing: The Economic Burden of Salmon Declines in the Columbia River Basin (Oct. 1996)), that study concluded that up to $500 million/year in regional economic benefits are being lost each year from salmon declines in the Columbia Basin, together with approximately 25,000 lost family-wage jobs. (See: http://www.pcffa.org/CDNReport-Columbia.pdf). The economic cost of the current highly depleted status quo on the Columbia is, in fact, huge.

Our sister industry, the recreational fishing industry—which would also be negatively affected by many provisions of H.R. 6247 that deal with dams and hydropower development nationwide—itself amounts to a $125 billion industry nationwide supporting more than another 1 million jobs, according to the American Sportfishing Association (see http://asafishing.org/facts-figures/sales-and-economics). That industry too, like the commercial salmon fishing industry and the jobs they both support, is almost entirely dependent on healthy rivers for its existence.

This is particularly true for western U.S. salmon fishermen, who have suffered enormously from the loss of salmon habitat and the complete or nearly complete blocking of many of our most productive western U.S. salmon-bearing rivers by poorly thought-out dams, often built without fish passage, many of which are now outdate or functionally obsolete.

Make no mistake, decades of gradually lost western states' salmon-river productivity has meant tens of thousands of lost jobs for our industry, nearly bankrupted many coastal communities, and caused widespread economic and social disruption in many rural communities and towns. On the flip side, however, more recent river restoration efforts—including the removal of salmon-killing dams when those dams no longer are cost-effective to keep, or where they were foolishly located—are helping to restore many thousands of local fishing and river-related jobs, providing economic lifeblood to once-dying coastal fishing-dependent communities, and restoring many billions of dollars to the U.S. economy. In short, more salmon means more jobs and stronger economies throughout the coastal western states.

While there are some aspects of H.R. 6247 to which we see no objection, there are many more provisions that are at best poor public policy, and at worst would create economic disasters and destroy thousands of jobs in our industry. I will discuss only the worst provisions in my short comments in Part 2 below, as well as try to put some of these worst provisions—those aimed at imposing scientific "gag-rules" on federal agencies and categorically preventing dam removals regardless of the economic consequences—into some perspective in Part 1.

Part 1—Aging Dams as a National Infrastructure Disaster

First off, to see why in many cases dam removal makes good sense, we should consider the current state of the nation's aging dams. There are, according to the U.S. Army Corps of Engineers' National Inventory of Dams, approximately 84,000 dams in the nation providing a range of benefits and built for a wide array of purposes. This is a staggering number—roughly one dam built in the U.S. for every day since the signing of the Declaration of Independence in 1776.

Yet no dam can exist forever. All have engineered lifespans, after which their reservoirs silt up, their concrete structures crack and deteriorate, and they can catastrophically fail—endangering the lives, property and natural resources (including drinking water supplies) of those who live far below and around them.

An increasing number of the nation's 84,000 dams are now economically obsolete, many are near or past their engineered lifespan, and quite a few no longer function to provide the benefits they were intended to produce. According to a January 2009 report by the Task Committee of the Association of State Dam Safety Officials, The Cost of Rehabilitating Our Nation's Dams, over 4,400 of these 84,000 dams are now considered to be physically unsafe by state dam safety inspectors. From 2005 to 2008, their report notes, the states reported 566 dam incidents, including 132 dam failures—and that number is likely under-reported. The nation's dam failure rate is also expected to accelerate. That report is available at: http://www.damsafety.org/media/Documents/DownloadableDocuments/RehabilitationCosts2009.pdf. That report also noted that:

> "Without proper maintenance, repairs, and rehabilitation, a dam may become unable to serve its intended purpose and could be at risk for failure. State and federal dam inspection programs can identify deficiencies in dams, but inspections alone will not address safety concern posed by inadequately maintained or outdated dams. For most dam owners, finding the funds to finance needed repairs or upgrades is nearly impossible. The lack of reliable funding to resolve dam safety issue poses a threat to public safety nationwide."

That important study also concluded that the cost of rehabilitation up to current safety standards of just the nation's non-federally owned dams would be $51.46 billion. To address just the most critical of these dams over the next 12 years, the cost was estimated to be at least $16 billion.

Congressional efforts to help provide those funds, the study noted, have been few and paltry compared to the urgent need. The report also notes that, at least at the time written, there was only one federal program available for rehabilitation of non-federally owned dams (the Watershed Rehabilitation Act of 2000 (P.L. 106–472, Sec. 313)), and its funding was orders of magnitude smaller than what is actually going to be required.

In short, an increasing number of the nation's dam are aging, increasingly obsolete, and becoming an infrastructure nightmare with serious repercussions for the nation's public health and safety. In this light, Congress should be encouraging private industry efforts to remove obsolete dams, not inhibiting it as H.R. 6247 attempts to do.

While only a small fraction of the nation's approximately 84,000 dams were designed to generate hydropower, this logic applies across the board. FERC currently carries 3,036 licensed hydropower dams in its safety inspection program, with about two-thirds of those dams more than 50 years old. Some older power dams are candidates for removal because they can no longer be operated cost-effectively—or are

doomed to near-term catastrophic failure unless ultimately removed. To put things in perspective, it's worth noting that FERC has licensed 20,441 MW of hydroelectric capacity since 1986, yet only 222 MW (about 1% of total licensed capacity) are current FERC candidates for decommissioning. Those few dams that are candidates for decommissioning are, however, on that list for very good reasons.

Each Dam Removal Proposal Must Be Judged on its Merits

It is just as illogical to say "all dams are good" and should be kept as they are, as to say "all dams are bad" and should be removed. The fact is, each dam was designed and constructed to provide certain public benefits and engineered only to last for a specific life span. No dam can last forever—eventually it will either come down by human design or catastrophic failure.

Dams also have a serious economic downside: they can block valuable rivers, destroying other valuable natural resource industries (including commercial or recreational fisheries), which in turn destroys jobs, and can have devastating impacts on water quality and disrupt natural hydrological flows that cause other societal problems such as greatly increasing the costs of providing clean drinking water to communities downstream.

Any rational analysis must therefore conclude that dams that no longer provide sufficient public benefits to justify their existence, or which are reaching the end of their engineered life-span and becoming safety hazards, or which are creating other problems for society (such as destroying valuable fisheries) which push their economic value to society into the negative, are potential candidates for removal. Thus each dam removal project must be evaluated and judged on its own merits, always on a case-by-case basis.

According to American Rivers, at least 925 dams have been removed over the past 100 years in this country. As more dams age, many more are becoming candidates for removal. Other dams can still be upgraded, their hydropower output improved with new technologies, and can remain in place longer—but always at an economic cost. If that cost to upgrade or retrofit a dam to modern relicensing standards surpasses or outweighs the economic value of any benefits that dam can provide, then that dam becomes economically obsolete, and it should be considered for removal. But again, this is a case-by-case judgment that must be made for each dam.

Hydropower Dam Removals That Make Economic Sense

The Condit Dam: The Condit Hydroelectric Project is a privately owned 125-foot high dam located in south-central Washington on the White Salmon River in Klickitat and Skamania Counties. The project has a nameplate capacity of 13.7 MW, but generally provides less than that maximum amount. Constructed between 1911 and 1913 by the now defunct Northwestern Electric Company, PacifiCorp Electric Operations (PacifiCorp) acquired the project in 1947. A PacifiCorp fact sheet on Condit Dam is also available online at: www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/EnergyGeneration_FactSheets/3721–20_GFS_Condit_v4.pdf.

In short, this was a very old and largely obsolete dam, which generated very little total energy (only about 1/10th of 1% of PacifiCorp's total generation capacity of 10,597 MW) and was built (well before the advent of the current multi-state electrical grid) to serve local manufacturing plants that no longer exist. FERC relicensing of this very old project was clearly going to require major retrofitting to upgrade construction to meet current relicensing standards. Those relicensing costs, as it turned out, would likely far exceed the dam's economic value.

In 1999, after two years of negotiations, a Settlement Agreement was reached between PacifiCorp and multiple agencies and stakeholder groups that provided a lower-cost way to remove the dam by simply allowing it to remain in operation for a period of years while still selling power and then using those revenues to pay into a "dam removal fund" to minimize cost impacts to company ratepayers. Condit dam was removed earlier in 2012.

No federal funds were used for actual Condit dam removal, but because the Condit Dam removal affects multiple federal interests, including lands of the Yakama Tribe, the U.S. Department of Interior and several other federal agencies were involved in that Settlement in order to protect federal interests. The Settlement Agreement and related documents on the Condit Dam removal project are available on a PacifiCorp web site at: www.pacificorp.com/es/hydro/hl/condit.html.

The Elwha and Glines Dams: Elwha Dam, completed in 1913, is a 108-foot high concrete gravity dam located on the Elwha River in the Olympic Peninsula at river mile 4.9. It has no fish passage. A powerhouse contains four generating units with a combined generation capacity of only 14.8 MW.

The companion Glines Canyon Dam, completed in 1927, is a 210-foot high single-arch concrete structure located at Elwha River mile 13. It also has no fish passage facilities. A powerhouse with one generator has a capacity of only 13.3 MW.

Both dams sat illegally on federal lands within Olympic National Park. Both dams were originally constructed to provide electricity to a handful of then-isolated local saw mills—operations which either no longer exist or which can today draw much cheaper power from the multi-state power grid, which did not exist when the dams were originally built. In short, these small—and now technologically obsolete—power dams have simply outlived their original purposes.

Since their construction, however, the damage caused by the Elwha and Glines Canyon dams to public resources has been far-reaching. Salmon and steelhead populations have been considerably reduced. Only about 4,000 salmon now spawn in the 4.9 miles of river below Elwha Dam out of what were once some of the most valuable and abundant salmon runs in the State of Washington.

In addition to decimating the river's valuable salmon runs, the dams also struck a long-term blow to the Lower Elwha Klallam Tribe which relied on the salmon and river for their physical, spiritual and cultural well-being. The Tribe considered the dams' existence to be a breach of the United States' federal Trustee responsibilities toward the Tribe—exposing the federal government to major potential legal liabilities for breach of that trust.

The economic harm caused by these two dams has reverberated throughout the entire coastal Washington ecosystem. The dams and their associated reservoirs inundated and degraded over five miles of river and 684 acres of lowland and forest habitat, much of it federal lands. The river itself has been degraded through increased temperatures, reduced nutrients and reduced spawning gravels downstream. Multiple other animal species which depended on Elwha River salmon for their sustenance have greatly declined in numbers.

In 1992, Congress passed Public Law 102–495, the Elwha River Ecosystems and Fisheries Restoration Act. That Act directed the Secretary of the Interior to study ways to fully restore the Elwha River ecosystem and native anadromous fisheries. Purchase and removal of these two dams was one of the considerations. The Elwha Report, submitted by the Secretary of the Interior, determined that removing the dams was both feasible and necessary to fully restore the fisheries and river.

Removing both dams this year is re-opening over 70 miles of still pristine salmon habitat. With 83 percent of the Elwha watershed now protected within Olympic National Park, salmon have an especially high chance for recovery. A restored, free-flowing river is estimated to be able to produce approximately 390,000 salmon and steelhead annually within about 30 years, compared with less than 50,000 fish if the dams were fitted with expensive upstream and downstream fish passage facilities, which are much less effective than volitional passage.

The November 1996 Final EIS found that significant economic benefits estimated at $164 million over the 100 years following dam removal will be realized through increased recreation, tourism, and sport fishing. Ultimately, the high costs of retrofitting and relicensing these dams, for a very small power benefit, and the major economic benefits from restored salmon and steelhead fisheries, all greatly outweighed the economic value of keeping these economically obsolete dams.

Both were purchased by the federal government in 2000 and are now finally being removed this year—and salmon are already recolonizing newly opened areas on the Elwha River for the first time in nearly 100 years. As these fish runs recolonize the Elwha and grow in abundance, they will re-establish many previously lost local and regional fishing jobs and help restore damaged local economies.

The terribly slow pace of the Elwha-Glines dam removal process is also an object lesson in why all dam removals should not depend upon Congressional approvals, as H.R. 6247 seeks to require. The obviously necessary removal of these private dams, sitting illegally on federal lands, was actually formally approved by Congress back in 1992. However, it then took the federal government nearly 20 years to accomplish the dam removal components of that 1992 bill. The reason: funding was blocked for nearly 15 years because of Congressional political in-fighting that had nothing to do with the merits of this specific project.

Why Klamath Dam Removal Also Makes Economic Sense: The four Klamath hydropower dams (Iron Gate, Copco 1 & 2 and the J.C. Boyle Dam), also owned by PacifiCorp, are also good examples of aging dams that are now technologically and economically obsolete. They also cause far too much damage and economic losses to lower river and coastal salmon industry jobs to justify their continued existence. The first of these four dams was built in 1918 and none of them have fish passage for salmon—a practice that is patently illegal today.

The Klamath River is also economically important for salmon fishing industry jobs because it was historically the third largest salmon-producing river in the lower

48 states, historically producing an average run of about 880,000 salmon and steelhead annually. Outside of Alaska, only the Columbia and Sacramento-San Joaquin river systems produced more salmon and steelhead. Today—in no small part due to the damage done by impassable dams—the Klamath chinook salmon runs average less than 15% of historic numbers, and in some years less than 4%.

Because these four Klamath dams essentially cut the river in half, blocking access to most of the salmon's historic spawning grounds, and because of multiple other water quality and depleted spawning gravel impacts, in some years (such as 2006) the river's remaining productivity cannot even meet the minimum 35,000 "spawner floor" requirement deemed biologically necessary to have a fishery. In such years "weak stocks" in the Klamath close down whole chunks of the ocean commercial salmon fishery from Monterey, CA to well into Washington State in which they intermingle. In 2006 this type of "weak stock" closure cost California, Oregon and Washington more than $100 million in direct economic losses—and required $64.2 million in emergency Congressional disaster assistance.

Yet the reality is that all four Klamath dams combined do not generate all that much power. Although the whole Klamath Hydroelectric Project is technically rated for maximum power generation of about 169 megawatts (MW) (about 1.6% of PacifiCorp's total generation capacity of 10,597 MW), no dams can run at maximum capacity 24/7, especially during summers when turbine flows are lowest. The entire Klamath Hydroelectric Project combined actually generated only about 82 MW of power on average over the past 50 years, according to FERC records (see the November, 2007, FERC Klamath Final Environmental Impacts Statement ("FERC FEIS") available online at: http://elibrary.ferc.gov/idmws/File_list.asp?document_id=13555784 or found by a FERC docket search at www.ferc.gov, Docket No. P–2082–027, posted November 16, 2007, Document No. 20071116–4001). For comparison, a single modern electrical power plant can continuously generate 1,000 MW or more.

The 1956 Federal Energy Regulatory Agency (FERC) 50-year license to operate the Klamath Hydropower Project expired in 2006. There are now only two legal options for these Klamath Hydropower Project dams, both of which will cost PacifiCorp ratepayers money. These options are to either: (1) update the dams and relicense them to modern safety and fish passage standards, which it turns out will cost at least $460 million, and quite likely more than $500 million once all (currently unknown) water quality damage mitigation costs are added in, according to PacifiCorp testimony to the California and Oregon Public Utilities Commissions (PUCs); or (2) decommission and remove these aging dams entirely—which the company can now do far more cheaply under the recently signed Klamath Hydropower Settlement Agreement (KHSA) for a "capped" cost to its customers of only $200 million.

And according to cost-benefit estimates by FERC, even after all the expensive retrofitting to meet modern standards for relicensing, these dams would still then only be able to generate about 61 MW of power on average—about 26% less than they do today (FERC FEIS, Sec. 4.4, pg. 4–4). Klamath dam relicensing thus means spending a great deal of money for what is actually very little power. In fact, FERC estimated in its 2007 Final Environmental Impact Report (FEIS) on relicensing that even if fully relicensed, the required retrofitting would be so expensive that these dams would then have to operate at more than a $20 million/year net loss (FERC FEIS (Nov. 2007), Table 4–3 on pg. 4–2).

If you calculate the cost of FERC relicensing (at least $500 million) and also accept the economic losses estimated by FERC of $20 million/year for a new 50-year FERC license (a net economic loss of $1 billion over 50 years) and add them together, then the probable costs of a new 50-year FERC license for the four Klamath dams to PacifiCorp's customers would be at least $1.5 BILLION. This relicensing cost is 7.5 TIMES the "capped" costs of $200 million that PacifiCorp's customers will be obligated to pay for Klamath River four-dam removal under the current Klamath Hydroelectric Settlement Agreement (KHSA).

In short, the full cost of FERC relicensing for these four aging and now economically obsolete dams would vastly exceed their remaining net economic value.

These inescapable economic numbers are why, on May 5, 2011, the California Public Utilities Commission (CPUC) formally confirmed that the KHSA is indeed the most cost effective, least risky and therefore best alternative for PacifiCorp's customers as compared to FERC relicensing (CPUC Docket No. A10–03–015). A prior September 16, 2010, ruling by the Oregon PUC came to the same conclusion (OPUC Docket No. UE–219).

In short, keeping the Klamath dams would mean extremely expensive fixes for a lot less power, and result in a project that would likely lose money for the rest of any new license—losses that customers would ultimately also have to make up

for in even higher power rates. The "bottom line" is that it's just a lot cheaper for customers to remove the four Klamath dams than to keep them.

And this doesn't even begin to account for the likely economic and jobs-related benefits of a restored world-class Klamath salmon run, a more stable irrigation system and the many other economic benefits that will also come from other aspects of the Klamath Settlement. The best current estimate is that this dam removal project with its associated major watershed restoration efforts would nearly double the average salmon run size from the basin, stabilize an otherwise at-risk $750 million farming and fishing local economy—and create 4,600 new farming and fishing jobs (see www.klamathrestoration.gov, Summary of Key Conclusions and EIR/EIS Economic Fact Sheet).

The best current estimate for the total costs of decommissioning and full removal of the four dams, including various mitigation measures not available under the FERC process alone, is about $290 million (i.e., most likely cost, in 2020 dollars), including various environmental mitigation measures (see Detailed Plan for Dam Removal—Klamath River Dams (Sept. 15, 2011), Table ES–1, pg. 7, at www.klamathrestoration.gov). By implementing dam removal through the KHSA, PacifiCorp thus saves its customers at least another $90 million as well as reduces its own company and ratepayer risk and uncertainty. This is another good business reason the KHSA is a good deal for PacifiCorp customers.

It should also be noted that in accordance with the KHSA, no federal money will be used for this Klamath dam removal process. Dam removal is to be financed under the KHSA solely through non-federal sources, with the first $200 million coming from PacifiCorp ratepayers. What little federal money has been used to analyze the Klamath dam removal proposal is because it will directly impact federal lands, and this analysis was required by NEPA.

As to replacement power, Pacific Power is already legally committed to bringing more than 1,400 MW of brand new, cost-effective renewable power online by 2015 (see Final Order, Measure 41, in CPUC Docket A05–07–010). This is 17 times more power than the four Klamath dams generate all together today. There are many options for the replacement of this power from comparable carbon-free or renewable sources by 2020.

Summary of Part 1: Many hydropower dams still make economic sense, but in a growing number of instances it is dam removal that makes the most economic sense, is the only common sense option. In those instances it would be foolish indeed for Congress to try to force private companies (as in the case of PacifiCorp's Klamath dams) to retain economically unproductive assets to the detriment of their ratepayers and customers, as H.R. 6247 tries to do. It would be even more foolish for Congress to forbid restoration and mitigation efforts by federal agencies on federal lands that may incidentally occur from non-federal dam removals, as H.R. 6247 also tries to do.

Not all dams are created equal. Many of the nation's dams today, including a growing number of the 3,036 major hydropower-producing dams, simply no longer make economic sense. Many of these aging dams use old technologies and are thus functionally obsolete; some are orphaned or now abandoned; and others would be cost-prohibitive to retrofit or rehabilitate, and so are economically obsolete. But if left in place they will ultimately fail catastrophically.

The only sensible option in such cases is simply to remove those obsolete dams entirely and replace their renewable power through more cost-effective (i.e., cheaper) sources from nearly anywhere else in the nation's vast power grid.

Part 2—Major Problems with H.R. 6247

Sec. 7—Automatic Congressional Preapprovals of Unknown Future Federal Water Storage Projects. This provision is clearly a "Trojan horse" that provides a pre-approved, "blank check" of Congressional approval of unknown future federal "projects" regardless of any and all environmental laws, and regardless of whether these projects even make economic sense. Such a "blank check" provision allows federal bureaucrats far too much power to rubber stamp and approve dubious new federal projects without NEPA analysis, Clean Water Act clearances, public scrutiny or any other of the many checks and balances traditionally provided to protect taxpayers from oppressive government bureaucracies and boondoggle construction projects.

Even if no federal funds are used for financing, constructing, or operating such future hypothetical federal projects, they still remain federal projects, and should not be "pre-approved" sight unseen without public debate or federal oversight. This would simply be bad public policy. Also, there is no reference in this blanket exemption to there being non-federal funding for repairs and maintenance costs of any

such project—so presumably the federal taxpayer would still be on the hook for those costs.

There is clearly a need for more water storage in many places in the arid West. But future reservoir projects should be planned systematically and thoughtfully, on a case-by-case basis and with ample opportunity for public involvement and discussion. Blanket Congressional pre-approvals of such projects forever in the future, sight unseen, and regardless of their details and prior to any real NEPA or cost-benefit analysis, is bad public policy and will lead to bad government decisions.

Sec. 8—Prohibiting So-called "Harmful Spills" at Federal Dams. This section is clearly aimed at ending the Court-order practice of "spilling" water through the Columbia River federal power dams' spillways in order to prevent endangered juvenile salmon from having to go through their turbines, where many are killed.

In fact, this "spill" program has proven to be far more successful at increasing overall salmon survival through the Columbia River dams than anyone predicted. (See: Comparative Survival Study (CSS) of PIT-tagged Spring/Summer Chinook and Summer Steelhead (2011 Annual Report, prepared by the Fish Passage Center and Comparative Survival Study Oversight Committee, available at: www.fpc.org/documents/CSS/2011%20CSS%20Annual%20Report--Final.pdf; see also: Fish Passage Center Memorandum of July 14, 2011, Benefits of spill for juvenile fish passage at hydroelectric projects, at: http://fpc.org/documents/memos/102-11.pdf).

Ending this important, and now proven effective, mitigation practice just throws one of our best salmon mitigation tools out the window. This just promotes more mitigation failures and puts that much more pressure on the other aspects of the Columbia River hydropower system to provide equivalent survival benefits they cannot provide. This provision is clearly bad for salmon and salmon jobs.

Drought also has nothing to do with spills within the Columbia Power System. The eight federal power dams on the Columbia and Snake Rivers are all "run of the river" dams, and so neither upstream nor downstream flows are changed in any way by whether or not flows at the dams run through the turbines or through the spillways—it is the same volume of water, just flowing through different gates. In fact, Columbia dam spills are more important to maintain during dry years than ever. The last time spill was cut off due to low-water conditions in the Columbia was in 2001 and it devastated Columbia Basin salmon returns, and salmon-dependent fishing communities, for the next several years.

There is always some impact on salmon caused by spills, such as the potential for gas bubble trauma (GBT) from supersaturation of nitrogen in the spillways. But Sec. 8 could prohibit spill even if spill is by far less harmful than forcing young salmon through the turbines. This is in fact what the science shows. There is no effort in this provision whatsoever to balance relative risks of harm, nor to acknowledge the science—only to categorically shut down spill and thereby throw out a major dam impacts mitigation tool that has been proven to improve salmon survival and has resulted in higher salmon returns. Moreover, the region currently has the tools and means to shut off or to reduce spill when and if necessary to truly protect salmon. At present, however, the science says that salmon could use more spill not less.

In a massive government overreach, Sec. 8 also apparently gives any federal agency anywhere veto power over whether or not water is spilled at any dam anywhere for any (or no) reason. This could jeopardize dam spill mitigation programs all over the country, putting vast portions of our inland recreational fisheries—and many thousands of fisheries jobs—at risk.

Sec. 10—Halting Funding of BPA Modernization. This provision attacks several proposals and programs described in a recent Secretary of Energy Chu memo that, if implemented, would help the nation's PMAs, including BPA, to accelerate and expand energy efficiency and integration of certain renewable energy resources such as wind power. Generally speaking, increasing the amount of energy efficiency and non-hydro renewable energy in the Northwest provides BPA with additional flexibility in how it manages the federal hydro system. With a more diverse renewable energy portfolio and the deployment of new large-scale efficiency initiatives, BPA could pursue many operational changes at the federal dams that in turn aid salmon. Halting this modernization process will retard salmon recovery efforts and destroy many more salmon jobs.

H.R. 6247 would essentially deep-six Secretary Chu's modernization efforts, or at least unnecessarily delay their implementation for years. Salmon wouldn't be the only thing to suffer as a result; one of the primary objectives of the Chu memo is to stimulate job creation in the clean energy economy—but by turning the nation's energy development clock back to approximately 1950, H.R. 6247 would stand squarely in the path of these new clean energy jobs and the much needed new economic activity they'd bring to the Northwest and beyond.

Secs. 11, 12, 13 and 14—New Prohibitions on and Barriers to Necessary Dam Removals. These provisions are entirely punitive, among other things imposing a "scientific gag-rule" (Sec. 11) preventing federal agencies from studying, analyzing—and by implication even commenting with any knowledge about—future hydropower dam removal projects, federal or non-federal. All this does is to force agencies to ignore the science and institutionalizes government-mandated ignorance. Imposing ignorance and forbidding informed input on government decisions is the worst of bad public policy. This provision also runs counter to several other sections of law, including NEPA, requiring the agencies to conduct such studies when such projects could potentially affect federal resources.

Many rural dams sit on, near or can affect nearby federal lands. Sec. 12 prohibitions against the federal government spending money to help mitigate the impacts of dam removals on federal lands also means that federal lands that are affected by nearby non-federal dam removals will just have to sit there forever as damaged—without any possible restoration efforts by federal agencies. Such public resources will simply be wasted. When those public resources include rivers that support valuable fisheries this prohibition will also help kill fisheries jobs nationwide.

Sec. 13's prohibitions cutting off even completely unrelated federal funds to any NGO which, for instance, intervenes in FERC dam relicensing proceedings (a form of litigation) or other litigation that "would negatively impact the generation of hydropower" in any way—by even the smallest amount—are merely petty attempts to Congressionally punish organizations for their exercise of First Amendment free speech rights to comment on public issues, and punishes related efforts to protect public resources and utility customers from boondoggle federal projects. It also smacks of the grossest form of government coercion and overreach.

Furthermore, this provision would prevent communities all around the U.S. from taking appropriate and necessary steps to ensure public safety and safeguard public resources. This provision would eliminate a multitude of highly successful river restoration programs currently conducted through federal-NGO river restoration community partnerships. None of these prohibitions make any rational sense, and are terrible public policy.

And finally, apparently in a misguided effort to expedite more hydropower development, Sec. 14 would simply strip the fish and wildlife Trustee agencies (USFWS and NMFS) of their long-standing Federal Power Act Section 4(e) conditioning authority over future FERC licenses, leaving it solely to FERC—and not the Trustee agencies who actually have the expertise over such matters—to make final decisions on how best to protect the nation's valuable fish and wildlife resources from potentially negative impacts of power dams. Turning America's multi-use and economically vital rivers into single-use industrial conduits for hydropower alone is terrible public policy. It is hard to imagine a faster way to kill all other major river-dependent industries and the millions of jobs they support.

Since the passage of the Federal Energy Policy Act of 2005, Pub. L. No. 109–58, § 241, 119 Stat. 594 (2005), hydropower applicants have already had numerous special opportunities to present less costly alternative mitigation measures to offered agency conditions for adoption by FERC, complete with special quasi-judicial hearing rights. None of the extra bureaucracy introduced by Sec. 14 into the FERC process is in any way necessary.

If Congress wishes to truly expedite new low-impact hydropower projects, it already has before it the McMorris Rodgers' Hydropower Regulatory Efficiency Act (H.R. 5892) which passed the House on 7/9/12. Not one dissenting vote was cast against this bi-partisan bill. That is the sort of bi-partisan and collaborative initiative that would make much more sense than the largely punitive and misdirected provisions of H.R. 6247.

The CHAIRMAN. Thank you very much for your testimony.

And now I recognize Ms. Rebecca Miles from Lapwai, Idaho. Ms. Miles, you are recognized for 5 minutes.

STATEMENT OF REBECCA A. MILES, LAPWAI, IDAHO

Ms. MILES. Thank you, Mr. Chair. Just briefly to introduce myself, I am a member and a citizen of the Nez Perce Tribe, and I also have brought with me my son, Ivory Miles Williams, who has become the fisherman in my home, as well as my other son, Tommy Miles Williams. I was born and raised in Lapwai and I am

a seventh generation direct descendant of Old Chief Looking Glass, Apash Wyakaikt, who came into the treaty grounds in 1855 to break up the negotiations and guarantee that our people would have a right to fish in all our usual and accustomed places.

Thank you very much, Mr. Chair, for this opportunity to testify, and I am testifying before you as a proud citizen of the United States and the Nez Perce Tribe in opposition to H.R. 6247.

Both the United States and the Nez Perce Tribe have grounded their governance on core principles, such as making decisions that reflect the needs of future generations, keeping promises, looking before we leap, taking responsibility for the consequences of our actions, and evaluating all information before rushing to judgment.

During my years serving as a member of the Nez Perce Tribal Executive Committee and its former chair—that is the governing body of the Nez Perce Tribe—and now serving in the capacity as the Executive Director, I have had the privilege of witnessing both the United States and the tribe employing these principles in making decisions and citing policies. Simply put, H.R. 6247 runs directly counter to all these hallmarks of good governance.

I want to emphasize that my remarks today are my personal comments. I am not before you as a representative of the Nez Perce Tribe. I have been recognized as having an influential voice and one who shares a very similar approach to my good friend, Senator Mike Crapo, of having a collaborative approach, one that he asked for in 2011 again.

Indeed, the tribe was not invited to testify today. I feel this has been disrespectful to all the work the tribe has engaged in to make the Snake and Columbia River system work for fish and our local communities. I cannot help but conclude this also serves to highlight the type of flawed approach to governance that this bill represents.

My people, the Nez Perce, have a long history of protecting the interests of generations. The Nez Perce at one time were the largest Columbia River plateau tribe and one of the most influential and powerful. Our homeland consisted of 13 million acres. When I mentioned Old Chief Looking Glass, when he rode into the Walla Walla council to break up negotiations, that negotiation ended in the Nez Perce Tribe ceding 13 million acres to the United States—13 million acres to the United States—in exchange for a very simple right that was reserved, and that was to hunt, fish, and gather in all our usual and accustomed places.

And central among the rights that the Nez Perce reserved, we also take part in our religious ceremonies that were reserved to be able to freely do. Dozens of churches and longhouses throughout the basin rely on the salmons' return for our connection with this land. Salmon are, obviously, and simply the lifeblood of my people, and we believe that the creator has bestowed upon us the duty to protect these creatures from harm, just as they are protected and fed us when the creator put man on this earth.

Our salmon and our people bore the consequences of decisions to construct dams, such as the four dams on the lower Snake River. They have had devastating effects on our fish and our people. Every run of salmon and steelhead that returns up the Columbia and Snake River destined for the Nez Perce Reservation and our

usual and accustomed fishing places in the Snake Basin is now either extinct or listed as endangered or threatened under the Endangered Species Act.

Promises that could have the four lower Snake River dams and healthy, harvestable levels of salmon were made, that we could have both. Those promises, despite some good intentions, remain unfulfilled. Other promises that our local communities would be vibrant and self-sustaining as a result of having an inland seaport more than 400 miles from the ocean also remain unfilled.

Given this backdrop, you might expect that the Nez Perce people simply demand that the United States honor their treaty and their promises and that they take responsibility for the impact of those dams that they have had on salmon and on us and do whatever it takes, regardless of what the impacts may be on our neighbors and our local communities.

I am closing my comments, Mr. Chair.

And yet, the tribe's support for breaching these lower Snake River dams has not stopped at what is best for fish and what it believes the best biology and best economics supports, once again referring to this collaborative approach.

My tribe, the Nez Perce, one of the only tribes left on this system who haven't been silenced to advocate for the best science, is working to ensure that wild, naturally spawning runs—wild, naturally spawning runs—are rebuilt to healthy, harvestable levels and the conservation burden is fairly shared. The Nez Perce, as a fisheries co-manager, is actively engaged in managing the treaty fishery, improving passages for salmon throughout the mainstem Columbia.

Thank you so much, Mr. Chair, for this opportunity to provide testimony.

[The prepared statement of Ms. Miles follows:]

Statement of Rebecca A. Miles, Lapwai, Idaho

Thank you for the opportunity to testify today. I am testifying before you—as a proud citizen of both the United States and the Nez Perce Tribe—in opposition to H.R. 6247.

Both the United States and the Nez Perce Tribe have grounded their governance on core principles, such as making decisions that reflect the needs of future generations; keeping promises; looking before we leap; taking responsibility for the consequences of our actions; and, evaluating all information before rushing to judgment. I have had the honor of serving as the first woman Chairman of the Nez Perce Tribe, and, currently, as the Tribe's Executive Director. In these roles, I have had the privilege of witnessing both the United States and the Tribe employing these principles in making decisions and setting policies. Simply put, H.R. 6247 runs directly counter to all of these hallmarks of good governance.

I want to emphasize that my remarks today are my personal comments. I am not before you today as a representative of the Nez Perce Tribe. Indeed, the Tribe was not invited to testify at today's hearing. I find this extremely troubling, given all the work the Tribe has been engaged in to make the Snake and Columbia River system work for fish and our local communities. I cannot help but notice that this serves to highlight the type of flawed approach to governance that H.R. 6247 represents.

My people, the Nez Perce, have a long history of protecting the interests of future generations. In the mid-19th century, the Nez Perce were the largest tribe on the Columbia River Plateau and one of the most influential and powerful. The Nez Perce homeland consisted of 13 million acres of land in what is now Idaho, Oregon, and Washington. This original land base included significant portions of six different drainages, some of which were located here in what is now eastern Washington. This was home to my people, and the salmon that swam through the waters of the Basin were an integral part of our religion, culture, and physical sustenance. They still are today.

I am indebted to my ancestors, who at the time of the 1855 Treaty worked to ensure that the rights we had exercised since time immemorial and that are essential to our people's culture, our way of life, and our beliefs would be reserved and secured for future generations.

Central among the rights that the Nez Perce reserved—and the United States secured to the Tribe by Treaty—is our right to take fish at all our usual and accustomed places.

Salmon are sacred to the Nez Perce. They are part of our religious ceremonies; dozens of churches and longhouses throughout the Basin rely on the salmon's return for our connection with this land and the annual return is a celebration that ensures our culture is passed from generation to generation. Salmon are a source of economic reliance and strength for our people as well. Jobs—both on and off the Reservation—depend on salmon survival and protection. Our commercial fishermen, indeed, put salmon on some of your tables as well.

Salmon are simply the lifeblood of my people. We believe that the Creator has bestowed upon us the duty to protect these creatures from harm, just as they protected and fed us when the Creator put man on this earth.

Our salmon and our people have borne the consequences of decisions to construct dams –such as the four dams on the lower Snake River—that have had devastating effects on our fish and our people. Every run of salmon and steelhead that returns up the Columbia and Snake River destined for the Nez Perce Reservation and our usual and accustomed fishing places in the Snake Basin is now either extinct or listed as Endangered or Threatened under the Endangered Species Act.

Given this backdrop, you might expect that the Nez Perce people might simply demand that the United States honor their Treaty and their promises, and that they take responsibility for the impact those dams have had on the salmon and on us—and do whatever it takes, regardless of what the impact may be on our neighbors and our local communities.

And yet the Tribe's support for breaching the four lower Snake River dams has not stopped at what is best for the fish and what it believes the best biology and best economics support. Instead, the Tribe has taken the additional step of supporting investment in local communities that will be affected by this decision. For example, decades after the construction of the lower Snake River dams, the Port of Lewiston continues to be subsidized by local residents. The Tribe's vision is not to dismantle the Port of Lewiston but to transform it from a subsidized "seaport" to an economically viable and sustainable enterprise.

This example demonstrates that each situation involving hydroelectric dams involves case-by-case considerations, full consideration of all information and all the parts of the equation, and taking responsibility for the consequences—both positive and negative—of our decisions.

It is precisely this process of consideration and evaluation, the hallmarks of good decision-making, that H.R. 6247 seeks to prevent. It is primarily because of this, in addition to the fact that this bill would do great harm to our salmon and the waters they travel and thus to Nez Perce culture and our economic viability, that I so strongly oppose H.R. 6247.

Anyone who cares about restoring salmon to healthy, sustainable, and harvestable levels will fiercely object to Section 8 of this bill which could end or severely restrict the highly successful practice of spilling water over the federal dams on the Snake and Columbia rivers. The science on this matter is clear—spill is the most effective and safest means of getting salmon past the federal dams. What's more, the fish have told us the same story. Since spill has been implemented in 2006 on the Columbia and Snake rivers, we have witnessed salmon returning to the Basin in higher numbers. Salmon, of course are still endangered and threatened, and spill alone is not the reason for higher returns, but without spill, our salmon populations would be far worse off. Our fishermen would have emptier nets; our people would have gone hungry; thousands would have lost their jobs and hundreds more not found new jobs; and millions of dollars in the local economy would have slipped away. We understand that some believe that the so-called "cost" of spill in power revenue has been too high for the positive impacts we have seen. I ask you, what is the price for ensuring thousands of family-wage jobs, that the tribal sacrament is delivered to tribal people, that a culture and way of life—both tribal and non-tribal—continues, and that the United States honors its promises to Indian people? It is past time that the killer of more than 90% of the salmon—the Federal Columbia River Power System—do more to help this important resource. The Nez Perce has fought hard to secure the simple tool of more spill, and the Tribe will continue to fight for its implementation.

Similarly, Section 11 of H.R. 6247—Federal Funding Prohibitions on Federal Dam Removal prohibits federal dollars from being spent both on studying "the re-

moval, partial removal, or breaching of any Federal or non-Federal hydroelectric-producing dam on the removal of federal or private dams," and the actual removal, partial removal, or breaching of such projects with Congressional authorization.

The bill's prohibition on even studying potential dam removal is simply counter to sound federal decision-making. It is imperative that federal agencies have the ability to study different actions to ensure that the federal government is using its resources well, that it is not wasting precious federal dollars, that it is doing its best to protect our environment for future generations, that it is looking before it leaps, and that it is meeting Treaty and trust responsibilities to Indian people. To block the ability of federal agencies to even consider when such actions might be needed will ensure that the federal government doesn't have the data it needs to make well-informed decisions. As I indicated, the Tribe's perspective is that breaching the four lower Snake River dams should encompass an investment in local communities. The latter aspect would certainly benefit from additional study. In short, any legislation that essentially bans the collection of information is a bad idea and not in the public interest.

Our people have been repeatedly harmed as the Columbia Basin became the most dammed watershed on the planet. Federal, state, and tribal scientists tell us that removal of the four dams on the lower Snake is the action most likely to protect and restore salmon populations throughout the Columbia Basin. These salmon are not just an icon of the Northwest, they are an economic powerhouse and a cultural imperative. It is beneath the integrity and intelligence of the United States to prohibit federal agencies from even studying the removal of these dams.

Section 12, prohibiting federal funding for dam removal mitigation activities unless Congress explicitly authorizes such actions, is also highly problematic. This would all but prevent lands and waters impacted by dam removals from being restored. Instead of allowing such areas to become productive and healthy, thereby paying dividends for Americans, this bill virtually guarantees that these resources would remain degraded. The Tribe has experience with restoring such mitigation activities and can attest to the benefits these actions have—both to the salmon and to the economy. Restoration and mitigation projects put people to work. Why, in the current economy, would Congress want to make it harder for federal agencies and private entities to create new jobs? Similarly, why would Congress want to make voluntary and collaboratively-developed restoration projects virtually impossible to implement? These community-driven, public-private partnerships are among the most cost-effective and successful ways to restore resources. If the sponsors of this bill are worried about federal spending, the appropriate place to address that concern is in the appropriations cycle for particular agencies. Instead, this section would hinder important job-producing projects and hamper the restoration of rivers and lands.

Our people are affected by non-federal projects, such as the Hells Canyon Complex, and the Tribe has been involved in the efforts by Idaho Power Company to obtain a new 40 or 50 year license from the Federal Energy Regulatory Commission. The H.R. 6247 proposal that the fish and wildlife Trustee agencies' (USFWS and NOAA) expertise over conditioning licenses to protect fish and wildlife resources be stripped and left to FERC seems unconscionable.

Finally, the bill's flaws are highlighted in areas such as Section 3(7), finding a National interest in protecting and promoting hydropower. This is misguided. Each dam must be judged separately, on its own merits and on a case-by-case basis, to see if its cost to society is higher or lower than its benefit. To make a blanket statement that it is in the best interest of Americans to retain all current dams is not just simplistic, it is inaccurate. It is not, for instance, in the best interest of this nation to keep in place dams that are killing what was once the largest salmon run on this planet; that have caused the loss of 10s of 1000s of jobs; that are jeopardizing a way of life for both Indian and non-Indian people; that are holding back a region from being more prosperous; and that interfere with and could indeed violate the United States' treaty trust responsibilities to Indian people.

My Tribe, the Nez Perce, is working to ensure that wild/naturally-spawning runs are rebuilt to healthy, harvestable levels, and the conservation burden is fairly shared. The Nez Perce Tribe, as a fisheries co-manager, is actively engaged in managing the Treaty fishery, improving passage conditions for salmon through the mainstem Columbia and Lower Snake River dams, improving the transparency of scientific issues concerning the needs and status of the fish, implementing habitat restoration and hatchery projects, and ensuring that actions that are taken today are consistent with the needs of its future generations. H.R. 6247 would directly impair the Tribe's progress toward restoring self-sustaining, harvestable salmon and unwisely excuses the federal government from its own responsibilities. It is counter

to careful, adaptive regional planning, and it's bad for fish. I believe the United States is—and should be—better than this.

Thank you for the opportunity to provide this testimony.

The CHAIRMAN. Thank you very much for your testimony.

And now I will recognize Mr. Jim Yost, who is the Chairman of the Power Committee of the Northwest Power and Conservation Council out of Boise, Idaho. Mr. Yost, you are recognized for 5 minutes.

STATEMENT OF JAMES A. YOST, IDAHO COUNCIL MEMBER AND CHAIRMAN OF THE POWER COMMITTEE, NORTHWEST POWER AND CONSERVATION COUNCIL, BOISE, IDAHO

Mr. YOST. Chairman Hastings, Congressman McClintock, thank you and the staff and the ratepayers for the ability to present a little bit today. There is a big advantage in being next-to-last on the schedule. The advantage is I get to sit next to the second-best potato-growing person in the United States.

[Laughter.]

Mr. YOST. The disadvantage is that many of the speakers——

The CHAIRMAN. This will not count on your time, but we get more tonnage per acre than Idaho, and I always remind my colleagues of that.

[Laughter.]

Mr. YOST. They are smaller and they are a little bit bitter.

[Laughter.]

Mr. YOST. The disadvantage is much of what I had prepared in my written statement has already been presented, but I have gone through for the Committee and listed over a dozen benefits of the hydro system with a little explanation of what it means.

It means a lot to Idaho particularly because, as a nation, 7 percent of the electricity is produced by hydropower. In Idaho, within the boundary of Idaho, 80 percent of our electricity is produced with hydropower. All of the water that we use to generate electricity in Idaho is also used on the lower Snake River and the mainstem Columbia project. So it is used again. It is the best renewable that we have for energy. It is clean. It is dependable. We know what it is going to be. Even with different water years, we know what it is going to be. It extremely reliable. It is flexible. You can turn it on and off. It is efficient. Hydroelectricity is about 90 percent efficient. Even a good, gas-fired turbine is only 60 percent efficient.

And I want to comment on wind power. Wind power is fine if it is a small percentage of your resource base, but let me give you a comparison of wind power. It is like planting 100 acres of potatoes but you can only harvest 30 acres and only 5 acres are under contract. That is what wind power is.

[Applause.]

Mr. YOST. And when you have a resource base that is energy and you are trying to incorporate wind, if you have 10 or 12 percent wind in the system, it doesn't severely impact operations. You can maintain stability, reliability. You can ramp up and down. All of those things are fine. But as BPA in the Northwest and Idaho Power and a couple other industries are finding, after you get a

larger percentage of wind in your base, then for every 500 megawatts of wind that you add, you have to add a coal-fired or a combined-cycle gas-fired turbine because you can't count on the wind. It is not reliable, and it produces energy but no capacity. That means when you flip the lights and you need a lot of energy all at once, you can't rely on wind. It doesn't generate electricity when you need it. It has no capacity.

It is like Beanie Babies, the fad of Beanie Babies. Everybody had to have Beanie Babies. Well, wind is a fad that everybody has to have wind, and then you buy all of these Beanie Babies and you load up the shelf and you got all of these Beanie Babies. And what are they good for? Well, not much. And that is the same with wind. It is just a fad.

But I want to talk about the legislation. I think it is important. I think that it is a breath of fresh air for what is happening. I appreciate at least some common sense coming into play because the hydro system is faced with FERC relicensing or biological opinions, Federal agency regulations, and the costs are increasing and the regulations are increasing. We are taking the flexibility from the hydro system. If we take it away from the hydro system, we have to add natural gas to provide us that reliability factor or capacity, as we call it in the industry, for the system.

So I appreciate the opportunity to present with you today.

[The prepared statement of Mr. Yost follows:]

Statement of James A. Yost, Idaho Council Member, Northwest Power and Conservation Council

Chairman Hastings and members of the House Natural Resources Committee, I thank you for the opportunity to testify and present comments on this legislation and about hydropower in general in the Pacific Northwest and specifically Idaho. I am one of two Idaho members of the Northwest Power and Conservation Council and current chairman of the Council's Power Committee. These remarks will represent generally known facts of the hydropower system and river operations specific to Idaho and have not been reviewed by the full Council.

The hydropower system in Idaho includes the major Snake River headwater facilities at Jackson Lake in Wyoming and Palisades (Bureau of Reclamation) in Idaho. The large regulating Reservoir of American Falls in Southern Idaho and then downstream through several other "run of the river" projects to the Hell's Canyon Projects (Brownlee, Oxbow, and Hells Canyon) all operated by Idaho Power Company. The Snake then flows through the Four Lower Snake River Dams to merge with the Columbia River. There are numerous other smaller dams and diversions from these headwaters to the Lower Snake River Dams. In addition, Dworshak Dam (US Army Corps of Engineers) on the North Fork of the Clearwater River at Orofino is another major facility in Idaho. Northern Idaho also contains several dams and the river system is greatly influenced by the large Libby Dam in Montana as well as several smaller dams in that state.

This dynamic network of hydropower facilities provides hydroelectric power at low prices and does so with a number of additional benefits. I would like to provide you with some of the benefits of hydropower:

Renewable: Most of the renewable energy in the United States comes from hydropower (96%). Hydropower facilities harness the energy of falling and flowing water to generate electricity. This water is continually being replenished. As a matter of fact, hydropower is the best of renewable resources today, even if some agencies and states won't provide the credit deserved. It not only provides energy, it provides capacity. Wind doesn't get close and provides about as many problems as it solves because it is intermittent and provides minimal capacity.

Clean: The fuel for this power generation is water and has no air contaminate discharge, no CO_2 or particulate matter.

Reliable: This generation is flexible and can provide power to meet changing demands for electricity. It can produce very little when there is no demand (at night) to maximum output during hot or cold times or during heavy loads and can do so

in a very short time period. The fuel source is reliable on an as needed basis, can be stored for short periods of time to meet peak demands, and is available to all other down-stream hydropower generators.

Efficient: Hydropower turbines today generate to about 90% of the energy available much more efficient than other forms of electrical generation.

Flexible/Stable: The hydropower system can respond quickly to changes in demand which is essential to maintaining the reliability of the electrical grid. This issue is becoming more critical with the addition of wind, an intermittent resource that needs ever more integration to get it on the power system and maintain operational reliability.

Secure: The fuel source is the domestic water/river system of the region and not dependent upon foreign suppliers, cost fluctuations, or transportation issues.

Cost Effective: The hydropower system has low operating costs and a long power plant life. Original life of 30–50 years can be extended and remain in service for twice that long.

Low Risk: There are no fuel cost risks. Historical water records provide sideboards for water availability that is confirmed or adjusted based upon snow pack and water content of snow pack as it accumulates and well before it enters the system as run-off.

Stored energy: Energy can be stored in many projects in the reservoir pools and used for generation as needed.

Waste: There is no waste stream.

Start Capability: The facilities can start quickly and ramp up quickly compared to other generating resources which can take hours/days/weeks to begin generating electricity.

Employment: The Operation and Maintenance of the hydropower system is minimal but provides employment opportunities and future development will provide additional employment opportunities for those in the local area. Not only in construction but also in engineering, planning, licensing, permitting, and other aspects of project implementation. Operation and Maintenance costs are predictable and stable.

The above represents some of the more direct benefits of hydropower and the hydropower system, especially when compared to other types of generating resources. However, there are additional benefits that are equally important even if indirect.

The hydropower system provides flood protection. All facilities in the Northwest and Idaho were constructed for two major purposes, power generation and flood control. Without some controls, the river system would overwhelm communities and properties. Flood control was not to provide entire river management but to take the peak run-off events to some moderate level. This not only prevented severe damage but provided some degree of assurance for those who benefited from the power, communities, and a transportation system. Without Libby Dam flood protection this last spring, the community of Bonners Ferry Idaho would have experienced major flood damage.

In Idaho, especially the Southern Snake River Plain, agricultural irrigation was also a major benefit from the construction of hydropower facilities. The water provided a growing season in an arid high desert and agricultural produce became a major economic main stay for Idaho. With this commodity production came families, communities and economic prosperity opportunities.

This hydropower development changed the fish and wildlife opportunities from a flash flooding river environment to a more controlled pool and ripple environment. Those hydropower projects provided mitigation for fish and wildlife impacts and have continued to improve habitat for fish and wildlife and provide for additional recreational opportunities in excess of the original environs. Water flows can be shaped to enhance a fishery. Each year with additional information, the Northwest makes improvements to fish passage, by-pass, and all main-stem passage at the hydropower facilities. Transportation has also improved over the years as better data enlightens the operations.

Also the water of this system can be used from domestic, municipal, and industrial water supplies.

The Columbia and Lower Snake River Dams and the lock system created the opportunity for an inland port at Lewistown Idaho. There was upstream passage without these eight facilities but it was very limited in size of vessel and time of year. This is an important benefit for Idaho and the transportation of our produce to markets.

The operations of the Montana facilities have impacts upon the resources of Idaho. White Sturgeon and other resident aquatic species, flood control, river management decisions in Northern Idaho all hinge on the ability to coordinate reservoir and river operations with Montana.

The hydropower system of Idaho generates electricity the same as the downstream states of Oregon and Washington, however, there are different river operations that need be given due consideration. The snow pack in Idaho contributes to river flows at a different rate and time. The major run-off or peak freshet is generally between the middle of May and the middle of June. There won't be high flows and the reservoirs won't be full until about that time. Man may want to change it but Mother Nature just doesn't let the snow melt until that time of year. Idaho then tries to accommodate the Biological Opinion for Salmon by providing additional water from Idaho when it is available from those that own the water rights. That water is provided downstream upon reasonable requests. Water from Idaho is also provided from Dworshak Dam for the Biological Opinion.

While the nation's benefit of hydropower is only about 7%, Idaho receives 80% of the in state electrical power generation from hydropower generation. Idaho has the third lowest electrical rate as a result of hydropower. Will the rates in Idaho and the Pacific Northwest increase? Yes, as the costs of Biological Opinions, FERC relicensing, regulatory requirements, mitigation, and higher cost of intermittent resources (wind and to some degree solar) continue to increase and force additional operations expenses, the rates and bills of consumers will go up.

This legislation would provide an excellent opportunity for breathing room at status quo operations until technological improvements provide for a more efficient coordinated power system. In Idaho and the Northwest, the hydropower system will remain the base upon which we build. It is a powerful renewable resource without the downsides of wind and solar. It has proven to be reliable. It is economical. It is efficient. It is the best energy source we have in Idaho and the Northwest. Try not to mess it up.

The CHAIRMAN. Thank you very much, Mr. Yost.

[Applause.]

The CHAIRMAN. And now we will recognize Chris Voigt, the Executive Director of the Washington Potato Commission out of Moses Lake.

STATEMENT OF CHRIS VOIGT, EXECUTIVE DIRECTOR, WASHINGTON POTATO COMMISSION, MOSES LAKE, WASHINGTON

Mr. VOIGT. Thank you, Chairman Hastings and Representative McClintock. I appreciate this opportunity.

But I want to start actually by recognizing my son. As I was sitting around the kitchen table the other night preparing some comments for today, he asked what I was doing, and he excitedly ran off to his room, dug through a pile of old homework that he had stashed, came out and said, Dad, I think I can help. And he handed me the report that he wrote on the Grand Coulee Dam and the benefits after he did a tour in the summer. So I wish he was here. So I am wearing his tie that he gave me for Fathers Day in his honor.

The undisputed fact is that we can grow more potatoes in the Columbia Basin than anywhere else in the world, more potatoes per acre, undisputed fact. The reason for that is because of our dams, because of the plentiful irrigation water that we have in the Columbia and the Snake River system. That is the only reason. Without that water, we would have absolutely no potatoes. We can grow more potatoes with fewer resources than anywhere. That is $750 million worth of potatoes. That is a substantial amount.

But what is even more substantial is the food processing that we add to that crop, the value-added production, and that food processing is here because of our hydropower costs. They are low. They can compete in a global food market with the high yields that we have and the availability of inexpensive hydropower. We go from a $750 million industry to a $4.6 billion industry, over 23,000 jobs,

just related to the potato. This doesn't take into account all the other crops that we grow here in the Columbia Basin. So a huge economic impact to the rural communities here in eastern Washington because of our dams.

We have covered a lot of points, but one thing that I really want to stress that really hasn't been talked about much and it is troubling is that we need more dams, not less. That is the other undisputed fact. And the reason why I say that is because the U.S. Census Bureau has predicted that in the year 2027 we are adding another billion people, and most experts will agree that because of the population growth and the change in diets, as we are moving people in developing countries from poverty to a low middle class, their diets change. We have to raise 40 percent more food.

Now, in the old days, that was easy because we had it figured out. We could take nitrogen out of the air and condense it into a fertilizer pellet and feed it to the plant. Yields went off the chart. We could keep up with population demand. And then we figured out plant genetics. We could cross plants and increase yield through genetics and through hybridization and now biotechnology. We were able to meet the challenge back then. And then we figured out how chemical molecules can get rid of pathogens like fungus and bacteria and weeds and insects, and we were able to grow production.

Well, we have maxed out those technologies. We don't have any more rabbits that we can pull out of the hat when we are dealing with population growth. So this 40 percent increase in food capacity that we have to accomplish is going to be the greatest challenge that our society is going to face. Now, we might reach that 40 percent. Maybe we can cobble it together, but the next 40 percent increase that we are going to have to get to after that in the year 2046, that is where our children are going to have to be making the decision of who eats today and who does not because that will be a challenge. In the next 50 years, we are going to have to produce more food in the next 50 years than we have in the entire lifetime of this planet. And those are overwhelming facts, ladies and gentlemen.

We have to find more water resources because irrigation increases crop yields tenfold. You talk to a wheat grower who is growing 30 bushel per acre. It took 2 years to grow that outside of Ritzville, let us say. The guy across the street in the Columbia Basin project grows 150 bushel of wheat every year. That is a tenfold increase. So we need to somehow be able to figure out how we can harvest the excess flow of water out of the Columbia and Snake River and temporarily park it somewhere behind a dam, whether it is an off-channel dam or whether it is a dam high up in the water system. But it is a necessity. It is our moral obligation, the role that we have to play in the world.

And hunger is not going to affect our country. MSNBC came up with a report today saying that because of the drought, food costs for the average American family is going to cost $621, $621. Well, that means my wife is going to have to wait on her new iPhone a year. But to someone in a developing country, $621? That is half their income. They will not be able to afford food. We have lost our cushion of food supply. That is no longer there and we have to take

actions now to prepare for the next 50 years of how we are going to feed 2 billion more people.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Voigt follows:]

Statement of Chris Voigt, Executive Director, Washington State Potato Commission, Advisory Board Member, Family Farm Alliance

I would like to thank Chairman Hastings and the entire Natural Resource Committee for this opportunity to appear before you today. I see today's hearing as an opportunity to launch a serious discussion on the roles of dams and hydro electric power in this region as well as the rest of the United States.

Like most people in the farming community, I have an inherent love of nature and all places wild. I understand Mother Nature and work with her to find sustainable solutions to grow food. I'm able to recharge my batteries after a busy growing season by finding seclusion in backpacking, hunting, rafting or my favorite, fly fishing. This closeness and partnership with nature gives us in the farming community insight into pragmatic solutions on how to balance man and nature. The current operation of the Columbia and Snake River systems is a good example of balancing the needs of man and the needs of nature. Fish populations have rebounded, habitat has improved, and food production and power generation have continued.

To meet the future demand for food and energy, it is imperative that we begin to lay the immediate ground work to expand water storage and hydropower generation. I believe it's naïve to think that we can feed an additional two billion people and reduce our reliance on fossil fuels without growing our portfolio of water storage and hydropower. While there are several provisions of this Bill, my comments will be directed to those provisions that most affect food production.

Background on the Role of Dams in Food Production

Dams play a critical role in the production of food for this country and for others who are unable to feed themselves. I'd like to quickly touch on the obvious benefits they play.

Irrigation Water

Just as everyone in this room has to water their home gardens, we too have to water our crops. There is no better place in the world to grow potatoes than here in the Columbia Basin. The average potato yield in this country is just over 20 tons per acre. The average yields in the Columbia Basin are 50% higher than that, but even that number is misleading because a significant portion of the crop is harvested early to meet market demands, which in turn, sacrifices higher yields. There are several farms here in the Columbia Basin that have produced over 50 tons/acre. No one in the world can produce more food per acre, with fewer inputs, than here in the Columbia Basin. But 80 years ago, no one knew that, until we added water. The creation of the Columbia Basin Irrigation Project allowed the desert to bloom and created sustainable farming and economic development to some of the most depressed counties in the State.

Power Generation

Farmers rely on cost effective, reliable, energy to produce their crops. An average potato field requires various pumps, fans, and motors to move water and keep the crop cool in storage. Potato and other food processors also rely on low cost hydro power.

One of the reasons Washington State attracts a large presence of food processors is because of their ability to switch between electricity and natural gas to power their operations. This gives them added flexibility they might not have in other regions of the country. They can switch to electrical use when natural gas prices rise. Washington agriculture can compete in a global market place because of our low cost hydro power.

Transportation

The dams of the Columbia and Snake River system provide the most cost effective way of transporting many agricultural products. One barge tow can take over 538 trucks off the road. It is also the equivalent of 140 rail cars. The use of barges on the river system saves on wear and tear of our highways and also has the fewest emissions compared to other modes of transportation.

Economic Benefits of Irrigation

There are currently 165,000 acres of potatoes produced in Washington State, over 90% of them grown here in the Columbia Basin. The ability to deliver the precise amount of irrigation precisely when the plant needs it, has allowed us to produce high yields and high quality. This has attracted many food processors to the area which add value to the crop. Almost 90% of the potato crop in Washington State is processed into value added products. This large amount of value added business has made the economic value of the potato crop rise from the farm gate value of $750 million to over $4.6 billion. The potato industry is also responsible for over 23,000 jobs in the State. All this economic activity occurs from just one crop of potatoes. All because we have access to irrigation water that is stored behind dams that produce clean and cost effective hydro electric power. Without access to this irrigation water, our industry would be approximately 1/10 of its current size with little to no additional value added processing.

Why We Need More Water Storage-Global Demand for Food

World population current stands at just over 7 billion people. The U.S. Census Bureau predicts that world population will reach 8 billion in the year 2027, and 9 billion in 2046. The irrigation waters that dams provide will be even more critical in the future. It is not going to be an easy task to feed an additional 2 billion people, especially since a large portion of the population in developing countries will be moving from poverty into a bulging middle class. This rise in economic stature will spur a large increase in the demand for protein, which will require an even higher level of crop production. It would be naive to think we can meet the future demand for food without new water storage.

Most experts agree that we will have to increase food production by 40% within the next 15 years. In the past 70 years, agriculture has been able to meet the growing demand for food through the use of plant genetics, pest control, and synthetic fertilizers. We are near the point where we have maxed out those technologies.

The only two ways to significantly increase food production will be to expand acreage or increase irrigation on existing farmland. Expanding acreage is problematic since all "good" farm land is already being farmed. We would have to expand into lands that are poor for food production, such as lands that maybe high in salt or not have the proper pH for good plant growth. Plant genetics may help us here if we can develop plant varieties that are tolerant to those poor soils fast enough. The other alternative, also problematic, is to convert more native habitat to farmland. An example would be cutting down more rainforest to accommodate farming.

Irrigation is a solution that produces higher yields and more food. The challenge becomes, can we divert more water for food production with no or limited impacts to the environment. This will be a challenge in many parts of the world but we are blessed with abundance here in the PNW. There is excess flow in the Columbia and Snake River systems, but unfortunately, those excess flows do not occur when the water is most needed. The solution is more water storage. Off channel storage or storage high in the system would be the best approach and give the most flexibility. We need to take the excess flow from the river when it is not needed for fish, power generation, or food production, and temporarily park it in storage, and release it when it is needed. This strategy can actually improve the environment for fish, increase power generation, and increase food production. More dams are needed, not less.

As our safety cushion of food supply diminishes with population growth, the most vulnerable are at risk. It is our moral duty to increase food production and the PNW well situated to do our part.

Need for Expansion of Electrical Power Generation

Electrical demand will continue to grow as the world slowly transitions away from fossil fuels and more and more households utilize electrical products and vehicles. Hydropower will play a critical role in power generation and stable power management. Water storage and hydropower are also critical for integrating other renewable power sources like wind and solar.

The effects of potential climate change will also require the use of dams to mitigate potential impacts to society. Climate models in the PNW show that we will have similar precipitation but it may be in the form of more rain and less snow pack. The models also predict that the snowpack will melt sooner which is very detrimental to peak water, power, and stream flow demands in July and August. Water storage projects are going to be critical in mitigating impacts to food production, fish needs, and power generation.

Financing Projects

We are very supportive of the provision in the Bill that allows non-federal parties to complete studies and finance projects. It's obvious that the federal budget has little to no room to meet the repair and replacement needs of existing infrastructure in this country. This situation makes it very difficult to fund any new projects. Provisions to provide more private investments will be needed to meet the infrastructure needs of this country. A good example of this is a local effort to fund $700 million of a $775 million project in the Odessa Sub Area. Local land owners will form Local Improvement Districts and sell bonds or seek private loans to fund the water delivery infrastructure needed in this area rather than asking Congress to pay for the full construction costs up front with 50 year repayment terms.

Authorizing Hydropower Development on Existing Water Projects

The irrigation districts and Bureau of Reclamation manage thousands of miles of man-made canals and other water delivery structures. Streamlining the process to site small scale hydro projects on these structures is an easy way to increase clean hydro production with little to no environmental issues. But it's important to note that these types of small hydro projects should not be allowed to interfere with the primary use of water delivery.

Transparency and Reporting

We believe this provision of the Bill would be useful in making the public aware of the efforts involved in protecting and enhancing fish passage and the level of coordination and cooperation. I see no down side to this provision.

Creation of New Funding Source by Targeting Repayment Funds to Reclamation Account

We support this provision of the Bill as a means of funding water infrastructure. In the simplest of terms, this fund is like a bank handling a mortgage. As a home owner makes payments to the bank, the bank turns around and used those funds for new home loans. As water users make payments to the federal government for the cost of water projects, those funds could be used to fund the next project that would be paid back over a period of time.

On behalf of the Washington State Potato Commission and the Family Farm Alliance, I would like to thank the committee for the opportunity to offer comments on the value of water storage projects and hydropower facilities. I sincerely hope that my comments illustrate the importance of irrigation water and hydropower to current and future food production.

About the Washington State Potato Commission

The Washington State Potato Commission (WSPC) is a grower organization with oversight provided by the Washington State Department of Agriculture. The primary focus of the WSPC is to address concerns that may affect the sustainability of potato farming in Washington State and to provide vision to address future sustainability concerns.

About the Family Farm Alliance

The Family Farm Alliance (Alliance) is a grassroots organization of family farmers, ranchers, irrigation districts and allied industries in 16 Western states. The Alliance is focused on one mission: To ensure the availability of reliable, affordable irrigation water supplies to Western farmers and ranchers. We are also committed to the fundamental proposition that Western irrigated agriculture must be preserved and protected for a host of economic, sociological, environmental and national security reasons—many of which are often overlooked in the context of other national policy decisions.

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

[Applause.]

The CHAIRMAN. We will now begin the rounds of questioning, and we too, Mr. McClintock and I, will both be on the 5-minute clock. So as we ask questions, if you could be cognizant of your answer in that same timeframe.

I will start with myself first, and I am going to ask a question of all of you. But in view of the fact that, generally speaking, in the last 5 years the salmon runs have been very good, I want to

show you a clip of Judge Redden. It takes about a minute and a half, and then I am going to ask a question and ask you to comment on that. So if you would show this clip, I would appreciate it.

[Video shown.]

The CHAIRMAN. Now, my questions to you—now, Judge Redden has retired, as you know, but for 7 years he held up essentially the BiOp on the Columbia River. And my question to you—and you heard some of the statements he made. My question to all of you—it is a two-part question. Do you believe what Judge Redden said that a more aggressive action relative to the dams is needed, number one? And number two, do you think that the courts running the dams is a good idea? We will start with you, Mr. Flint. Real briefly because I want everybody to answer that. So real briefly.

Mr. FLINT. No and no. I don't know how else to say it. I have always felt that Judge Redden had a conflict of interest with—and particularly his wife, and I thought that has always clouded this issue.

The CHAIRMAN. Ms. Rowe?

Ms. ROWE. I will agree with Tom and I will help him out again. No and no. I think what we heard in that testimony there is a lot of the "and, uh, but, uh, and it." Absolutely not.

The CHAIRMAN. Mr. Heffling?

Mr. HEFFLING. No and no again. What we find with the courts instructing us on what to do is we do things and we don't know what benefits the salmon. I mean, we have been spilling for all these years. What we have found is improved ocean conditions has actually improved fish runs. So we don't know whether or not the spill actually helps.

The CHAIRMAN. Mr. Sanders?

Mr. SANDERS. Well, nothing new on the two answers. I would say no and no. The Snake River—of the 13 endangered species fish that are listed, only four go up the Snake. This aggressive action of just digging around the dams is kind of hard to get your head around on that even being done. So no.

The CHAIRMAN. Mr. Spain?

Mr. SPAIN. I will answer the second question first. Of course, we shouldn't be running the river by court order. That is the worst possible outcome. It is an outcome forced on us by gridlock. We do need to have a conversation regionally and we need to develop solutions regionally.

To answer the question, does it make economic sense to spend $12 billion and counting on mitigation measures that haven't worked?

The CHAIRMAN. Ms. Miles?

Ms. MILES. Could you repeat both questions?

The CHAIRMAN. The question is do you think more aggressive action should be taken as Judge Redden pointed out in the clip, and do you think the courts running the river is a good policy?

Ms. MILES. Mr. Chair, having been involved directly, including in those back courtroom discussions, representing the tribe at the time, I sat in all of those court proceedings and also the private sessions and private negotiations that we had for accords. I would

say that Judge Redden towed the line directly with his inability to order any dam to be breached, especially on the lower Snake River.

The CHAIRMAN. Then answer the question because the time is running out here.

Ms. MILES. Sure. So I do not believe that Judge Redden—I do believe the court—we requested injunctive relief for spill because we have proven——

The CHAIRMAN. I understand. Answer the question.

Ms. MILES. Yes.

The CHAIRMAN. Yes in both cases?

Ms. MILES. And the second question?

The CHAIRMAN. Do you think the court running the river is good policy?

Ms. MILES. I don't believe the court is running it. I believe the court is protecting a species that cannot speak for itself.

The CHAIRMAN. Mr. Yost?

Mr. YOST. The system, contrary to what people are saying, is doing pretty well. We are killing a lot of fish. Commercial fishermen and the ocean are killing them. People in zone 6 are killing them. Tribes are killing them. The sport fisheries are killing them. We are not trying to save the salmon. We are trying to kill them, and it just depends on who wants to whack them. That is the issue.

[Laughter.]

The CHAIRMAN. Answer the questions.

Mr. YOST. The judicial system can't handle its judicial system, let alone running a biological river operation.

The CHAIRMAN. Mr. Voigt?

Mr. VOIGT. Courts running it, no. You know, people in agriculture are pragmatic people. We are solution-oriented. And the courts have not really—it is just not an efficient way of doing it.

Walla Walla County, because of its location on the Snake River, actually has the highest potato yield of anybody. A lot of people think Grant County, but it is actually Walla Walla County. So actually that potato ground is the most productive. Can we afford to take the most productive land in the world out of production? No.

The CHAIRMAN. Good. Thank you. Obviously, my time is over, but I did want to give you all an opportunity to make a statement. Mr. McClintock is recognized.

Mr. MCCLINTOCK. Thank you, Mr. Chairman.

Just for the record, we in California are neutral on the Idaho-Washington potato rivalry.

[Laughter.]

Mr. MCCLINTOCK. Mr. Heffling, the Chairman noted—and you just mentioned this—salmon runs over the last year or so in the Pacific Northwest have been burgeoning. Our Subcommittee on Water and Power has received quite a bit of scientific testimony involving the Pacific decadal oscillation, a changing ocean current that sometimes favors Alaskan waters and sometimes favors the Pacific Northwest. Over the past 10 years, that current has been favoring Alaska to the detriment of the Pacific Northwest. It appears that current has now shifted back.

To what extent does that play in the salmon runs that we are watching?

Mr. HEFFLING. I think the ocean currents are probably the single largest factor in the decline of Columbia and Snake River salmon.

Mr. MCCLINTOCK. I have an individual in my district who worked with the so-called environmental groups. I call them "so-called" because they really aren't working for the environment. They are working for this bizarre fever dream that I mentioned earlier. But he is convinced that the effort to destroy our dams and canals was coordinated with the down side of that cycle. They knew the cycle would be moving toward Alaskan waters, that there would be declining runs in the Pacific Northwest, and that is when they began that agitation. In Sacramento, we hear, oh, it is the pumps that are responsible for the decline in the salmon runs. Up here, we hear it is the dams that are responsible. But isn't most of this natural ocean conditions?

Mr. HEFFLING. It is exactly natural ocean conditions, and that is why "remove the dam" became so popular with environmental people is because it coincided with poor ocean conditions and a drop and turning down.

Mr. MCCLINTOCK. I think this individual as well thinks that this was all very carefully coordinated. They expected by now to have prevailed on removing the dams and stopping the pumps and then being able to claim that the return of the salmon was a result of their environmental regulations when in fact it is something that has been going on for a very, very long time.

Mr. HEFFLING. Well, that is exactly right. I mean, there were predictions before the first dam was installed that the salmon were going to go extinct. This is from a person at Oregon Fish and Wildlife that predicted the decline in the salmon. And it was all due to ocean conditions and not the dams.

Mr. MCCLINTOCK. And when was that prediction made, by the way? I think you reference it in your written testimony. Wasn't it 1894?

Mr. HEFFLING. 1894.

Mr. MCCLINTOCK. And it reminds me of an Ogden Nash observation that the ass was born in March. The rains came in November. Such a flood as this, he said, I scarcely can remember.

Mr. Sanders, I a few years ago submitted to the California Energy Commission a request for information on what is the actual cost of electricity generation from the various sources. And they came back and reported that the very cheapest form of electricity generation that we have available to us is hydroelectricity. They were estimating at the time between a half a cent and 1 and a half cents per kilowatt hour. At that rate, it would cost—I believe the figure was $60 a year—a year—for an average household's electricity bill. The next cheapest was coal, then nuclear. The most expensive by far were wind and solar.

Now, we are told that wind and solar will replace hydroelectricity. What is that going to do to the price that consumers pay on their electricity bills every month?

Mr. SANDERS. Well, right now power from Bonneville Power Administration is about $30 a megawatt hour. The actual base price for the generation at the dams is probably $5 to $10. So we have nuclear costs on top of that and fish costs on top of that.

Mr. MCCLINTOCK. Well, that is the whole point. Once you eliminate the bureaucratic regulations, what are we dealing with in terms of the actual cost?

Mr. SANDERS. We are back up to 30 bucks, and wind is probably in the $80 to $90 a megawatt hour, and that is assuming that you can back it up with an existing hydro resource, which right now the flexibility of the Federal-based system is near maximum.

Mr. MCCLINTOCK. My time is very limited. What I want to underscore in your testimony is, first, you have the enormous cost of wind and solar. Solar is not a new technology. That was invented in 1839, and in 170 years of research and development, we have not invented a more expensive way of producing electricity. So you have that native cost to begin with.

But then on top of that, as you just pointed out, because wind and solar are intermittent and because we operate an integrated grid that has constantly got to match the power going on the grid with that coming off, for the intermittent power like wind and solar that can drop off in an instant with a drop-off in the wind or a cloud bank passes over the array or the sun goes down, as it tends to do from time to time, the generating capacity falls off. And you have to constantly keep standby power instantly ready to come in and replace that unexpected and unpredictable drop-off.

So we not only have to pay for these premium electricity generating facilities, but we then also have to pay to have backup facilities. If they are fossil-fueled, they have to be constantly running, ready to go on line at a moment's notice. Or you have hydroelectricity which can be turned on and off with a valve, but we are tearing down the hydroelectricity to bring in more wind and solar.

Does that make any sense to you?

Mr. SANDERS. No.

Mr. MCCLINTOCK. And then on top of that, I just might add, we have huge transmission costs with wind and solar because they are low capacity. They require high tension transmission lines that are extremely expensive and usually over very, very long distances to transmit that electricity, which means further increases in our electricity rates, which was one of the objectives of the Chu Memo.

I will come back to you in a few.

The CHAIRMAN. I want to ask a question. This is a question again for all of you, and I alluded to this in my last question where the salmon runs seem to be coming back, roughly in the last 5 years, very robustly, which by the way, coincidentally, happens to be about the life cycle of the salmon. It is not exact.

So this year, an estimated 650,000 fall Chinook are expected to come back. This summer, more than 380,000 steelhead came back and over, roughly, a half a million wild sockeye were counted at Bonneville Dam this year.

My question to all of you is with the evidence of these fish runs that are coming back in greater numbers, does this not prove that dams and saving fish can coexist? Mr. Flint, we will start with you.

Mr. FLINT. Yes. I am a firm believer in the fish-friendly technology that we are implementing, and also, you know, we have one of the most respected supplementation hatcheries in the Columbia

River system. And to be quite honest with you, Alaska fishermen love us for what we are doing.

The CHAIRMAN. Ms. Rowe?

Ms. ROWE. I would agree, yes. In fact, my husband is a freelance videographer for Outdoor TV and he just returned from a trip in Alaska and said the same thing. Fish in Alaska are declining as ours are repopulating and increasing.

The CHAIRMAN. Mr. Heffling?

Mr. HEFFLING. Yes, I agree. I would think the things we have done at the dams have already shown that they can coexist. We have trout submerged traveling screens that direct juvenile fish into bypass facilities and we also have spill gate weirs that pass them over the spill facilities a lot better than other spill gates. So yes.

The CHAIRMAN. Mr. Sanders?

Mr. SANDERS. Yes. And I think the aggressive nature of what we have done, the money we have spent is working extremely well.

The CHAIRMAN. Mr. Spain?

Mr. SPAIN. Some qualifications on that. What ocean conditions do is change. They are guaranteed to change. The big problem, the bottleneck is when ocean conditions are bad. We have to take advantage of the good times so that we can work and buy time to deal with those problems that are going to be there when ocean conditions are bad so we don't wind up with more extinctions.

And I want to say it is my hope, our organization's hope, that we can work out ways for salmon and hydropower in the Columbia to coexist because one of my favorite meals, frankly, is salmon with Washington potatoes and Washington bread.

The CHAIRMAN. And Washington wine. Let me just throw that in too.

[Laughter.]

The CHAIRMAN. I just want to say that while ocean conditions change, the one constant is dams.

Ms. Miles?

Ms. MILES. Thank you, Mr. Chair. It is my hope and hopefully in my existence of being an influential person on this to have them coexist as this collaborative approach that Senator Mike Crapo discussed. The Nez Perce Tribe is the largest—or tribal fisheries in the country and hands down. You say those big returns. You are welcome. The Nez Perce Tribe, hands down, produces more fish—and I appreciate the comment on supplementation—in our hatcheries, more than Washington, Oregon, Idaho, State and Federal program fisheries managers put together. And so I do appreciate the question because it has been my tribe's desire and our fishermen to make that collaborative approach happen and continue those discussions.

The CHAIRMAN. Mr. Yost?

Mr. YOST. Yes, they can coexist. That is not the major problem today in getting additional fish back for harvest.

The CHAIRMAN. Mr. Voigt?

Mr. VOIGT. We have made a tremendous amount of progress in the last 20 years, and while it has been costly, the collaboration that went into effect with the biological opinion most recently, while you can make an argument that some of the incremental

gains probably economically weren't worth it, but we have made progress. And it looks good, and I think it absolutely documents that both can exist. We can have a healthy environment and dams at the same time.

The CHAIRMAN. I am going to ask one question here and it probably should be at least self-evident from my standpoint, and so I will ask anybody who disagrees with what I am saying to answer in the negative. Does anybody on this panel believe that hydropower is not renewable? And if you do not raise your hand, then I am going to assume all eight of you believe that it is renewable.

That is good. I appreciate that.

[Applause.]

The CHAIRMAN. Mr. McClintock?

Mr. MCCLINTOCK. Thank you, Mr. Chairman.

Mr. Sanders, I would like to continue where we left off. We were talking about the enormous basic cost of these wind and solar generators, plus on top of that, the added expense that for every megawatt of solar or wind, you have to keep a megawatt of reliable, immediately obtainable backup power or the grid will collapse. And then on top of that, we talked about the increase in the transmission costs because of the special transmission lines that are required to carry this electricity over large distances.

Now, Mr. Spain said that, oh, well, the Klamath dams—that is not really 150 megawatts. It is only 82 megawatts. Well, that is because they have been restricted from generating electricity by the regulations that Mr. Spain's group has been very successful in having imposed. Moreover, the 50 turbines that he says will replace it have to then be replaced by additional backup power on top of that. Isn't that correct?

Mr. SANDERS. Yes, that is right. I mean, if people basically want their home warm in the winter and their beer cold in the summer, and if the wind is not blowing, neither of those will happen. So you have to have some kind of reliable backup to firm up the wind. And it is megawatt for megawatt.

Mr. MCCLINTOCK. Let us talk about the cost of relicensing. Aren't virtually all of those costs the direct result of the bureaucratic regulations that groups like Mr. Spain's have been successful in imposing?

Mr. SANDERS. Well, I am not familiar with relicensing costs. I think Mr. Flint could probably talk to that more.

Mr. MCCLINTOCK. Mr. Flint, how about you? Can you answer that question?

Mr. FLINT. Yes, I can. We just successfully went through relicensing with our hydro project. We have two dams under one license. It costs the ratepayers of Grant County $45 million for that paperwork. That paperwork would sit on this table. It was like Sears Roebuck catalogues 6 feet high.

Mr. MCCLINTOCK. Forty-five million dollars. What does that mean to your ratepayers?

Mr. FLINT. That means that we are going to be paying off this relicensing paperwork for the next 50 years. Approximately it equates to probably about 10 cents or 10 percent out of their bill that they pay each month.

If I may, I would also like to say that of the bill, of that $1 that they pay each month, 30 percent of that goes for fish programs.

Mr. MCCLINTOCK. Now, how much of this is related to dam safety?

Mr. FLINT. Dam safety is something that we take very seriously, and we are in the process of some direction from FERC who controls what we do. We currently are looking about anywhere from a $20 million to $120 million proposal for safety on dams.

Mr. MCCLINTOCK. And how does that compare to the other costs that you have to bear?

Mr. FLINT. Well, I will just elaborate a little bit. In the next 50 years, for this new relicensing, we have a plan for fish, recreation, safety, all those components. It is about $1.7 billion over 50 years, including all the paperwork, all the environmental things that are involved.

Mr. MCCLINTOCK. So this isn't about dam safety. We already have very good laws in place to assure the safety of our dams and very good laws that assure that those dams are safe. This is not about dam safety.

Mr. FLINT. No, it is not. If I may have the liberty, Mr. Spain here made the comment that 87,000 dams are obsolete or dangerous. I would like to respond to that. Ninety-five percent of those dams are under 7 feet tall. They don't have any power generation and they don't have any fish passage.

Mr. MCCLINTOCK. We are also told, oh, don't worry because the cost of removing the Klamath dams is capped at $200 million, which is an enormous amount for the ratepayers. But that is just the tip of it. We have a water bond with $250 million earmarked for the destruction of those dams. On top of that, to borrow that money, you have to pay another $250 million in interest. So it is $200 million to the ratepayers and another half a billion dollars in principal and interest to the taxpayers of California. That comes to about $75 for every working family in the State. That to me seems insane.

Mr. FLINT. It is. Actually there is one part that is really overlooked. Anytime you take a reservoir out of production, there is an artificial recharge of the surrounding aquifer, and when you take that reservoir out of existence, all at once you have people's wells going dry. You have towns going dry. You have huge economic impacts that have not been, quite frankly, brought into this discussion.

Mr. MCCLINTOCK. Thank you.

The CHAIRMAN. Mr. Spain, for purposes of full disclosure, you and/or your association have participated as co-plaintiffs in 18 lawsuits regarding fish. Is that correct?

Mr. SPAIN. At least. We are a commercial fishing organization and——

The CHAIRMAN. Right. No. That is fine. I just wanted to establish for the record that you have participated in those lawsuits.

Now, in your written testimony and your oral testimony, you spent a great deal of your time talking about decrepit dams, and you used a phrase that if they are economically obsolete, they should be replaced and so forth.

Now, taking that at face value, you participated in a lawsuit dealing with the Columbia and Snake River BiOp. Which of those dams are economically obsolete?

Mr. SPAIN. That is a discussion that is ongoing, as you well know. And obviously——

The CHAIRMAN. So you acknowledge that some of the dams on the Snake River and Columbia River are economically obsolete.

Mr. SPAIN. I am saying that all dams everywhere have to be able to meet the purpose for which they were constructed. They have to be economically sound and they have to be functionally——

The CHAIRMAN. So which ones? My question to you is which ones, using that term. I understand that people can have that debate. You participated in a lawsuit that is dealing with the Snake and Columbia River dams. Which of those dams are economically obsolete?

Mr. SPAIN. I think you have had testimony already today that some $12 billion has been spent on fish mitigation for a number of the dams.

The CHAIRMAN. Mr. Spain, I am asking you a question.

Mr. SPAIN. The question really—sir, if I may be allowed to answer.

The CHAIRMAN. I am asking the question and the question is, using your own term—and you spent a great deal of time in your earlier testimony—which of those dams on the Columbia and Snake River are economically obsolete.

Mr. SPAIN. I am saying that is a discussion that is currently ongoing.

The CHAIRMAN. Well, I am asking you which one do you think. You participated in a lawsuit. You must have thought something was economically obsolete.

Mr. SPAIN. The outline of the discussion is how much money do we spend to maintain a structure that is not working.

The CHAIRMAN. OK. Which one is not working?

Mr. SPAIN. Again, that is a discussion that is ongoing. I have made that response.

The CHAIRMAN. Well, Mr. Spain, in due respect, I have to say I am not satisfied with your answer because in your testimony you use that term and you participated in a lawsuit dealing with the major dams on the Snake River and you cannot tell me which one is obsolete.

Mr. SPAIN. Every dam has to meet certain criteria. Is it meeting its function? Is it economically sound?

The CHAIRMAN. OK. My question to you, since you are participating in this, which one of those dams? All of them?

Mr. SPAIN. I have answered that question.

The CHAIRMAN. Well, I don't think you did.

Let me just have a real quick follow-up on that. I understand that Trout Unlimited, who was part of that, has withdrawn as one of the original plaintiffs of the suit in front of Judge Redden. Are you contemplating withdrawing?

Mr. SPAIN. That was their decision because they are looking at trying to negotiate a settlement of this that is local in base.

The CHAIRMAN. Well, as you know——

Mr. SPAIN. I mean, you know, one of the problems that we have is we have solutions imposed by courts. We have solutions imposed by Congress. None of them are working. And their decision——

The CHAIRMAN. In due respect, Mr. Spain——

Mr. SPAIN. Their decision——

The CHAIRMAN. In due respect——

Mr. SPAIN. Sir, if I may answer.

The CHAIRMAN. OK, I will let you answer.

Mr. SPAIN. Their decision was something you will have to question them about, but their decision was a principled one to try to work for a settlement within the region of these issues.

The CHAIRMAN. Of course, that is what the stakeholders were and that is why the States of Washington, Idaho, Montana, Columbia River Intertribal Commission, the Colville Tribe, among others agreed that the BiOp should go forward.

Well, I just want to say in due respect—and part of the problem—and I know the Grant PUD had to go through this because probably the threat of litigation mainly coming from the Endangered Species Act—in fact, we had testimony in front of my Committee. We were having hearings on the Endangered Species Act. And if one thing has come loud and clear in the hearings we have had thus far—and we had one, by the way, over in Longview earlier this year—is the issue—it wasn't on salmon but it was on the spotted owl. But the issue was the cost of litigation, and the Department of the Interior cannot tell us how much they are spending defending against these lawsuits which, of course, slow down the whole process of whatever you are trying to do. A lot of those lawsuits, by the way, are filed with people that were getting Federal funds.

My time is about to expire. So I will recognize Mr. McClintock.

Mr. MCCLINTOCK. Thank you, Mr. Chairman. I looked up the flow rates on the American River in my district historically. Before the dams, they ranged anywhere from just barely a trickle to a complete, violent inundation of the entire region. The dams changed that cycle to a steady flow of water in good times and bad.

I am just wondering, Mr. Heffling or Mr. Flint or Mr. Sanders or Ms. Rowe—in fact, any of the folks actually from the area—what was the region and its ecologically like before the dams were constructed.

Mr. FLINT. Since I have the microphone in front of me, I would like to respond to that.

You know, it is very interesting that we always hear about the roadblocks for fish. One of the stories that you don't hear is the fact that on a critical water year before there were dams, the Columbia was not a free-flowing river. It was stagnant pools. And there were fish dying by the millions because they were in stagnant water and they were trapped. So in a lot of aspects, the dams are really helping the migration passages for fish.

Mr. MCCLINTOCK. By the way, early explorers noted the same thing on the Klamath, I might add.

Mr. FLINT. Yes. That is something that nobody really talks about.

Mr. MCCLINTOCK. So it wasn't a gently ever-flowing river in good times and bad with amber waves of grain as far as the eye could see.

Mr. FLINT. Well, that is a utopia we would all like to have but it doesn't exist.

Mr. MCCLINTOCK. Well, we are told that is what we will have if we tear down those dams and replace them with wind and solar, as has just been suggested again here today. How does that comport with reality? Well or not well?

Mr. FLINT. Not well.

Mr. MCCLINTOCK. Mr. Sanders, we are talking again about the electricity prices. What can we expect to see on our household electricity bills if this lunatic fringe of the environmental left has its way and these dams come down?

Mr. SANDERS. Well, the rates are going to increase. I mean, there is no way around that.

Mr. MCCLINTOCK. You are going to have to pay for the much more expensive power. You are going to have to pay for the additional backup power, and you are going to have to pay for the specialized transmission of that power.

Mr. SANDERS. Right, yes. And a couple of issues.

One, I mentioned in my testimony $12 billion has been spent on fish and wildlife mitigation in the Pacific Northwest since 1978. We don't want to attribute that full $12 billion to the four Snake River dams and say if we take those out, we won't have to spend any of this other money. That $12 billion is the full impact of all the mitigation measures that have been done on the entire Federal-based system. So the dams on the Columbia River contribute to that $12 billion. The dams on the Snake contribute to that. So I don't differentiate those. I just want to be clear that the $12 billion that we have spent, you can't say if we just spent that on removing the lower Snake River dams, everything would be good.

Mr. MCCLINTOCK. Well, I have a modest suggestion on mitigation measures. Count the dam hatchery fish.

Mr. SANDERS. Right. That would be good too.

The other issue that you mentioned is transmission. And we just assume that transmission lines are going to be built from the wind generation or the solar generation to the load centers. That is an extremely expensive proposition, and you end up with a NIMBY complex, "not in my back yard." We don't want those transmission lines built because of—name the reason. So just to assume that we can build transmission, move the wind generation from wherever it is to the load centers is——

Mr. MCCLINTOCK. By the way, we are seeing that in the Northeast where the calls for wind generation were the loudest. Now, when people try to put in wind generators, they are told, oh, no, not in my back yard. I don't want you to spoil my view. I don't want you to chop up all of our rare birds.

Mr. SANDERS. You will notice that most of the wind generation is in eastern Washington and eastern Oregon. It is not on the I-5 corridor.

Mr. MCCLINTOCK. Just very briefly. Skyrocketing electricity prices. Ms. Rowe, what is that going to do to our grocery bill?

Ms. ROWE. It will go up quite simply. So many times we talk about natural disasters. Our friends in the Midwest are dealing with that.

Mr. MCCLINTOCK. Mr. Heffling, what does that do to our economy? Manufacturing, for example.

Mr. HEFFLING. It costs us many jobs.

Mr. MCCLINTOCK. I have never seen a single proposal that combines more bad policy in one single measure than what has been advocated by the left to tear down these dams.

The CHAIRMAN. For Mr. Flint, I want to ask you a question. I alluded to the fact that there is a lot of knowledge in this area on fish passage. You are one of the three PUD's, Mid-Columbia PUD's, that have dams on the system. You have two dams. Chelan has two dams, and I know there are some representatives from Chelan PUD here. And then Douglas has a dam. And I visit all of them and I know all the work that they do.

But specifically, Grant PUD put in the Vernita Bar Agreement I think—I forget the exact time. Could you explain what the Vernita Bar Agreement did and how it is working right now?

Mr. FLINT. Well, you are going back a ways, so I will try to dust off the cobwebs. But the Vernita Bar Agreement there is below Priest Rapids Dam about 5–7 miles. There is a natural gravel bed that is in the river there. There are times in the past where we have de-watered that for energy production and for flow of the river conditions, and it was not good for fish. And so what we have done, we went into an agreement where we will keep those gravel beds for the salmon eggs watered and enough flowage there that there will be no mortality to those natural salmon beds.

The CHAIRMAN. I think the principle here is that you—and I know that all five of the mid-Columbia dams are a little bit different. There is nothing that works equally the same on all five of them. I mean, I know you are having some issues with Wanapum and Priest Dam, Priest Rapids, for example, your two dams. But to me the principle here and why the Vernita Bar Agreement—you don't hear much about it because it has been successful. And the solution to that problem was made locally which, of course, reinforces what I have always felt, is that the fish knowledge here in the Northwest, given the opportunity—given the opportunity—to pursue these ideas, can be good. I know the fish passage that all of you have had. I know particularly Chelan's fish passage is somewhat unique, you know, at Rocky Reach. But it works because local people got together and made it work. And you don't hear any discussion about that anymore. And I think the Vernita Bar was the first of those, if my memory serves me correctly, of the mid-Columbia's that came up with real solutions to the spawning.

Anything more? Well, I have another question here I want to ask you and Mr. Sanders.

Mr. FLINT. I think we are always looking for win-win things. I honestly do. Things that are cost-effective and make sense. And that is our goal.

The CHAIRMAN. This will be a question to Mr. Sanders and Mr. Flint.

As you are aware, some of your compatriots, Okanogan PUD and Pend Oreille PUD and some others, are trying to relicense dams.

They are running into problems not necessarily with FERC but with other Federal agencies. I know with Okanogan, for example, it is with BLM, entirely unassociated with producing power.

We address that in my legislation. Do you think that that is good policy to be addressed, and so you have maybe one focal point on the relicensing process so there is some predictability? Okanogan is nowhere as large as Grant, and Grant spent $45 million to relicense. So that provision in the bill. Would you comment on it?

Mr. SANDERS. Yes. I think that is a very positive step so that you have some predictability. You know who to go to talk to. And it is not what the traffic will bear as far as how many tasks can you impose on a relicensing process, but rather what is a reasonable mitigation. So, yes, I think that is a positive way to go.

The CHAIRMAN. Mr. Flint?

Mr. FLINT. I also think that is a positive thing.

The one thing that I am not sure you are aware of, but FERC is the one that is in control of relicensing. And we have heard through the process with Chelan and Douglas that our next relicensing process, which will be somewhere around 40 years from now—all these three dams will be considered one. And so to be honest, I don't know if that is good or bad, but it is certainly on our radar screen, and I would like to bring that to your attention too.

The CHAIRMAN. What we heard in earlier testimony is that there should be one clearinghouse and the logical one for that is FERC. The problem that we are seeing is something that is not anything related. Like the BLM issue with the Okanogan Dam, for example, has to do with access to the dam, nothing to do with flow, nothing at all. And yet, they have the means by which to stop a project. We address that in the bill. And my question was if you thought that was good policy. I hope you say yes.

Mr. FLINT. Well, absolutely.

The CHAIRMAN. Justify it again.

Mr. McClintock?

Mr. MCCLINTOCK. Thank you, Mr. Chairman.

Ms. Miles, you have been very candid in making clear your statement is for yourself and not for the Nez Perce Tribe. I recently had a delegation, official delegation, from the Nez Perce. They were greatly supportive of fish hatcheries and very highly critical of the professional environmental organizations that are opposing them. What is the Nez Perce position on fish hatcheries?

Ms. MILES. Thank you, Mr. Chair.

The Nez Perce position has always been in our mission statement to restore healthy, harvestable salmon—make no mistake. We are in this to catch these fish to continue our way of life—harvestable levels of salmon. And so, Mr. Chair, the Nez Perce Tribe has been a lead in developing these unique supplementation types of hatcheries.

Mr. MCCLINTOCK. They have, indeed. In fact, we are told by professional environmentalists, oh, but they are just different. And is there really any significant difference between a hatchery fish and a fish born in the wild? Isn't the principal difference the same as a baby born at home and a baby born at the hospital?

Ms. MILES. Mr. Chair, the tribe is working toward creating that scenario you speak of. That is exactly what—rearing them in the wild in a hatchery that doesn't look like a normal hatchery where they are pooled in cement, that they're actually learning to be wild.

Mr. MCCLINTOCK. Well, I am told in Alaska, they are now pioneering what they are calling ocean ranching where the hatchlings are released directly into the ocean and then harvested directly out of the ocean.

Now, in 2010, the tribe reported that what was a run of 1,000 in the 1990's exceeded 41,000 in 2010. Now, obviously, part of that is the natural Pacific decadal oscillation. But isn't that figure of 41,000 which, by the way, is many times the recovery goal set by NOAA—isn't that largely due to the Nez Perce's hatchery efforts?

Ms. MILES. Yes, absolutely.

Mr. MCCLINTOCK. And shouldn't we count the dam hatchery fish when we're assessing salmon?

Ms. MILES. Mr. Chair, the Nez Perce Tribe has stuck to their mission of we want to restore the natural, native populations, and we have to do that with our supplementation hatcheries. We have to.

Mr. MCCLINTOCK. Thank you.

I want to get to Mr. Spain before my time expires. Mr. Spain, you have said that your group encourages hydroelectricity generation. Let me ask you what hydroelectric dams do you support.

Mr. SPAIN. Well, first off, let me make it clear. Our people are ratepayers. Our people are customers, many different utilities. So we are tied into the grid just as much as anybody else.

Mr. MCCLINTOCK. If you are making the point that you don't really represent a lot of your members, I would——

Mr. SPAIN. There are a number of dams in my own watershed. There are a number of dams that are being retrofitted with fish passages.

Mr. MCCLINTOCK. Well, we have in my district the Auburn Dam, 2.3 million acre-feet of water storage, 800 megawatts of the cleanest, cheapest electricity on the planet, 400-year flood protection for the Sacramento plain. Does your group support or oppose constructing the Auburn Dam, for example?

Mr. SPAIN. That is not something I am terribly familiar with. I am much more familiar with Northwest dams. But, remember, all dams have to be considered on a case-by-case basis.

Mr. MCCLINTOCK. No, but again—yes, fine. On a case-by-case basis, what new hydroelectric dam does your organization support constructing?

Mr. SPAIN. Well, for instance, there is the Rodgers-McMorris Dam bill——

Mr. MCCLINTOCK. That is small hydro. That is an important contribution but——

Mr. SPAIN.—which would set in motion dozens and dozens of different small, low-impact hydro plants.

Mr. MCCLINTOCK. Exactly.

Mr. SPAIN. We have also been looking at wind, offshore wind——

Mr. MCCLINTOCK. We have already talked about wind and solar.

Mr. SPAIN. We have also been looking at ocean——

Mr. MCCLINTOCK. So the answer is no, there is not a single hydroelectric dam that you can point to——

Mr. SPAIN. That is incorrect, sir.

Mr. MCCLINTOCK. OK, and which one do you support constructing?

Mr. SPAIN. Each has to be taken on their own merits, sir.

Mr. MCCLINTOCK. What dams that you believe should be torn down have you proposed to be replaced with a new dam?

Mr. SPAIN. There are many, many ways of doing that, sir. I will give you an example. In the Klamath, the 82 megawatts of power there will be replaced. PacifiCorp is under a legal obligation to bring on board 1,400 megawatts of renewable power, in other words——

Mr. MCCLINTOCK. Well, we have already talked about——

Mr. SPAIN.—to replace that, sir.

Mr. MCCLINTOCK. We have already talked about that.

Mr. SPAIN. To replace that 82 megawatts lost by——

Mr. MCCLINTOCK. Do you support replacing those dams with new state-of-the-art dams?

Mr. SPAIN. It depends on where they are——

Mr. MCCLINTOCK. On the Klamath?

Mr. SPAIN.—and what impact they have on fisheries.

Mr. MCCLINTOCK. Which proposals have you supported to do so? Mr. Spain, do you understand when you are so evasive in answers to questions, it just ruins whatever credibility you brought in here, which to my mind wasn't much?

[Applause.]

The CHAIRMAN. We are nearing the time. So this will be the last round. I just have a couple of questions, and then Mr. McClintock, and then we will wrap it up.

One of the issues that is tied to, when we talk about hydropower, is the power marketing authorities, of which BPA is one of the power marketing authorities. And the Chu Memo, which was simply a letter from Secretary Chu to all the power marketing authorities, directed them to pursue alternative sources of energy. It has not been much more specific than that. I have to be very honest with you, but it caused a bit of an uproar.

Now, there is one characteristic of all of the power marketing authorities, and that is, they generally can govern all of their resources within their areas. For example, BPA markets the power that is generated by all of the dams. The irrigation districts that are created by Grand Coulee Dam, for example, are governed by generally local governing boards.

So with the Chu Memo—and I want to ask all of you. And if you are not really familiar with it, I understand. Sometimes these issues get rather esoteric, so I don't expect you to know all of them. But the underlying issue from my point of view is this. If the Chu Memo were to become the policy, you would probably be having people in Washington, D.C. making energy decisions for us in lieu of decisions made in the regional areas, whether you are talking about BPA or WAPA in the Southwest or others.

So my question to you—and I will start this time, Mr. Voigt, with you and we will work our way up that way. My question: do you think it is good policy generally to transfer what has been histori-

cally good governance at the local level, transferring it to Washington, D.C. as is represented by the Chu Memo? Mr. Voigt?

Mr. VOIGT. Out of respect to all the people here in Washington, D.C., I am not sure transferring anything to Washington, D.C. is the right thing to do.

I firmly believe in local control. We have the local knowledge. Just like the example you gave of the Vernita Bar. You know, that wouldn't have been discovered in a cubicle in Washington, D.C. So I think if we can collaborate with the stakeholders on a local basis, we can find pragmatic decisions that will benefit us all.

The CHAIRMAN. Mr. Yost?

Mr. YOST. I agree that solutions can be found at the local level, and there isn't a solution for Washington, D.C.

[Laughter.]

The CHAIRMAN. Ms. Miles?

Ms. MILES. Yes. Once again, just not in an official capacity for the tribe, they certainly would form an opinion on that question. The tribal members of all these plateau tribes have always been in a position that has had to directly seek assistance elsewhere because we can't get everybody to the table, and that is something that the tribes' individual members, fishermen, have requested. And so I do believe there is a local collaborative effort that we can solve the problems ourselves, but we haven't seen that. We haven't seen all parties come to the table and include everybody, which is essential for a local problem solution.

The CHAIRMAN. Mr. Spain?

Mr. SPAIN. Well, certainly we are great believers in locally based, locally developed solutions. That said, we do have a national power grid, and so there has to be some balance.

The CHAIRMAN. Mr. Sanders?

Mr. SANDERS. The Pacific Northwest utilities have probably 60 or 70 years of collaborative work that has gone on, and that has been done kind of in spite of Washington, D.C. So, no, we don't need the control to come from there.

And relative to Secretary Chu's memo, I mean, we have been doing conservation aggressively for 30 years. We have been building transmission lines to support renewable energy without any encouragement from Washington, D.C. So that is happening here now.

The CHAIRMAN. Mr. Heffling?

Mr. HEFFLING. I would agree that we are much more involved in fish passage and operating the grid here in the Northwest than anybody in Washington, D.C. would understand.

The CHAIRMAN. Good.

Ms. Rowe?

Ms. ROWE. Local stakeholders have the most to lose and they also have the most to benefit. Washington Wheat Growers believe in the local level participation and knowledge.

The CHAIRMAN. Mr. Flint?

Mr. FLINT. Well, local control of your destiny is at the heart of public power. And to lose any opportunity to have a destiny in our power marketing we would be totally against. And I concur with Mr. Sanders. We have 60 years plus of being very cost-effective and efficient in how we are doing that. And to be quite honest with you,

we are fortunate to have the hydropower that we have here, and there are a lot of people in other parts of the United States who would like to have what we have. And I see one way of that happening.

The CHAIRMAN. Thank you.

Mr. McClintock?

Mr. MCCLINTOCK. Well, thank you, Mr. Chairman.

I am not having a lot of luck with getting specific answers from Mr. Spain, so I think I am going to call it quits at this point.

But as I said earlier, the people in my district are facing the same challenges as the folks here today, and I just want to thank you for your leadership on this issue. I want to thank you for your legislation. Folks in my district are facing just enormous costs, and we have been talking about them, not just the enormous cost of tearing down these four perfectly good, functional dams, but then the enormous costs that they will bear in perpetuity for the extremely expensive power that is proposed to replace it with.

And I am struck by the fact that we are being told that hydroelectricity, whose reliability and instant accessibility is absolutely essential to keep the grid from collapsing, as more wind and solar is being added to it, should now be replaced by wind and solar. That is simply silly, and yet that is the best answer we are getting out of the advocates of these ludicrous policies. The folks in my district, as in yours, are being asked to trade the technologically cheapest electricity available to us for the technologically most expensive electricity and being told that we should just grin and bear it. Well, I don't think we are going to grin and bear it any longer.

What you are seeing here in this region with the public rising in opposition—I am watching in my own as well. And as I said earlier, I am not only happy to report—to carry word to your folks that they are not alone in this fight. I can't wait to get back to mine and assure them that they are not alone either.

Again, thank you for your leadership. Thank you for this hearing. And I want to thank all of the folks here for coming out today.

The CHAIRMAN. Thank you.

[Applause.]

The CHAIRMAN. Well, I want to thank all of the panelists here. Your testimony was very important, and I think this sort of dialogue is very, very helpful. So even though there are differences of opinion, listen, we live in America. That is one of the great things that we have is that we can disagree. But I do appreciate all of you very much for being here and participating.

And I want to thank Troy Woody, who is the General Manager of TRAC, and Steve Roberts, who is the facilities manager here at TRAC. And of course, they are at the top, and so the staff does all the work, and that is James McClean, David Hetterscheidt, Phil Ashcroft, and Linda Tower. So that is sole acknowledge to them.

And I know that Chanda Teabay had some say in all of this, as did Heather Soriavanksa, and the event coordinator, Christy Kessler.

And I also want to thank the Pasco Police Department, Janey Raybel and Mike Nelson, for being here.

So thank you all very, very much. Again, any of you that are inspired by what you heard here and want to have testimony made part of the public record, I would invite you to do so, and the directions are out in front.

And for those of you that came from far and wide—and I know there are some that had to get up awful early to get here on time—we do appreciate your coming.

So if there is no further business to come before the Committee, the Committee stands adjourned.

[Whereupon, at 10:58 a.m., the Committee was adjourned.]

○