

MODERNIZING HYDROPOWER: LICENSING AND REFORMS FOR A CLEAN ENERGY FUTURE

HYBRID HEARING

BEFORE THE
SUBCOMMITTEE ON ENERGY
OF THE
COMMITTEE ON ENERGY AND
COMMERCE
HOUSE OF REPRESENTATIVES
ONE HUNDRED SEVENTEENTH CONGRESS
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MODERNIZING HYDROPOWER: LICENSING AND REFORMS FOR A CLEAN ENERGY FUTURE

THURSDAY, MAY 12, 2022

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENERGY,
COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:33 a.m., in the John D. Dingell Room, 2123 Rayburn House Office Building, and remotely via Cisco Webex online video conferencing, Hon. Bobby Rush (chairman of the subcommittee), presiding.

Members present: Representatives Rush, Peters, McNerney, Tonko, Schrier, DeGette, Butterfield, Matsui, Castor, Schrader, Kuster, Pallone (ex officio); Upton (subcommittee ranking member), Burgess, Latta, Griffith, Johnson, Bucshon, Walberg, Duncan, Palmer, Lesko, Pence, Armstrong, and Rodgers (ex officio).

Staff present: Waverly Gordon, Deputy Staff Director and General Counsel; Tiffany Guarascio, Staff Director; Perry Hamilton, Clerk; Zach Kahan, Deputy Director Outreach and Member Service; Rick Kessler, Senior Advisor and Staff Director, Energy and Environment; Mackenzie Kuhl, Press Assistant; Elysa Montfort, Press Secretary; Tyler O'Connor, Energy Counsel; Lino Pena-Martinez, Policy Analyst; Kaitlyn Peel, Digital Director; Kris Pittard, Policy Coordinator; Kylea Rogers, Staff Assistant; Medha Surampudy, Professional Staff Member; Caroline Wood, Staff Assistant; Tuley Wright, Senior Energy and Environment Policy Advisor; Kate Arey, Minority Content Manager and Digital Assistant; Sarah Burke, Minority Deputy Staff Director; Brandon Mooney, Minority Deputy Chief Counsel, Energy; William Clutterbuck, Minority Staff Assistant/Policy Analyst; Theresa Gambo, Minority Financial and Office Administrator; Jack Heretick, Minority Press Secretary; Nate Hodson, Minority Staff Director; Sean Kelly, Minority Press Secretary; Peter Kielty, Minority General Counsel; Emily King, Minority Member Services Director; Bijan Koohmaraie, Minority Chief Counsel, Oversight and Investigation Chief Counsel; Jerry Couri, Minority Deputy Chief Counsel, Environment; Clare Paoletta, Minority Policy Analyst, Health; Olivia Shields, Minority Communications Director; Michael Taggart, Minority Policy Director; Everett Winnick, Minority Director of Information Technology; Peter Spencer, Minority Senior Professional Staff Member, Energy; Mary Martin, Minority Chief Counsel, En-

ergy and Environment; and Michael Cameron, Minority Policy Analyst, Consumer Protection and Commerce, Energy, Environment.

Mr. RUSH. The hearing is now called to order. The Subcommittee on Energy will now come to order. Today the subcommittee is holding a hearing entitled “Modernizing Hydropower: Licensing and Reforms for a Clean Energy Future.” Due to the COVID-19 public health emergency, members can participate in today’s hearing either in person or remotely via online video conferencing.

In accordance with the updating guidance that has been issued by the attending physician, members, staff, and members of the press present in the hearing room are not required to wear a mask. For members participating remotely, your microphones will be turned—will be set on mute for the purpose of eliminating inadvertent background noise. Members participating remotely will need to unmute your microphone each time you wish to speak.

Please note that once you unmute your microphone, anything that is said in Webex will be heard over the loudspeakers in the committee room and subject to be heard by the livestream and also by C-SPAN. Given that members are participating from different locations at today’s hearing, all recognition of members such as for questions will be in order of subcommittee seniority. Documents for the record can be sent to Lino Pena-Martinez at the email address that we provided to all the staff. All documents will be entered into the record at the conclusion of—of the hearing. That said, the Chair will now recognize himself for 5 minutes for the purposes of an opening statement.

STATEMENT OF THE HON. BOBBY L. RUSH, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. RUSH. Again, good morning to each and all, everyone, all and all. Today’s subcommittee hearing is on modernizing our hydropower regulatory landscape. Historically, this has been an issue where members on both sides of the subcommittee and of our full committee that we found ways to work in unison. Four years ago, we all worked together on a package of bipartisan ideas to reform hydropower licensing.

And today, I look forward to hearing from our witnesses on how those proposals have turned out and what additional improvements might be necessary. Hydropower is a double-edged sword. It represents a wonderful source of zero-carbon electricity and pumped storage can be—can enable the employment of even more renewable resources on our grid. At the same time, we must seriously reckon with the impacts of hydropower generation on the rivers and the ecosystem that dams are built within and the fish and the plant life that depend upon those rivers.

In short, this is, indeed, a complicated issue, one deserving of this subcommittee’s attention. I do not want to recognize—I do want to recognize the extraordinary background for today’s hearing. For nearly four years, the hydropower industry has met together with the Indian tribes along with environmental communities in what is called the Uncommon Dialogue process to work in order to create a legal framework that is acceptable to all parties.

This is, indeed, unprecedented in the history of the hydroelectricity industry in this country. And I want to thank all

the stakeholders for their hard work over the years and for their unyielding commitment to the integrity of this process. Part of today's hearing is to examine this very network, this framework, taking seriously both its strength and where it needs improvements. Particularly of interest to me is the fact that this framework will finally recognize the sovereignty and the agency of the Native American tribes and allow these very tribes to advance and to advocate for themselves rather than operate under the outdated, antiquated colonial assumptions that the Department of the Interior sufficiently knows what is best for the tribal community when FERC-licensed projects coincide with tribal trust land.

It seems to me that any serious attempt to reform our hydro laws must codify the right of tribes to have a seat at the table when projects impact their lands. To do otherwise will—is unconscionable and absolutely not according to our noblest and highest standards. With that said, I'm looking forward to today's hearing and to a thoughtful discussion around needed reform to hydroelectric section and the pros and cons of the Uncommon Dialogue proposal.

[The prepared statement of Mr. Rush follows:]

PREPARED STATEMENT OF HON. BOBBY RUSH

Committee on Energy and Commerce

Opening Statement as Prepared for Delivery
of

Subcommittee on Energy Chairman Bobby L. Rush

Hearing on, "Modernizing Hydropower: Licensing and Reforms for a Clean Energy Future"

May 12, 2022

Good morning, everyone. Today's Subcommittee hearing is on modernizing our hydropower regulatory landscape.

Historically, this has been an issue where members on both sides of this Subcommittee and our full Committee have found ways to work together.

Four years ago, we worked together on a package of bipartisan ideas to reform hydropower licensing, and today I look forward to hearing from our witnesses on how those proposals have turned out, and what additional improvements might be necessary.

Hydropower is a double-edged sword. It represents a wonderful source of zero-carbon electricity, and pumped storage can enable the deployment of even more renewable resources on the grid.

At the same time, we must seriously reckon with the impacts of hydropower generation on the rivers and ecosystems that dams are built within, and the fish and plant life that depend on those rivers. In short — this is a complicated issue, one deserving of this Subcommittee's attention.

I do want to recognize the extraordinary background to today's hearing.

For nearly four years, the hydropower industry has met together with Indian Tribes, along with environmental communities, in the "Uncommon Dialogue" process to work to create a legal framework acceptable to all parties. This is unprecedented in the history of hydroelectricity in this country, and I want to thank all the stakeholders for their hard work and unyielding commitment.

Part of the purpose of today's hearing is to examine this framework — taking seriously both its strengths, and where it needs improvement.

Particularly of interest to me is the fact that this framework would finally recognize the sovereignty and agency of Native American Tribes, and allow them to advocate for themselves, rather than operate under the outdated colonial assumption that the Department of the Interior knows what is best for Tribal communities when FERC-licensed projects coincide with Tribal trust lands.

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It seems to me that any serious attempt to reform our hydro laws must codify the right of Tribes to have a seat at the table when projects impact their lands. To do otherwise would be unconscionable.

With that said, I am looking forward to today's hearing and to a thoughtful discussion around needed reforms to the hydroelectric sector, and the pros and cons of the Uncommon Dialogue proposal.

I now yield for five minutes to my friend and colleague, the Ranking Member from Michigan, Mr. Upton, to make an opening statement.

Mr. RUSH. I now yield for 5 minutes to my good friend and colleague, the ranking member from the great State of Michigan, Mr. Upton, for 5 minutes to make an opening statement.

**STATEMENT OF THE HON. FRED UPTON, A REPRESENTATIVE
IN CONGRESS FROM THE STATE OF MICHIGAN**

Mr. UPTON. Well, thank you, my friend, Mr. Chairman, and thanks to our witness as well. Some came all across the country for appearing before us today, so thanks for that. I do look forward to today's hearing to explore opportunities to improve the permitting process for hydropower. So important. It has been almost four years since this subcommittee held a hearing on FERC licensing reform, and a lot has happened since then.

Leader Rodgers' bill, the Hydropower Modernization Act of 2017, passed the House with strong bipartisan support. A number of Energy and Commerce hydro bills became law as part of the America's Water Infrastructure Act of 2018, including Dr. Bucshon and Mr. Griffith's bill to establish a two year licensing process, a shot clock for nonpowered dams and closed-loop pumped storage projects, Mr. Hudson's bill to expedite the approval for conduit hydropower.

These recent accomplishments are a testament to the importance of hydropower as part of our all-of-the-above approach to energy policy. I will remind everyone that Republicans are eager to get to work to conduct oversight of the laws that we passed in 2018, four years ago, and pick up where we left off, particularly with Leader Rodger's comprehensive hydropower reform legislation that passed the House.

The regulatory environment for hydro has become increasingly challenging. Licensing new hydropower facilities and relicensing existing facilities requires extensive consultation with multiple Federal, State, and local government entities. Sometimes, the process takes years, costs tens of millions of dollars.

While project developers can typically site and construct wind, solar, and natural gas generation in maybe two or three years or less, it sometimes might take a decade to relicense existing dams and more complex hydro projects. In many ways, licensing challenges are limiting hydropower's potential for sure. Hydro is among the cleanest, most reliable, most affordable energy sources in America, and we need to build on that. Hydro is a baseload power available anytime you need it, even when the sun isn't shining or the wind stops blowing.

Not many folks think of hydro as an emerging technology, but hydro is going to play an even bigger role in the next-generation grid. Conventional hydro and pumped storage hydro can help stabilize the grid to integrate weather-dependent and solar and, yes, batteries. Hydro can also provide that black start capability so that we can restart the grid in the event of a large-scale emergency power outage. According to DOE, hydro generation could expand by perhaps as much as 50 percent by 2050. But Congress has got to act.

Both the existing hydro fleet and the new hydro generation projects are at risk due to inefficient relicensing process and because some of the more radical environmental groups have be-

come—to advocate for the removal of dams. Hydro is also disadvantaged by State laws that fail to recognize the clean and renewable attributes of hydro and by the Federal tax code that favors wind, solar, and batteries.

If one thing is clear, antiquated FERC licensing process for hydro is a significant barrier to expanding hydro production. Congress has got to strengthen the lead agency role of FERC and hold coordinating agencies to strict timelines. Disputes need to be resolved quickly and decisively so that permits don't get held up in the courts for years.

This committee should start by conducting oversight of the 2-year licensing programs for pumped storage and nonpowered dams that we passed into law. Our understanding is that these programs have failed to meet the objectives that Congress laid out. And if it is true, we should think about ways to amend the programs to make them work. So I am pleased to see that there is broad interest in an expediting licensing program for hydro. I look forward to hearing from the supporters of the Uncommon Dialogue to understand how the reforms will, in fact, improve the process. But I would note that I have some concerns that the Uncommon Dialogue proposal might expand the environmental review with an oversight—oversized focus on climate change and mitigating past effects that could, in fact, occur decades ago when the original dam was constructed.

I also have some concerns with the Uncommon Dialogue's embracing of offsite environmental mitigation and dam removal, which can be a slippery slope. You know that. There are also questions about whether the expanded interagency and tribal consultation will, in fact, expedite the process or would it perhaps lead to additional litigation and delay. So Mr. Chairman, thanks for the hearing. I look forward to what could be a very strong bipartisan track on hydro. And with that, I yield back.

[The prepared statement of Mr. Upton follows:]

PREPARED STATEMENT OF HON. FRED UPTON

**Opening Statement of Republican Leader Fred Upton
Subcommittee on Energy “Modernizing Hydropower: Licensing and Reforms
for a Clean Energy Future”
May 12, 2021
*As Prepared for Delivery***

Thank you, Mr. Chairman. And thank you, to our witnesses, for appearing before us today to provide your testimony.

I look forward to today’s hearing to explore opportunities to improve the permitting process for hydropower facilities. It has been almost four years since the Subcommittee held a hearing on FERC licensing reform, and a lot has occurred since then. Leader Rodgers’ bill, the *Hydropower Modernization Act of 2017*, passed the House with strong bipartisan support. Several Energy and Commerce hydropower bills became law as part of the *America’s Water Infrastructure Act of 2018*, including Dr. Bucshon and Mr. Griffith’s bills to establish a 2-year licensing process for non-powered dams and closed-loop pumped storage projects, and Mr. Hudson’s bill to expedite the approval for conduit hydropower.

These recent accomplishments are a testament to the importance of hydropower as part of our “all-of-the-above” approach to energy policy. Republicans are eager to get to work to conduct oversight of the laws we passed in 2018 and pick up where we left off with Leader Rodger’s comprehensive hydropower reform legislation that passed the House.

The regulatory environment for hydropower has become increasingly challenging. Licensing new hydropower facilities and relicensing existing facilities requires extensive consultation with multiple Federal, State, and local government entities. The process takes years and costs tens of millions of dollars. While project developers can typically site and construct wind, solar, and natural gas generation in 2-3 years or less, it can sometimes take 10 years or longer to relicense existing dams and more complex hydropower projects. In many ways, licensing challenges are limiting hydropower's potential.

Hydropower is among the cleanest, most reliable, and most affordable energy sources in America. Hydropower is baseload power, available any time you need it – even when the sun is not shining, and the wind stops blowing.

Not many people think of hydropower as an emerging technology, but hydropower is going to play an even bigger role in the next generation grid. Conventional hydropower and pumped storage hydropower can help stabilize the grid to integrate weather-dependent wind and solar, and batteries. Hydropower can also provide “black-start” capabilities so we can restart the grid in the event of a large-scale emergency power outage.

According to the Department of Energy, hydropower generation could expand by an additional 50% by 2050; however, Congress must act. Both the

existing hydropower fleet and new hydro generation projects are at risk due to the inefficient relicensing process and because some of the more radical environmental groups have begun to advocate for the removal of dams. Hydropower is also disadvantaged by State laws that fail to recognize the clean and renewable attributes of hydro and by the Federal tax code that favors wind, solar, and batteries.

If one thing is clear, the antiquated FERC licensing process for hydro is a significant barrier to expanding hydropower production. Congress must strengthen the lead agency role of FERC and hold coordinating agencies to strict timelines. Disputes must be resolved quickly and decisively, so permits do not get held up in court for years.

This Committee should start by conducting oversight of the 2-year licensing programs for pumped-storage and non-powered dams that we passed into law. Our understanding is that these programs have failed to meet the objectives that Congress laid out – if this is true, we should think about ways to amend the programs.

I am pleased to see there is broad interest in an expedited licensing program for hydropower, and I look forward to hearing from the supporters of the Uncommon Dialogue to understand how the reforms will improve the process.

I have some concerns that the Uncommon Dialogue proposal will expand the environmental review with an oversized focus on climate change and mitigating past-effects that may have occurred decades ago when an original dam was constructed. I also have concerns with the Uncommon Dialogue's embracing of off-site environmental mitigation and dam removal, which can be a slippery slope. There are also questions about whether the expanded interagency and tribal consultations will expedite the process, or whether it could lead to additional litigation and delay.

Mr. Chairman, I want to thank you for calling today's hearing. I hope this is the start of what will continue our strong bipartisan track record on hydropower permitting reform.

Thank you, I yield back.

Mr. RUSH. The gentleman yields back.

The Chair now recognizes Mr. Pallone, the chairman of the full committee, for 5 minutes for his opening statement.

OPENING STATEMENT OF HON. FRANK PALLONE, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

Mr. PALLONE. Thank you. Thank you, Chairman. Today, the committee continues its work to move toward a clean energy future. Hydroelectric generation is one of the oldest sources of renewable energy, and it remains a reliable source of carbon-free power and grid stability. Those important benefits, however, can also come with a very high cost. Hydroelectric works and dams can cause significant environmental impacts, interfere with the use of tribal lands, and decimate fish and wildlife.

So we must find a balanced approach to hydropower development and modernization while still protecting fish and wildlife populations, water quality, recreational activities, and the role of tribal nations. So last year, hydropower produced more than six percent of the Nation's electricity. Several states, including Washington, Oregon, New York, and California, particularly rely on hydropower both to keep the lights on and to maintain grid reliability.

And as a carbon-free resource, hydropower also plays an instrumental role in combating the climate crisis. Despite its current role in our energy mix, many hydropower projects are nearing the end of their 50-year licenses. The industry has claimed that the ability to license new hydropower projects or to relicense existing projects has become too onerous. According to hydropower development proponents, hydroelectric generation has the potential to provide an additional 50 gigawatts of carbon-free power, including through the establishment of facilities on nonpowered dams.

But the proponents say this is only possible if Congress reforms the Federal Power Act's licensing framework. On the other hand, environmental groups, recreation enthusiasts and tribal nations have long maintained that the Federal Power Act's protection for fish and wildlife, recreational opportunities, and tribal interests are essential to ensuring the thoughtful licensing and relicensing of hydropower projects.

And weakening those protections could put fish, wildlife, and the \$375 billion outdoor recreation economy at risk. So given these competing interests, I commend the Uncommon Dialogue stakeholders comprised of participants from the hydropower industry, environmental groups, and tribes for their truly unprecedented and historic effort to bridge long-standing divides and reach an agreement on reforms to the Federal Power Act's hydropower licensing process.

I am particularly pleased by the provisions that remove outdated paternalistic barriers to tribal nations, acting directly as the conditioning authority for hydropower projects located on tribal lands. This is a much-needed acknowledgment of tribal sovereignty that I hope we can all support.

Yet while I applaud these efforts, I am concerned that the Uncommon Dialogue agreement proposes to significantly rewrite several seminal resource protection provisions within the Federal

Power Act and the decades of case law associated with them. Specifically, I am concerned about the proposal for Sections 4(e) and 18. Those two provisions, along with other long-standing pieces of law the proposal seeks to change, have successfully mitigated damage to and enhanced the value of fish, wildlife habitat, recreation, cultural resources, and flood control for decades.

And so we should only alter them with the greatest of care and caution. That said, we can't ignore the important role hydropower needs to play in a net zero carbon future. And so we must find a way forward together, something that I think members on both sides of the aisle have a strong interest in doing. So with that in mind, I welcome the signatories to the Uncommon Dialogue proposal who are testifying, as well as the other witnesses here today. I look forward to hearing all of your thoughts on the State of the hydropower industry, the current licensing regime, and the Uncommon Dialogue's proposed reforms. I hope this stream will help us determine whether the Uncommon Dialogue's approach achieves the right balance between development and conservation is necessary to serve as a basis for eventual bipartisan consensus legislation to modernize the licensing process.

And with that, I yield back the balance of my time, Mr. Chairman.

[The prepared statement of Mr. Pallone follows:]

PREPARED STATEMENT OF HON. FRANK PALLONE JR.

Committee on Energy and Commerce

Opening Statement as Prepared for Delivery
of
Chairman Frank Pallone, Jr.

Hearing on, "Modernizing Hydropower: Licensing and Reforms for a Clean Energy Future"

May 12, 2022

Today the Committee continues its work to move towards a clean energy future. Hydroelectric generation is one of the oldest sources of renewable energy, and it remains a reliable source of carbon-free power and grid stability.

Those important benefits, however, can also come with a very high cost. Hydroelectric works and dams can cause significant environmental impacts, interfere with the use of Tribal lands, and decimate fish and wildlife. So we must find a balanced approach to hydropower development and modernization, while still protecting fish and wildlife populations, water quality, recreational activities, and the role of Tribal nations.

Last year, hydropower produced more than six percent of the nation's electricity. Several states, including Washington, Oregon, New York, and California, particularly rely on hydropower both to keep the lights on and to maintain grid reliability. As a carbon-free resource, hydropower also plays an instrumental role in combatting the climate crisis.

Despite its current role in our energy mix, many hydropower projects are nearing the end of their 50-year licenses. The industry has claimed that the ability to license new hydropower projects, or to relicense existing projects, has become too onerous. According to hydropower development proponents, hydroelectric generation has the potential to provide an additional 50 gigawatts of carbon-free power, including through the establishment of facilities on non-powered dams. But the proponents say this is only possible if Congress reforms the Federal Power Act's licensing framework.

On the other hand, environmental groups, recreation enthusiasts, and Tribal nations have long maintained that the Federal Power Act's protections for fish and wildlife, recreational opportunities, and Tribal interests are essential to ensuring the thoughtful licensing and relicensing of hydropower projects. Weakening those protections could put fish, wildlife, and the \$375 billion outdoor recreation economy at risk.

Given these competing interests, I commend the Uncommon Dialogue stakeholders – comprised of participants from the hydropower industry, environmental groups, and Tribes – for their truly unprecedented and historic effort to bridge long-standing divides and reach an agreement on reforms to the Federal Power Act's hydropower licensing process.

I am particularly pleased by the provisions that remove outdated, paternalistic barriers to Tribal nations acting directly as the conditioning authority for hydropower projects located on

May 12, 2022

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Tribal lands. This is a much-needed acknowledgement of Tribal sovereignty that I hope we can all support.

Yet, while I applaud these efforts, I am concerned that the Uncommon Dialogue agreement proposes to significantly rewrite several seminal resource protection provisions within the Federal Power Act, and the decades of case law associated with them. Specifically, I am concerned about the proposals for sections 4(e) and 18. Those two provisions, along with other longstanding pieces of law the proposal seeks to change, have successfully mitigated damage to and enhanced the value of fish, wildlife, habitat, recreation, cultural resources, and flood control for decades. We should only alter them with the greatest of care and caution.

That said, we cannot ignore the important role hydropower needs to play in a net-zero carbon future, and so we must find a way forward together – something that I think Members on both sides of the aisle have a strong interest in doing.

So, with that in mind, I welcome the signatories to the Uncommon Dialogue proposal who are testifying, as well as the other witnesses here today. I look forward to hearing all of your thoughts on the state of the hydropower industry, the current licensing regime, and the Uncommon Dialogue's proposed reforms. I hope this hearing will help us determine whether the Uncommon Dialogue's approach achieves the right balance between development and conservation necessary to serve as the basis for eventual bipartisan, consensus legislation to modernize the licensing process.

Mr. RUSH. The gentleman yields back.

The Chair now recognizes Mrs. McMorris Rodgers, the ranking member of the full committee, for 5 minutes for the purposes of her opening statement.

**OPENING STATEMENT OF HON. CATHY McMORRIS RODGERS,
A REPRESENTATIVE IN CONGRESS FROM THE STATE OF
WASHINGTON**

Mrs. RODGERS. Thank you, Mr. Chairman. In the Pacific Northwest, we are blessed with abundant, affordable, and clean hydropower—hydroelectric power. Hydropower has served our industrial backbone in Washington State for over 80 years and now promises to serve an innovative future, ensuring a reliable, secure energy system for many decades to come.

I have heard from companies like Diamond Foundry and Zilla, who are locating their facilities in Washington State. And a big reason why is our affordable, reliable hydropower. This is all possible because, unlike weather-dependent wind and solar sources, hydropower provides the firm and dispatchable energy that is vital for reliable and resilient electric supply.

At present, hydropower generation accounts for over six percent of U.S. electricity, almost 40 percent of our Nation's reliable renewable generation. A Department of Energy report found that U.S. hydropower production could increase 50 percent above current levels by 2050 from upgrading existing hydropower facilities and adding generation capacity to nonpowered dams. Only three percent of the 90,000 dams in the United States produce electricity. There is great potential for new hydropower generation. Yet we must confront challenges. For example, many Federal dams in my State and around the country have been in service for decades, and while they can operate safely for many years to come, some are calling for dam removal. Communities with critical energy resources like the Lower Snake River Dams operated by the Army Corps of Engineers face calls to dismantle these clean energy sources for the sake of agendas that fail to prioritize reliable delivery of power for people.

When these agendas undermine affordable, reliable delivery of energy and power, serious harms to public health and safety can follow. The first step involves continued committee oversight and work to update the licensing and relicensing process overseen by the Federal Energy Regulatory Commission under the Federal Power Act. FERC regulates nonFederal hydropower projects, which include about 2500 dams and account for one half of hydropower generation in the Nation.

Previous work by Energy and Commerce led to the enactment of some bipartisan reforms into law in 2018. These included provisions to modernize hydropower development and existing nonpowered dams and to expedite licensing for pumped storage and other innovative technologies. More work is needed.

The licensing process for traditional hydropower continues to take considerable time and expense. A recent DOE report found it takes, on average, five years to obtain an original license, 7.6 years for relicensing. And some complex projects can take more than a decade. At the same time, the number of existing hydropower

projects that will require Federal relicensing is set to double in the next decade.

In 2017, the House came together, and we passed legislation that I led to improve the process with strong bipartisan support. And while we made good progress in the Senate, we didn't get across the finish line. We should conduct oversight of recent reforms and continue to work to strengthen licensing and remove unnecessary barriers to hydropower technologies.

My updated Hydropower Clean Energy Future Act, H.R. 1588, provides the path to continued reforms, and I look forward to working with my colleagues to advance this through committee. In the meantime, any discussion of licensing reform is a step in the right direction. So I welcome today's hearing to review the Uncommon Dialogue proposal and applaud the participants' desire to work on hydropower relicensing reforms. I do believe it's important that we take a deliberate approach. The Uncommon Dialogue proposal includes new requirements for climate modeling, expanded environmental reviews, embracing offsite environmental mitigation and dam removal. It includes changes in the statutory relationship with far-reaching implications between the Department of the Interior and the tribes concerning mandatory conditions for licensing. It includes new licensing terms, which have broad—may have broad, unintended impacts across all types of infrastructure, permitting and spurn more litigation.

We need to hear from FERC and the resource agencies to understand the impact of these proposals. We, in Congress, must be careful not to attempt to fix problems by layering more bureaucracy or encouraging more lawsuits. I welcome all of the witnesses here today. I'm especially happy that Rich Wallen from Washington State is here testifying on behalf of Grant County Public Utility District. Thank you. I yield back.

[The prepared statement of Mrs. Rodgers follows:]

PREPARED STATEMENT OF HON. CATHY McMORRIS RODGERS

Republican Leader Cathy McMorris Rodgers
Hearing on “Modernizing Hydropower:
Licensing and Reforms for a Clean Energy Future”
May 12, 2022
As Prepared for Delivery

HYDROPOWER IS VITAL FOR A SECURE ENERGY FUTURE

In the Pacific Northwest, we are blessed with abundant, affordable, and clean hydroelectric power.

Hydropower has served our industrial backbone in Washington state for 80 years and now promises to serve an innovative future.....ensuring a reliable, secure energy system for many decades to come.

I have heard from companies like Diamond Foundry and Sila, who are locating their facilities in Washington state – and a big reason why is our affordable, reliable hydropower.

This is all possible because unlike weather-dependent wind and solar sources, hydropower provides the firm and dispatchable energy that is vital for a reliable, resilient electric supply.

UNDERUTILIZED POTENTIAL OF HYDROPOWER

At present, [hydropower generation accounts](#) for over 6% of U.S. electricity generation, and almost 40% of the nation's renewable generation.

A Department of Energy report found that U.S. hydropower production could increase 50 percent above current levels by

2050 from upgrading existing hydropower facilities and adding generation capacity to non-powered dams. Only 3 percent of the 90,000 dams in the United States produce electricity.

There is great potential for new hydropower generation.

THREATS TO HYDROPOWER FROM RADICAL AGENDAS

Yet we must confront challenges. For example, many federal dams in my state and around the country have been in service for decades, and while they can safely operate for many years to come, radical environmental activists are calling for dam removal.

Communities with critical energy resources, like the Lower Snake River Dams operated by the Army Corps of Engineers, face calls to dismantle these clean energy sources for the sake of agendas that fail to prioritize reliable delivery of power for people.

When these agendas undermine affordable, reliable delivery of energy and power, serious harms to public health and safety can follow.

UPDATE AND STRENGTHEN HYDROPOWER LICENSING

The first step involves continued Committee oversight and work to update the licensing and relicensing process overseen by the Federal Energy Regulatory Commission, under the Federal Power Act.

FERC regulates non-federal hydropower projects, which include about 2,500 dams and account for about one half the hydropower generation in the nation.

Previous work by Energy and Commerce led to the enactment of some bipartisan reforms into law in 2018.

These included provisions to modernize hydropower development at existing nonpowered dams and to expedite licensing for pumped storage and other innovative technologies.

More work is needed. The licensing process for traditional hydropower continues to take considerable time and expense.

A recent DOE report found it takes an average of 5 years to obtain an original license, 7.6 years for relicensing, and some complex projects can take more than a decade.

At the same time, the number of existing hydropower projects that will require Federal relicensing is set to double in the coming decade.

ADVANCE COMMITTEE'S BIPARTISAN RECORD OF REFORMS

In 2017, the House came together and passed [my legislation](#) to improve the process with strong bipartisan support. While we made good progress with the Senate, we didn't get it across the finish line.

We should conduct oversight of recent reforms and continue our work to strengthen licensing and remove unnecessary barriers to hydropower technologies.

My updated Hydropower Clean Energy Future Act ([HR 1588](#)) provides the path to continued reforms and I look forward to working with my colleagues to advance this through Committee.

In the meantime, any discussion of licensing reform is a step in the right direction, so I welcome today's hearing to review the Uncommon Dialogue proposal...

... and applaud the participants' desire to work on hydropower licensing reforms.

However, we should proceed carefully, deliberately.

The Uncommon Dialogue proposal includes new requirements for climate modeling, expanded environmental reviews, embracing off-site environmental mitigation, and dam removal.

It includes changes in the statutory relationship, with far reaching implications, between the Department of the Interior and the Tribes concerning mandatory conditions for licensing.

It includes new licensing terms which could have broad unintended impacts across all types of infrastructure permitting and spurn litigation.

We need to hear from FERC and the resource agencies, to understand the impacts of these proposals.

We in Congress must be careful not to attempt to fix problems by layering on more bureaucracy or by encouraging more lawsuits.

I would like to welcome our witnesses. I'm particularly happy to have Rich Wallen from Washington state, testifying on behalf of the Grant Public Utility District.

Thank you, and I yield back.

Mr. RUSH. The gentlelady yields back. The chair would now like to remind all the members of the subcommittee that pursuant to committee rules, all members' written opening statement shall be made part of the record. Now it is time for me to welcome, officially, our witnesses for today's hearing. They are, from my left, Mr. Malcolm Woolf, who is the president and chief executive officer of the National Hydropower Association.

Next is Mr. Tom Kiernan—I think that's right—the chief executive officer of the American Rivers. Next is Ms. Mary Pavel. She is a partner in—at Sonosky, Chambers, Sachse, Endreson & Perry, LLC. Welcome. Next with me, Mr. Richard Wallen. He's a general manager and chief executive officer of the Grant County Public Utility Commission.

And finally, there is Mr. Chris Wood, who is the president and the CEO of the Trout Unlimited. I want to thank each and every one of you for joining us today. And we certainly look forward to your expert testimony. At this time, I would like to recognize each witness for 5 minutes to provide your opening statement.

But before we begin, I would like to explain the lighting system. In front of each of you is a series of lights. And the light will initially be green. Then the lights will turn yellow when you have one minute remaining for your testimony. And if you would, at that time, begin to wrap up your testimony, that would be important. The light will turn red when your time expires. And we ask you to bring your comments to a halt.

So that said, Mr. Woolf, welcome again, and you are recognized for 5 minutes for the purposes of an opening statement.

STATEMENT OF MALCOLM WOOLF, PRESIDENT AND CHIEF EXECUTIVE OFFICER, NATIONAL HYDROPOWER ASSOCIATION; TOM KIERNAN, CHIEF EXECUTIVE OFFICER, AMERICAN RIVERS; MARY PAVEL, PARTNER, SONOSKY, CHAMBERS, SACHSE, ENDRESON & PERRY LLC; RICHARD WALLEN, GENERAL MANAGER AND CHIEF EXECUTIVE OFFICER, GRANT COUNTY PUBLIC UTILITY DISTRICT; AND CHRIS WOOD, PRESIDENT AND CHIEF EXECUTIVE OFFICER, TROUT UNLIMITED

STATEMENT OF MALCOLM WOOLF

Mr. WOOLF. Thank you, Mr. Chairman. On behalf of the National Hydropower Association, I am pleased to be here today in support of an unprecedented joint hydropower license reform package. This is a unique moment for at least two reasons. First, never before has a representative of the hydropower industry testified in support of the same hydropower license package with representatives of American Rivers and the Skokomish Nation.

Second, our Nation is at the crest of a new wave of hydropower licensing and license surrenders. Roughly 30 percent of the non-Federal fleet is up for relicensing by 2030. That number soars to 45 percent by 2035. With relicensing taking 7.6 years on average and often lasting more than a decade, the need for hydropower license reform has never been more urgent.

There are lots of issues on which me and my colleagues disagree. Yet on this issue, our respective caucuses have been able to build

a holistic integrated license reform package that has broad stakeholder support. Our hope is that Congress can take action on such a package this year. This committee has a great track record of working on hydropower license reform in a bipartisan way, most recently, the Hydropower Regulatory Efficiency Act championed by Ranking Member McMorris Rodgers and Representative DeGette and the provisions in the 2018 American Water Infrastructure Act championed by Representative Griffith and Bucshon.

Our joint legislative proposal builds on these efforts while accomplishing many of the items set forth in H.R. 1588, the Hydropower Clean Energy Future Act introduced by Ranking Member McMorris Rodgers, which NHA continues to support. Our joint license reform proposal is the result of several years of discussion through Stanford's Uncommon Dialogue process. NHA believes that this historic proposal will meaningfully improve the hydropower licensing and relicensing process while preserving important environmental safeguards and respecting the rights of tribal nations.

Let me share three takeaways. First, hydropower is an essential part of a reliable clean energy grid. Hydropower currently provides over six percent of U.S. electricity generation, providing reliable baseload renewable power to an estimated 30 million Americans. In addition, pumped storage hydropower provides dispatchable long-duration energy storage, representing 94 percent of all energy storage in the Nation. Together, the waterpower industry provides 68,000 good-paying jobs around the country.

As a flexible renewable energy resource, hydropower serves as a force multiplier, balancing variable wind and solar so the lights stay on when the sun goes down and the wind is still. In addition, hydropower plays an often-overlooked role in enhancing system reliability and resilience, providing, for example, 40 percent of the Nation's black start capability, which is vital in enabling the grid to restart in the event of a blackout.

Second, new and existing hydropower is at risk due, in part, to the Byzantine licensing and relicensing system. As noted earlier, we are at the crest of a wave of hydropower licensing. At the same time, relicensing takes 7.6 years to complete on average and often takes much longer than a decade. The paperwork costs associated with relicensing typically exceed \$10 million with facility upgrades requiring many millions more.

Relicensing an existing facility takes longer than relicensing a nuclear power plant. As a result, a recent industry survey found that more than 40 percent of hydro owners were actively considering decommissioning a facility. Alarming, 58 percent of facilities have submitted license surrender applications to FERC since 2010, including 17 in just the last two years, which brings me to my final takeaway.

Reform of the licensing process is urgently needed. The joint license reform package offers many benefits to the hydro industry, including clarifying mandatory conditioning authority, expedited licensing for nonpowered dams in closed-loop or off stream pumped storage and improved coordination between the various agencies. NHA supports the joint license reform package to advance the renewable energy benefits and storage benefits of hydro power, the environmental and economic benefits of healthy rivers, and the sov-

ereignty of tribal nations. We look forward to collaborating with the committee to enact this proposal this Congress and appreciate your convening today's hearing.

[The prepared statement of Mr. Woolf follows:]

**Testimony of Malcolm Woolf
President and CEO of the National Hydropower Association**

**“Modernizing Hydropower: Licensing and Reforms for a Clean Energy Future”
Energy Subcommittee of the House Energy and Commerce Committee**

May 12, 2022

Introduction

Thank you, Chairman Rush and Ranking Member Upton, as well as Chairman Pallone and Ranking Member McMorris Rodgers, for hosting today’s Energy Subcommittee hearing on hydropower licensing reform. I hope we can use today’s hearing to build consensus on a prudent path forward to improve hydropower licensing in the United States.

I am Malcolm Woolf, President and CEO of the National Hydropower Association. NHA is the national non-profit trade association dedicated to advancing the interests of the U.S. hydropower industry, including conventional, pumped storage, and new marine energy technologies. NHA’s membership consists of more than 250 organizations, including consumer-owned utilities, investor-owned utilities, independent power producers, equipment manufacturers, and environmental, engineering, and other service providers. Our vision is for waterpower, in all its forms, to be valued as America’s premier carbon-free, renewable energy resource, be a growing source of green-energy jobs, and help achieve a reliable, sustainable, and clean electricity system in North America.

NHA is pleased to support this unprecedented Joint Hydropower License Reform package. The legislative proposal is the result of several years of discussion through the Stanford Woods Institute “Uncommon Dialogue” process to advance the renewable energy benefits of hydropower and the environmental and economic benefits of healthy rivers. Working with river conservation organizations and Tribal communities, we have reached a historic Joint Proposal, one that promises to improve the hydropower licensing, relicensing, and license surrender process while preserving important environmental safeguards and restoring self-determination for Tribal Nations. While we will continue to challenge each other on other issues, we have come together to support this landmark Package.

Congressional action on license reform is urgently needed for several reasons. As discussed briefly below:

- Hydropower is an essential part of a reliable, clean energy grid;
- Both the existing hydropower fleet and new clean energy generation is at risk due, in part, to the byzantine licensing and relicensing process; and
- The proposed legislative reforms represent an integrated, holistic proposal that creates common ground among industry, tribal and environmental interests to preserve and enhance the hydropower fleet, while ensuring that the rights of Tribal Nations are respected, and environmental concerns are addressed.

Hydropower is an Essential Part of a Reliable, Clean Energy Grid

Since the Appleton Edison Light Company began operating in Wisconsin in 1882, hydropower has provided emission-free electricity and helped to power America's economic prosperity. Through a continued commitment to robust environmental and technological advancements, hydropower is uniquely positioned to provide dispatchable renewable electricity and energy storage capacity, offer essential grid reliability services, and further enable the integration of variable wind and solar to accelerate the transition to a twenty-first century clean energy grid.

Today, traditional hydropower provides over 80 GW of electricity capacity in the United States, roughly 7% of electricity generation.¹ Pumped storage hydropower provides another 22 GW of dispatchable, long-duration energy storage, representing 94% of all energy storage currently in the U.S.² In addition to generating power around the country, hydropower and pumped storage are job creators. Today the waterpower industry provides 68,000 good-paying jobs around the country.³

Hydropower also plays a critical role in our electric system as a flexible, adaptable renewable resource that enables more wind, solar, and other variable renewables on the grid. When the sun goes down or the wind isn't blowing, hydropower and pumped storage rush in to fill the gaps and balance the grid in seconds. For example, in the Spring of 2020, when a nuclear

¹ U.S. Department of Energy, *U.S. Hydropower Market Report*, Jan. 2021, at p. iv, available at www.energy.gov/eere/water/hydropower-market-reports

² NHA's 2021 Pumped Storage Report, Sept. 22, 2021, at p. 4, available at www.hydro.org/news/nha-unveils-new-2021-u-s-pumped-storage-hydropower-report

³ 2021 U.S. Energy Employment Report, p. 83, available at www.energy.gov/us-energy-employment-jobs-report-useer

unit tripped offline in New England, the lights in Boston didn't flicker because the Northfield Mountain and Bear Swamp pumped storage stations immediately provided 1,700 MWs of backup. Hydropower's flexibility allows it to serve as a force multiplier. We can incorporate more variable energy resources, like wind and solar, on the grid because hydropower can produce electricity when variable resources go offline.

Significantly, hydropower also plays an often-overlooked role in enhancing grid reliability. For example, although hydropower provides 7% of overall U.S. electricity generation, it provides nearly half (40%) of the nation's "black start" capability,⁴ which is vital in enabling the grid to re-start (such as the 2003 Northeast blackout).⁵ Additionally, hydropower is roughly 15% of installed capacity in California but can provide up to 60% of spinning reserves, a service that ensures that generation drops do not disrupt the

FIGURE 3: RESOURCE CAPABILITIES TO PROVIDE VARIOUS GRID SERVICES

Product	Nuclear	Run-of-River Hydro	Pondage Hydro	Pumped Storage	Coal	Combined Cycle	Combustion Turbine	Wind	Solar	Battery Storage	Renewable Resources	Energy Efficiency
Day-Ahead Energy	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Real-Time Energy	○	✓	✓	✓	✓	✓	○	✓	✓	○	○	○
Clean Energy	✓	✓	✓	○	✗	○	○	✓	✓	○	○	✓
Regulation	✗	○	✓	✓	✓	✓	○	○	○	✓	○	✗
Spinning Reserves	✗	○	✓	✓	✓	✓	✓	✗	✗	✓	○	✗
Non-Spinning Reserves	✗	✗	✓	✓	✗	✓	✓	✗	✗	✓	○	✗
Load-following	○	○	✓	✓	○	✓	✓	○	○	✓	○	✗
Reactive Power	✓	✓	✓	✓	○	✓	✓	○	○	✓	✗	✗
Black Start	✗	✓	✓	✓	○	✓	✓	✗	✗	○	✗	✗
Resource Adequacy	✓	✓	✓	✓	✓	✓	✓	○	○	○	✓	✓

Technical Capability to Provide Product

✓ Well-Suited

○ Neutral

✗ Poorly-Suited

reliability of the grid (which was particularly crucial during the August 2020 blackouts).⁶ The chart from a recent Brattle Group report highlights hydropower's unique ability to provide black

⁴ Black start is the process of restoring a power station to operation without relying on the external electric power transmission network. In blackout conditions, when external power is unavailable.

⁵ U.S. Department of Energy, *U.S. Hydropower Market Report*, Jan. 2021, at p. 19, available at www.energy.gov/eere/water/hydropower-market-reports

⁶ U.S. Hydropower Value Study: Current Status and Future Opportunities, January 2021 at 19, available at <https://www.energy.gov/sites/default/files/2021/01/f82/hydropower-value-study-v2.pdf>

start capability, frequency response,⁷ spinning reserves,⁸ and other essential grid reliability services.⁹

The importance of these reliability services provided by hydropower should not be underestimated. As the chart above demonstrates, hydropower is the only form of renewable energy that provides the full suite of ancillary services which help ensure consumers can keep the lights on.¹⁰ If hydropower disappears, our electric system will be forced to rely on carbon-based forms of energy generation for these reliability services. The decisions legislators make today about whether to create a licensing framework that preserves and promotes hydropower generation will determine whether we can transition to a reliable, clean energy system in the future.

Both the Existing Hydropower Fleet and New Clean Energy Generation are at Risk Due, In Part, to the Byzantine Licensing and Relicensing System

1) Today's inefficient relicensing process threatens the continued operation of the existing fleet.

281 facilities, representing 13.8 GWs of hydropower and pumped storage facilities, are set to have their licenses expire by 2030.¹¹ This represents a “doubling of FERC relicensing

⁷ Frequency response is the ability of generation to increase and decrease output to maintain the frequency necessary for the electric system to function.

⁸ Spinning reserves are rapidly-available capacity available in generating units that are operating at less than their capacity. When there is a sudden generation disruption, resources with spinning reserves can increase energy generation to prevent loadshedding.

⁹ The Brattle Group, *Leveraging Flexible Hydropower in Wholesale Markets, Principles for Maximizing Hydro's Value*, April 2021, available at www.hydro.org/wp-content/uploads/2021/04/Leveraging-Flexible-Hydro-in-Wholesale-Markets.pdf

¹⁰ For more information on ancillary services. See generally, <https://greeningthegrid.org/integration-in-depth/ancillary-services>.

¹¹ U.S. Department of Energy, *U.S. Hydropower Market Report*, Jan. 2021, at p.39, available at www.energy.gov/eere/water/hydropower-market-reports

activity” over the eight years.¹² Together, these 281 facilities represent about 30% of the roughly 1,000 active FERC hydropower licenses.¹³ By 2035, this number soars even higher to 45%.¹⁴

The uncertainties surrounding the cost, duration, and outcome of the relicensing process threaten the existing hydropower fleet. According to a U.S. DOE study, relicensing takes, on average, 7.6 years to complete,¹⁵ with relicensing for many facilities lasting over a decade. Surprisingly, relicensing an existing hydropower facility takes longer than relicensing a nuclear power plant.¹⁶

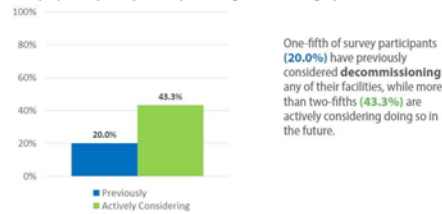
The process paperwork associated with relicensing is also expensive. Projects of greater than 10 MW report licensing costs exceeding \$1 million. Projects more than 100 MW reporting costs around \$10 million or more.¹⁷ In addition to the paperwork, relicensing typically requires physical construction, including modernization of recreational facilities and environmental improvements, such as the installation of new fish passage, or the replacement of expensive equipment to improve environmental performance.¹⁸

Regulatory uncertainty created by our existing hydropower licensing process – a byproduct of choices made by Congress – is pushing existing hydropower operators to consider retiring their assets. More than two-fifths (43.3%) of hydropower industry asset owners said that they were “actively considering” decommissioning a facility in

Decommissioning

Question:

“Have you previously, or are you actively considering, decommissioning any facilities?”



¹² Id. at p. v.

¹³ U.S. Federal Energy Regulatory Commission (FERC), *Hydropower Primer: A Handbook of Hydropower Basics*, available at www.ferc.gov/sites/default/files/2020-05/hydropower-primer.pdf

¹⁴ U.S. Federal Energy Regulatory Commission (FERC), Complete List of Active Licenses. Updated 04-14-2022 [https://ferc.gov/sites/default/files/2022-04/ActiveLicense_4.14.2022.xlsx]

¹⁵ U.S. DOE National Renewable Energy Laboratory (NREL), *An Examination of the Hydropower Licensing and Federal Authorization Process*, at p. xiii, available at www.nrel.gov/docs/fy22osti/79242.pdf

¹⁶ Id. at p. xiii compared to U.S. Nuclear Regulatory Commission, Backgrounder on Reactor License Renewal, aiming to complete license renewal decisions within 18 month from receipt of application, available at www.nrc.gov/reading-rm/doc-collections/fact-sheets/fs-reactor-license-renewal.html

¹⁷ Id. at p. 66.

¹⁸ U.S. Department of Energy, *U.S. Hydropower Market Report*, Jan. 2021, at p. 6.

a recent industry survey, up from 20% only a few years ago.¹⁹

Inefficiencies in the hydropower licensing process have already taken a toll on the existing fleet. 41 facilities submitted license surrender applications to FERC from 2010 to 2019.²⁰ The Intergovernmental Panel on Climate Change (IPCC) recently made clear that global greenhouse emissions need to peak before 2025 at the latest if we want to limit global warming to 1.5 degrees Celsius.²¹ At a time when we need to dramatically expand clean energy generation, it makes no sense to perpetuate a regulatory system that pushes clean energy offline.

2) The antiquated licensing process is also a significant barrier to new clean energy generation.

A 2012 Department of Energy report found that the top 100 non-powered dams (81% of which are Army Corps of Engineer facilities) could contribute approximately 8 GW of clean, reliable hydropower.²² Yet a decade later, only a handful of these prime sites for new hydropower have been developed. Similarly, there are 90 proposed pumped storage facilities in the development pipeline. Many of the challenges outlined above related to hydropower relicensing are also a barrier to licensing new projects. Regulatory uncertainties surrounding time, costs, and outcomes push developers away from retrofitting existing dams with hydropower production or building new pumped storage facilities. What this means is federal policies are preventing private developers from creating new, much needed sources of clean electricity generation and energy storage.

The Proposed Legislative Reforms Represent an Integrated, Holistic Proposal that Creates Common Ground Among Industry, Tribal and Environmental Interests Package to Preserve and Enhance the Hydropower Fleet, While Ensuring that Environmental Concerns are Addressed and the Rights of Tribal Nations are Respected.

¹⁹ Hydropower Foundation, Ontario Waterpower Association, and Kleinschmidt, *Ear to the Water industry survey*, Oct. 2021, available at <https://info.kleinschmidtgroup.com/ear-to-the-river-results>, at p.20.

²⁰ U.S. Department of Energy, *U.S. Hydropower Market Report*, Jan. 2021, at p. 5.

²¹ Press Release, IPCC, The evidence is clear: the time for action is now. (April 4, 2022) <https://www.ipcc.ch/2022/04/04/ipcc-ar6-wgiii-pressrelease/>

²² U.S. DOE, Oak Ridge National Labs, *An Assessment of Energy Potential at Non-Powered Dams in the United States*, April 2012, at viii, available at www.osti.gov/biblio/1039957-assessment-energy-potential-non-powered-dams-united-states

The proposed licensing reform package will help ensure the long-term viability of the hydropower industry by reducing administrative uncertainty and red tape in the hydropower licensing process. The NHA supports the entire proposal, which was the product of a careful compromise. We look forward to collaborating with the Committee to advance the legislative proposal.

I would like to take this opportunity to highlight a few provisions that are particularly important for the hydropower industry:

1) Clarifying the scope of conditioning authority under the Federal Power Act will reduce uncertainty and litigation during licensing and relicensing.

The proposed legislative package would require that mandatory conditions imposed on a hydropower facility be reasonably related to the project's effects. The hydropower industry recognizes that dams can change and affect the river ecosystems they are part of and welcomes the opportunity to mitigate these effects. It is also proud of its environmental stewardship, as hydropower licensing often involves significant environmental enhancement. Hydropower facilities also contribute to local communities by providing clean, reliable electricity, adding to the job and tax base, and creating parks, trails, and other recreational opportunities such as fishing and boating at local reservoirs.

In NHA's experience, hydropower licensing and relicensing efforts can get bogged down by trying to determine the scope of federal and state agencies' existing authority to impose conditions on hydropower facilities. Clarifying that conditions must be reasonably related to the effects of a hydropower project will help focus the licensing process, reduce litigation, and avoid unnecessary delays. At the same time, this proposal ensures that the appropriate governmental authorities retain authority to impose conditions that are reasonably related to the hydropower project's effects and the ability to mitigate effects, if any, on the surrounding environment. This provision is a step forward for all parties in licensing.

2) Two-year expedited licensing is appropriate when seeking to add renewable generation at existing, qualifying non-powered dams.

The DOE Oak Ridge National Laboratory report referenced above estimated that – in total – adding generation to existing non-powered dams could unlock 12 GW of new clean

energy generation.²³ Almost all the nation's 90,000 dams were built for flood control, water storage, irrigation, navigation, or recreation. Less than 3% of these multi-purpose dams (roughly 2,200) are also used to generate emissions-free electricity. Better utilization of the nation's existing non-powered dams can accelerate the transition to a clean electricity grid, while simultaneously improving environmental outcomes. Unfortunately, it takes nearly five years on average to license a non-powered dam with hydropower production,²⁴ with some projects nearly twice that length.

In the 2018 *America's Water Infrastructure Act* (AWIA), Congress attempted to create a two-year process to retrofit non-powered dams with hydropower generation. However, in the four years since this new process was created, only one project developer has applied to use the provision and was

found to be ineligible. The two-year framework from AWIA is not working because it did not include pre-licensing activities (those process milestones and consultation requirements that must occur before a developer may file a license application and constitute a major portion of the licensing process). As a result, project developers who examined it have concluded that the

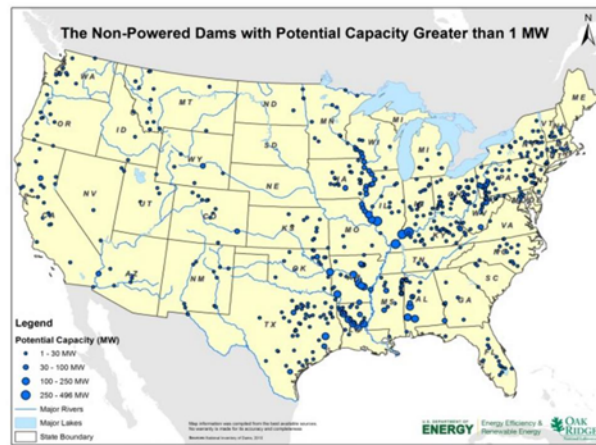


Figure ES-1: Locations of the top non-powered dams with potential hydropower capacities greater than 1 MW

²³ U.S. DOE, Oak Ridge National Labs, *An Assessment of Energy Potential at Non-Powered Dams in the United States*, April 2012, at viii, available at www.osti.gov/biblio/1039957-assessment-energy-potential-non-powered-dams-united-states. A subsequent 2016 DOE Waterpower Technology Office study was more conservative, estimating 4.8 GW potential at nonpower dams by 2050. See U.S. Department of Energy, Waterpower Technology Office, *Hydropower Vision: A New Chapter for America's First Renewable Electricity Resource*, Oct. 21, 2016, at p.1, available at www.energy.gov/eere/water/downloads/hydropower-vision-report-full-report.

²⁴ *An Examination of the Hydropower Licensing and Federal Authorization Process* (nrel.gov) p. 56.

process would not significantly reduce the licensing timeframe that would otherwise be achieved using one of the existing licensing processes, particularly the integrated licensing process.

If enacted, our proposal would revisit the existing two-year process for licensing new hydropower production at existing dams by requiring a FERC licensing decision within two years after FERC determines that the project proposal meets the applicable environmental screening criteria (a process that takes just 90 days). This starts the clock much earlier in the process than the license application filing. Unlike earlier attempts to create a two-year process, this proposal *requires* FERC make a license decision within two years. To qualify for this expedited licensing process, retrofitting a dam with hydropower must not materially change the operations of the existing dam. When deciding whether a non-powered dam qualifies for this expedited process, FERC can consider whether environmental mitigations that would be a part of adding hydropower to a dam, like fish passage, would *help improve* the health of a river ecosystem the dam is part of. This is an important acknowledgement of how hydropower operations with environmental mitigations can make river conditions more suitable for fish than a dam without mitigations. By providing a clear set of criteria for whether a non-powered dam qualifies for an expedited licensing process, Congress can help developers select non-powered dams for retrofits that they know are more likely to qualify for this process.

3) Three-year expedited licensing process is appropriate for developing qualifying new closed-loop and off stream pumped storage projects.

The United States needs to rapidly build out our energy storage capacity to effectively incorporate more variable energy resources into the electric grid. While much of the political discourse has focused on batteries, pumped storage is a proven source of energy storage that is often overlooked. Pumped storage facilities essentially serve as a “water battery” and can integrate a growing amount of variable wind and solar resources into the grid (which can charge the “water battery”) while maintaining grid stability and reliability.

Today, the United States has 43 existing pumped storage projects, with over 22.8 GW of storage capacity, representing 94% of all installed capacity of energy storage.²⁵ Pumped storage generates power the same way a traditional hydropower plant does, by using a turbine and

²⁵ NHA's 2021 Pumped Storage Report, Sept. 22, 2021, at p. 4, available at www.hydro.org/news/nha-unveils-new-2021-u-s-pumped-storage-hydropower-report

generator to transform the kinetic energy of falling water into electricity, but with an added feature. When there is surplus electricity on the grid, pumped storage facilities pump water to the upper reservoir and store it for later use. That gives pumped storage the flexibility to inject power into the grid or to absorb it when needed. Both functions are becoming increasingly important for grid stability and reliability.

Unlike other forms of energy storage, pumped storage does not require mining large amounts of minerals in countries with poor environmental track records. Pumped storage developers have a proven track record of working with U.S. regulators to limit the ecological impacts of their projects.

Our proposal creates a new three-year licensing process for qualifying closed-loop pumped storage and off-stream pumped storage facilities. Closed-loop and off-stream pumped storage projects use two reservoirs that are not located within a stream. To qualify, facilities must not implicate the critical habitat of endangered or threatened species and be unlikely to involve complex environmental issues. When a pumped storage facility qualifies for this process, FERC is required to issue a license decision within three years. This is a vast improvement over the typical licensing process for pumped storage projects, which can take anywhere from 7 to 10 years.²⁶ This is also an improvement over the 2-year licensing process for pumped-storage Congress attempted to create in AWIA. The legislation only required that FERC make a licensing decision within two years after a fully developed license application was filed with FERC. While that was a good start, most of the licensing time occurs *before* an application is filed. The legislative package proposes to close this loophole by requiring a 3-year licensing process for closed-loop pumped storage projects, start to finish.

Today, there are over 90 pumped storage projects in some stage of development across 27 states, representing over 90 GW of new, long-duration storage, including 16 projects in the Northwest, 41 projects in the Southwest, 10 projects in the Northeast, and 12 projects in the Southeast. The three-year process for licensing new closed-loop and off stream pumped storage projects, along with the other reforms in the package, will help bring these projects to fruition, creating jobs in communities around the country, improving grid reliability, and enhancing our ability to dependably incorporate renewable energy resources into our power system.

²⁶ [An Examination of the Hydropower Licensing and Federal Authorization Process \(nrel.gov\)](#) p. 56.

4) Improving coordination between FERC and other federal, state, and tribal authorities with conditioning authority will promote a more efficient licensing process.

Depending on the location and impacts, licensing or relicensing a hydropower facility may implicate 13 major federal statutes and five major federal agencies.²⁷ State resource agencies also have responsibilities in the hydropower licensing. No single agency has authority to coordinate the current hydropower licensing process. This means relicensing efforts can often get delayed when one agency fails to discharge its responsibilities in a timely manner.

If enacted, the license reform proposal will help ensure the coordinated and timely review of license applications. The proposal directs FERC to convene a technical conference at the beginning of every licensing and relicensing effort with all agencies that have responsibilities under existing law to attempt to establish a joint schedule for discharging their responsibilities and to analyze opportunities to coordinate studies required under law. Once a joint schedule and study plan is established, FERC is then directed to convene a technical conference to analyze and address what challenges may disrupt this schedule. This “belt and suspenders” process at the beginning of each licensing will create clear timelines and expectations for agencies to adhere to.

Because a wide range of agencies wield conditioning authority in hydropower licensing, another challenge faced by the industry is inconsistent or conflicting licensing terms. In existing hydropower licensing, FERC lacks authority to work with agencies that wield conditioning authority to resolve inconsistent or conflicting terms. This puts the impetus on hydropower operators to appeal the Commission’s decisions to the U.S. Courts of Appeals to resolve inconsistencies in their licenses. This package proposes to fix this issue by directing FERC to convene a technical conference to allow these conditioning agencies to work together in an attempt to resolve inconsistent or conflicting licensing conditions. By improving coordination between agencies with conditioning authority, these reforms will help minimize unnecessary administrative delays during hydropower licensing and relicensing process.

²⁷ The statutes are: Federal Power Act, River and Harbors Act, U.S. Bureau of Reclamation Statutes; National Environmental Policy Act, Clean Water Act, Endangered Species Act, Fish and Wildlife Coordination Act, National Historic Preservation Act, Coastal Zone Management Act, Magnuson-Stevens Fishery Conservation and Management Act, Marine Mammal Protection Act, Pacific Northwest Planning and Conservation Act. The federal agencies include: FERC, Environmental Protection Agency, Department of the Interior (including U.S. Fish and Wildlife Services and the National Park Service), U.S. Forest Service, and the National Oceanic and Atmospheric Administration.

5) Providing 4(e) conditioning authority to Tribes removes the Department of the Interior as an intermediary, reducing an administrative burden in hydropower licensing.

Section 4(e) of the Federal Power Act gives the Secretary of the Interior authority to impose mandatory conditions in the licenses of hydropower facilities on Indian reservation land held in trust by the Department of the Interior. In theory, this authority is supposed to empower the Secretary of the Interior to act as a trustee and impose conditions that are in the best interests of the impacted tribe. In practice, the Secretary of Interior has not always wielded this power to protect the best interests of tribes.

In the experience of hydropower industry operators, providing mandatory conditioning authority to the Secretary of the Interior creates an inefficiency in the hydropower licensing process. Rather than having a seat at the negotiating table, Tribal Nations are forced to work through the Secretary of the Interior. This puts Tribal interests to the whim of bureaucrats in Washington while preventing Tribes and hydropower industry operators from working together to solve problems.

The joint legislative package would shift 4(e) mandatory conditioning authority for hydropower facilities on reservation lands from the Department of the Interior to the Tribal Nation where the project is located. This provision recognizes tribal sovereignty by entrusting Tribal Nations with the power to make mandatory conditioning decisions on their own lands. Like all conditions, those imposed by a tribe under 4(e) must be reasonably related to the effects of the hydropower project. By bringing tribes to the table at the start of licensing process, this provision removes the Department of the Interior as a middleman between tribes and hydropower operators and will reduce a friction point in the licensing process. We are confident this reform will contribute to a more efficient licensing process in the instances when hydropower facilities are on tribal lands.²⁸

6) Since hydropower licenses last 30-50 years, considering the changing climate is appropriate.

Hydropower licenses may last from anywhere between 30 – 50 years. Given the length of these licenses, it makes sense for FERC to consider how changing environmental conditions may

²⁸ The National Hydropower Association estimates 10 FERC licensed facilities will be affected by this provision.

affect hydropower operations. From industry's perspective considering the reasonably foreseeable effects of climate change in relicensing will only strengthen the importance of hydropower. As noted above, hydropower is a major source of clean energy generation. The most important thing we can do to mitigate climate change is reduce carbon emissions. By providing reliable, carbon-free energy, hydropower is an essential part of any climate solution. Hydropower has the added benefit of being a clean energy multiplier by helping grid operators incorporate more variable wind and solar energy resources into the electric system. In addition to providing clean energy, dams can help mitigate the effects of climate change by storing water for environmental, agricultural, and drinking purposes in areas where it is becoming increasingly scarce. Overall, we believe considering climate change in hydropower relicensing *improves* the case for our industry moving forward.

Conclusion

Thank you for allowing me to testify before the Committee. I look forward to answering your questions and working with the Committee to advance this joint reform package.

Mr. RUSH. I want to thank the witness.

The Chair now recognizes Mr. Kiernan for 5 minutes. Mr. Kiernan, you are recognized.

STATEMENT OF TOM KIERNAN

Mr. KIERNAN. Thank you, Chairman Rush. Thanks to you and Ranking Member Upton and members of the subcommittee. It is a real pleasure to be with you to testify and to share the perspective of American Rivers on the topic of modernizing hydropower. I am Tom Kiernan, president of American Rivers. And our staff have been participants in, and we have been some of the leaders of the Uncommon Dialogue. We have also participated in hundreds, literally hundreds, of hydropower licensing proceedings.

And we have experienced both the best of that process and the worst of that process. The hydropower licensing reform package that we are bringing to you today as a collaboration was born from the encouragement of this committee to seek common ground and to find solutions. Our proposal is an extension of our shared goals of protecting rivers, strengthening tribal sovereignty, and generating renewable electricity that contributes to achieving a 21st Century clean energy grid.

This package is an integrated, holistic proposal that successfully creates common ground by bringing together the different perspectives of conservation, tribal and industry constituencies. It has been carefully balanced to ensure that we do no harm to any interest while creating a win-win-win for conservation, tribes, and industry. I will focus my testimony today on how our hydropower licensing reform package improves river health in the context of the three crises that we see rivers facing today: biodiversity loss, climate change, and racial and cultural inequities.

On biodiversity loss, since 1970, the world has lost 83 percent of all freshwater species and nearly a third of all freshwater ecosystems. Freshwater species are declining twice as fast as their terrestrial and ocean counterparts. One significant factor driving the loss of biodiversity is the loss of river connectivity. Dams do have significant effects on river ecosystems.

And when they are improperly sited or lack functional fish passage, they can contribute to biodiversity loss. Our licensing reform package addresses this growing issue by requiring FERC to open a rulemaking to add greater specificity and timelines to the license/surrender process for nonFederal dams and with owners that want to remove their dam. Even when all parties agree that a dam needs to be removed, it can take decades to do so.

These proposed changes will help licenses better protect—predict the time and cost associated with license surrender and make the process more predictable and easier to remove unwanted dams. Removing dams from rivers when they have outlived their useful life opens habitats and makes it easier for freshwater species to rebound. Second major challenge for rivers is climate change. Extreme weather events are becoming more frequent. And disruptions like the crippling drought in the West make it critically important that we consider climate change when crafting license conditions.

Many licensees already analyze hydrology and how it is changing because of changing climate. But this type of analysis has not yet

incorporated into the licensing processes. Accordingly, this package would require FERC, agencies, and federally recognized tribes to consider how project effects may change under a changing climate when developing their license conditions. It also requires FERC to stay abreast of and incorporate the latest science on climate change and analytic tools through periodic technical conferences convened in consultation with Department of Energy. These are common-sense requirements that will promote better decisionmaking to ensure healthy and climate-resilient rivers into the future.

And the third main challenge is racial and cultural inequity. Reform is needed to achieve the promise of self-determination for tribes. In 1975, Congress recognized tribes as sovereign governments. But the administration of Section 4(e) of the Federal Power Act remains a relic of the pre-self-determination era. More than 45 years after Congress recognized tribes as sovereign governments, tribal governments must still rely upon their trustee, the Department of the Interior, to intervene on their behalf to protect their resources.

The continued need for an intermediary adds complexity and inefficiency to the licensing process and is an affront to the sovereignty of tribal governments. Our proposal remedies this. In closing, this package is an integrated and holistic proposal that successfully creates common ground among the various interests of conservation, tribes, and industry, and I thank you for the opportunity to testify today.

[The prepared statement of Mr. Kiernan follows:]

TESTIMONY OF TOM KIERNAN ON BEHALF OF
AMERICAN RIVERS
UNITED STATES HOUSE OF REPRESENTATIVES
THE ENERGY AND COMMERCE COMMITTEE
ENERGY SUBCOMMITTEE
HEARING ON "*Modernizing Hydropower: Licensing and Reforms for a Clean Energy Future*"
CONGRESSMAN BOBBY RUSH, CHAIRMAN
HEARING ON MAY 12, 2022

Chairman Rush, Ranking Member Upton, and Members of the Subcommittee:

Thank you for this opportunity to testify and share the perspective of American Rivers on the topic of *Modernizing Hydropower: Licensing and Reforms for a Clean Energy Future*.

My name is Tom Kiernan and I am the President and CEO of American Rivers. American Rivers is one of the leading national conservation organizations involved in hydropower licensing. Our staff have been involved in hundreds of new and original license proceedings since our founding, and we have seen the best and worst that the federal licensing process has to offer. Since 1973, American Rivers has protected and restored more than 150,000 miles of rivers through advocacy efforts, on-the-ground projects, and an annual America's Most Endangered Rivers ® Campaign. Headquartered in Washington, DC, American Rivers has offices across the country and more than 300,000 members, supporters, and volunteers. As the nation's leading river advocate, American Rivers seeks to ensure our nation's rivers and floodplains are protected.

American Rivers is a participant and leader in the *Uncommon Dialogue on Hydropower: Climate Solution and Conservation Challenge*, which is a forum created by the Stanford Woods Institute to change the paradigm around hydropower and river health by bringing together a diverse group of stakeholders to develop consensus policy, technology, and investment recommendations related to river health, hydropower, and dam safety. We chose to participate in this forum because we wanted to search for the win-win-win solutions to the challenging issue of hydropower licensing reform.

Licensing Reform touches on many of the most pressing issues of our time from biodiversity loss to climate disruption to racial and cultural inequity. We feel the weight of these challenges and have come to the negotiating table to try to positively address these issues. The licensing reform package we have brought to you today was born from the encouragement of this committee to seek common ground and find solutions. It is an extension of our shared goals of protecting rivers and tribal sovereignty while also generating renewable electricity that contributes to achieving a 21st century clean energy grid. This package is an integrated and holistic proposal that successfully creates common ground among the differing interests and priorities of the environmental, tribal, and industry constituencies and it has been carefully balanced to ensure that we "do no harm" to any constituencies' interests while advancing each of our constituencies' interests. American Rivers is grateful for the opportunity to provide our

perspective and we would like to invite the committee to join us in the same spirit of collaboration that we pursued in negotiating this package.

I will focus my testimony today on how the licensing reform package addresses how hydropower intersects with three significant challenges: biodiversity loss, climate disruption, and racial and cultural inequity.

Biodiversity Loss

Since 1970, the world has lost 83% of freshwater species and nearly ⅓ of freshwater ecosystems.¹ Freshwater species are declining twice as fast as their terrestrial and ocean counterparts.² One significant factor driving the loss of biodiversity is loss of habitat and connectivity.³ Dams have significant effects on river ecosystems and when they are improperly sited or lack functional fish passage, they can contribute to the factors causing biodiversity loss.

The licensing reform package addresses this growing issue by requiring FERC to open a rulemaking to add timelines and greater specificity to the license surrender process. Even when all parties agree that a dam needs to be removed, it can take decades to do so. The Federal Power Act's existing surrender provisions, and FERC's existing regulations, lack timelines and milestones to help move the license surrender process forward in a timely manner. They also lack opportunities for early input by agencies and other stakeholders, making cost-effective multi-benefit solutions more difficult to advance and evaluate. The licensing reform package looks to the *Energy Policy Act of 2005*, and the Integrated Licensing Process it created, as a model to reform the license surrender process. These proposed changes will help licensees better predict the time and costs associated with license surrender and make the process more predictable and easier to remove unwanted dams.

The package also shines a spotlight on non-operational dams and requires FERC to send a report to Congress every 5 years identifying non-operational projects under its jurisdiction. The report must provide a timeline for either rehabilitating or removing the non-operational projects. FERC licenses assume projects are in working condition, and many license conditions designed to protect aquatic ecosystems lose their protective function when projects are not operating. Removing dams and project works from rivers when they have outlived their useful life opens habitat, making it easier for freshwater species to rebound.

Climate Disruption

Extreme weather events are becoming more frequent and disruptions like the freeze in Texas and crippling drought in the west make considering climate change when crafting license

¹ David Tickner, Jeffrey J Opperman, Robin Abell, Mike Acreman, Angela H Arthington, Stuart E Bunn, Steven J Cooke, James Dalton, Will Darwall, Gavin Edwards, Ian Harrison, Kathy Hughes, Tim Jones, David Leclère, Abigail J Lynch, Philip Leonard, Michael E McClain, Dean Murruen, Julian D Olden, Steve J Ormerod, James Robinson, Rebecca E Tharme, Michele Thieme, Klement Tockner, Mark Wright, Lucy Young, Bending the Curve of Global Freshwater Biodiversity Loss: An Emergency Recovery Plan, *BioScience*, Volume 70, Issue 4, April 2020, Pages 330–342, <https://doi.org/10.1093/biosci/biaa002>

² Id

³ <https://www.iucn.org/theme/species/our-work/freshwater-biodiversity>

conditions critically important. Many licensees already analyze how hydrology and the operation of their projects are changing as the climate changes. It is part of sound business practice. But this type of analysis is not incorporated into the licensing process. The package requires FERC, mandatory conditioning agencies and Federally Recognized Tribes to consider during licensing how project effects may change under a changing climate when developing their license conditions. It also requires FERC to stay abreast of and incorporate the latest climate science and analytical tools through periodic technical conferences convened in consultation with the U.S. Department of Energy. These are common-sense requirements that will promote better decision-making to ensure healthy and climate resilient rivers into the future.

Hydropower licenses last, on average, 45 years. The licensing process provides a once-in-a-generation opportunity to understand the impacts of a changing climate on hydropower projects and affected rivers. This understanding will improve community safety and security, and help rivers and communities thrive and become more resilient.

Racial and Cultural Inequity

Infrastructure development in the twentieth century had profound impacts on tribal rights, authorities, and resources. This is particularly true where hydropower licensing and development ignored tribal treaty rights, overlooked tribal interests and perspectives, and damaged culturally important species such as salmon.⁴

Reform is needed to achieve the promise of self-determination for tribes. In 1975, Congress passed the Indian Self-Determination and Education Assistance Act recognizing Tribes as sovereign governments by providing greater autonomy and the ability to administer and participate directly in programs and authorities that had previously been administered on their behalf. Significant progress toward self-determination has occurred in the interim period, but the administration of Section 4(e) of the Federal Power Act remains a relic of the pre-self-determination era. The package would take long-overdue action by providing mandatory conditioning authority under Section 4(e) of the Federal Power Act to federally recognized tribes whenever a hydropower project has project facilities within the boundary of a tribal reservation.

More than 45 years after Congress recognized tribes as sovereign governments, tribal governments must still rely upon their "trustee", the Department of the Interior, to intervene on their behalf to protect their resources. The continued need for an intermediary adds complexity and inefficiency to the licensing process and is an affront to the sovereignty of tribal governments. It is long past time that tribal governments receive the authority to protect their trust lands impacted by hydropower. Doing so will make the process more efficient and timely by having tribes at the table and able to make decisions about resource protection. Many tribal governments have built world-class fisheries and natural resource departments and are well equipped to make these decisions themselves.

⁴Frank, Derek Red Arrow (2017) "A Hell of a Complex: The Miscarriages of the Federal Hydropower Licensing Regime" *American Indian Law Journal*: Vol. 6: Issue 1, Article 5, pg. 244. Available at: <https://digitalcommons.law.seattleu.edu/aij/vol6/iss1/5/>

The package also promotes respect for treaty rights by requiring Federal land management agencies to consult with the Secretary of the Interior and any potentially affected Federally Recognized Tribes regarding the obligations of the United States that apply in the project area under a federal treaty. If treaty obligations are identified, the package imposes a requirement on FERC and other agencies to meet federal obligations applicable to the treaty with a Federally Recognized Tribe and gives the tribe the ability to make recommendations under Section 10(j) of the Federal Power Act, with the same standing as state fish and wildlife agencies.

Hydropower Licensing Generally

American Rivers is heartened that the Committee is examining the challenges and opportunities of hydropower in the United States. Hydropower provides approximately 7 percent of the overall energy production in the country, and comprises 50 percent of all non-fossil fuel energy consumed in the U.S. The licensing of hydroelectric dams is overseen by the Federal Energy Regulatory Commission (FERC), with the critical involvement of the federal Departments of Agriculture, Commerce, and the Interior, as well as state and tribal water quality agencies. FERC may grant a license for a term of 30 to 50 years, with the average life of a license being 45 years.

American Rivers thinks the hydropower licensing process is valuable and works well. That said, there is room for improvement, which is why we worked with our tribal and industry partners to bring the committee our licensing reform package and supported reform to existing expedited licensing processes for certain low-impact projects. On paper, hydropower licensing is designed to take 5.5 years. In practice, it takes an average of 6.7 years.⁵ Licensees may avail themselves of 3 different licensing processes (the Traditional, the Alternative, or the Integrated Licensing processes) and this choice can dramatically affect the length of licensing. Relicensed projects that use the integrated licensing process on average receive a license in 5.9 years, as compared to 7.8 years for the projects using the alternative licensing process or 8.5 years for projects using the traditional licensing process.⁶ While our licensing reform package makes considerable improvements to the licensing process that we believe will yield efficiency, the choices that FERC makes to approve the use of processes other than the integrated licensing process will ultimately determine how great the efficiency improvements of this licensing reform package will be if enacted.

Federal resource protection agencies also play an integral role in the licensing of hydropower facilities. Our support for the value and importance of their contribution to the licensing process remains unwavering. The Federal Power Act (FPA) delineates the responsibilities for licensing at the federal level. FERC is not, and has never been, responsible for maintaining fish, wildlife, or federal lands. Since the passage of the FPA, the Secretaries of Commerce (through the National Marine Fisheries Service) and the Interior (through the U.S. Fish and Wildlife Service)

⁵ Levine, Aaron, Brenda Pracheil, Taylor Curtis, Ligia Smith, Jesse Cruce, Matt Aldrovandi, Christa Brelsford, Heather Buchanan, Emily Fekete, Esther Parish, Rocio Uribe-Martinez, Megan Johnson, and Debjani Singh. *An Examination of the Hydropower Licensing and Federal Authorization Process*. Golden, CO: National Renewable Energy Laboratory. NREL/TP-6A20-79242 pg. xi. <https://www.nrel.gov/docs/fy22osti/79242.pdf>.

⁶ Id pg. 47.

have been responsible for fish and wildlife protection and the Secretaries of Agriculture (through the U.S. Forest Service) and the Interior (through the Bureau of Indian Affairs, the Bureau of Land Management, the U.S. Fish and Wildlife Service, and the National Park Service) have been responsible for managing lands held by the federal government ("federal reservations").

Section 4(e) requires Cabinet Secretaries with authority over a "federal reservation" to ensure that the proposed project doesn't negatively impact the reservation or interfere with its Congressionally designated use. Federal reservations are all lands and marine reserves in the federal estate, from Indian reservations to National Forests and wildlife refuges. Section 18 of the FPA deals with fish passage, or the ability of fish species to get from one side of a dam to the other and charges the Cabinet Secretaries with authority over fisheries to provide it. Most fish species do not naturally inhabit only the section of a river downstream of dams or between dams. For a population to survive the construction of a project and thrive, it often must be afforded a way to traverse project dams.

Our experience during the last 30 years of participating in licensing proceedings all over the country is that agencies are judicious and pragmatic in the exercise of their resource protection authorities. While we have supported the transfer of authority under Section 4(e) from the Department of the Interior to Federally recognized tribes, that support should not be construed as a critique of how federal agencies administer this authority generally. Rather, it is support for tribal self-determination specifically. We find tremendous value in the contributions of federal agencies. Their ability to continue to mitigate the impacts of hydropower projects through Sections 4(e), 18, and 10(j) will be critically important to addressing biodiversity loss and climate adaptation in the future.

Conclusion

The hydropower licensing process provides a range of stakeholders the opportunity to shape the shared use of our nation's rivers. The rivers do not belong to environmentalists or to electricity producers; they belong to all Americans, and they must be maintained to promote multiple uses. American Rivers believes the licensing reform package we have brought to this committee is an integrated, holistic proposal that creates common ground among the needs and appropriate authorities of our three constituencies. For your reference, we attach a summary of the licensing reform package below.

I would like to thank the committee for its invitation to speak today. American Rivers is eager to serve as a resource and stands ready to collaborate with the committee on licensing reform. I look forward to answering your questions.

April 4, 2022

Summary of WG6 Federal Power Act Amendments Package

The Drafting Team for Uncommon Dialogue Workgroup 6 prepared a package of proposed amendments to the Federal Power Act. The package is intended to enhance the economic value and environmental benefits of hydropower projects and healthy rivers. It is driven by eight themes stated below.

Improves cooperation among FERC, Federally Recognized Tribes and resource agencies in the hydropower licensing process

- Requires FERC and other Federal and State agencies and Federally Recognized Tribes to consult in the development of a coordinated schedule for all federal authorizations for hydropower licensing.
- Requires FERC and other Federal and State agencies and Federally Recognized Tribes to meet in a conference to develop a joint study plan to the extent possible, and to document any disagreements.
- Provides an opportunity for FERC and other Federal and State conditioning agencies including Federally Recognized Tribes to attempt to resolve conflicting and inconsistent license terms prior to FERC's licensing decisions.
- Allows participation by all relicensing participants in these technical conferences and consultations.
- Establishes an opportunity for FERC, Federal, state and local agencies, and Federally Recognized Tribes to cooperate in preparation of the environmental assessment or environmental impact statement. Allows cooperating entities party status in the licensing proceeding, with protections against *ex parte* communications.
- Provides that administrative costs recovered in annual charges for Federal agencies' direct costs be refunded to the relevant Federal agency, with public review of annual charges determinations.
- Allows for recovery of administrative costs incurred by Federally Recognized Tribes and State agencies through a fund created by re-allocating other annual charges that FERC currently directs to the Treasury.

Expands the authority for Federally Recognized Tribes to protect their lands, waters, other resources and treaty-protected rights

- Shifts Federal Power Act (FPA) § 4(e) mandatory conditioning authority from the U.S. Department of the Interior to a Federally Recognized Tribe for any project located on land held in trust within the exterior boundaries of a Tribal reservation.
- Requires Federal land management agencies, when developing their FPA § 4(e) mandatory conditions, to consult with the Secretary of the Interior and any potentially affected Federally Recognized Tribes regarding the obligations of the United States that

apply in the project area under any effective federal treaty with a Federally Recognized Tribe.

- Imposes an obligation on FERC and other agencies to meet federal obligations applicable to a federal treaty with a Federally Recognized Tribe.
- Extends FPA § 10(j) recommendation authority to Federally Recognized Tribes during the licensing of a project that may affect treaty rights.

Promotes a culture of “show your work” in hydropower licensing

- Requires that mandatory conditions under FPA § 4(e) be reasonably related to project effects on federal lands.
- Modifies Federal Power Act § 18 to require that any fishway prescribed by the Secretary be “as appropriate to address project effects and other relevant factors.”
- Requires Federal agencies and Tribes with mandatory conditioning authority under FPA§4(e) or § 18 to provide a rationale for their decisions on submitted alternatives under§33.
- Modifies the trial-type hearing process for mandatory conditions under FPA § 4(e) and§18 by: (1) allowing hearing on disputed issues of material fact relative to an alternative condition or prescription proposed by the licensee or another party; (2) placing the burden of proof on proponents of disputed issues or alternatives; and (3) providing opportunities for all parties to hearings to participate in settlement negotiations.
- Requires FERC, Federal agencies, and Federally Recognized Tribes to cite to specific parts of documents relied upon for their findings and to state the basis for reliance on the cited information in making their findings.

Addresses climate change in the hydropower licensing process

- Directs FERC, mandatory conditioning agencies and Federally Recognized Tribes to consider climate change and changing project effects under a changing climate when developing their license conditions.
- Requires FERC to stay abreast of, and incorporate, climate science and analytical tools through periodic technical conferences convened in consultation with the U.S. Department of Energy.

Provides improved evaluation of projects during the licensing process

- Defines the terms “ongoing effect” and “reasonably foreseeable effect,” and defines “project effects” as such ongoing and reasonably foreseeable effects.
- Directs FERC, other Federal agencies, and Federally Recognized Tribes to consider whether any ongoing or reasonably foreseeable adverse effect on any fish species can be mitigated by providing access to habitat upstream or downstream of project dam(s), or by maintaining or improving downstream habitat, or by off-site mitigation.
- Improves the analysis of present and reasonably foreseeable future project economics, taking into account market conditions.
- Requires FERC, licensees, and other parties to disclose hydrologic data and models used in licensing proceedings, subject to protections for intellectual property.

Mr. RUSH. The chair thanks Mr. Kiernan.

And now, Ms. Pavel, you are recognized for 5 minutes for the purposes of an opening statement.

STATEMENT OF MARY PAVEL

Ms. PAVEL. Thank you, Mr. Chairman, and members of the committee. My name is Mary Pavel. I am a partner at the law firm of Sonosky, Chambers, Sachse, Endreson & Perry, and I am attorney for the Skokomish Indian Tribe and a member of the tribe. I am honored to be here with my colleagues to support the Uncommon Dialogue and the work that we have all done the last few years to reform and improve the licensing process.

In my written testimony, I told the story of the Skokomish Tribe to illustrate why the Uncommon Dialogue licensing reform proposal regarding 4(e) of the Federal Power Act, which would secure tribes a full place at the table and setting these conditions is not only the right thing to do but also consistent with the Federal policy of self-determination and with the Federal Power Act itself.

The Skokomish Tribe's experience with the Federal Power Act and the licensing of the Cushman Hydroelectric Project demonstrates what can happen if tribes are forced to rely on distant bureaucrats in Washington, DC. In the case of the Skokomish Tribe, the bureaucrats failed to do anything to protect the tribe's reservation. And the Skokomish Tribe bore the cost of that failure for 86 years. With the Uncommon Dialogue proposals in recognizing tribal authority to impose conditions on federally licensed projects that are located on tribal trust—will finally animate what the original drafters of the Federal Power Act intended, that while developing hydropower is important for America, it was not to be done at the expense of the trust responsibility to tribes or tribal homelands. I want to thank you for the opportunity to present this testimony and look forward to answering any questions that you may have today. Thank you.

[The prepared statement of Ms. Pavel follows:]

**TESTIMONY OF
MARY J. PAVEL, PARTNER
SONOSKY, CHAMBERS, SACHSE, ENDRESON & PERRY, LLP
HOUSE ENERGY AND COMMERCE COMMITTEE HEARING
ON
MODERNIZING HYDROPOWER: LICENSING AND REFORMS
FOR A CLEAN ENERGY FUTURE**

MAY 12, 2022

Mr. Chairman and members of the Committee thank you for the opportunity to testify today. My name is Mary Pavel. I am currently a partner in the law firm of Sonosky, Chambers, Sachse, Endreson & Perry, LLP. I previously served as the Chief Counsel and Staff Director for the Senate Committee on Indian Affairs. I am an attorney for the Skokomish Indian Tribe and a member of the Tribe, and I have been a participant in the Uncommon Dialogue process since its inception.

I think the best way to illustrate the importance of the proposed reform to the Federal Power Act to recognize Tribal sovereignty and the proper role of Tribes to protect their lands and resources when the Federal Government is considering the licensing/relicensing of a hydroelectric facility is to tell the story of my Tribe, the Skokomish Tribe, and the construction and licensing of the Cushman Dam on the North Fork of the Skokomish River in Washington State.

A. The Skokomish Reservation

Since time immemorial, the people of the Skokomish Indian Tribe occupied and controlled lands adjacent to the Skokomish River and Hood Canal on the Olympic Peninsula of Washington State. In 1855, the Skokomish Indian Tribe entered into a treaty with the United States government, which reserved a permanent homeland for the Skokomish people near their ancestral villages along the Skokomish River at the southernmost point of Hood Canal. *See* Treaty of Point No Point, January 26, 1855, 12 Stat. 933, reprinted in II C. Kappler, Indian Affairs, Laws and Treaties at 674-77; *see also* *U.S. v. Washington*, 384 F. Supp. 312 (W.D. Wash. 1974) (*Boldt*).

The location of the Reservation was intended to facilitate easy access to the Skokomish River, its tributaries, and the tidelands and salt water of Hood Canal that sustained the Skokomish people for generations. *Id.* at 376-77. The Reservation's location near the Skokomish River and the waters of Hood Canal supported the fish dependent lifestyle and culture of the Tribe. In 1905, the United States Supreme Court correctly acknowledged that for Pacific Northwest Indian tribes, fishing and hunting resources "were not much less necessary to the existence of the Indians than the atmosphere they breathed." *United States v. Winans*, 198 U.S. 371 (1905).

The treaty with the United States also reserved to the Skokomish people “the right of taking fish at usual and accustomed grounds and stations . . .” as well as hunting rights “on open and unclaimed land.” *Boldt*, 384 F. Supp. at 376-77. The Skokomish people relied and continue to rely on natural resources of the Skokomish River for subsistence, economy, ceremonial, cultural, religious, and other purposes. *Id.* Many tribal members derive all or a part of their income from the fish and shellfish of the Skokomish River system.

B. Section 4(e) of the Federal Power Act

The focus of my testimony today is the Section 4(e) of the Federal Power Act and the importance of this provision in protecting the resources that are vital to the Skokomish Tribe. In one scholarly article, it is said, “the Federal Power was premised on the principle that electric power potential of the Nation’s navigable waterways is a public resource, which should be harnessed in a manner consistent with the public interest.” Kirsch, Peter J. and Sietz, J. Barton, “The Role of the Federal Energy Regulatory Commission in Protecting Non-Consumptive Water Uses” (1990) presented at *Moving the West’s Water to New Uses: Winners and Losers* (Summer Conference, June 6-8)) at <http://scholar.law.colorado.edu/moving-west-water-to-new-uses/13/>. Section 4(e) of the Federal Power Act is the tool that ensures that when this development happens it is consistent with the purposes of other federal lands and most importantly, for the purposes of this testimony, Federal Indian reservations. *See* Sommerville, Thane D., “Tribes and Dams: Using Section 4(e) of the Federal Power Act to Protect Indian Tribes and Restore Reservation Resources,” *Bellwether, Seattle University School of Law* (Spring 2009).

Currently, it is only the Secretary of the Interior who can impose conditions to protect federal Indian Reservations, when projects licensed by the Federal Power Energy Regulatory Commission (“FERC”) are located on tribal trust lands. *See* 16 U.S.C. § 797(e). More specifically, the Federal Power Act authorizes the licensing of hydroelectric power projects within reservations, but only upon an affirmative determination by FERC that the license “will not interfere or be inconsistent with the purpose for which such reservation was created or acquired.” 16 U.S.C. § 797(e). In addition, Section 4(e) requires that any license issued within a Reservation shall be subject to and contain such conditions as the Secretary of the Interior shall deem necessary for the adequate protection and utilization of such reservations. *Id.*

The Skokomish Tribe’s experience with the Federal Power Act is an example of when the trustee completely abdicates its responsibility under the Act and as well as an example of when the trustee half-heartedly embraces its responsibility under the Act. The Skokomish Tribe’s experience with the Federal Power Act further demonstrates the critical importance that Section 4(e) plays in balancing the use of the Nation’s waters for the development of hydropower with terms and conditions essential to ensuring that

hydropower is not developed at the expense of other vitally important resources. But most importantly this story illustrates why it is time, in the era of Tribal Self-Determination, where Tribes are operating multi-million federal programs pursuant to the Indian Self-Determination Education and Assistance Act and managing air and water resources pursuant to the Clean Air Act and the Clean Water Act, to empower Tribes to step into the shoes of the Secretary and ensure that they put forward mandatory conditions under the Federal Power Act to protect their reservations and resources.

C. Initial Licensing of the Cushman Hydroelectric Project

Since the early 1900s, the City of Tacoma and others recognized the hydropower possibilities for the Skokomish River. The Skokomish Tribe equally recognized the potential devastation that hydropower development would cause the Skokomish Tribe, its people and its resources. These concerns are well documented in correspondence between the Tribe and officials of the highest levels within the federal government, including officials within the Department of Justice and the Department of the Interior. These concerns were also expressed to the City of Tacoma.

On November 21, 1923, the City of Tacoma requested a “minor license” from the United States, through the Federal Power Commission (now FERC) for the operation of the Cushman Hydroelectric Project. *Skokomish Indian Tribe v. United States*, 332 F.3d 551, 554 (9th Cir. 2003). Notwithstanding the repeatedly expressed Tribal concerns regarding the impact that hydropower development would have on its treaty protected fishery and its Reservation, Tacoma submitted its license application without any measures for fish passage or any other mitigation to protect the Tribe and its Reservation. See *City of Tacoma’s Application to Federal Power Commission for a License to Flood Certain Lands of the United States* (November 21, 1923).¹ Moreover, Tacoma’s 1923 application did not inform the Federal Power Commission that the main power plant and a portion of the project transmission line would be on the Skokomish Reservation, or that Tacoma intended to divert and dry up the entirety of the North Fork Skokomish River upstream of the Reservation. *Id.* Nor did the Federal Power Commission conduct any investigation to determine potential impacts to the Skokomish Tribe or the Skokomish Reservation. In 1924, the United States, through the Federal Power Commission, granted the City of Tacoma authorization to flood 8.8 acres of federal land through a so-called “minor part” license. See *License for A Minor Part of a Complete Project*, Project. 460, *Washington City of Tacoma*, O.C. Merrill, *Executive Secretary Federal Power Commission* (June 3, 1924). The license did not authorize the construction, operation, or maintenance of any dams, reservoirs, powerhouses, transmission lines or appurtenances. *Id.* The “minor part” license only authorized activity on less than two-tenths of one

¹ Copies of the records of this history are part of the record of proceedings in *Skokomish Indian Tribe v. United States*, No. C99-5606 (E.D. Wash.).

percent of the area actually occupied by the present-day Cushman Project. *Skokomish v. United States*, 332 F.3d at 565 (Tashima, J., dissenting).

In 1924, the City of Tacoma began construction of the Cushman Hydroelectric facility on the North Fork of the Skokomish River under the fifty-year “minor part” license issued by the Federal Power Commission. The Cushman Project became fully operational in 1930. From its inception, the Project was vigorously resisted by the Skokomish Tribe because of its impacts on Reservation lands and treaty fishing rights. The record in the Tribe’s case against the City of Tacoma and the United States documents the Tribe’s repeated requests to the Interior Department to take action to protect the Skokomish Tribe and its Reservation, and its multiple requests to the Interior and Justice Departments for assistance and litigation in both state and federal courts. *See* record of proceedings in *Skokomish Indian Tribe v. United States*, No. C99-5606 (E.D. Wash.). However, the Interior Department did nothing to protect the Tribe or its Reservation, despite Interior’s authority (exclusive of the Tribe) under the Federal Power Act to protect the Tribe’s Reservation and despite the United States’ obligations under the Treaty with the Tribe to protect the rights guaranteed it under that Treaty. *See Federal Power Comm’n v. Tuscarora Indian Nation*, 362 U.S. 99 (1959); *White Mountain Apache Tribe v. United States*, 537 U.S. 465 (2003).

The Cushman Project includes two dams, two power houses, penstocks, a pipeline, transmission lines and other structures. *City of Tacoma v. FERC*, 460 F.3d 53, 59 (D.C. Cir. 2006). Most of the Project’s structures lie just northwesterly and in close proximity to the Skokomish Indian Reservation. One power house and the project transmission lines are within the Reservation, with the transmission lines being located on trust property. The two dams totally block fish passage up the North Fork of the Skokomish River. Further, the entire flow of the North Fork of the Skokomish River was diverted from its channel and sent by pipeline to an out of basin power house on Hood Canal (a bay of the Puget Sound). *City of Tacoma*, 460 F.3d at 59.

Notwithstanding issuance of the license, the Tribe continued to pursue avenues for redress and protection of its treaty rights. Frustrated by the failure of the United States to protect it, the Tribe attempted to seek legal recourse against the development and associated impacts of the Cushman Project on its own. The Tribe was prevented from doing so by the United States. In a petition submitted to the Secretary by letter dated August 17, 1930, the Tribe petitioned the United States to approve legal representation by private attorneys to represent the Tribe against Tacoma. *See* Petition to the Secretary of the Interior, Department of Indian Affairs, Washington, D.C. by George H. Adams et al (August 17, 1930). On October 10, 1930, the acting Commissioner of Indian Affairs refused the Tribal members’ request for legal representation, and reported that “steps that have already been taken by the Department of Justice to protect their interests.” *See* Letter from Henry Scattergood to Nicholson, Superintendent, Taholah Agency (October 10, 1930). There were no such steps.

Meanwhile, on September 13, 1930, tribal members sued in state court to enjoin Tacoma from diverting the North Fork out of its watershed. *See Complaint, Henry R. Allen, et al, Mason County Superior Court* (September 13, 1930). Two days later, tribal members—including my great-grandfather--on behalf of themselves and the Tribe sued in federal district court to enjoin Tacoma, arguing that the diversion would ruin their salmon fishery, and diminish their treaty fishing rights, thwart a primary purpose of the reservation, and irreparably destroy their principal means of livelihood. *Complaint, Adams v. City of Tacoma*, Case No. 428 (W.D. Wash. 1930). The federal district court dismissed the Tribe's suit against Tacoma holding that the Tribe could not represent itself and could only be represented by the United States. *Adams v. City of Tacoma*, Case No. 428 (W.D. Wash. 1930).

Following this dismissal, the Tribe was forced to rely solely on the United States as trustee to protect its interests. However, the United States declined to bring suit, or take any other form of action, to protect the Tribe's rights. In 1934, Assistant United States Attorney General Harry W. Blair informed United States Attorney for Western Washington, Charles J. Dennis that the United States had a right to bring suit for damage to the Skokomish Indians' treaty rights and cited a July 7, 1934 report evidencing significant damage resulting from the diversion of the North Fork Skokomish River. *See Letter from Harry W. Blair Assistant Attorney General to J. Charles Dennis, United States Attorney* (September 15, 1934). Assistant Attorney General Blair directed United States Attorney Dennis to investigate the matter, determine the extent of damage, and bring legal action if warranted. *Id.*

However, United States Attorney Dennis had served as attorney to the City of Tacoma from 1920-1923 and again from 1928-1932. In that capacity, he represented Tacoma in cases relating to the Cushman Project and the damming and diversion of the North Fork. In September 1934, in what is clearly an ethical violation and conflict of interest, United States Attorney Dennis recommended against the United States filing suit against Tacoma for the purpose of protecting the Tribe's fishing rights. *See Letter from Charles Dennis, United States Attorney to United States Attorney General* (September 24, 1934).

In 1935, the Assistant Secretary of the Interior agreed with Tacoma's former attorney's recommendation that no legal action would be taken by the United States on behalf of the Tribe to protect the Tribe's rights against the damming and diversion of the North Fork Skokomish River. *See Letter from Oscar Chapman, ASIA, to U.S. Attorney General*, (October. 1, 1935).

D. Impact on the Skokomish Reservation for the Trustee's Failure

As a consequence, Tacoma operated this facility without any “significant license conditions.” *City of Tacoma v. FERC*, 460 F.3d 53, 66 (D.C. Cir. 2006). The failure of Interior to exercise its statutory duty to impose any – let alone “appropriate-license conditions” in 1924 resulted in the destruction of the once plentiful Skokomish North Fork fisheries, the flooding of almost thirty percent of the Skokomish Reservation and the continued degradation of the entire Skokomish Watershed and the destruction of treaty protected cultural and wildlife resources. *Skokomish Indian Tribe v. United States*, 410 F.3d 506, 509-510 (9th Cir. 2005) (*en banc*).

The dewatering of the North Fork completely destroyed the salmon run up what was once a premier Tribal as well as a sports fishery, with grievous economic and cultural consequences for the Tribe. *See City of Tacoma v. FERC*, 460 F.3d 53, 62 (D.C. Cir. 2006); *Skokomish Indian Tribe v. United States*, 410 F.3d 506, 509-510 (9th Cir. 2005) (*en banc*). *See also Washington v. Wash. State Commercial Passenger Fishing Vessel Ass’n*, 443 U.S. 658, 686 (1979) (the Treaty of Point No Point entitles the Tribe an opportunity to harvest up to a maximum of 50% of harvestable resources).

In terms of direct impact on the Skokomish Reservation itself, the dewatering of the North Fork resulted in an approximately 40% reduction in the flow of the Skokomish River mainstem. The decreased flows in the mainstem greatly contributed to the massive siltation of the River, because it resulted in significant aggradation – which occurs whenever deposits of sediment cause the floor of a river to build up over time because of the absence of flushing flows. This aggradation caused almost one-third of the Reservation lands to be flooded, and resulted in the failure of septic systems, contamination of wells, blocked fish migrations, damaged Reservation orchards and pastures, and the silting over of fisheries and shellfish beaches. *Skokomish v. United States*, 410 F.3d at 509-510; *see also id.* at 521 (Graber, J., dissenting quoting technical analyses opining that dredging the channel could lessen, halt or even reverse the aggradation).

The Department of the Interior’s Report to FERC, in connection with the relicensing of the Project, estimates that the aggradation reduced the conveyance capacity of the mainstem from pre-Project levels of 18,000 cfs to approximately 5,000 cfs. Prior to the Project, the Skokomish River flooded approximately once every 1.3 years. Now the River is subject to flooding more than 10 days a year every year. In all, 27% of the Tribe’s Reservation land is repeatedly flooded and has therefore become useless. When the news shows the pictures of a fish swimming across the road in Washington State – that is the Skokomish River.

The Skokomish River estuary was also negatively impacted by the loss of river flow. The Skokomish River estuary is part of the Puget Sound Estuary system, which is classified as an estuary of national significance under the National Estuary Program of the Clean Water Act, 33 U.S.C. § 1330. By impounding and diverting the North Fork

Skokomish River out of its watershed, the Cushman Project severely reduced freshwater and nutrient inflow and altered sediment and salinity regimes, with the consequent adverse impact on the biological productivity of the Skokomish River estuary, inter-tidal delta, and Hood Canal. The Washington Department of Fish and Wildlife's Recommendations on Terms and Conditions on the Project's relicensing stated that the Skokomish River Estuary on the Reservation was an excellent shellfish gathering ground for Tribal members. But because of the Cushman project's operations, the shellfish beds on the Skokomish River Estuary were greatly reduced in size and productivity. The degradation of the Estuary is a result of both increased siltation and the septic contamination of the Estuary.

Wildlife populations were also severely impacted by the operation of the Cushman Project. The greatest impact has been upon the migratory deer and elk herds that historically wintered in the valley of the North Fork. The two reservoirs created by the Cushman Project inundated important wintering areas. The destruction of these traditional wintering areas has contributed substantially to the declining populations of deer, elk, and other game and non-game wildlife in the vicinity of the project. Finally, the flooding caused by the Project has destroyed numerous tribal historical and cultural sites.

E. The Relicensing of the Cushman Project

Given the failure of the United States to uphold its responsibility under the Federal Power Act to impose any conditions, the Tribe had to wait until the Project came up for licensing again in 1974 to address the impact of this Project on the Tribe and its Reservation.

On November 5, 1974, Tacoma filed its application for a new license. 84 FERC, ¶ 61,107 (1998). The Tribe intervened one year later to ensure that the United States would not once again abdicate its responsibility to the Tribe and sought conditions on the new license that would protect the Skokomish Reservation. *Id.* at 61,536.

As stated in the FERC initial license for the Project in 1998: "Commission action on the Cushman Project license application has been delayed by a series of matters, including the lack of prerequisite water quality certification; the enactment of the Electric Consumers Protection Act of 1986; the requirements of special legislation to remove National Park status from a corner of the Project reservoir; disputes over compliance with the National Historical Preservation Act; a one year deferral of the deadline for federal agencies to refer the Commission staff's Environmental Impact Statement to the Council on Environmental Quality for review of the EIS's adequacy; and an eleventh-hour Endangered Species Act issue." *Id.*

Thus, there was a there was twenty-four years between when Tacoma filed for a license and when FERC issued its initial new license in 1998. In our view, the delay in

relicensing only benefitted Tacoma. From the time the license expired in 1974 until a renewal license was ultimately issued, Tacoma was able to operate the Cushman Dam as it had been operated since 1930. *City of Tacoma*, 460 F.3d. at 60. Essentially, what Tacoma received was not a 50-year license, but an 86s -year license to operate the project wholly free from all terms or conditions that might otherwise protect the environment, natural resources, or the Skokomish Tribe's Reservation and Treaty rights. *Id.* at 61.

While the license was pending renewal, the Tribe used this time to knock on every door of the Federal government to ensure that the federal government did not once again ignore its responsibility to the Tribe. In doing so, the Tribe actively pushed Interior to move forward with 4(e) conditions that would protect the Reservation and the Treaty protected resources. The Tribe did this because Interior is the only Agency that can impose 4(e) conditions to protect Indian Reservations. Thus, it was imperative that the Tribe convince Interior to impose 4(e) conditions.

Ultimately, the conditions that Interior put forward were far less than what the Tribe wanted or believed were necessary, but at least the trustee finally acted. *See* Letter from Willie R. Taylor, Director, Office of Environmental Policy and Compliance, Department of the Interior, to Lois D. Cashell, Secretary FERC, Re Cushman Hydroelectric Project, Project No. 460, forwarding DOI section 4(e) conditions for the adequate protection and utilization of the Skokomish Indian Reservation (August 4, 1997). Despite this, FERC rejected Interior conditions, asserting that Interior had missed FERC's unilaterally imposed 60-day deadline. *See* 84 FERC ¶ 61,549. Further, notwithstanding the well-documented adverse impacts that this Project had on the Skokomish Reservation, FERC took the position that Interior only had the authority to impose conditions on a discrete and very small portion of the Project, namely that being the transmission line right-of-way located on the Reservation. *Id.*

Both the Tribe and City filed petitions to review the Cushman Project license in the U. S. Court of Appeals for the D.C. Circuit Court. In this case, it was the Tribe who defended Interior's authority to impose 4(e) conditions on the Project, not the federal agency itself. Once again, our trustee abdicated its responsibility. *See City of Tacoma*, 460 F.3d.53 (D.C. Cir. 2006).

In this landmark case, the D.C. Circuit held that FERC must include the Interior Department's Section 4(e) conditions in any license it issues for the Project. *City of Tacoma v. FERC*, 460 F.3d 53, 64-67 (D.C. Cir. 2006). The Court of Appeals held that FERC "exceeded its statutory authority by placing a strict time restriction on responsibilities Congress delegated other federal Agencies." *Id.* at 65 ("FERC took all the time it needed – a full 24 years . . . Interior, in contrast, produced its license conditions within about three years.").

The Court of Appeals also rejected FERC's argument that the Secretary's Section 4(e) conditions must be limited to the impacts of the Project facilities actually located on reservation lands. Relying on the Supreme Court's decision in *Escondido Mut. Water Co. v. LaJolla Band of Mission Indians*, 466 U.S. 765 (1984), the Court concluded instead that since some of the Project facilities are located on reservation trust land, the Secretary may impose any "conditions that are designed to mitigate the effect of the project on the Skokomish River to the extent doing so is reasonably related to protecting the reservation and the Tribe." *City of Tacoma*, 460 F.3d at 67. The Court then remanded the case for further proceedings, leaving open the opportunities for: (1) FERC to "express its disagreement" with the conditions and seek to persuade Interior to modify them; (2) FERC to deny a license; and (3) the City to litigate the reasonableness of the conditions. *Id.*

This legal victory for the Tribe, the first consequential decision since the Tribe began its fight against this Project, created an opportunity for the Tribe, Tacoma, the federal government, and the State agencies to reach a global settlement for the future operation of Cushman Project, including Interior's 4(e) conditions. The global Settlement Agreement was signed by the parties in January 2009 and FERC issued a new 40-year license to Tacoma in July 2010. The benefits of the Settlement Agreement and new license, included increased carrying capacity on the Skokomish River, improved fish habitat, improved fish passage, restoration of salmon populations, including two hatcheries to reintroduce salmon to the North Fork; restoration of wildlife habitat, and restoration lands and cultural sites to the Tribe. *See Cushman Hydroelectric Project Settlement Agreement Highlights*, Tacoma Power, TPU.

F. Conclusion

The Skokomish Tribe bore the brunt of the cost of generating power at the Cushman dam for 86 years, notwithstanding that there was a provision of the law that allowed the federal government to protect the Reservation. Today, Tribal governments have some of the world's best science related to the management of their trust lands and resources. Tribal governments are in the best position to understand the impact of a project on their lands and resources and to work in concert with other land management agencies and the project proponents to develop conditions that strike the balance of interests that the Federal Power Act has always called for. In the 21st century, Tribes should not have to rely on a distant trustee to do the right thing (or the case of the Skokomish and the Cushman Dam, anything) when they have the capacity and ability to do the work themselves.

Thank you for the opportunity to testify.

Mr. RUSH. The chair wants to thank the witness.

And now, Mr. Wallen, you are recognized for 5 minutes for the purposes of an opening statement.

STATEMENT OF RICHARD WALLEN

Mr. WALLEN. Chairman Rush, Ranking Member Upton, and members of the subcommittee, thank you for the opportunity to testify on the importance of hydropower. I am privileged to serve our citizen owners as a CEO and general manager of Grant County Public Utility District. Grant is a not-for-profit public utility providing electric power and wholesale fiber service in Central Washington.

Since our founding in 1938, we have been determined to provide our customers with affordable and reliable energy. Our county's need for electricity is growing, and we have a diverse customer base of farmers, irrigators, data centers, and other large industry. We own and operate two Columbia River dams with a combined generating capacity of 2100 megawatts of clean, renewable energy.

Our project is licensed by FERC. While projects of the Federal Columbia River Power System are not FERC-licensed, policies that impact one set of hydropower tend to impact the other. Under the State of Washington's Clean Energy Transformation Act, utilities must provide and make public a clean energy implementation plan with its own targets for energy efficiency and renewable energy.

In April 2008, Grant received a 44-year license extension for our project. Grant was required to use the traditional licensing process during this time, which we believe created additional bureaucratic burdens, delays, and created uncertainty among stakeholders prior to issuance.

We could have benefited during our licensing process. And as a supporter of H.R. 1588, the Hydropower Clean Energy Future Act, and commends Ranking Member McMorris Rodgers for her consistent leadership on hydropower issues. As a member of the National Hydropower Association, Grant is closely following the development of the hydropower license reform as well. There are components of this effort we see as beneficial as reasonable relicensing timelines and the show-your-work provisions.

The recently completed Columbia River system operational environmental impact statement studied the environmental, biological, power supply, and socioeconomic impacts of the entire Federal Columbia River system operations. One of the proposed alternatives was breaching the Lower Snake River Dams. While we recognize some of the removal efforts contemplated under the Uncommon Dialogue are for nonpowered dams, the predominance of dam removal in the dialog at all is concerning.

The Lower Snake River Dams are built to facilitate fish passage and actually achieve spring juvenile survival rates of 96 percent and summer migrating fish survival at 93 percent. Both meet or exceed performance standards. Nonetheless, some stakeholders push for removal of the Lower Snake River Dams even though the fish in the neighboring undammed rivers are experiencing similar stresses and the fact that only three of the listed species even migrate up the Snake. The four Lower Snake River Dams are a criti-

cally vital component of BPA's low-cost carbon power—carbon-free power supply.

To remove the dams would result in massive rate increases to regional supply cost, increases in carbon emissions and increased risk of blackouts. Replacement carbon-free resources are not available and cannot be easily or cheaply secured and require overbuild to counteract their intermittency.

Under this future, the Lower Snake River Dams would grow in importance because they can act as giant clean energy batteries, helping fill in these gaps for wind and solar. Hydropower provides dependable and carbon-free generation when we need it and how we need it. While Grant owned and operates its own hydro dams, we are concerned about the impact losing the Lower Snake would have for the entire region.

The Western Electric Coordinating Council, in its 2021 Western assessment of resource adequacy, issued a warning that every region in the Western grid is facing an abnormal risk of blackouts. We are also concerned about the price impacts, as the BPA has forecasted wholesale price impacts of 50 percent if the dams are removed and replaced with wind or solar plus batteries.

This price hike could impact Grant PUD customers, as we, a public power utility, have rights to BPA-provided generation. In a carbon-constrained world, hydropower is increasingly vital for its emission-free generation, load-following capabilities, grid stability, and integrating—resources that keep the lights on.

Grant PUD is proud of its role in promoting the modernization of hydropower and thankful for the pioneering spirit exhibited by our founding fathers almost 85 years ago as well as our long-standing relationship with the Wanapum Band of Native Americans as we continue to protect, preserve, and perpetuate their cultural traditions and way of life. I look forward to your questions.

[The prepared statement of Mr. Wallen follows:]

Written Testimony of Rich Wallen

Chief Executive Officer and General Manager, Grant PUD

U.S. House Committee on Energy and Commerce, Subcommittee on Energy

Modernizing Hydropower: Licensing and Reforms for a Clean Energy Future

May 12, 2022 10:30AM

Chairman Rush, Ranking Member Upton and Members of the Subcommittee, thank you for the opportunity to testify on the importance of modernizing hydropower. I am privileged to serve as the CEO and General Manager of Grant County Public Utility District. Grant PUD is a not-for-profit, public utility providing electric power and wholesale fiber service(s) for our county in Central Washington.

Since our founding in 1938, we have been determined to provide our customers with affordable and reliable energy. As a public utility, we are governed by a democratically elected five-member board of commissioners who set policy, review operations and approve budget expenditures. Our county's need for electricity is growing. While most of our county is agricultural, some of our largest power purchasers are data centers, including Microsoft, in the community of Quincy as well as manufacturers like SGL Carbon and REC Silicon at the Port of Moses Lake.

Grant County has a renewable energy portfolio rooted in hydropower that has helped us avoid retail rate increases since 2019. We operate two Columbia River dams and two smaller hydro generators that have a combined generating capacity of more than 2,100 megawatts of clean, renewable energy. Priest Rapids and Wanapum dams, collectively known as the Priest Rapids Project, are licensed by the Federal Energy Regulatory Commission (FERC). These locally-owned and operated hydroelectric resources enable Grant PUD to provide our customers with some of the lowest-cost, most reliable electricity in the country. We have invested millions of dollars to modernize turbines and generators at both facilities. This investment maximizes the potential energy flowing through the Columbia River. Our federal license to operate the dams requires we provide safe fish passage and invest heavily in habitat restoration, fish rearing and studies to ensure the survival of migratory and otherwise endangered species. In addition to our hydropower generation, we also have a share of the Nine Canyon Wind Project, which includes 63 wind turbines with a maximum generating potential of 95.9 MW.

Since Grant's inception, it has been a recipient of "preference" power. The 1937 Bonneville Power Act established the Bonneville Power Administration (BPA) to market the power produced at the federal dams. It also included a "preference clause" which gives "preference and priority in the use of electric energy to public bodies and cooperatives." This means that consumer-owned utilities, including Grant PUD, have first right to the low-cost federal power produced at federal dams along the Columbia River – and pay all of the costs associated with generating and transmitting that electricity. The projects of the Federal Columbia River Power System are not FERC licensed because they are owned and operated by the federal government; however, policies that impact one set of hydropower generation tend to impact the other.

Under the State of Washington's Clean Energy Transformation Act (CETA), utilities must prepare and make public a clean energy implementation plan with its own targets for energy efficiency and renewable energy. Grant PUD's 2020 Integrated Resource Plan (IRP) shows our county's demand for electricity outgrowing the planning margins of our generation by 2026, especially at times of peak demand, this IRP process is currently underway for 2022 as per Washington statute and will likely draw the same conclusions based on our large customer queue.

This further demonstrates the importance of hydropower generation and the need for effective and efficient permitting. In 1999 Grant PUD formally asked FERC for permission to use the Alternative Licensing Process (ALP), but the Joint Fisheries Project (JFP) objected and the request was denied by FERC. Grant PUD then started into the Traditional Licensing Process (TLP). Our experience in the TLP resulted in less collaboration as comments were submitted back and forth through FERC versus collaborative front-end stakeholder engagement.

Grant PUD received its final license renewal on April 17, 2008 after operating under annual licenses pending the disposition of its new license application. The renewal allows for 44 years of continued operation of the project. Total estimated fish and wildlife costs over the license term are projected at \$1.02B. This does not include additional investments made for turbine upgrades conducted at both Priest Rapids and Wanapum dams related to fish survival improvements. From our experience with our FERC-licensed dams, the process was frustratingly bureaucratic, with timely and expensive delays that create too much uncertainty for our members. Grant PUD is a proud supporter of H.R. 1588, the Hydropower Clean Energy Future Act. We could have benefited from legislation like this during our license renewal process in 2005 and commend Leader Cathy McMorris Rodgers for her consistent leadership on hydropower issues.

Hydropower is the single largest electricity source for our region. As a member of the National Hydropower Association, Grant PUD is closely following the development of the so-called "Uncommon Dialogue." There are many components of the effort that would be beneficial to Grant, there are elements we are still reviewing, and there are elements that give us pause. One of those elements that gives us pause is the focus on dam removal, with dam removal being one of the three pillars of the legislation.

Dam removal in the Northwest has been a serious point of contention for several years, plagued with litigation. The recently completed Columbia River System Operation (CRSO)

Environmental Impact Statement (EIS) studied the environmental, biological, power supply and socioeconomic impacts of the entire Federal Columbia Rivers System Operations. One of the proposed alternatives was breaching the Lower Snake River Dams (LSRDs). The conclusion of the study was that the dams play a vital role in the Northwest power system and that their continued operation does not inhibit the existence of endangered or threatened salmon species. While we recognize some of the removal efforts contemplated under the “Uncommon Dialogue” are for non-powered dams, the continued focus on the removal of the power-generating and commerce-strengthening Lower Snake River Dams from organizations associated with leadership roles within the uncommon dialogue is very concerning.

As a conscientious consumer-owned utility, we take environmental stewardship seriously. The protection of ecosystems and imperiled species are of utmost importance to the communities we serve. About a quarter to a third of the dollars billed to BPA customers fund fish and wildlife programs. Combined with our preference brethren, BPA ratepayers have invested more in Endangered Species Act mitigation efforts than any other region, spending more than \$750 million per year in recovery efforts. Since 2000, nearly \$2 billion have been invested in the Lower Snake River Dams to enhance salmon survival. These upgrades were built to facilitate fish passage and actually achieve spring juvenile survival at 96% and summer migrating fish survival at 93%, meeting or exceeding performance standards. Nonetheless, some stakeholders push for removal of the Lower Snake River Dams even though fish in neighboring undammed rivers are experiencing similar stress and the fact that only three of the listed species even migrate up the Snake. Peer reviewed academic studies have shown that the similar undammed rivers like the Peace River in British Columbia produce similar survival results for fish. This push for dam removal is not about fish recovery or science.

The four LSRDs are also a critically vital component of BPA’s low cost, carbon-free power supply. To remove the dams would result in massive rate increase to regional supply costs, increase in carbon emission, impacts on other critical areas of the economy and increased risks of blackouts. The four dams produce about 1,000 aMW each year and account for about one quarter of BPA’s total reserve-holding capacity for the year. Replacement carbon-free resources are not available and cannot be easily or cheaply secured.

Experts anticipate the Northwest will need to build 100 GW or more of new nameplate wind/solar + batteries by 2045 to meet Oregon and Washington state’s grid decarbonization laws.¹ The region currently only has 64 GW of capacity. The huge buildout is required because we are replacing 24x7 fossil-fueled resources with intermittent energy resources, like wind and solar. That means “over-building” wind and solar to the point where there is always enough generation on-line to provide power to people who need it. Under this future, the LSRD will grow in importance, because they can act as giant, clean energy batteries, helping fill in the gaps for wind and solar. Losing the LSRD means losing their capabilities and likely extending the operation of coal or natural gas generation.

¹ https://www.ethree.com/wp-content/uploads/2018/06/Public-Generating-Pool_2018-Pacific-NW-Scenarios-and-Sensitivities_Final-Report.pdf
<https://www.ethree.com/wp-content/uploads/2019/12/E3-PNW-Capacity-Need-FINAL-Dec-2019.pdf>

While Grant PUD owns and operates its own hydropower dams, we are concerned about the impact losing the LSRD would have for the entire region. The Western Electric Coordinating Council—in its 2021 Western Assessment of Resource Adequacy—issued a warning that every region comprising the Western grid is facing an abnormal risk of blackouts.² The grid is interconnected, so even if a utility like Grant PUD has sufficient electricity to meet its customers' needs, our customers could still experience blackouts if the integrity of the grid fails. We are also concerned about the price impacts, as the Bonneville Power Administration has forecasted wholesale price impacts of 50% if the dams are removed and replaced with wind or solar plus batteries.³ This price hike could impact Grant PUD customers, because we—as a public power utility—have priority rights to BPA-provided generation.

The costs of dam removal would also be significant. Pacific Northwest communities and business would have to pay almost \$700 million per year to replace the carbon free output of the LSRDs, and not have a single additional MW to meet growing electrical demand. This enormous cost would also have no benefit of greenhouse gas reduction and could alternatively be spent replacing carbon emitting resources. Further, the costs of replacing the power output does not include the cost of actually removing the dams or their non-power benefits including transportation, irrigation, and recreation.

In a carbon constrained world, hydropower is increasingly vital for keeping the lights on. It is carbon free. It can be stored and generated on demand. It helps integrate wind and solar to the grid. Grant PUD is proud of its role in promoting the modernization of hydropower and thankful for the pioneering spirit exhibited by our founding fathers almost 85 years ago. I look forward to your questions.

² [WARA 2021.pdf \(wecc.org\)](#)

³ <https://usace.contentdm.oclc.org/utis/getfile/collection/p16021coll7/id/14957>

Mr. RUSH. The Chair wants to thank all of our witnesses.

And Mr. Wood, you are now recognized for 5 minutes for purposes of an opening statement.

STATEMENT OF CHRIS WOOD

Mr. WOOD. Thank you, Chairman Rush. Chairman Rush, Ranking Member Upton, and members of the subcommittee, thank you for the opportunity to testify today on the issue of hydropower and licensing reforms for a clean energy future. Trout Unlimited is the Nation's largest—excuse me—trout and salmon conservation organization. We are a nonpartisan organization with more than 350,000 members and supporters, many of whom are from your districts, spread around the country. We have a deep and abiding interest in the relationship among dams, hydropower projects, and trout and salmon fisheries.

Trout and salmon are migratory creatures. When their migratory paths are blocked and the cold water they need warmed too much, they become imperiled. Science and research show how dam construction has caused or contributed to the harm and extinction of many species of trout and salmon in the U.S. Thus, we have a huge stake in ensuring that hydropower is done right and balanced properly with the needs of people and communities who depend on the fish and wildlife resources of our waterways.

While we are passionate advocates for fish, we also see ourselves as problem solvers. We have a long history of engagement in project-specific licensing and in regulatory and legislative processes, partnering with the tribes, State and resource agencies and, of course, utilities and project developers.

In fact, in 2002, we testified in this same room and worked very hard with the man for whom this room is named, the great John Dingell, prior to passage of the Federal Power Act amendments in 2005. On the ground, we have had many successes and learned some hard lessons. In the late 1990's and early 2000's, we worked cooperatively with the Avista Corporation to restore bull trout and cutthroat trout in Northwest Montana.

We worked with Portland General Electric in the middle of their license to help them voluntarily. They, in fact, came to us, install fish passage to restore salmon and steelhead on the Deschutes River in Oregon. More recently, we worked with Pennsylvania Power and Light to remove two dams and bypass a third on the Penobscot River in Maine. This is a particularly interesting story, as part of our agreement was that all of the lost power would be and it has been replaced. And the fish response has been amazing since those dams came out.

We have seen the process work well. We have seen it work poorly, and we have seen the way in which improvements could be valuable. With this history in mind, TU participated in the Uncommon Dialogue, and we absolutely applaud the effort and its participants and salute all who are participating in the conversation, especially my friends here from American Rivers, the tribes, and the hydropower industry.

We support many of the concepts included in the package. We support the group's stated goal of advancing mutual interests in a way that does no harm. We support the proposed new tribal au-

thority. We also support providing more resources to State, Federal, and tribal agencies participating in listing—licensing proceedings.

But there are some key aspects of the package that we think are underdeveloped or that may need to be sharpened. For example, we think the modification of mandatory conditioning authorities under Section 4(e) and 18 of the Federal Power Act would benefit from additional review and scrutiny. We urge the subcommittee to continue its engagement with Uncommon Dialogue participants and seek input from additional stakeholders, especially the State and Federal resource agencies who will be discharged to implement the changes and to continue to make further improvements to this package through the legislative process. And when those improvements are made, we fully look forward—or we look forward to fully supporting the legislation. While we have some concerns about some of the details, we intend to continue to work alongside our colleagues here today as well as with Members of Congress to ensure that a final legislative product is successful and allows all stakeholders to move forward together. Thank you for holding this hearing today, and thank you for inviting me to participate.

[The prepared statement of Mr. Wood follows:]



Testimony of
Chris Wood, Trout Unlimited
Before the House Committee on Energy and Commerce
Subcommittee on Energy

Modernizing Hydropower: Licensing and Reforms for a Clean Energy Future.

May 12, 2022

Chair Rush, Ranking Member Upton, and members of the Subcommittee, thank you for the opportunity to testify today on the issue of hydropower and licensing reforms for a clean energy future.

I am the CEO and President of Trout Unlimited (TU), the nation's largest trout and salmon conservation organization. TU is a non-partisan, not for profit organization representing more than 300,000 members and supporters across the country, sportsmen and sportswomen, many of whom are your constituents.

Trout Unlimited has a deep and abiding interest in the relationship between dams, hydropower projects and trout and salmon fisheries. Trout and salmon are highly migratory fish. When their migratory paths are blocked, and the cold water they need is warmed too much, their life cycles are compromised. Science tells us that dam construction and operation has caused, or contributed to, harm and extinction of many species of trout and salmon in the U.S. Thus, we have a huge stake in ensuring that hydropower development is done right, and balanced properly, with the needs of people and communities who depend fish and wildlife resources of our waterways.

TU's mission is to bring together diverse interests to care for and recover rivers and streams so our children can experience the joy of wild and native trout and salmon. Our members and supporters live, recreate, hunt and fish along the waterways impacted by hydropower development. Our members and volunteers dedicate more than 700,000 hours annually in projects to restore and improve their local watersheds.

While we are passionate advocates for our fish, we see ourselves first and foremost as problem solvers. TU has a long history of engagement that stretches back to the early 1980's—in project-specific licensing and in regulatory and legislative processes — partnering with Tribes, states, and federal resource agencies, and of course utilities and project developers, to identify and implement collaborative solutions, balancing the needs of fish and wildlife with power production goals. In Congress, we have testified in this same room in 2002 on this same subject and worked hard with the person whose name is revered in this very room, our beloved friend John Dingell, prior to the enactment of the FPA amendments in 2005. On the ground, we have had some successes, and learned some hard lessons. From working with Avista Corporation to restore bull trout in northwest Montana, to working with

A mission to bring together diverse interests to care for and recover rivers and streams so our children can experience the joy of wild and native trout and salmon.

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Portland General Electric (PGE) to restore salmon and steelhead on the Deschutes River in Oregon, to working with Pennsylvania Power and Light (PPL) to restore Atlantic salmon on the Penobscot River, Maine, TU has a deep history with hydropower licensing. We have seen the process work well, we have seen it work poorly, and we have seen the ways in which improvements to the process could be valuable.

With this history in mind, TU was a participant in the Uncommon Dialogue - along with representatives from industry, tribes and conservation interests - to identify and advance mutually beneficial license reform proposals to support hydropower development, advance tribal rights, and promote conservation and natural resource benefits. That effort resulted in a proposed suite of reforms to the Federal Power Act ("proposal"), which is the topic of discussion in today's hearing. We applaud this effort to find common ground and provide meaningful solutions to vexing issues on hydropower relicensing and the management of our nation's aging dam inventory. We salute all who are participating, especially those friends who sit next to me today, American Rivers, Tribes, and Hydropower industry.

We support many of the concepts included in the package - in particular provisions related to tribal authority and language aimed at supporting state, federal, and tribal agencies participating in licensing proceedings. But there are key aspects of the package that we think are under-developed or that may need to be sharpened to avoid harm and unintended consequences. For example, the proposed modification of mandatory conditioning authorities under Sections 4(e) and 18 of the Federal Power Act are likely unnecessary and at a minimum would benefit from additional review and scrutiny.

We urge the Subcommittee to continue its engagement with Uncommon Dialogue participants - and seek input from additional stakeholders, especially the federal and state resource agencies - to make further improvements to these concepts through the legislative process. When improvements are made, we look forward to fully supporting the legislation.

We will further outline our perspectives on the significance of the hydropower licensing process and where we see opportunities and pitfalls in license reform discussions.

Hydropower and the Licensing Process // Why the licensing process is important to Trout Unlimited

Hydropower has been a significant source of power for the Nation dating back to the earliest days of the United States. It helped establish our Nation, it continues to be a critical part of our power supply today and will be part of climate mitigation solution assets for tomorrow. But it comes at a price. Hydropower and dams can and do have significant impacts to rivers and streams and to migratory fisheries, such as trout, salmon, shad, and the habitats they rely on. Blocked fish migration, dewatered rivers and streams, changes in flow and sediment transport, water temperature warming, are some of the well-documented impacts. These impacts have real world consequences for recreational and commercial fisheries, tribes and treaty resources and local communities.

A license term lasts between 30 - 50 years; the underlying infrastructure is likely to exist much longer. The licensing process is the critical juncture during which industry, regulators and affected stakeholders are able to work together to ensure that impacts are minimized and adequately mitigated.

The Federal Power Act (FPA) was established in 1935 to regulate the development of power from privately owned dams in a manner that successfully balanced the interests of hydropower developers and the interests of all other river users and communities who depend on healthy, vibrant rivers. The Act provided several protections for non-power interests, including 4(e), which requires any license within a reservation not interfere or be inconsistent with that reservation's purpose and Section 18,

which requires that licensees construct, maintain and operate “such fishways as may be prescribed by the Secretary of the Interior or the Secretary of Commerce” to protect fish populations.

In 1986, Congress amended the FPA (ECPA amendments) to ensure that in issuing licenses, FERC give “equal consideration” to a number of power and nonpower values, including “the protection, mitigation of damage to, and enhancement of, fish and wildlife... (including related spawning grounds and habitat), the protection of recreational opportunities, and the preservation of other aspects of environmental quality.” FPA Section 10; 16 U.S.C 797(e). The new law also provided a clear role for federal and state fish and wildlife agencies by requiring FERC to include conditions in the license to “adequately and equitably protect, mitigate damage to and enhance...fish and wildlife affected by the development, operation and management of the project” and to develop such conditions based on the recommendation of these agencies. (10(j) recommendations).

Through these authorities – Section 4(e), 18, and 10(j) - Congress developed a framework meant to ensure timely and effective fish passage and assurances of water quality above and below hydroelectric projects. TU relies on these resource agencies and these authorities to protect and restore our fisheries resources and to help ensure equal consideration of non-power values in FERC’s licensing processes.

Because hydropower licenses can last as long as 50 years, and the associated infrastructure many years beyond that, tribes and natural resource agencies’ roles in the licensing process provides a crucial opportunity to ensure that projects will be properly developed and operated to ensure our river resources are preserved for future generations. This opportunity is all the more crucial for re-licensing, as many of the projects coming up for relicensing in the next 10-15 years were developed prior to the existence of major natural resource laws or the 1986 equal balancing requirements and have not had significant updates or upgrades since their last license. The relicensing process provides our resource managers with the much-needed opportunity to ensure that these projects are updated and appropriately modernized.

Of particular significance to Trout Unlimited is the Section 18 fish passage authority. Section 18 authority to provide effective, appropriate, fish passage at dams is fundamental to addressing the impacts of hydropower dams on the nation’s migratory fish. Lack of effective fish passage at hydropower dams is the primary driver of salmon declines and multiple ESA-listings on both coasts. Agency authority to prescribe fishways and establish performance standards to assess their effectiveness is essential to prevent salmon extinction.

Effective use of Section 18 and the other mandatory authorities have produced some outstanding results for fish and power across the nation.

The **Penobscot River Restoration Project** may be the best win win fish habitat restoration project conceived and completed so far in the United States. In a project cited as the inspiration for the Uncommon Dialogue discussions that bring us to you today, TU, other NGOs, the Penobscot Indian Nation, the state of Maine and several federal agencies agreed to the purchase of three critical dams in the Penobscot watershed by the Penobscot River Restoration Trust.

- The two lowest dams on the Penobscot, Veazie and Great Works, were purchased by the Penobscot Trust (YES! TU was temporarily a dam owner!) and were removed in 2012-2014.
- The Trust built an innovative nature-like fish bypass around the third dam in 2016.
- Licenses for all three dams were surrendered.

- Changes to the hydropower configuration at other dams actually resulted in a **net increase** in hydropower production while removing three significant barriers to fish passage from the watershed.
- Fish recovery was immediate. Before construction on the bypass was complete, nearly 2 million river herring, and 7,000 American shad had returned to spawn upstream of the removed dams.

Relicensing of two **Avista** dams on the lower Clark Fork River in Montana in the late 1990's and early 2000's is another excellent example of the importance of Section 18. In preparation for relicensing, Avista pro-actively asked FERC if the company could convene a collaborative relicensing group to work out license stipulations and mitigation upfront, instead of putting together a plan, having FERC review it, then go out to the public and await controversy, the usual FERC relicensing process. Montana Trout Unlimited was the main conservation group involved, along with Idaho Panhandle TU chapter. Following a few years of in-depth meetings and planning, Avista's license renewal included a record-breaking amount of funding (for the project size) for mitigation, about \$200 million. Avista saw it as a much better deal than years of adversarial interactions, attorneys and likely litigation over mitigation. The mitigation package included funds for things like cutthroat and bull trout restoration, conservation easements/land purchases to protect habitat, fish migration studies coupled with fish passage projects, including fish passage at Cabinet Gorge dam. With lots of follow-up credit to Idaho Fish & Game, it has been a very big success for native trout and other assemblages of native and sport fish in that system. It stands as a model for how to do relicensing collaboratively, rather than combatively.

These are excellent examples of the balance provided for in law by this committee. Effective use of Section 18 brought stakeholders together to find placed based solutions to real life challenges. We seek more of these win-wins, not fewer.

Uncommon Dialogue license reform proposal

There are many positive aspects of the Uncommon Dialogue proposal.

Improvements for Tribal management of water and fisheries resources

The proposed reform package takes an important and long overdue step of further clarifying/expanding the authority for Federally Recognized Tribes to protect their lands, waters, other resources, and treaty protected rights. This is one of the very best aspects of the proposal.

Process coordination

Process coordination, communication and collaboration are critical aspects of an supporting a timely and efficient process. In the early 2000s, stakeholders involved in the hydropower licensing process worked together to develop the Integrated Licensing Process (ILP) at FERC to help improve coordination, maximize early planning and engagement, and move more efficiently and collaboratively through the licensing process. The ILP has been successful in many ways, including greater timeline certainty and efficiency and increased support for agencies to effectively engage as partners in the process.

The reform package proposes further process coordination steps, requiring FERC and other agencies and tribes to consult in development of a coordinated schedule, requiring status check-ins and further coordination on study plans, with the intent to make a more timely and transparent process. As noted, we support coordination, but caution that additional process burdens must also include additional resources to support the agencies. To that end, we are very supportive of cost recovery language aimed at supporting the agencies and tribes.

Agency funding to enhance capacity

The proposed reform package attempts to meet that challenge with measures aimed at supporting resource agencies. Specifically, for federal agencies, the proposal would clarify the existing FPA process to direct the portion of costs recovered in annual charges for Federal agencies be refunded to the relevant Federal agency directly rather than held in the general treasury. For administrative costs incurred by Federally Recognized Tribes and State agencies, the proposal allows for cost recovery through establishment of a “license reimbursement fund” at FERC. The revenues for this fund come from reallocation of a portion of other annual charges that FERC currently directs to the Treasury. We support these concepts as critical to ensure agencies are able to meet the new process steps.

Support the process for license surrender and for addressing non-operational facilities

We support provisions in the proposal which contains improvements to the FERC process to better facilitate decommissioning and a pathway for dam removal at sites where generation no longer makes sense.

Much of the nation’s existing infrastructure is aging. Changing climate, changing electric system needs, new technologies and other pressures have changed conditions and, in some places, removing existing infrastructure may be the most appropriate step. As we review our existing infrastructure for potential dam safety needs and opportunities to add or increase power generation (whether adding power to a nonpowered dam, or adding additional capacity at existing powered dams), we should also look for opportunities to support and incentivize voluntary removal of projects that no longer serve a public purpose or where the impacts no longer justify the benefits.

Removing dams – even dams with existing or hypothetical power production values – can be done without detrimental impacts to power values. On the Penobscot, for example, TU helped build deals to replace every bit of power production lost in removing the dams by bolstering hydropower generation elsewhere in the basin without harming fish.

When we remove dams, we see clear results: healthier river ecology, and trout, salmon and steelhead moving back into their historic habitats upstream. No other restoration action comes close in terms of helping migratory freshwater fish species reach spawning waters and rebuild their populations.

Modification of mandatory conditioning authorities: Section 18 concerns

The proposed reform package would modify the language of Sections 18 and 4(e) to add new statutory language tying those mandatory conditions to project effects. While the modification is minor in appearance, the implication of modifying these foundational provisions is potentially significant.

Section 18 applies to any hydropower project that may affect the passage of fish species present in the project area (or species planned for introduction in the area). It authorizes the U.S. Fish and Wildlife Service and National Marine Fisheries Service to prescribe upstream and downstream fishway passage requirements. Existing statute plus **bold underline** proposed addition reads:

[FERC] shall require the construction, maintenance, and operation by a licensee at its own expense of such ... fishways as may be prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate **to address project effects and other relevant factors.**

Section 4(e) authorizes federal land managers to impose mandatory conditions on a FERC license for hydropower projects located on federal reservations. Existing statute provided with **bold underline** reflecting proposed additions in the UD proposal:

[A license issued within a reservation] shall be subject to and contain such conditions as the [relevant Secretary], or Indian Tribe as provided in section 823h of this title shall deem (A) necessary for the adequate protection and utilization of such reservation and (B) reasonably related to project effects on the reservation and its utilization.

We strongly support the addition of Indian tribes to this section. We have concerns about the addition of part (B) language.

Proponents of this proposed language suggest that the intent is not to change the scope or effect of Sections 4e and 18, but simply to clarify what is already standard practice, namely, that agencies are required to provide reasonable rationale for their conditions. However, this new language could be interpreted as limiting the existing scope of the authorities, imposing new levels of scope and scale rationale and risks placing agency exercise of the authority under increased legal scrutiny and or causing a “chilling effect” on use of the authority. In our view, the simplest way to avoid changing the intent is to simply not change the law. The significance of these provisions is too important.

This proposed language change would introduce new uncertainty at a critical juncture – we are still working through relicensing of projects operating on pre-ECPA licenses, many of which have inadequate fish passage provisions. These relicensing provide once-in-a-generation opportunities to improve fish populations. These opportunities are increasingly important as the multiple threats facing migrating fish populations, especially endangered and threatened populations, are compounded by changing climate conditions. Changes to 4(e) and 18 could make it more difficult to address critical protection, mitigation and enhancement needs – such as addressing fish passage – at a time when fish are increasingly impacted by climate change.

We urge the committee, at an appropriate point in the legislative process, to bring agency witnesses to a hearing to gain their insights into these concerns to see whether they have merit or not.

Additional considerations for the committee

Hydropower as a climate solution

Climate change is having a profound impact on our nation’s waters – and the coldwater fisheries that rely upon healthy habitat and cold, clean water. Dams and hydropower projects can – but not in all cases – further exacerbate these challenges for coldwater species. Trout and salmon depend on an abundance of clear, cold water, a feature which makes them particularly vulnerable to climate change. Fish in rivers are extending their ranges northward and migrating earlier to waters that were previously colder than the fish could tolerate. As coldwater habitats begin to warm, the ability of these populations to access coldwater habitats, from small headwater streams to deep river pools, will be critical.

As we consider opportunities to expand hydropower capacity, it is imperative that we also look for ways to reduce impacts and improve conditions for coldwater systems – this includes evaluating existing infrastructure to prioritize investment in repair, retrofit, or removal as appropriate.

Support strong funding to agency budgets to support early and consistent engagement

In order to carry out their duties in an efficient and effective manner federal resource agencies must be adequately funded in order to support their employees and their work. As noted above, we applaud the language in the in the proposed reform package to support cost recovery by federal, state and tribal agencies. We further urge the Congress to increase appropriations to the federal resource management

agencies in order to fund the staff positions that allow them to efficiently and thoroughly evaluate applications for hydroelectric licenses.

Twenty First Century Dams Act (H.R.4375 / S.2356), and thanks to Congress for obsolete dam removal funding in IIJA.

Trout Unlimited is proud to have been part of the Uncommon Dialogue effort with stakeholders representing dam safety, tribal, conservation and industry interests, including NHA, to develop bipartisan proposals to advance the rehabilitation, retrofit and removal of the nation's dams. This effort led to the development of the Twenty First Century Dams Act (H.R.4375 / S.2356), led by Representative Kuster (D-NH) and supported by many on this committee and to advance several key funding and investment provisions as a part of the bipartisan Infrastructure Investment and Jobs Act to support these goals. All of these proposals demonstrate the type of collaborative solutions that are needed to responsibly maintain and expand our nation's hydropower capacity – incentivizing upgrades and investments in our existing hydropower fleet, supporting responsible addition of capacity at existing infrastructure, and investing in repair or removal of infrastructure where appropriate.

Conclusion

Hydropower – when carefully sited and operated to minimize and mitigate impacts – can provide a responsible and low-carbon source of energy and provide an essential component of our nation's energy mix. Like any form of energy, hydroelectric development is not without impact and when it comes to rivers and aquatic ecosystems, dams and hydropower can have profound and lasting harmful impacts. It is important to get the balance right.

We believe that we can responsibly advance hydropower development without repeating the impacts of the past, but it will require collaboration and commitment to advancing the least impactful projects, improving conditions at existing facilities, and, if necessary, removing infrastructure where appropriate.

We are proud of our role in the collaborative effort that led to the development of the proposed license reform package. We support the groups stated goal of advancing mutual interests in a manner that “does no harm.” While we have concerns on some of the details of the proposal, we intend to continue to work with and alongside our colleagues here today, as well as with Members of Congress and the broader community of non-profits, tribes, dam owners, and regulatory agencies who work in this arena to help ensure that a final legislative product is successful and allows all stakeholders to move forward together.

Thank you for holding this hearing today and for inviting us to share our perspective. We look forward to working with the Committee on this topic.

Mr. RUSH. Again, the Chair want to thank all the witnesses and want to thank Mr. Wood for your testimony. And all the witnesses, we want to thank you for your testimoneys. We will now move to the members' questioning. And each member will have 5 minutes to ask questions of our witnesses. And I will start by recognizing myself.

Ms. Pavel, I want to start by learning about some of the benefits of the Uncommon Dialogue proposal for Native American tribes. In your testimony, you talked about how, even within the last 20 years, the Department of the Interior abdicated its responsibility and acted as a Skokomish Tribe trustee in the relicensing process. Can you talk a little bit about how things would have been different and better and what additional conditions your tribe may have imposed if the Uncommon Dialogue proposal had been logged when the Cushman project was being relicensed?

Ms. PAVEL. Absolutely, Mr. Chairman, and thank you for the question. How would have it been different—it would have been—the tribe would have been at the table early on. They would have been at the table with the licensee early on because, as my brother, who is my tribe's chairman at the time, will tell the story, he spent a decade knocking on the doors of our trustee, begging our trustee to get engaged to do something. The first person to open the door for my brother was the State of Washington DEQ, said, OK, let's talk. Let's have a conversation. And then it was through allies like Trout Unlimited and American Rivers where we were able to bring other political forces to bear because my tribe is just a little tribe, and so we had to bring other forces to bear on our trustee.

But I think that Tacoma would have—if Tacoma had known they would have had to sit down with us and we were the entity they had to deal with the government, they would have come and sat down with us and worked it out. So we would have—we would—that early convening of key stakeholders would have happened if that would have happened. And the kind of conditions that would have gotten imposed, had the tribe had the mandatory conditions, I don't think they are that different than, ultimately, what got imposed as a result of the global settlement that happened after Tacoma—after the tribe won the lawsuit with Tacoma v. FERC where we sat down and said, "OK. Let's talk about the resource."

This is resource management opportunity. Let's talk about—let's build spillways. We've got to restore our sockeye fishery. Let's build a hatchery. Can we build a hatchery? Let's talk about where the tribe can—can benefit because we don't benefit from any of that power. That power gets shipped to the residents of Tacoma. As my brother says, when people like to say they create power from dam, they are not creating power. You are taking power. You are taking energy from our River. But the global settlement that happened with the relicensing allowed the tribe to share in the generation of revenues like if—because it's on tribal lands, so we get the 4(e) payments.

We became a full partner with the city of Tacoma in the management of this facility and restoring habitat. And if you look at Tacoma's website, they are excited. They love being part of it. We own part of the campgrounds now, so we're present in the recreational ownership of this facility. We talk about these critical cultural

sites. And that would have—what—the global settlement that ultimately achieved after my tribe basically invested everything we had is probably what would have happened if we had been at the table early. But it would have happened earlier. It wouldn't have taken an additional 30 years. We would have been there earlier, Mr. Chairman.

Mr. RUSH. So you would agree or you—do you agree that the Federal Power Act, as currently written, is outdated and out of step—is outdated and out of step with other laws on tribal sovereignty?

Ms. PAVEL. Absolutely, Mr. Chairman. It is out of step. And tribes are some of—and as you know, Congresswoman McMorris Rodgers knows. Chairman Pallone knows. Many members know. Tribes have some of the best resource management data science in the world, especially in the Northwest. And there is no one better to examine the impact of hydroelectric projects on tribal trust lands and how best those resources can be protected than tribal governments. And in this area of self-determination where tribes are managing multimillion dollar Federal programs, we are managing and serving in treatment of states under the Clean Air Act, the Clean Water Act. It is time to fully, as I said before, animate the provisions of the Federal Power Act with the tribal governments' voice themselves.

Mr. RUSH. Want to thank—my 5 minutes have concluded.

The Chair now recognizes the ranking member, Mr. Upton, for 5 minutes.

Mr. UPTON. Well, thanks again, Mr. Chairman. And thanks for the testimony as well. This is an issue that I would like to think that we can expand hydro, and we can work—I would like to think we can work in a bipartisan basis to do that. And of course, as I indicated in my opening statement, the concern that many of us have is how did it take so long to get something done.

I would like to think again that we are all on the same page, that we know the importance of hydro. We know the importance not only to the environment but to the communities that have it and the end users that, frankly, need it in a—in a big way. So Mr. Woolf, I guess, you know, on your testimony, you indicated that hydro is disadvantaged to other forms of energy, particularly wind and solar. We are all supporters of renewable energy. We want it to work.

But some of us are a little afraid of a system that is being overbuilt for wind and solar. I had one of my Michigan utilities just this week indicated that they would—to do wind and solar for renewable, it would require, in Michigan, tens of thousands of new acreage that they would have to set aside to do that to be able to hit the targets that they want to and to be able to eliminate some of the coal plants that are currently in use that are scheduled to be phased out over the next number of years.

How long does it normally take FERC from start to finish to issue an original license for a hydro project? You need to turn on your mic. It's the 25 million people that are watching us that want to hear your answer. We can hear you but it's—

Mr. WOOLF. Thank you for your question. It takes way too long to license a hydropower facility. On average, it takes 7.6 years from

start to finish. And that is on average. There are many facilities where it takes over a decade, some facilities where it has taken over two decades to get a hydropower license.

Mr. UPTON. So have you seen any impact, any change, since we passed the bill back in—what?—2018? Have you seen any positive movement on that, anyone saying, hey, “Let’s get this shot clock started?”

Mr. WOOLF. I wish I could say that those provisions have proven effective. In fact, they have not. Unfortunately, only one facility has come in to seek to use those provisions and was found by FERC to be ineligible.

So—

Mr. UPTON. And where was that project? Do you know what State, where it is?

Mr. WOOLF. I am sorry. I do not.

Mr. UPTON. Maybe if you could—

Mr. WOOLF. I can get that for committee.

Mr. UPTON. That would be helpful.

Mr. WOOLF. Yes.

Mr. UPTON. So one new project in the last four years?

Mr. WOOLF. One project that sought to use it and was—

Mr. UPTON. That sought to use it.

Mr. WOOLF [continuing]. Found ineligible by FERC. So not a single facility has been able to use those provisions.

Mr. UPTON. And one of the things, I think, you know, as we thought about this hearing, where is FERC on this? I would like to have FERC come testify and tell us what they have been doing or not doing. I know they have now got a full commission that’s there. But obviously this ought to be a priority as we look at something that doesn’t emit or has zero emissions.

I think there is pretty much—I think there is a hydro facility virtually in every State in the union, every—

Mr. WOOLF. Forty-eight states.

Mr. UPTON. Every State. So there is no reason why we can’t expand that. And FERC ought to make this a priority to try and get it done, especially since we are trying to help them do their job with the legislation that we passed in 2018. How long does it normally take—and again, I—wind, solar or battery installations. And again, for me in Southwest Michigan, I have seen our utilities come to the plate. I was in Boston over the weekend with my daughter and her—my grandkids—I would say—my wife would say our grandkids. A lot of houses there have the solar panels on. But how long does it usually take to get a permit for one of those alternative forms of renewable energy?

Mr. WOOLF. For a commercial scale renewable system, it is state-regulated. So it varies State by State. In California, for wind, it can take up to three years. If you are in Texas, it could be done in less than a year. It is less than half the time, far, far less than half the time than a hydropower facility. And one of the reasons why the AWEA law that this committee passed a few years ago has not proven effective is that it starts once—it excludes from that two year shot clock any of the pre-application work that needs to be done. And there is usually years of pre-application work, studies and community outreach. None of that is included in that shot

clock, unfortunately, as FERC has interpreted it. And that is why the provisions have not proven effective.

Mr. UPTON. So I will just make a little comparison my last 12 seconds. It almost—so we have a number of dams in Michigan that are a hundred years old. They are not really produce—it almost seems like it is easier and it takes years to close some of those down than it does to actually create a new one that is even more efficient.

So Mr. Chairman, with that, I yield back.

Mr. RUSH. The gentleman yields back. The Chair now recognizes the chairman of the full committee, Mr. Pallone, for 5 minutes.

Mr. PALLONE. Thank you, Chairman Rush. I want to ask three questions of three people about the Uncommon Dialogue. So just keep that in mind because I want to get to Ms. Pavel. She is the last one.

So Mr. Wood, can you describe why Trout Unlimited elected not to support the Uncommon Dialogue? And in so doing, can you address whether your organization believes that proposed reforms to Section 4(e) and 18 will weaken environmental protections, including for fish populations?

Mr. WOOD. Thank you, Chairman Pallone. To be clear, we do support the Uncommon Dialogue. We are not in support of the final proposal now. We just think it needs to—it needs to take a little more time. It needs to see a little more sunshine and get a little more review and scrutiny, particularly from the action agencies, who will be saddled with implementing it.

So again, we are very supportive of the process. We think it is exemplary, frankly, for dealing with a lot of these issues. We just think that 4(e) and Section 18, in particular, if we are not intending to make changes to what those sections do, then we probably shouldn't change the words.

Mr. PALLONE. OK.

Mr. WOOD. If the intent is to keep those sections intact and to keep the same authorities intact, our belief is we should take a conservative approach and not try to use new language.

Mr. PALLONE. OK. And then Mr. Kiernan, your organization, American Rivers, supports the Uncommon Dialogue despite concerns by some, including Trout Unlimited, that the proposal is not—or I am guess—I am putting words in Mr. Wood's mouth, though I shouldn't because I—I thought he thought it may not be sufficiently protective of the environment. But that is not exactly what he said.

But Mr. Kiernan, can you elaborate on your organization's basis for supporting the Uncommon Dialogue and, in particular, address whether the proposed reforms weaken the protections for fish and wildlife set forth in Sections 4(e) and 18, basically the same question?

Mr. KIERNAN. Yes. Thank you very much, Chairman Pallone. Yes. We do support this package. We do not think the changes to Section 4(e) and 18 weaken the protections for rivers and fish and wildlife. We believe that the language that we crafted is codifying existing judicial interpretation of the current law. So it is not changing policy. It is merely codifying what the courts have done.

We also do see some benefit, we think, for all parties in having that codified because it just makes it absolutely clear in statute what the intent of Congress is so that there is no accidental or what have you courts moving off of that. To have the clarity from Congress, we think, gives the clarity we need long-term in these proceedings.

Mr. PALLONE. All right. Thank you.

So we got two minutes for Ms. Pavel, who I have known for a long time. I won't say how long. Let me ask you. In addition to protections for fish, wildlife, and recreation, I believe we have to ensure that any reforms to the Federal Power Act empower tribal nations to make decisions about the use of their own lands and the current regulatory regime vests the Department of the Interior rather than the tribal nations themselves with the authority to impose mandatory conditions on the use of tribal lands.

And I don't agree with that. That has to change. So my question is do you think the Uncommon Dialogue's proposal sufficiently empowers tribal nations to make decisions about the use of tribal lands? And how do we ensure that all tribal nations, including those without significant financial resources or hydropower expertise, are able to participate in the hydropower licensing process?

Ms. PAVEL. The short answer is yes. I think it goes far enough. I think one of the components of the proposal would be to create and to provide resources for all land management agencies to do the work that they need to relative to Federal relicensing and licensing projects, including tribal governments. So that is important so that tribes like mine who don't have to lose their blood and treasure and invest everything they have in participating in developing the capacity to do—do the work necessary here.

One of the things, does it go far enough? Does it do enough? Well, no. My brother, my tribe's natural resources manager, would say the 4(e) condition attaches to the fish. It doesn't attach just to trust land. We—you know, the tribal caucus certainly advocated for that. But we collectively couldn't get that far. But we could attach to where it is on tribal trust lands, which is what the—how the law is, how it has been interpreted, again, as Mr. Kiernan said, a codification of what the law is.

If a project is on tribal trust lands within the boundaries of a reservation, these—the new 4(e) tribal authority would attach. And that is really historic. It is really—and what is really historic, in my experience, is that the stakeholders, the industry stakeholders, were—really embraced this idea and this principle.

And I think it is because of what Mr. Wallen said. They have been partners. They are partners. Tribes and industry and operators and PUDs have been partners in land management agencies. And so it shouldn't have been surprising. But it really was exciting and heartwarming to have industry embrace that aspect of this proposal early on.

It was really one of the first points of common ground that we reached in the Uncommon Dialogue. My friend, Chuck Sensiba, or Malcolm or somebody, one of them likes to often say, "We were engaged in an uncomfortable dialog." But vis-a-vis the tribal issues, that wasn't the case. It was really an early agreement, and that is exciting.

Mr. PALLONE. Thank you so much.

Thank you, Mr. Chairman.

Mr. RUSH. The gentleman yields back.

The Chair now recognizes the ranking member from the full committee, Mrs. McMorris Rodgers, for 5 minutes.

Mrs. RODGERS. Thank you, Mr. Chairman.

The role of hydropower is vital to our Nation's electricity, especially reliable, affordable electricity. And the fact is hydropower has demonstrated an outsized role when it comes to baseload and meeting that important need. As Mr. Woolf notes in his testimony, hydropower provides seven percent of our Nation's generating capacity but nearly half of our Nation's black start capability.

And as some states like Washington State are rushing to install weather-dependent generation and we—and we are concerned about increased blackouts, brownouts, hydropower is more important than ever. Hydropower's future is more than just support of solar and wind buildout, though. We know from our experience in Washington State that it is central for affordable energy.

And I might just note when it comes to a double-edged sword, every source of electricity has a double-edged sword. Wind and solar—I think we should seriously recognize the impact on birds, land, environmental, and materials needed, the huge disposal issues, supply chain concerns. And the power is not reliable. Grant County PUD was built by the community to bring electricity to the county in the 1920's and 1950's. And they encouraged the construction of two dams on the Columbia River collectively known as the Priest Rapids Project.

Mr. Wallen, would you talk briefly about that experience navigating FERC relicensing and what recommendations you have to improve the process?

Mr. WALLEN. Yes. Thank you, Ranking Member McMorris Rodgers. Grant values regulatory certainty and external stakeholders coming to the table early and often. We want to promote, ensure success through a transparent approach that is based in sound science. With certainty, we can strive toward achieving regulatory requirements in a biologically sound and cost-effective manner.

Fish, all stakeholders and reliable carbon-free generation all lose with an overly long process. We have heard 7.6 years, ten years. Waiting this long to implement innovative and enhancement measures is bad for both our natural and cultural resources and bad for domestic carbon-free power supply. These long licensing process and lessons learned, we should all take heed and learn from as we move forward.

Mrs. RODGERS. Thank you. As a followup, your project took about ten years. Your colleagues at Northwest Public Power Association note that the Energy Northwest in Richland, Washington was able to relicense a 1200-megawatt nuclear power plant faster than a 27-megawatt hydro project.

One difference was, unlike NERC licensing, FERC is not the clearly designated lead agency in the process. Do you think it would be helpful for Congress to designate FERC as the lead agency?

Mr. WALLEN. Yes. I think designation as FERC as the lead agency could help in coordinating schedules, working on timelines,

working on studies required and really could just help promote process discipline, which seems to be lacking.

Mrs. RODGERS. You note in your testimony that projects on the Federal Columbia River Power System are not FERC-licensed because they are owned by the Federal Government. Yet you also note that—and I'll quote—policies that impact one set of hydro-power generation tend to impact the other. First, I'd like to ask how would removing the Lower Snake River Dams negatively impact consumers and the economy?

Mr. WALLEN. Yes. As you know, the Pacific Northwest has passed some of the most aggressive decarbonization laws in the United States. This has happened at the same time Washington and other states are electrifying. I mean, we are electrifying through the transportation. We are electrifying through building heating. This unprecedented challenge really has put tremendous strain and will continue to do so on both the reliability and the affordability of the electric grid given the existing technologies.

In short, we have got a math problem. We are looking for 24/7 generation to meet these growing demands. And losing the Lower Snake takes this from a complex math problem to an almost impossible one to solve. We are also greatly concerned that people are considering—not considering the difficulty associated with some of the things that you talked about with supply chain and other logistical challenges and inflationary pressures as we look at this. In short, really, as utility leader, we are—

Mrs. RODGERS. Thank you. I have one last question I want to get to. Because the Uncommon—this draft seems to embrace environmental mitigation, even dam removal. There is a whole section that provides sweeping liability waivers for any harm or damages caused by dam removal. Does that give you pause?

Mr. WALLEN. Grant PUD is committed to fulfilling our responsibilities and be good stewards in the environment we are entrusted to manage. And we have always done that and will continue doing that.

Mrs. RODGERS. Thank you. Thanks for being—everyone. I yield back.

Mr. RUSH. The gentlelady yields back.

The Chair now recognizes the gentleman from California, Mr. McNerney, for 5 minutes.

Mr. MCNERNEY. I thank the chair.

I thank the witnesses. There is almost too much agreement for comfort here. So I appreciate, Mr. Wood, at least—at any rate, most of my questions are going to be addressed to you, Mr. Wood, and one to Mr. Kiernan. The western United States is in a severe megadrought. And some reservoirs have already reached critically low levels, even though it is not even summer.

We are confronting a new reality. So for example, during the record wet year in 2017, the Oroville Dam nearly failed, and they had to evacuate 180,000 people from down—downstream. Just four years later, where water levels are so low that hydroelectric generation was curtailed for five months. So Mr. Wood, please describe the risks that periods of extreme drought and extreme precipitation pose to the reliability of hydroelectric generation and dam safety. Mr. Wood?

Mr. WOOD. Sorry about that. Did you want me to answer that?

Mr. MCNERNEY. I mean Mr. Woolf.

Mr. WOOD. That's what I thought.

Mr. MCNERNEY. Too many W's and too many O's here. Sorry.

Mr. WOOLF. Thank you for the question. Climate change is water change. So you are absolutely right. And that makes hydropower's flexibility more critical than ever. Hydropower is the resource that is able to fill in those gaps and respond as the grid is forced to change because of climate change.

In your own State of California, obviously having historic droughts—but even last year with, you know, record low water, hydropower was out—was able to outperform. There was a recent study showing that in that—basically, the hydropower facilities save their water to the afternoon ramp when solar is coming off the grid. Hydropower doubled from five to ten percent of the grid because it saved its water, saved its power for when they knew the grid was going to need it. And that is part of the flexibility and why hydropower is so important. We can respond to what—the grid's evolving needs.

Mr. MCNERNEY. But when we have these extreme droughts, the hydropower loses its reliability.

Mr. WOOLF. I mean, it certainly depends in different parts of the country. At the same time, while the West is having droughts, there is record rainfall in other parts of the country. But you are right. Certainly these are having a huge impact. And the hydropower operators are using a variety of tools, forecasting other things to adapt to what is a change in climate.

Mr. MCNERNEY. Well, how does this proposal address the trade-offs between freshwater delivery and hydropower generation in an increasingly arid West?

Mr. WOOLF. These are really complicated challenges, and it is part of one—part of what I hope this committee recognizes, is that most hydropower facilities were not built for power generation. They were built for other purposes. They are multipurpose facilities. This is water storage. This is irrigation. Part of how the West has done so well despite these droughts is that hydropower—those facilities have been there to provide that water storage so we can get through these periods of drought. But these are unprecedented times, so these are real challenges.

Mr. MCNERNEY. Certainly.

Mr. Kiernan, what needs to be done to ensure that hydropower in the West remains a reliable source of power?

Mr. KIERNAN. I think one of the key solutions is what our proposal suggests or includes, and that is requiring FERC and other mandatory conditioning agencies and the tribes to include climate change in their analysis when they are thinking through project conditions so that they consider what are the potential extremes and what might be the impact on the dam, the surrounding communities, the lands, the reservation and take that into account with the conditions so that, like you mentioned at Oroville with the huge flood and the drought, those extremes, we think, need to be considered as part of the whole licensing process. And that is why the Uncommon Dialogue did include climate change as a requirement for FERC and the other agencies to include in their process.

Mr. MCNERNEY. Thank you. I want to switch to biodiversity. According to your testimony, Mr. Kiernan, the world has lost 83 percent of freshwater species since 1970. And freshwater populations continue to decline, much faster than the ocean counterparts. We have experienced this in my district with Chinook—spring-run Chinook salmon.

Mr. Wood, then, this question is for you. To what extent is the decline in freshwater species attributable to dams, and how successful are fishways at facilitating fish passage?

Mr. WOOD. You know, trout and salmon are the ultimate indicators of the health of the land. And it would be wrong of me to suggest that hydropower is the only problem for the reason that we have lost 106 stocks of salmon in the Pacific Northwest and another couple hundred are imperiled. But it is a contributing factor. And the problem often isn't the fish passage itself. As was cited by my colleague earlier, those numbers are relatively high. It is often the delayed mortality associated with the big reservoirs. So in the Snake River Basin, for example, you are talking about—it used to take a day or two for a smolt to flush down to the ocean, you know, 100 years ago before the dams were built.

Today, it can take up to three weeks, and they have to traverse 140 miles of, you know, bathwater-warm reservoirs to get there, and those are full of predators and, you know, disease and that—there is this really dramatic delayed mortality that is tied with that.

Mr. MCNERNEY. Thank you.

Mr. Chairman, I yield back.

Mr. RUSH. The gentleman yields back. The Chair now recognizes Mr. Latta for 5 minutes.

Mr. LATTI. Well, thank you, Mr. Chairman. And I want to thank our witnesses for your testimony today; great to have you all before us.

Mr. Wallen, in your testimony, you go into detail about Grant's PDU's experience with permitting process, which included bureaucratic delays and roadblocks, the final license and renewal. I would like to kind of followup where the gentleman from Michigan and our subcommittee ranking member was talking with Mr. Woolf. But as Americans continue to consume more energy and not less energy in the coming years, we are going to need to address why it takes, on average, seven to ten years to permit an energy project. And I know we heard some explanations from Mr. Woolf. But I would also like to hear from you, from especially reading your testimony. Is there any explanation as to why it takes so long from permit to be approved for a hydropower project?

Mr. WALKEN. None that I can readily give. You know, I think, again, it is early and often engagement at the table focused on certainty and taking the external stakeholders coming in to that conversation will lead to success. It has got to be transparent. It needs to be based on sound science to get the right biological outcomes that we are looking for. Again, I think we cannot continue down this path because we are impacting the fish. We are impacting the ability to leverage this domestically available carbon-free generation resource that we have.

Mr. LATTA. Let me go further in your testimony because you are talking about, you know, you need effective and efficient permitting. And also—it is also—you say that in your process—in your renewal process for your license, the process was frustrating, bureaucratic with time and expense delays and a question about certainty. And one of the things I think that also comes up when you talk about how long a project takes, how often does something change within that process that you have to go back and fix in your renewal process that you are doing because, all of a sudden, there is something that has been changed and circumstances.

Mr. WALLEN. Yes. When you start to talk about a decade of a process to start to finish, there is a lot that can change during that time period. I think even for us, we started down the traditional license process initially. Or, actually, let me correct that. We wanted to go to the ultimate licensing process, and it was denied by FERC.

We felt like that could have led to a much better outcome for us even back in the—you know, 1999. So there are opportunities. And we were looking to go through this early and often engagement. I mean, our team of technical professionals were chomping at the bit to make this happen. And it seemed like they would encounter roadblock after roadblock even then to move through that process.

Mr. LATTA. Well, thank you. You know, and also this is a question that Mr. Woolf was asked by our ranking member on the subcommittee. But how does the permitting process compare to projects that we utilize other energy sources that you have seen in the past?

Mr. WALLEN. Yes. I think we heard the delta even between commercial nuclear power and us. I think we often hear on the permitting side for solar or wind and how much shorter that time—those time periods are. So, yes, there is opportunities, in our opinion, to streamline the process, make our process effective and efficient under those type of constraints as well.

Mr. LATTA. Well, thank you.

Mr. Woolf, I am one of the cochairs of the Grid Innovation Caucus. And my good friend from California, one of the many issues that I care about is how new technologies and practices can be used to improve grid reliability. And I have 86,000 manufacturing jobs in my district. And, I mean, we make everything from steel to float glass to having the largest food processing plant in the world, having General Motors in my district. So we do all kinds of things. And we have to have power. And I mean, we have got to turn the power on every day. And it is running 24 hours a day. Would you speak to the reliability, the benefits of hydropower and its ability to provide that baseload power?

Mr. WOOLF. Thank you for your question. That is one of the wonderful things about hydropower. We were America's first renewable resource, and we are a huge solution for what the 21st-century grid needs. As we are putting more wind and solar, there are variable resources. We have them—a greater need for flexible resources. That is exactly what hydropower can provide.

One example, a few years ago in New England, a nuclear power plant tripped off 1700 megawatts. Instantly, two pumped storage facilities were able to come online, provide that power. The lights

in Boston didn't even flicker. That kind of flexibility is huge. It is what we are going to need more of as the grid evolves. And that is what hydropower can provide. But we are not going to be able to do that if the fleet goes away.

Mr. LATTA. Well, thank you very much, Mr. Chairman. My time has expired, and I yield back.

Mr. RUSH. The gentleman yields back.

The Chair now recognizes the chairman of the Subcommittee on Environment, the gentleman from New York, Mr. Tonko, for 5 minutes.

Mr. TONKO. Well, thank you, Mr. Chair.

And I do want to commend the Uncommon Dialogue participants for finding agreement on this proposal. The last time this committee considered hydropower licensing reform, it did not start from a place of broad stakeholder consensus. And I truly believe that ultimately hurt the legislative process as well as the final product. But these organizations have given us a strong foundation. And I hope they will continue to stand together and even expand the coalition as policymakers inevitably consider changes to the original proposal because hydropower is an incredibly important clean energy solution, one that has had strong bipartisan support on this committee.

But like all energy infrastructure, it needs to be developed and operated responsibly. An improved licensing process can, indeed, help ensure that. Mr. Woolf—get this right—Congress has previously legislated reforms to the—to the licensing process. If I remember from the last time this committee examined licensing, the integrated licensing process had not been utilized as often as we had hoped for. And the 2018 expedited processes for low-impact projects also have not been taken advantage of. So why do you believe these provisions or these previous efforts have not fulfilled their expectations?

Mr. WOOLF. Thank you for the question, Congressman Tonko. We are incredibly disappointed by the track record of the AWEA laws from four years ago. Not a single company has been able to use those provisions, principally because they—the two year time clock starts—kind of excludes all of the pre-application work that is required to take place. So there is years of work that takes place before they will even start that time clock, which means it is not actually expediting anything. So it has not been able to be used.

Mr. TONKO. And why is this proposal that you are bringing to the committee different?

Mr. WOOLF. This is—this is very different in a number of different ways. For the expedited treatment, it starts that time clock at the very beginning when you file your intent to file an application or, actually, when FERC says that that's—they have 60 days to say, "Hey, do you qualify or not?" So it starts from start to finish.

So that 2-year start to finish is appropriate for—for qualifying nonpowered dams. FERC has done pilot projects. They have been able to get that done. We think that is appropriate for nonpowered dams. The dam is already there. So the level of complexity of the issues—for pumped storage, it is the same process, 3threeyears from start to finish.

Mr. TONKO. Thank you. And because projects operate on 30-to 50-year licenses, they often have not gone through environmental reviews in decades. Mr. Kiernan, over the course of several decades, how can the environment change around one of these projects?

Mr. KIERNAN. Well, I think the environment can change for a couple of factors, one, obviously, climate change. That is changing. And so the hydrology in and around the river likely has changed. The dam itself may have also caused unintended consequences. And in that time period, Congress has moved forward with new and important laws, as we as a country have learned what needs to be done to protect the fish, the river, the wildlife surrounding it. So all of those factors, I think, indicate appropriately the relicensing process and the importance of doing it and doing it thoughtfully and doing it as we are proposing where FERC coordinates early on in the process with other agencies, and they get a joint study plan together.

Mr. TONKO. Thank you. And so is it fair to say that relicensing should not just be seen as an opportunity for industry. How can relicensing enhance fish, wildlife, and other aspects of environmental quality, including changing conditions that are, indeed, related to climate change?

Mr. KIERNAN. I think by having a licensing process where all stakeholders are involved and we do have—for example, in the trial-type hearing, some changes to that process where more stakeholders are at the table. All of this does create more transparency, getting all of the data on the table. One of the phrases we have used in our discussions is a philosophy of show your work where FERC now is required to—everything from citing—telling us where they are getting the data, what is the citation, where is it in the 200-page document to—what models, nonproprietary—what public models are they using? So all of that is just making the data more available so that FERC and other agencies have the data to do the right thing for the fish and for the wildlife. And that is the reason that this proposal improves health for the river and the fish.

Mr. TONKO. Thank you, and I am running—I ran out of time. But Ms. Pavel, I will have a question sent your way dealing with Section 4(e) in terms of relationship to the tribe. So we will get that to you.

With that, Mr. Chair, I yield back.

Mr. RUSH. The gentleman yields back.

The Chair now recognizes Mr. Griffith of West—of Virginia for 5 minutes.

Mr. GRIFFITH. Thank you very much, Mr. Chairman.

Let me first echo what Ranking Member McMorris Rodgers said, that all energy sources have some negative impacts. And I think we need to do research on all of them. For example, wind—she mentioned birds. She left out bats. But what the Europeans have found is that if you paint one blade black, you reduce significantly bird mortality on offshore windmills.

So I think we need to do more research on that. I also believe that we need to do more research on how we can make fossil fuels more effective as well. That being said, Mr. Kiernan and Mr. Wood have both talked about different things that are happening to the

rivers and biodiversity. And I am interested. I know it is not today's hearing. So I am not going to ask for a response. But I am just interested in you all's concerns as time goes by—we can do this in writing—about the effect of pesticides, particularly for the Trout Unlimited on the species that are not targeted by agriculture but that are affected by pesticides used in agriculture affecting the amount of food that is available and, perhaps, the ingestion of pesticides that the insects have acquired by the fish that eat them. But those are just a few of the things that I found interesting in the comments up to this point. But those weren't any of my questions that I was supposed to ask, so let me get to that.

In the 115th Congress, my bill, the Promoting Closed-Loop Pumped Storage Hydropower Act, became law as part of the American Water Infrastructure Act. This created, at FERC, an expedited licensing process for closed-loop projects, which are essentially giant batteries. FERC was directed to ensure that this expedited licensing process resulted in a final decision on the application in less than two years.

Mr. Woolf has just told us, in response to Mr. Tonko, part of the problem with that. And I am disappointed that FERC isn't here to testify on the proposal before us and to see whether they agree with you, Mr. Woolf, because we thought we were taking care of this back in 2018. And now we hear that that has not occurred.

But, you know, we would like to see that occur. And Dr. Bucshon's bill has been mentioned several times for nonpowered dams. And that hasn't seen results either. Mr. Woolf, since FERC is not here, I am going to ask you the questions. It is my understanding that only one facility has applied to use the expedited licensing process for closed-loop hydro, and the application was either withdrawn or rejected. Are there efforts by FERC to promote this program that encourage hydropower companies to apply for this expedited prices? Are you aware of any of those? All right. He is not aware.

And it seems that some of the environmental laws and requirements imposed by other agencies outside of FERC are the holdup and are the—and are resulting in more complicated application processes. Would you agree with that?

Mr. WOOLF. Absolutely.

Mr. GRIFFITH. And he agrees with that. The proposal under review today includes much of the same interagency task force language that we included in 2018. You have mentioned, in your answers to Congressman Tonko, that this new language will do better. What is the language in there that is going to make it so that we don't get hung up with other agencies trying to implement their laws? I mean, well, go ahead and answer that one. I will get to the next one later.

Mr. WOOLF. By starting the pre-application process, starting the shot clock, that is going to help. The entire process, we are also trying to coordinate by requiring FERC to do up-front coordination with those other agencies, come up with a combined schedule. And if there is conflicting conditions, work that out before the process is over.

Mr. GRIFFITH. So in other words, for the folks watching back home, they would already have a system set up before Company X

would ever bring in their proposal. The agencies would already have it worked out. You have got this much time to respond, and the other agency has so much time to respond. And then FERC gets those informations and moves forward; is that correct?

Mr. WOOLF. That is right. And it would only apply for closed-loop or off-stream pumped storage. Those don't typically have the environmental concerns.

Mr. GRIFFITH. And they don't have the environmental concerns because there isn't wildlife that is going to be impacted because it is a closed loop. That is the whole point of the bill. Somehow, the agencies of the Federal Government have missed that. Would you agree with me on that?

Mr. WOOLF. I would.

Mr. GRIFFITH. Thank you. The law also requires FERC to conduct a workshop to explore potential—the potential developing these projects in abandoned mine lands. FERC issued guidance in October 2019. Are you aware of any companies exploring this option?

Mr. WOOLF. There is increased need in pumped storage around the country, and folks are looking at abandoned mines.

Mr. GRIFFITH. And I got a bunch of them.

Mr. WOOLF. Yes. I mean, it is a huge opportunity, but the licensing process is—we have got 90 facilities in the pipeline, and nothing has been built for decades.

Mr. GRIFFITH. All right. Do you think FERC could do more to advertise this opportunity?

Mr. WOOLF. We would love it. Yes.

Mr. GRIFFITH. Thank you very much. My time is up. I yield back.

Mr. RUSH. The gentleman yields back.

The Chair now recognizes the gentleman from North Carolina, Mr. Butterfield, for 5 minutes. Mr. Butterfield, are you unmuted? You are muted, Mr. Butterfield. Mr. Butterfield, are you all right? Are you OK?

Ms. Kuster, we will go to you, and then we will come back to Mr. Butterfield after we work out his technical difficulties.

Ms. KUSTER. Thank you so much, Chairman Rush, and I am grateful to you and to Chairman Pallone for holding this hearing today. I am particularly grateful that the committee agreed to examine this landmark proposal to improve the hydropower licensing, relicensing, and surrender process. Before diving into licensing, I want to thank Mr. Wood for highlighting the 21st Century Dams Act during his testimony today.

I am proud to have introduced this legislation on a bipartisan basis with our colleague, the late Representative Don Young and with Senator Diane Feinstein. This bill will make huge investments to rehabilitate dams, retrofit them with hydropower turbines, and remove dams that have outlived their usefulness. This is an opportunity to boost our Nation's clean energy production. And I welcome my colleagues on both sides of the aisle here today to join me in passing the 21st Century Dams Act.

Now on to licensing reforms. To everyone sitting here today, it is clear from your testimony that we can all agree on one thing. The hydropower licensing process needs to be reformed. The current process is inefficient and drawn over far—drawn out over far

too many years, lacks transparency for stakeholder engagement and fails to give tribal nations an equal seat at the table.

The proposal before us today would address these long-standing issues and, in my view, would be a win-win-win for our Nation's river ecosystems, tribal nations and, most importantly, clear—clean energy production to address climate change. I want to commend the participants of the Uncommon Dialogue, including my friend, Dan Reicher, from Stanford for forming this coalition and putting together this thoughtful and holistic approach. In my district, there are 27 hydropower facilities that have licenses set to expire in the next decade. Many of these are small hydro facilities.

According to the Department of Energy, of the 41 dams that surrendered their licenses in the last decade, 36 were small hydro facilities. Mr. Woolf, can you speak to how this licensing reform proposal might help small hydropower facilities and potentially reverse this alarming trend?

Mr. WOOLF. Thank you for your question and again for your leadership of the 21st Century Dam Act. It has been tremendous. That really is hugely important to the industry and to this broader—this broader effort. Your question is spot-on. The small hydropower operators—and there are many—the process is so long, so expensive, so uncertain that it is easier simply to turn off the powerhouse than to go through the licensing process at the end of a life.

We think that this license reform package will help that by clarifying the conditioning authority. It is going to reduce delays, reduce litigation by having increased coordination between the various parties. We think it is going to create a lot more clarity and help keep the existing small hydro fleet operating.

Ms. KUSTER. Thank you. That is my goal.

Mr. Kiernan, in your testimony, you spoke on how this proposal creates common ground. And it is clear that it carefully balanced the interests of environmental, tribal, and industry stakeholders. What are the challenges of making further changes to this licensing reform agreement?

Mr. KIERNAN. This group has worked—I think it is a good three, three-and-a-half years. And a lot of difficult or, as Malcolm said, uncomfortable discussions. So we have been slogging away, building an understanding. And as I think you mentioned and I know as I said, we have created a holistic proposal that is knit together where we think there is some synergy in this language.

So our hope, as we have said—a package is a package. It holds together. It is, we think, a win-win-win. And if there are significant changes to it, suddenly that balance is lost, or the interwoven benefits that create the win-win-win would be lost. We look forward to the committee's serious consideration of the package.

Ms. KUSTER. Well, and I think, as my colleague pointed out, it is rare to have all of you parties coming together. That doesn't happen often in this committee room. And so I think it is good cautionary tale for us as we consider it, this combination.

Mr. KIERNAN. And if I may, also thank you as well for your leadership on the 21st Century Dams Act. Has been extraordinary.

Ms. KUSTER. Thank you.

Ms. Pavel, do you share this perspective?

Ms. PAVEL. Absolutely. And want to echo my colleague's thanks for your work, the committee's work on the 21st Century Dams Act. But absolutely. I share their perspective. This is really, you know, a unique opportunity of the stakeholders. And I think, you know, I give a lot of credit to this committee for encouraging the stakeholders sit down and have that dialog, both—with bipartisan encouragement to have this dialog because what we learned was that we can—we can stop one another from achieving our greatest progress.

Ms. KUSTER. Well, thank you so much to all of you. I think it is still a damn good idea, and I hope that we can get it done in this committee. And with that, I will yield back.

Mr. RUSH. The gentlelady yields back.

The Chair now recognizes the gentleman from Ohio, Mr. Johnson, for 5 minutes.

Mr. JOHNSON. Well, thank you, Mr. Chairman, and a special thanks to all of our witnesses for being with us here today. You know, I am really glad that we are revisiting this issue, an issue that this committee did some good work on a few years back, but it is clearly an area where more needs to be done. And I also applaud Ranking Member McMorris Rodgers for her work on this and for her legislation, H.R. 1588, which I am proud to support as part of the Energy and Commerce Republicans securing cleaner American energy agenda.

My district in Eastern and Southeastern Ohio is long. It is the longest district east of the Mississippi. It is bordered on one side by the Ohio River for 300 miles. So I got a lot of river. It is a daily reality for my constituents to see firsthand the power and the economic benefits the river gives our communities, including several hydropower projects.

So it surprises me that—and maybe it shouldn't but it does. But it surprises me that some of the biggest advocates for green energy argue that hydropower is somehow not renewable in the same way as, say, wind and—wind and solar even though the river flows day or night, whether the sun shines or not. And it flows whether the wind is blowing or not. It is there.

So to my colleagues, we should remember the goal is to ensure affordable, reliable energy. And if we want to be greener and secure our grid, then we need to make innovating in this space easier. So Mr. Woolf, one of the concerns we have right now is that, in this push to rush our economy's transition to green energy, we may inadvertently make ourselves even more dependent on massive amounts of batteries and magnets that are made with materials sourced almost exclusively from communist China. Would you agree that baseload hydropower and new technologies such as pumped storage could protect our renewable portfolio and energy security with less exposure to those dangerous supply chain bottlenecks that we would get from China?

Mr. WOOLF. The fuel source for hydropower and pumped storage is domestically sourced water.

Mr. JOHNSON. OK.

Mr. WOOLF. Absolutely agree.

Mr. JOHNSON. All right. That is a pretty direct answer. I appreciate that. Mr. Wallen, you mentioned in your testimony that your

region's baseload electric—electricity demand is only growing and that it is nearly impossible to comply with State laws mandating carbon reductions without the carbon-free power you provide with hydropower. Can you expand on this and explain why it is so important to treat hydropower equally as a renewable energy source?

Mr. WALLEN. Yes, Congressman Johnson. Yes. As you indicate, our load is growing. And we are approaching, in 2026, with planning margins, outgrowing the physical output that we are entitled to of our project. So it is top of mind. We go through integrated resource planning, as required by Washington State statute, every two years. We are in the midst of that process again today, likely the same outcome that we had in 2020, is that we need new generation, or we need to figure out a new way to get it. And so the existing hydro resources we have, continuing to leverage them, as I talked about from a grid stability, load-following capabilities. Just as we look at renewables, yes, I think there is a difference. I think hydro is a lot better in a lot of different ways when we look at all those additional characteristics that we do gain from that clean, renewable, domestically sourced resource.

Mr. JOHNSON. Yes. You know, I am really not sure how anyone that watches a hydropower facility produce electricity and the flow of a river like the Ohio River—I don't know how anyone could argue that that is not renewable energy. In fact, I am not even sure that it doesn't rank above renewable energy because it is always there. Day or night, wind or rain, sun or moon, it doesn't matter. It is there.

Mr. WALLEN. And if I may add, that is what I talked about earlier. It is when we need it and how we need it. And that is a distinct clarifier, in my opinion, of this renewable energy resource unlike the others.

Mr. JOHNSON. Well, you know that when we need it is, like, right now. You know, we need the power when we need it. And that is normally right now. How we get it, hydropower, is certainly an alternative. And I think we need to be innovating that way.

Mr. Chairman, I yield back.

Mr. RUSH. The gentleman yields back. And the Chair now recognizes the gentlelady from Washington, Ms. Schrier, for 5 minutes.

Ms. SCHRIER. Thank you, Mr. Chairman.

Thank you to our witnesses. I really appreciate your being here today to talk about this very worthwhile proposal. I am so pleased to see the hydropower industry, tribes, and the environmental community all come together to improve the licensing and relicensing process. Our State has really been a model for bringing diverse opinions together to move the ball forward.

NonFederal hydropower operators in my district need a streamlined relicensing process. And I am really encouraged by the effort and the collaboration that produced the proposal that you are here to testify about today. I believe the Uncommon Dialogue approach is beneficial because it ensures more timely and efficient decision-making by having parties jointly develop a schedule with FERC. And as we know, uncertainty and delay are not good for making investment decisions.

We also know, as some of my colleagues pointed out, that many of these hydropower facilities are coming up for relicensing all at

the same time. This proposal also encourages coordination on steady plans and sets up processes to resolve conflicting license conditions and ensure that proposed requirements are tied to actual project benefits.

So additionally, this project takes additional, important steps to enhance the health of our Nation's rivers and improve tribal sovereignty. In Washington State, hydropower generates nearly two-thirds of our energy each year and the majority of our carbon-free energy. And we are the Nation's largest hydropower producer. And much of that is generated by publicly owned utilities in my district.

In particular, I want to talk about how this proposal might improve the licensing process for the Rock Island hydropower facility. This dam produces over 600 megawatts of power for my constituents. It is up for relicensing in the next five years. And I believe these reforms could improve and shorten that process for all parties involved.

Large hydropower projects, like Chelan PUD's Rock Island facility, can have really lengthening processes. They are costly, and many of those expenses are really passed on to ratepayers. So Mr. Woolf, can you speak about how this licensing reform proposal will help reduce the length and litigation associated with hydropower relicensing?

Mr. WOOLF. Thanks for your question, and you are exactly right. I think this reform package, if enacted, would be a huge benefit, not only to those folks doing expedited licensing for new nonpowered dams and pumped storage but to preserve the existing fleet.

It does a number of things to make that happen, first, by clarifying the mandatory conditioning authority. In these permitting processes, we often get bogged down in what's the scope, what can—what's in, what's not that often leads to litigation, usually leads to delay. By clarifying that, I think it is going to expedite the process. Requires interagency coordination at the front end. What is the schedule? Who is doing what? What studies do you need so you don't spend seasons doing studies only for a State agency to say, hey, we want to study a different fish, a different species after we are already, you know, two or three years into the process. Also has coordination at the end of the process. So I think there is a lot of things here to speed up this process, create greater certainty, and reduce litigation delays.

Ms. SCHRIER. Thank you for that perspective. So now we know how it makes it better for hydropower facilities.

Mr. Kiernan, I wonder if you could comment on why you think this proposal is a win for the environmental community.

Mr. KIERNAN. Thank you for the question. There are a number of benefits. Let me first speak to license surrendering. There are many owners of dams that want to relinquish, surrender their license. But the process right now is unclear and very time-consuming. So being able to have a more streamlined, scheduled license surrender allows us, frankly, to return the health of the river by removing the dam. So that is one example.

Second is the inclusion of climate change as one of the factors that FERC considers. And the third that I mentioned earlier is the transparency, the show our work, the having a process that is more open to the public is helpful for fish, wildlife, river health, as well,

I believe, for the industry. So it is, again, a win-win-win from all sides.

Ms. SCHRIER. Thank you. In the 30—25 seconds remaining, I just want to emphasize that as we become more and more reliant on electricity and we want more of that electricity to be clean, hydropower plays a critical role. And I want to just extend my agreement with my colleague from Washington that adding power generation to already existing dams would be a smart way to get more clean energy as we expand everything else to electricity. Thank you. I yield back.

Mr. RUSH. The gentlelady yields back.

The Chair now recognizes the gentleman from Michigan, Mr. Walberg, for 5 minutes.

Mr. WALBERG. Thank you, Mr. Chairman, and thanks to the panel for being here. Michigan has long been a historic State with hydropower. Got a lot of water surrounding Michigan on three sides and running through it.

In the late 1800's, in fact, the first hydro turbines were invented to provide lighting for a theater in our State, and that is cool. But there is little that I enjoy more than standing in a clear freestone river with fly rod in hand going against wily trout, whether brown, rainbow, brook, or whatever. And whether it is in the holy waters of Michigan or whether it is on the White River in Arkansas that is dam-fed and is amazing stream or in the Firehole or Madison, it is something I love.

But I also—I am a strong supporter of hydropower because it is clean, reliable, and affordable. I know the best energy policy is an all-of-the-above strategy that includes fossil, nuclear, renewables like hydro. But as policymakers, we have to be careful not to pick winners and losers. That is my concern among competing fuels. We should allow consumers in the market to choose the best technologies rather than bureaucrats.

As we look at modernizing the hydropower licensing process, we should be removing unnecessary and redundant permitting steps rather than adding new ones. In preparation for this hearing, FERC staff raised concerns that Uncommon Dialogue draft could lead to more uncertainty and litigation. This won't make the process any faster. For example, I am concerned the Uncommon Dialogue draft undercuts the relationship and trust responsibility between the Federal Government and the tribes.

I am also concerned that the draft would establish a precedent that could be weaponized against other types of energy infrastructure like pipelines, which is a big issue in Michigan now. Line 5, which is a critically important pipeline in Michigan and the entire Midwest, is in Federal court right now defending a lawsuit brought by a tribe that wants to shut the pipeline down because the tribe wants to impose its own standards and conditions. That is not how it works.

Congress passed the Natural Gas Act and the related statute, the Federal Power Act, to establish uniform Federal standards to prevent various State, local, and tribal requirements. I am concerned that taking mandatory conditioning authority away from the Department of the Interior and transferring it to the tribes will result

in a patchwork of inconsistent requirements that will not serve the public interest.

So Mr. Wallen, the Uncommon Dialogue draft depends or upends the existing process for the Department of the Interior to submit conditions on a hydropower license. Do you think Congress should take the conditioning authority away from the Department of the Interior?

Mr. WALLEN. Congressman Walberg, I think, you know, having an identified lead agency to help facilitate the discussions could be helpful. As far as we talked early and often at the table, I think those conversations are going to be the framework for a successful outcome. And we need to continue to focus on those. So I guess I—you know, given our licensing experience and, you know, we are good at Grant until 2052 at this point. So I am not sure that I—you know, I am the best to answer that question but—

Mr. WALBERG. Thanks for attempting. Let me ask you, then. You mentioned in your testimony that policies that impact one set of hydropower generation tend to impact others, meaning Federal dams. Do you agree that Congress should also pause and consider the potential impacts to other types of infrastructure like pipelines and electric transmission?

Mr. WALLEN. I think when we talk energy, Congressman, you know, policy established could have unintended consequences if we are not careful. And we need to be cognizant of those.

Mr. WALBERG. Turning now to licensing, Mr. Woolf, there are reports that FERC DHAC is looking to bring an increasing number of routine dam safety projects under the umbrella of formal licensing amendments and corresponding environmental reviews. I am concerned this increased administrative oversight could interfere with the ability of hydro owners and operators to make efficient and timely investments in dam safety.

I am also concerned about the clarity of FERC guidelines regarding when it may or may not require a licensed amendment. How can we work with FERC to get more certainty for hydro owners and operators regarding what divisions must review proposed dam safety investments and when formal license amendments will be required?

Mr. WOOLF. Thank you for your question. That is an increasing concern among my members, that routine operation and maintenance events that used to be routine, now we're being told we have got to go through a license amendment process that, as we have been talking about today, can be incredibly cumbersome, expensive, time-consuming. It is creating uncertainty. It is not clear to me whether this is a shift in FERC policy or if these are just kind of some rogue folks. So we are working with FERC to try to investigate that because if this is a new policy, that would be deeply concerning.

Mr. WALBERG. Thank you. My time has expired. I yield back.

Mr. RUSH. The gentleman does yield back, and the Chair now recognizes the gentleman, once again, from North Carolina, Mr. Butterfield, for 5 minutes.

Mr. BUTTERFIELD. Thank you very much, Mr. Chairman, for convening this very important hearing today. And let me just take a moment to apologize for not being in place a few moments ago. And

when I ran back to my computer, I forgot to unmute it. But thank you so much for your patience. Mr. Chairman, several cities in my congressional district are powered by hydropower, including the city of Roanoke Rapids, the Town of Gaston, and city of Rocky Mount.

In fact, hydropower is the second largest source of renewable electricity in the whole State of North Carolina. And I continue to strongly promote hydropower as a source of sustainable energy production. My district also includes many rural areas, including the Haliwa-Saponi and the Meherrin tribal lands, which is why I find it promising that the Uncommon Dialogue proposal would promote tribal interests.

And so let me just start with you, Mr. Wood, and thank you for your testimony and to the other witnesses as well. Question No. 1, although your organization has not endorsed the Uncommon Dialogue proposal, you praise the agreement's proposal to increase funding for resource agencies like the Department of the Interior that play an active role in the hydropower licensing process. Do you think the resource agencies are currently under-resourced? And if so, how does that lack of resources affect agencies' ability to protect Federal and tribal lands?

Mr. WOOD. Thank you, Congressman. I do think they are under-resourced. And I think with the—as has been talked about with the slug of relicensings that are coming, Congress would do well to make sure that the resource agencies have the capacity to engage in the relicensing in a timely manner to avoid some of the delays that our friends from the Hydropower Association have been talking about.

Mr. BUTTERFIELD. Thank you for that.

And now to Mr. Woolf. Thank you, sir, for your testimony. The Uncommon Dialogue proposal directs the Federal Energy Regulatory Commission—we call it FERC—to undertake a rulemaking to facilitate surrender of hydropower licenses. My question to you is what is the current process for surrendering a license, a hydroelectric license, and how should Congress ensure that licensees who surrender their licenses mitigate any environmental damage caused by the project?

Mr. WOOLF. Thanks for your question. And if I can quickly just add on to the answer to the prior question, in the joint legislative—

Mr. BUTTERFIELD. Sure.

Mr. WOOLF [continuing]. Proposal, we are actually redirecting some of the money that the hydropower industry currently pays. We are proposing that some of that money go directly to those State and other resource agencies to pay for their direct costs. So we have created a funding mechanism to address that exact concern. With respect to your—now I am blanking on surrendering.

Mr. BUTTERFIELD. Surrendering.

Mr. WOOLF. License surrender. Sorry.

Mr. BUTTERFIELD. Surrendering the license.

Mr. WOOLF. License surrender—

Mr. BUTTERFIELD. Yes.

Mr. WOOLF [continuing]. Is becoming increasingly common. Seventeen facilities have submitted license surrenders in just the last

two years. FERC has historically done it on a case-by-case basis. And that is part of this package, is to say, hey, let's have a little more clarity, a little more certainty, do a rulemaking process so that we can have greater clarity for all concerned about what the license surrender process involves.

Mr. BUTTERFIELD. But shouldn't there be some type of accountability when the license is surrendered with respect to any damage that may have been done to the environment?

Mr. WOOLF. We think that that is actually covered in the license itself, that we go to great lengths to mitigate any concerns during license operation. But when the license is surrendered, certainly they have got some continued responsibilities. Often, folks want that dam to continue. Almost all dams were built for multipurpose, for flood control, for irrigation. So when you do license surrender, you are not getting rid of the dam in many circumstances.

Mr. BUTTERFIELD. So you say when they surrender the license, they continue to have some responsibility. Is that responsibility enforceable?

Mr. WOOLF. They have responsibility during that license surrender process. Once they have formally surrendered the license, that is when their responsibility ends.

Mr. BUTTERFIELD. And FERC no longer has jurisdiction over the project?

Mr. WOOLF. Correct.

Mr. BUTTERFIELD. All right. Thank you, Mr. Chairman. You have been very patient. Thank you. I yield back.

Mr. RUSH. The gentleman yields back. Now the Chair recognizes the gentlelady from—the gentleman—Mr. Palmer.

Mr. PALMER. Thank you, Mr. Chairman.

Mr. RUSH. Five minutes.

Mr. PALMER. I want to follow on the licensing thing, Mr. Woolf. In your testimony, you State that relicensing an existing hydropower facility takes longer than relicensing a nuclear power plant. Despite all the rhetoric around the need for carbon-free energy from my Democrat colleagues, nuclear and hydropower always seem to be excluded or just talked over. Why do you think that both industries are uniquely attacked by Democrats to give a free pass to technologies like wind turbines that have a huge environmental footprint and that kill countless amounts of wildlife and also make us dependent on foreign sources for the—for the critical earth materials?

Mr. WOOLF. As several of your colleagues have pointed out today, every resource has pros and cons. There is downsides to everything. And I think wind and solar have been—have been—and batteries have been shiny for the last decade or two. And I think folks are ignoring the value that hydropower provides. An international report recently called hydropower the forgotten giant. And it is the Nation's largest or globe's largest source of renewable energy. And it has got the flexibility in baseload power that we need.

Mr. PALMER. Mr. Woolf, in your testimony, you State, unlike other forms of energy storage, pumped storage does not require mining large amounts of minerals in countries with poor environmental track records. Can you talk more about the economics of

pumped storage and how it can be a useful tool to reduce reliance on the supply chain of countries like China.

Mr. WOOLF. Thank you for the question. As this country does evolve to a grid that has got more wind and solar, it is a more variable grid. There is more flexibility on the grid. Some resource has to be able to fill in those gaps. When the sun goes down, when the wind isn't blowing, pumped storage is uniquely able to do that in—almost instantaneously and do it for long duration.

It can do it for four, six, eight hours, which is something that batteries cannot. So there is an increased need for long-duration energy storage. And we think pumped storage is an ideal solution, but only if we can get the permitting faster.

Mr. PALMER. And it is a resource sustainer, I guess. It can be re-circulated. Mr. Wallen, when it comes to building infrastructure, we continually hear how the National Environmental Policy Act and Endangered Species Act can add unnecessary delays and costs to projects. Do you think that we should be undertaking serious NEPA or environmental—Endangered Species Act reform and that that could lead to a quicker deployment of hydropower resources?

Mr. WALLEN. I really think this question would be best answered by Mr. Woolf.

Mr. PALMER. Well, I will direct that to Mr. Woolf then. That is called deflection.

Mr. WOOLF. And I am sorry. I was looking at my notes.

Mr. PALMER. That is all right. I think we should have some serious reevaluation of NEPA and the Endangered Species Act because it is adding unnecessary delays and costs to projects. And this is not to say that we want to eliminate these things. But what I found in looking at some of our regulatory issues is we have obsolete regulations. We have duplicative regulations. We have contradictory regulations.

And I think that is true in NEPA and Endangered Species Act. And I just—I want to know your perspective. If we could undertake that serious reevaluation, would it help us in terms of getting these hydro projects re-permitted or even in the hopeful possibility that we could build new facilities?

Mr. WOOLF. Absolutely agree. NHA is on record as wanting to streamline NEPA and the Endangered Species Act and the current pattern we are in of one administration issuing one law, the next administration coming in and reversing it. That doesn't allow for project certainty.

The key thing for our purposes today, however, is that, while we may disagree on that issue, we have come together on reform of the Federal Power Act. So we are trying to—politics is the art of the possible. We have got a solution for the Federal Power Act even if we can't solve everything.

Mr. PALMER. I think the key for this—and this would be true for everybody when it comes to regulations, is to improve agency transparency in the permitting licensing process. And again, to get rid of the obsolete, the duplicative, contradictory and to support reforms that move us in that direction so that we make the best and wisest use of hydrological resources that are available to us for generating power.

Last thing I want to say, Mr. Wood, in regard—are you located in Bozeman? I have been to Bozeman Senior—

Mr. WOOD. No. Unfortunately, I live in Washington, DC.

Mr. PALMER. That is tragic for a guy who likes to trout fish.

Mr. WOOD. There is a terrific shad run in the Potomac, though, that is on right now.

Mr. PALMER. Well, we have a trout stream that is the tailwaters of Lewis Smith Lake in Alabama that does—produces hydroelectric power. With that, Mr. Chairman, I yield back.

Mr. RUSH. The gentleman does yield back.

The Chair now recognizes the gentlelady from California, Ms. Matsui, for 5 minutes.

Ms. MATSUI. Thank you very much, Mr. Chairman. And I want to thank the witnesses for being with us today. As a co-chair of the—Energy and Environment Coalition, I recently launched the Nature and Oceans Task Force with Congressman Neguse to explore policies that harness the power of public lands and waters in the fight against climate crisis.

To make meaningful and lasting progress, I believe we need to take a full systems approach to critical climate and clean energy policies and appreciate the opportunity to discuss the role hydropower can play in our clean energy future. The Bipartisan Infrastructure Law makes vital investments that will help us achieve crucial climate goals, including \$3 billion for modernization and removal, dam safety, as well as hydropower projects.

For this funding to be as effective as possible, I believe it must be distributed in a way that incorporates local feedback and community input. In my district, the Sacramento Municipal Utility District or lovingly called SMUD has been a strong partner in realizing our region's clean energy and emissions targets, including a goal to reach zero carbon emissions in its power supply by 2030, the most ambitious goal of any large utility in United States.

Build Back Better included new financial tools to support public power upgrades and existing hydropower dams for dam safety, environmental improvements, and grid resilience enhancements. And I believe we should continue to pursue these important policies. Now, in my home State of—well, actually, I want to ask you a question about that.

Mr. Woolf, what role can public power play in increasing America's hydropower capacity? Mr. Woolf?

Mr. WOOLF. Public power is a huge part of this solution. Half of the hydropower in this country is Federal. Of the nonFederal, another half is public power. So fully 75 percent of the hydropower in this country is either Federal or public power in some way, which makes sense in a lot of ways because water is a shared resource. It flows through the hydropower facility, makes power, and then can go on and be used for recreation, irrigation, and everything else.

Ms. MATSUI. OK. Absolutely. Now, in my home State of California, the climate crisis is changing the way we approach our energy portfolio. Droughts are quickly becoming more regular and severe, and wildfire season has grown from a few months of the year to a truly year-round threat. As we look to the future, I believe con-

sidering climate change when crafting license conditions will be equally important, really critically important.

Mr. Wood, during licensing, when developing conditions, how can considerations of how projects may be affected by our changing climate help encourage more resilient infrastructure?

Mr. WOOD. I do—thank you for the question. I do think that one of the good things to come out of the Uncommon Dialogue process was the recognition that climate change needs to be a factor that is considered when you are relicensing a project for 30 to 50 years for some of the reasons that were described earlier. So I think that is a really important consideration as we deal with the prolonged drought and extreme flooding and wildfires in states like California in particular.

All of our Federal processes, whether they are those delivered by FERC or by the Federal agencies like the Forest Service and the BLM through laws like the National Environmental Policy Act, increasingly, they should be looking at their analyses through a climate lens.

Ms. MATSUI. Great. The Federal Power Act or I guess we call it the FPA includes several protections that are fundamental in our approach to stabilizing the environment and promoting healthy waterways and recreation. They represent bedrock achievements in environmental sustainability and need to be preserved. It is also important to ensure that the FPA keeps pace with the renewable demands our energy portfolio must include. Mr. Wood, do you think we can reduce the timeline for the licensing process without weakening the key environmental protections in Section 4(e) and 18?

Mr. WOOD. I think that was probably directed toward—toward me, so let me quickly answer. I think the compromise package that we have put forward does exactly that. We clarify existing case law to make it clear that when imposing mandatory conditions, you have to be reasonably related to project effects. Reasonably related to project effects, in my mind, is a very reasonable standard. It is what the case law and the courts that have looked at this have required.

But unfortunately, often, agency staff are not familiar with that case law. So we get bogged down in fights about that. But I think it is quite reasonable and very protective of the environment to say that agencies can impose mandatory conditions as long as they are reasonably related to project effects.

Ms. MATSUI. OK. Well, thank you very much. Our time has run out. I yield back, Mr. Chairman.

Mr. RUSH. The gentlelady yields back.

The Chair now recognizes the gentleman from South Carolina, Mr. Duncan, for 5 minutes.

Mr. DUNCAN. Thank you, Mr. Chairman. You know, now, more than ever, Americans are realizing the importance of access to reliable and affordable and secure energy. FERC plays a critical role in our energy supply, particularly as it relates to electricity generation. Unfortunately, bureaucrats and independent agencies across the board have infused political and policy motivations in their regulatory licensing decision.

The Uncommon Dialogue proposal being touted today increases FERC's climate change obligations by requiring FERC to give an

equal consideration to addressing the effects of climate change and licensing decision. Let's be clear. They don't like fossil fuels. They are going to do anything they can to stop fossil fuel generation and push this country toward their utopian idea of green power. This is an example, the Uncommon Dialogue. It is a prime example.

Also requires FERC to consider the reasonable and foreseeable effects of climate change—whatever the intent of these proposed new provisions, adding new terms unto the statute can have unintended consequences. We have already seen FERC use climate change motives slow down the licensing of critical energy infrastructure, and this would make the problem even worse. It concerns me, when thinking of our energy future as a country, and specifically for South Carolina—South Carolina is going to require an all-of-the-above approach. I support an all-of-the-above approach but also know what works to provide 24/7/365 baseload power supply for our manufacturing and our residential requirements. I am hopeful we can expand our hydro footprint, but we need to implement licensing reforms to do so. We can start with H.R. 1588, a bill I cosponsored led by Leader Rodgers.

Currently, Duke Energy in my district in the Carolinas operates two pumped storage hydro plants, the Jocassee Pumped Storage Hydro Station and Bad Creek Pumped Storage Hydro Station. It is a great example of battery storage if you are going to use wind and solar, by the way. Today, I want to talk about Bad Creek. This facility has been in operation since 1991. I visited up there when they were building it. It generates \$10.5 million in tax revenue for Oconee County every year.

Currently, Duke is in the process of adding an additional 280 megawatts of capacity to the facility, which will bring the total output of the facility to 1640 megawatts. And that is equivalent to two large nuclear reactors. What is even more exciting is Duke recently filed a pre-application document with FERC to, one, renew the licensing, existing license for Bad Creek for 40 to 50 year—additional years and to possibly add a second powerhouse which would double Bad Creek's capacity without adding any new dams or any new reservoirs using the existing infrastructure so big deal. Pumped storage hydro is really a great integrator of technologies that allows clean energy technologies like nuclear power and solar and wind all to work together, store that energy, use it when it is needed.

Mr. Woolf, I know some people may not be familiar with pumped storage hydro and all of its capabilities. I wanted to see if you could elaborate a little bit on my comments and give your perspective on pumped storage hydro.

Mr. WOOLF. Sure. Thank you very much. You raised a number of really important points. Like you, I also support 1588, that license reform package. In fact, the joint legislative package includes most of those provisions. It really builds on that framework. And I think this is a good bipartisan progress. You talked a little bit about the climate change provision in this. Industry supports that provision for two reasons.

First of all, water is our—is our fuel source. So we need looking at that water resource is critically important. And then second, this kind of clarifies FERC's authority to take—to take into account the

positive role that hydropower plays as an emission-free resource. So those climate change provisions are something that industry is comfortable with. And I love your question about pumped storage. It is critically important as we do go to a more variable grid. You need to have the flexibility that pumped storage can provide. A lot of those pumped storage facilities—I am not sure about Bad Creek. But a lot of them were built to balance out nuclear power where the nuclear power at night needed someplace to generate. Now we are using the pumped storage to balance out the excess solar that—

Mr. DUNCAN. Peak demands. Yes.

Mr. WOOLF. So I would love to take a tour of Bad Creek with you one of these days. Actually, just coming back from a pumped storage facility earlier in the week. They are fascinating, beautiful facilities. You would never know it is there, but they are keeping the lights on around the country.

Mr. DUNCAN. Yes. I appreciate that.

The remaining time, let me just say this. We need a loser pay system in this country because we have seen too many times environmentalist groups stop projects, even stop bidding on oil and gas leasing and proven reservoirs because there was going to be an environmental case filed, litigation, litigation, litigation, litigation. Finally, the company says, “I can’t do anymore.”

I am not going to mention one company. We worked on a pipeline. That was the case. If it is a loser pay, we wouldn’t see all that and could actually have commonsense energy production and exploration in this country.

With that, Mr. Chairman, I yield back.

Mr. RUSH. The gentleman does yield back.

The Chair now recognizes the gentlelady from Florida, Ms. Castor, for 5 minutes.

Ms. CASTOR. Thank you, Mr. Chairman. Welcome to our witnesses. It is more clear than ever that we need a secure domestic clean energy power sector. And thank goodness we have hydropower that is helping with that. In 2021, hydropower was about six percent of our overall electricity sector and one-third of renewables. So we see hydropower as a very important part of growing the—the clean energy economy in America.

And it is so—as that happens, we are going to need more collaborative efforts, industry, the environmental advocates, tribal nations sitting down and working on those solutions. So kudos to all of you for doing that. So let’s talk a little bit about how we can—how hydropower can accelerate the transition to a resilient clean energy economy.

We are really in a bind, though, aren’t we? What I have listened to today is that we want to do more on hydropower, but the climate-fueled droughts and the greater volatility, unpredictability is a great cause for concern. So I appreciate, Mr. Woolf, you saying it is very important for FERC to be considering the impacts of climate as we go forward.

Mr. Wood, would you go into a little more detail? Congresswoman Matsui asked you about how that is going to work. And could you give us a more practical step-by-step on how you—how

these are going to go hand-in-hand increasing hydropower but also taking into account the impacts of climate?

Mr. WOOD. Thank you for your question. I just—I think I just want to make one point off of that, that it is important to remember, in spite of the trying bureaucracy, how important the Federal Power Act and, in particular, how important Sections 4(e) and Section 18 have been to recovering rivers that were impacted by dams that were built before the environmental era. And I think our position, basically, is that you can improve the regulatory process without touching Sections 4(e) or 18.

When it comes to climate change, we have seen it playing out across the country. It is no different in Florida. But prolonged drought, decreased snowpack, earlier melting of the snowpack, which has impacts on river flows and late-season flows for irrigators—so I just—I don't think there is a way around analyzing the effects of climate change on every Federal activity as we move forward.

Ms. CASTOR. And we are so conscious of the cost right now, the cost on consumers, the fact that, last year, we paid out over \$148 billion due to climate-fueled catastrophes and droughts. But I am also quite conscious of what is happening on equity. And thank you, Mr. Kiernan, for pointing out the challenges for biodiversity and climate and equity.

And Ms. Pavel, tribal nations are using long-standing tenants of environmental stewardship—thank goodness—to help fight the climate crisis. Tribal sovereignty and economic development must be a part of our national efforts as we transition to a clean energy economy. How does the proposal we are discussing today enhance tribal sovereignty and economic prospects?

Ms. PAVEL. Well, it allows the tribes to step into the shoes of the secretary when a project is on tribal lands and imposing conditions that are necessary to protect the purposes for which the tribal reservation was established, which was, in most instance, to be a permanent homeland for that tribe and allows imposed conditions that will address the, you know, reasonable conditions that address the project impacts on that reservation.

Also, one of the other areas we haven't talked about today is where a project impacts treaty-protected resources so fisheries, resources. And there—that—under the authority of the discretionary, it gives a broader voice to tribal concern. And the secretary has to, as they are putting forward these discretionary conditions necessary to protect these treaty-protected resources, cultural and fisheries and natural resources, it gives tribes a greater voice in that aspect of it. And what we have talked about collectively is it brings all the stakeholders together early in a transparent process. People have to sit at that table early and say, "What is your issue? What problem are you seeing? What impact? How do we solve that problem?" And it forces the stakeholders to sit down and work it out.

Ms. CASTOR. It is a great example for how change can be made, so thank you again to all of you for this collaborative effort. And I yield back.

Mr. RUSH. The gentlelady does yield back.

The Chair now recognizes Mrs. Lesko, the gentlelady from Arizona, for 5 minutes.

Mrs. LESKO. Thank you, Mr. Chairman, and thank you to all of you for being here today and spending hours with us. The other day in the Wall Street Journal, there was an article, which I will show right here. It is entitled, “Electricity Shortage Warnings Grow Across U.S. Power Grid Operators Caution That Electricity Supplies Aren’t Keeping up with Demand Amid Transition to Cleaner Forms of Energy.”

And I think all of us, both Republicans and Democrats and all of you, agree that hydroelectric power is part of the solution. I have several questions. All of them are for Mr. Woolf. The first question is can you confirm that the nonFederal hydropower development considered and proposed under the Uncommon Dialogue is not intended nor will impact Federal hydropower projects or water or power rights, contracts, or obligations and that any such development would be pursuant to the Bureau of Reclamation’s lease of power privilege process, not FERC licensing?

Mr. WOOLF. Yes.

Mrs. LESKO. OK.

Mr. WOOLF. This proposal is just the Federal Power Act.

Mrs. LESKO. Fantastic. All right. Then my next question to Mr. Woolf, I understand that the National Hydropower Association has been active in talks with groups, including American Rivers and tribal nations in what has been referred to as the Uncommon Dialogue. Does your organization support the removal of Federal dams?

Mr. WOOLF. No.

Mrs. LESKO. OK. And does the National Hydropower Association support legislation that would raise the cost for customers of existing Federal hydropower projects?

Mr. WOOLF. No.

Mrs. LESKO. Good. Mr. Woolf, the Uncommon Dialogue meeting between your organization, American Rivers, and tribal nations has yielded several proposed amendments to the Federal Power Act, which you say is intended to enhance the economic value and environmental benefits of hydropower projects and healthy rivers. In these meetings and discussions, were customers of Federal hydropower generation projects or the national organizations representing them, such as the American Power—Public Power Association, the National Rural Electric Cooperative Association, and the National Water Resources Association, included?

Mr. WOOLF. I think we have invited them to participate, but I don’t think they have been directly involved.

Mrs. LESKO. OK. Mr. Woolf, many Arizonans, particularly those in rural areas, rely on power from Federal dams such as Glen Canyon and Hoover Dams. Why weren’t the customers included in these discussions?

Mr. WOOLF. This has been a—as has been mentioned, an uncomfortable dialog. This is really unprecedented to come together with these groups. This is a continuing process. So we are continuing to bring in more and more people as we can, but we have got to—we have got to start somewhere.

Mrs. LESKO. OK. Good. Mr. Woolf, an October 2021 report released by the Department of Energy’s Waterpower Technologies Office titled “An Examination of Hydropower Licensing and Federal

Authorization Process” examined which factors have the greatest impact on the hydropower licensing process.

One of the key findings in the report dealt with the sheer amount of bureaucracy involved in the permitting process. For example, hydropower licensing in the United States requires the participation of up to 11 Federal and State agencies depending on the plant’s location. This is compared to five to six agencies involved in other countries for their hydropower licensing process. Can you speak more—and I know you have already—but more to how this affects the timeline of hydropower projects?

Mr. WOOLF. As has been touched on earlier, one of the biggest challenges is the lack of process discipline. There is lots of different organizations, different Federal agencies, different State and local agencies. And there is not—there is no discipline if they miss those timelines. So that is one of the innovations in this joint proposal, is to get everyone together up front, establish a joint schedule, a joint timetable, figure out the scope of studies. And then at the back end, if there are inconsistent provisions, figure that out as well so making FERC the lead agency for that kind of coordination, we think, is going to speed things up. It doesn’t take away the role of the other agencies. They still have a voice. So we think that is also environmentally protective.

Mrs. LESKO. Thank you, Mr. Woolf, and thank you to the others, and have a great afternoon. And I yield back.

Mr. RUSH. The gentlelady yields back.

The Chair now recognizes the gentleman from California, Mr. Peters, for 5 minutes.

Mr. PETERS. Thank you very much, Mr. Chairman.

Thanks to the witnesses for being here this long time. Our energy challenges from grid reliability to volatile oil markets demand a technology-neutral approach to achieving climate stability and energy security. And hydropower is a clean baseload source of energy that can help us meet our clean energy goals. However, as we have discussed, new projects are being stalled by an inefficient regulatory process, and these regulatory barriers don’t just exist, by the way, in this particular area. We see it from constructing inter-State transmission lines, which this committee has dealt with, to restoring our forests and fighting wildfires.

So we need to come together and streamline these processes so that projects can be approved more quickly while still meeting high environmental standards. We made progress a few years back in 2017. I introduced the Hydropower Permit Extension or HYPE Act to cut red tape in the construction permitting process for hydropower projects. Ironically, that was allowing more time for things to be approved, which is kind of what we are not talking about here. But we want hydropower to be approved.

In my district, the city of San Diego is undertaking a project jointly with the San Diego County Water Authority to develop 4,000 megawatt hours per day pumped hydrostorage hydropower facility at the San Vicente Reservoir. And once completed, that facility will provide renewable energy that could power 135,000 households in the greater San Diego area. And I hope the committee and our witnesses will join me in supporting this project and others like it across the United States.

A lot of these questions have been answered, but Mr. Woolf, I am going to give you one more shot at something you have touched around for a while. You discussed the, quote, Byzantine licensing and relicensing system for hydropower projects. And as a result of this system, you said that more than 40 percent of hydropower industry asset owners are actively considering decommissioning a facility. You said that in your oral statement as well. Just elaborate for us briefly on how the regulatory system is preventing more clean energy deployment in this—

Mr. WOOLF. Thank you for your question, and thank you for recognizing the urgency of this issue. We are facing a wave of relicensing, with 45 percent up by 2035. And at the same time, we are facing an increasing trend of license surrenders. I did not even realize until preparing my testimony that 17 new projects had filed for license surrenders in the last two years. It really is an alarming trend. I am coming back earlier in this week from a conference where should you invest or should you leave it was one of the topics that the conference was talking about. And it is because of the licensing process. It takes so long. There is so many agencies involved. It is so uncoordinated. We certainly respect the rights for all of these laws to be implemented. But the lack of clarity on when will this effort end is leading to investment decisions, hey, let's just build a different technology that will only be there for a few years, but at least we know when that will end.

Mr. PETERS. Right. And do you feel like the project that you participated in, the Uncommon Dialogue, that the recommendations address that issue sufficiently?

Mr. WOOLF. We do. I mean, this is a remarkable situation to have the river community, tribal representatives and industry agreeing on a package together. And we urge Congress not to—not to miss this opportunity.

Mr. PETERS. Mr. Kiernan, I know how much—how devoted you are to the health of our rivers. And I share that concern about environmental quality. I am of the opinion that there is so many instances where we can achieve high environmental standards with less drag on the economy, less time, and less risk to investors. Can you elaborate on how we can expedite this licensing process for hydro projects while we maintain high environmental integrity?

Mr. KIERNAN. First let me just concur with kind of your assumption. We believe as well that we can improve the processes and improve the health of our rivers and have significant, if not, increasing amounts of hydroelectric generation for our clean energy grid of the 21st century. So agree with that. I think this proposal that we are jointly putting forward does that with greater transparency that we are suggesting, does that with the license surrender clarity and process.

By including climate change, that also helps getting all the information on the table. I will also just say that, over the last many decades, we, as a country, have learned what works well for fish passages, how to better manage our rivers. So I think, with improved processing that we are suggesting for FERC and with the improved knowledge that we have gained, we can do a lot better job improving the health of our rivers going forward. So we are optimistic we can make progress.

Mr. PETERS. I recall in our last conversation about this that the permit process is so unwieldy and unbounded. And I hope that we can—we can do something that provides more certainty and better timelines and better results and actually, frankly, clean energy with environmental protection. I think that is our goal.

Mr. KIERNAN. If I can just echo as well Mr. Woolf's comments on the coordination up front by the different agencies we think is key to be able to speed up the process and have it more predictable because get the agencies up front, have a joint study plan. Here is what we need and get that all clear up front is better for the entire process and all constituents.

Mr. PETERS. Thanks again to you all.

And Mr. Chairman, I yield back.

Mr. RUSH. The gentleman's time has expired.

The Chair now recognizes the gentleman from North Dakota, Mr. Armstrong, for 5 minutes.

Mr. ARMSTRONG. Thank you, Mr. Chairman.

The Uncommon Dialogue proposal that has been presented to this committee seems to have potentially conflicting goals when it comes to the deployment of hydropower capacity. Goal 1 is purported to be a streamlined licensing process that improves coordination, and Goal 2 seems to be an increased regulatory requirements and expand the scope of the environmental review. And really, I do appreciate the intention of streamlining licenses and the recognition of—particularly of tribal governments and tribal stakeholders in this process. It seems that several of the advocated reforms will only serve to make the process more—potentially make it more cumbersome. Mr. Wallen, the Uncommon Dialogue endorses the concept of offsite mitigation and dam removal. Do you have any concerns with these provisions?

Mr. WALLEN. You know, we have talked earlier. And as I said, Grant PUD is fully committed to our environmental responsibilities and being good stewards of the resource that we get the opportunity to manage. We have a long and proven track history of doing so, everything from the fish bypassed installation that we performed at both Wanapum and Priest Rapids. I mean, we are talking capital investments in, you know, excess of \$100 million.

Our fish habitat and acclimation facility is another capital infrastructure investment, \$65 million. But we are seeing the rewards of those. If you look through our fish bypass survival, between Wanapum and Priest Rapids, one area is 96 to 98-and-a-half percent. The other is 96 to 100. This is survival studies over the course of several years.

So the proof is in the pudding, in our opinion.

I think that we are all in agreement here today that licensing reform is critically important. We also agree that dams which don't provide values to society can be candidates for removal if dam owners agree. I think where we have discomfort is where we hear arguments for dams that do provide tremendous societal value, and we do not want to conflate our support for licensing reform with support for removal of productive federally owned dams. And I just wanted to make that clarification to my testimony.

Mr. ARMSTRONG. Thank you. I appreciate that. And this part of it—and it appears that the draft also expands the scope of environ-

mental remove and moves, in some cases, potentially the goalpost by making relicensing of existing dams more burdensome. The draft requires evaluation and potential mitigation of past effects caused by the construction of the original dam like in North Dakota.

I mean, we have the dam which potentially close to 100 years ago—this provision—and this is where I think I have—I appreciate everything. But it seems likely to lead to lawsuits and other efforts to remove dams that are deemed to have an environmental impact. Beyond that, what would be considered acceptable? Given your experience in the Columbian Basin, do you have any recommendations about balancing those effects?

Mr. WALLEN. Can you repeat the last part of your question there?

Mr. ARMSTRONG. Well, it seems like this could lead—well, I will back up. When we do this, not only is the increased permitting—and we are talking about—you were mentioning investment before. But there is—and maybe I will move on because I am going to run out of time. But the other problem here is—one is the increased permitting process, part of the problem that puts constraints associated with the time—the time it actually takes to do the permitting process. But the second problem is every single piece of paper and duplicative thing that you have to answer leads to the second part of this problem.

And what that problem is, is we have to get the power from where it is being produced to where it goes. And you don't have to go very far. You can go into New England and watch what has happened over the last seven years. I mean, you had the Northern Pass project in New Hampshire that went away. Massachusetts passed a law.

And just recently, the New England Clean Energy Connect was stopped in Maine. And the reason I bring this up is, you know, as somebody who has dealt with lots of pipeline litigation and all of those different issues, the people who—it turns out nobody likes utilitarian infrastructure. They really don't like it to go through a forest. And the people who are sometimes on sides or sometimes not—I mean, you are dealing with indigenous groups in Canada that were a problem to that. You are dealing with the Sierra Club that was a problem to that.

You are dealing with the Maine voters who just roundly rejected that. So I appreciate everything that is going on here, but the—every single time in an effort to streamline something, if you add duplicative paperwork or ask for things in a different way, you can deal with the permitting side from the regulatory side. But the litigation side that is coming down the pipe—and I say this a lot, and I have said it on infrastructure.

They don't have to stop it everywhere. They only have to stop it one place. And bottlenecks are the enemy to these types of projects. So all of the work you are doing, I think, is fantastic. But without litigation reform and without streamlining the permitting process, I wonder, very quickly, if we are going to—if we are going to see the results of whether—Mr. Woolf, you have something you want to say? You have four seconds, but I am last, so they will let you go a little bit.

Mr. WOOLF. Greatly appreciate your comments about regulatory—increasing regulatory requirements. We don't see that in this proposal. We see the offsite mitigation as a tool that only licensees can request. And the rest of these are factors that the industry already deals with. So we do see this as a—as a regulatory streamlining effort.

Mr. ARMSTRONG. I hope you are right.

Mr. WALLEN. And if I—

Mr. ARMSTRONG. Yes.

Mr. WALLEN [continuing]. Might also just add, it is our sense and hope that the recommendations we are making in the proposal will reduce litigation long-term by having clarity in what the process is and isn't so the long-term litigation will be reduced.

Mr. ARMSTRONG. And I am 33 seconds over, but I think one thing Ms. Pavel would appreciate is that if we do this and allow the tribal governments autonomy, let them make the decision and take some of the other agencies out of the equation because that will help both speed it up and decrease litigation. So with that, I yield back.

Mr. RUSH. The gentleman yields back.

The Chair now recognizes the gentleman from Oregon, Mr. Schrader, for 5 minutes.

Mr. SCHRADER. Thank you, Mr. Chairman, and thank all of you for all the work you have done and sitting through this long hearing as we pop in and out. Mr. Woolf, I guess basic question is how much time are we going to save, you know, with the Uncommon Dialogue process? If it is seven to ten years, now what is the anticipation of your—

Mr. WOOLF. Yes. It is certainly going to save a lot of time for the expedited nonpowered dams and for the closed-loop and the pumped storage facilities, which is huge. That is growth. That is flexible new generation the country needs. For relicensing, it is a little clearer. We are not on a shot clock, but we think by doing these reforms, we are going to reduce—we are not going to get bogged down, and it is going to save years off the process.

Mr. SCHRADER. So couple years saving?

Mr. WOOLF. I think so. It is going to vary facility by facility, though.

Mr. SCHRADER. Everyone generally agree with that assessment?

Ms. PAVEL. Yes. I agree with that. I mean, again, one of the current barriers is tribes have to knock on the agency's doors as opposed to sitting right down with the operators. Absolutely.

Mr. SCHRADER. OK. OK. Again, Mr. Woolf and maybe the others for that matter, unclear from my brief reading of what you all have done. Is there an expectation of a parallel process by the different Federal agencies so you are not just going from one to the other, but it is being done in parallel, so it can be done in a shorter period of time? Is that the anticipation?

Mr. WOOLF. That is exactly the—one of the solutions here. There has not been process discipline between the various agencies. And this would require FERC to be the lead agency to set up that coordinated schedule upfront of studies of who is going to do what, coordinated upfront. We think that will create a lot of greater clarity.

Mr. SCHRADER. Excellent. OK.

I guess, Mr. Wallen, just—I come from Oregon. You are from Washington. Transitioning to clean energy is a big deal for our states. We spend a lot of time doing that, trying to arrest the harmful effects of climate change. Hydro is a big piece of that. Our home states have made notable strides, I think, in, you know, addressing that through setting some pretty bold clean energy goals. And want the Federal process, I think, to complement what the states are doing. How do you see the role of hydropower changing as—in response to what the states are doing and what we may—what is our role here at the Federal level?

Mr. WALLEN. I think, as we have talked about before, as some states take different postures and accelerated timelines on clean energy transformation and goals, hydropower becomes much more important in the short-term as well. Just being able to have the ancillary services, the load following, the grid reliability characteristics, the dependable, dispatchable technology that just doesn't exist current—in any other current form that is licensed or approved on widescale use.

So I believe we will continue to see that into the future. But as we look at it today, I don't think that it could be any more important than it is right now for us to continue to leverage those resources in cost-effective manners for the benefit of society, for the benefit of our customers.

Mr. SCHRADER. OK. OK. Big part of the Bipartisan Infrastructure Law was \$52 million to help build out electrical vehicle charging stations in my home State. As we work to electrify our transportation systems and cleanup our energy, what is the best way we can leverage constant reliable hydropower to support the intermittent wind and solar? I guess, Mr. Woolf, with you—

Mr. WOOLF. Thanks for the question. As we are electrifying and cleaning up the grid, I think hydropower is that flexible, dispatchable resource. So one of the most important things we can do is the license reform package. We are also, all of us, I believe, strongly supportive of Representative Kuster's bipartisan Twenty-First Century Dam Bill. There are also provisions in the—in the—in the various tax packages. And we are concerned that there be tax parity and that hydropower not be left behind in whatever tax package may go through Congress so—

Mr. SCHRADER. Very good.

Mr. Wood, I guess last question for you. How is the power restored—use that term in Penobscot. You know, when you removed those dams, how did full restoration occur? What did you do? What did they do?

Mr. WOOD. Interestingly, sir, we actually owned the dams for a while. We were part of a collective that bought the dams. The other dams that were on the river just ran their turbines harder.

Mr. SCHRADER. OK. Very good.

With that, I yield back, Mr. Chairman. Thank you so much.

Mr. RUSH. The gentleman yields back.

The Chair now recognizes the gentleman from Indiana, Mr. Bucshon, for 5 minutes.

Mr. BUCSHON. Thank you, Mr. Chair.

I support the development and expansion of hydropower in the United States as part of an all-of-the-above energy strategy. In fact, I authored the Promoting Hydropower Development at Existing Nonpowered Dams Act that has been mentioned in the hearing already, which President Trump signed into law, and a bipartisan Water Resources Development Act of 2018.

The Promoting Hydropower Development at Existing Nonpowered Dams Act cut through the red tape and instructed the Federal Energy Regulatory Commission to create in an expedited permitting process for modernizing existing dams to provide hydropower that will result in a final decision from FERC in two years or less, which went from ten years to two years, we hope. My bill addressed the key—a key opportunity to increase a hydropower generation in the United States. This bill came about as the result of a 2012 U.S. Department of Energy report which estimated that nonpowered dams have 12,000 megawatts of potential capacity that could be used to increase U.S. hydroelectric generation. Additionally, a year after Congress passed the bill, the U.S. Energy Information Administration reported that 32 nonpowered dams were planned to be converted to hydroelectric dams, which EIA estimated would add about 330 megawatts of clean, renewable electrical generating capacity to the grid.

And last summer, I had a chance to ask FERC Chairman Richard Glick before this committee about the progress being made under my bill. Chairman Glick told this committee that FERC had implemented the regulations and that FERC had received a few applications that are making their way through the process. He also mentioned that FERC is working with industry to expedite the completed applications—completed application required by FERC's rulemaking.

So Mr. Woolf, has FERC interacted with any of your members regarding this process for retrofitting nonpowered dams?

Mr. WOOLF. My understanding is that not a single facility has been able to use those provisions.

Mr. BUCSHON. Yes. You know, so has FERC done anything to help expedite your members—to help them expedite their applications?

Mr. WOOLF. The way that provision is being interpreted such that it does not include the precicensing activities makes that provision—it doesn't actually expedite anything if it only starts once all the precicensing activities have ended. FERC's process at that point is about two years anyway. So it hasn't actually had the effect that all of us wanted.

Mr. BUCSHON. OK. So once again, a Federal agency is not following the intent of Congress, it seems to me, which is not unusual. We have this happen across agencies when they don't want to do something. And I am not sure that is what they want. But, you know, it is too bad because it was bipartisan. We spent a couple years putting that together. And when I asked Chairman Glick last year about what more could be done to improve the process outlined in the bill, he told us—he told this committee that it was, quote, too soon to really tell whether additional changes need to be made and that we should let the existing process work out for a few years.

Mr. Woolf, I see that the legislative proposal before us today includes provisions concerning the licensing process for modernizing existing nonpowered dams. What changes does the legislative proposal make relative to existing statute governing the issue? That would be the Uncommon Dialogue.

Mr. WOOLF. This should be low-hanging fruit. You have already got the dams there. They are providing a purpose. Let's add power, get the clean, flexible, reliable generation. But it goes through this—this Byzantine process that is just way too long. What the legislative proposal would do is start that shot clock when the applicant files its application—its notice of application and FERC says that it is—that it qualifies. So that would start that two year shot clock in a way that, apparently, we weren't clear enough four years ago.

Mr. BUCSHON. OK. Well, that is great. I would be for that. So the Uncommon Dialogue proposal must—took into account the previous legislation when crafting that section of the proposal, I am assuming.

Mr. WOOLF. That is right. It would be tailored changes specifically to the existing law from four years ago.

Mr. BUCSHON. And FERC obviously sought some feedback on that section or just—

Mr. WOOLF. We have had several conversations with FERC, but we have not heard specific feedback on that provision yet.

Mr. BUCSHON. OK. Great.

Ms. Pavel, do you have something you want to add to that? Your—

Ms. PAVEL. Well, I think the—the discussion you are having vis-a-vis the expedited process was really—you know, one of the guiding principles we had in the Uncommon Dialogue process was what problem are we trying to solve.

Mr. BUCSHON. Yes.

Ms. PAVEL. And that was a problem that was identified by all of the stakeholders. How do we solve that now? How do we make this process work better so—

Mr. BUCSHON. That is great because the intent was, of course, is to streamline the process and where applicable and where people want it, to convert a nonpowered dam to a hydroelectric dam. Because of the advantages of doing that versus creating an entire new hydroelectric—you know, de novo in a place where there is not a pre-existing dam. So I appreciate that.

Thank you, Mr. Chairman. I yield back.

Mr. RUSH. Does yield back.

The Chair now recognizes Mr. Pence for 5 minutes.

Mr. PENCE. Thank you, Chairman Rush, and Ranking Member Upton.

And thank the witnesses for being here today. I know it has probably been a long morning. I am going to try to avoid repeating questions or points if I may. My district is Southern Indiana. We have the Ohio River runs from my hometown to Congressman Bucshon's, so we are—I guess we are tag-teaming today. So, again, thanks.

So sitting on the Ohio River in my district is the Markland Hydroelectric Station, which produces 65 megawatts of electricity for

Switzerland County. It is about 52,000 homes in that very remote county. This station has been providing affordable, reliable, and carbon-free electricity to communities like Florence, Indiana since 1967.

The Ohio River, again, which runs on the southern part of the Hoosier State, is a perfect example of an abundant source that holds enormous potential for surrounding communities, particularly when we are talking about the electrification of the transportation industry or even those that talk about getting rid of coal, which I have got two coal plants in my district on the river.

But the onerous process to permit, license, or relicense hydroelectric plants makes new projects uneconomical, let alone the delays to interconnect new transmission lines. And how would you do that; right? Do it after the fact. Just this year, Markland completed a ten year relicensing process—and I know you have been hearing some of those stories all morning—for a ten percent increase in power output.

Mr. Wallen, would hydro reform legislation like what has been proposed by Ranking Member McMorris Rodgers make it easier to expedite these types of relicensing and upgrades for new technology on my Ohio River?

Mr. WALLEN. Yes. I believe so.

Mr. PENCE. And that is the simplest answer. And so I would say to my peers across the aisle, come on. Let's figure out how to get this done and work this out. And I know you are all doing a great job and working together, as Ms. Pavel said, and I appreciate that. But I think we ought to move on with this. And with that, Mr. Chair, I yield back.

Mr. RUSH. The gentleman very kindly yields back. And the Chair certainly want to commend the gentleman for his outstanding compassion on our witnesses. This concludes the witness questions, and I would like to thank each and every one of you for your participation and your expert testimony in this committee hearing, subcommittee hearing. And that said, I want to remind Members that, pursuant to committee rules, that they have ten business days to submit additional questions for the record to be answered by the witnesses who have appeared today. And I ask the witnesses to respond promptly to any such questions that you may receive.

Before we adjourn, I really do want to request unanimous consent to enter into the record the following documents, a letter dated May 12th, 2022, from the American Public Power Association; a letter dated May 4th, 2022, from the Confederated Tribes and Bands of the Yakama Nation on the Uncommon Dialogue Hydro-power River Restoration and Public Safety Amendment on Tribal Authority; and last, a May 12th letter dated—a May 12th letter from NOAA—from the NOAA Corporation to the Committee on Energy and Commerce on the Uncommon Dialogue; and also, last, a letter from Mr. Grothman, a Member of Congress and also from Mr. Pocan, a Member of Congress. It has been agreed to by both sides. This letter is a support letter for the bipartisan bill.

Without any objection, the documents will be entered into the record.

Mr. RUSH. At this time, the subcommittee stands adjourned, and the subcommittee is adjourned.

[Whereupon, at 1:28 p.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]



May 12, 2022

The Honorable Bobby Rush
 Chairman, Subcommittee on Energy
 House Committee on Energy & Commerce
 2125 Rayburn House Office Building
 Washington, DC 20515

The Honorable Fred Upton
 Ranking Member, Subcommittee on Energy
 House Committee on Energy & Commerce
 2322 Rayburn House Office Building
 Washington, DC 20515

Dear Chairman Rush and Ranking Member Upton,

The American Public Power Association (APPA) appreciates the opportunity to submit a statement for the record for the House Energy & Commerce Committee's Subcommittee on Energy's hearing, "Modernizing Hydropower: Licensing and Reforms for a Clean Energy Future." APPA supports and agrees with the testimony submitted by Rich Wallen, CEO and General Manager of Grant County Public Utility District, an APPA member.

The American Public Power Association is the voice of not-for-profit, community-owned utilities that power 2,000 towns and cities nationwide. APPA represents public power before the federal government to protect the interests of the more than 49 million people that public power utilities serve, and the 96,000 people they employ. APPA advocates and advises on electricity policy, technology, trends, training, and operations.

Hydropower Benefits

Making full use of the nation's hydropower resource is key to ensuring that the nation's grid remains reliable and resilient, and that utilities can meet emission reduction goals. Hydropower is a source of emissions-free, baseload power. Furthermore, hydroelectric generators can be started or stopped quickly, which make them more responsive than most other energy sources for meeting demand for electricity at its "peak" or highest volume. Hydropower's "black start" capability that makes it especially valuable in restoring power when there are widespread outages or disruptions on the system—this capability allows the generating units to cycle back on quickly if they have been tripped off in a power outage.

Non-Federal Hydropower

There is a significant potential for new hydropower to be generated at non-powered dams throughout the country and to increase output at existing hydropower facilities. But there are excessive barriers to tapping this potential. The Federal Energy Regulatory Commission (FERC) is the primary federal agency responsible for the licensing and relicensing of such non-federal hydroelectric projects, but the process can be lengthy, difficult, costly, and uncertain for applicants. Under the Federal Power Act (FPA), FERC must establish requirements in conjunction with the license that give "equal consideration" to not only

power needs, but also Endangered Species Act requirements, water quality issues, marine navigation, and other public-interest concerns. FERC must carefully evaluate many aspects of a hydropower project, but at the same time, state and federal agencies can impose “mandatory conditions” that FERC cannot balance or modify in the public interest.

While it is appropriate to consider a broad array of factors, this process must be streamlined and reformed. Critical new additions to existing hydropower facilities are languishing under bureaucratic and often contradictory processes that can span a decade or more or which simply become too costly. The byzantine licensing and permitting processes are also a significant impediment to simply maintaining existing hydropower capacity. Between now and 2030, 281 facilities representing nearly 14 gigawatts of hydropower generation and pumped storage capacity (roughly 30 percent of FERC hydropower licenses) are up for relicensing.¹ We simply cannot afford to lose existing hydropower capacity without threatening to miss emission reduction goals and grid resiliency. Congress must streamline the licensing process by establishing FERC as the lead agency, giving it the authority to set and enforce schedules for the issuance of all resource agency authorizations and studies, and ensure any “mandatory conditions” are directly relevant to the project. H.R. 3043, the Hydropower Modernization Act of 2017, introduced by Ranking Member Cathy Morris Rodgers (R-WA), addressed these and other issues in the licensing reform process. APPA strongly supported the legislation, which passed the House with bipartisan support in 2017.

Another significant obstacle to the growth and retention of non-federal hydropower capacity is insufficient federal tax incentives on par with those available to other clean energy resources. APPA strongly supports legislation introduced by Senators Maria Cantwell (D-WA) and Lisa Murkowski (R-AK), the Maintaining and Enhancing Hydroelectric and River Restoration Act of 2021 (S. 2306), that seeks to address this issue. The bill would create a 30 percent tax credit to support upgrades at existing hydroelectric dams for qualified dam safety, environmental, and grid resilience improvements. Critically, this credit would be available as a direct payment to public power utilities. This provision is also included in a bill introduced by Representative Annie Kuster (D-NH), H.R. 4375, the Twenty-First Century Dams Act. It is critical that this provision be included in any energy tax credit legislation that may be considered this Congress.

Federal Hydropower

The federal Power Marketing Administrations (PMAs)² provide millions of Americans served by not-for-profit public power and rural cooperative electric utilities with cost-based hydroelectric power produced at federal dams operated by the U.S. Army Corps of Engineers and Bureau of Reclamation. The Corps and Reclamation are the largest and second largest (respectively) generators of hydropower in the country. The PMAs market federally generated hydropower, with a statutory right of first refusal granted to not-for-profit entities, including public power utilities and rural electric cooperatives (called “preference customers”), at rates set to cover all the costs of generating and transmitting the electricity, as well as repayment, with interest, of the federal investment in these hydropower projects.

In accordance with federal law, PMA rates are set at the levels needed to recover the costs of the initial federal investment (plus interest) in the hydropower and transmission facilities. The PMAs annually review their rates to ensure full cost recovery. None of the costs are borne by taxpayers. Power rates also help to cover the costs of other activities authorized by these multipurpose projects such as navigation, flood control, water supply, environmental programs, and recreation. The annual appropriations process is also important to the PMAs. Although the customers pay all the PMA costs through their power rates, as

¹ National Hydropower Association: <https://www.hydro.org/wp-content/uploads/2021/07/NHA-Hydro-Relicensing-by-2030-Fact-Sheet.pdf>

² The four PMAs are: the Bonneville Power Administration (BPA), Western Area Power Administration (WAPA), Southwestern Area Power Administration (SWPA) and Southeastern Power Administration (SEPA).

mentioned above, for the Western Area Power Administration, Southeastern Power Administration, and Southwestern Power Administration, those monies flow back to the U.S. Treasury and then must be appropriated by Congress. (Bonneville Power Administration's (BPA) governing statute, amended in the 1980s, allows for a "revolving fund" so ratepayer money goes directly to BPA rather than to the Treasury.) In addition, the PMAs must receive yearly funding levels from Congress for purchasing and wheeling (transmitting) power in a drought situation or when the water at the dams is used for purposes other than for electricity production (i.e., recreation and environmental mitigation). This money for "purchase power and wheeling" will then be paid for by the PMA customers through their rates.

Federal hydropower and the PMAs are critical, though often overlooked, elements of the nation's power supply. APPA supports the continued existence and federal ownership of the PMAs and the sale of federally generated hydropower at cost-based rates. APPA strongly opposes any efforts to disproportionately assign costs to federal hydropower users for which they receive no additional benefits. Finally, APPA submits as attachments to this statement three documents related to federal hydropower: a letter from APPA President and CEO Joy Ditto sent to President Biden on April 4 regarding the urgent need to secure a modernized Columbia River Treaty; and two policy resolutions recently approved by APPA's membership: "In Support of Hydropower, the Federal Columbia River Power System, and Opposing Breach of the Lower Snake River Dams," and "In Support of Colorado River Basin Drought Assistance."

"Uncommon Dialogue" Effort

APPA was not directly involved with the "Uncommon Dialogue" effort lead by the National Hydropower Association (NHA) and a number of environmental and tribal organizations. However, many of APPA's members are also members of NHA and were engaged as the proposal developed. While APPA continues to believe that the hydropower licensing process requires more comprehensive reform along the lines of what was included in H.R. 3043 in 2017, we appreciate the incremental changes included in the group's recently (April 2022) released licensing reform proposals. We are particularly supportive of the proposed requirement that mandatory conditions under section 4(e) of the FPA be reasonably related to project effects on federal lands.

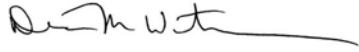
With regards to other proposals put forth in by the Uncommon Dialogue group and associated legislation regarding dam removal, APPA opposes efforts to remove productive dams that provide, or have the potential to provide, clean and economic hydropower generation.³ Furthermore, proposals to appropriate funding for the Corps, Reclamation, and any other federal agencies for "dam related activities" must include statutory text specifying that this funding cannot be incorporated into the rates paid by federal hydropower customers.

Conclusion

APPA commends the committee for taking a fresh look at the opportunities to modernize, preserve, and increase hydropower across the country and looks forward to working on legislative solutions.

³ APPA Policy Resolution 22-12, "[In Support of Hydropower, the Federal Columbia River Power System, and Opposing Breach of the Lower Snake River Dams.](#)"

Sincerely,

A handwritten signature in dark ink, appearing to read "Desmarie Waterhouse", with a long horizontal flourish extending to the right.

Desmarie Waterhouse
Vice President, Government Relations and Counsel

Attached:
Columbia River Treaty Letter
Snake River Dam Resolution
Columbia River Basin Drought Assistance Resolution



April 4, 2022

President Joe Biden
The White House
1600 Pennsylvania Avenue, NW
Washington, D.C. 20500

Dear President Biden:

On behalf of the American Public Power Association, I write to you today to bring your attention to the urgent need to secure a modernized Columbia River Treaty. Specifically, APPA respectfully requests you to direct State Department negotiators to elevate the importance of power provisions in negotiations. Failure to act quickly on negotiations will continue to cost American consumers millions of dollars a year, as well as the continued loss of renewable, baseload hydropower important to keeping the grid reliable.

The American Public Power Association is the voice of not-for-profit, community-owned utilities that power 2,000 towns and cities nationwide. APPA represents public power before the federal government to protect the interests of the more than 49 million people that public power utilities serve, and the 96,000 people they employ.

Public power has a heavy footprint in the Pacific Northwest, where community-owned electric utilities buy power generated on the Federal Columbia River System (FCRS) marketed by the Bonneville Power Administration (BPA or Bonneville). Bonneville rates are set to cover all generation and transmission costs, as well as repayment, with interest, of the federal hydroelectric projects. None of the costs are borne by taxpayers. This multi-decade partnership has proven wildly successful, providing affordable, emissions-free, and reliable power that has served as the cornerstone of the Pacific Northwest's economy since 1937. However, this success is increasingly threatened by the outdated Columbia River Treaty that has American ratepayers losing \$150 million a year in lost hydropower value to Canada.

The United States and Canada agreed to the Columbia River Treaty in 1964 for the mutual development of the Columbia River power and flood control systems. Under the Treaty, the U.S. provides payments to Canada, called the Canadian Entitlement (CE), in the form of returned power generation. The CE amount is calculated using a formula from 1961, which was based on the expected improvement to U.S. hydropower generation capability due to Canadian storage. Today, these calculations exceed the actual benefits of coordinated operations by an estimated 70-90 percent. An equitable rebalancing of this problem is worth more than a billion dollars to U.S. consumers at a time when many are already facing rising energy prices.

I strongly urge you to direct the State Department and the entire negotiating team working under National Security Council officials to move faster on renegotiating the treaty with a particular emphasis on the rebalancing the power provisions between the U.S. and Canada. Making full use of the nation's hydropower resource is key to ensuring that the nation's grid remains reliable and resilient, and that utilities can meet emission reduction goals to address climate change.

Sincerely,

A handwritten signature in black ink, appearing to read "Joy Ditto", with a stylized flourish at the end.

Joy Ditto
President & CEO

CC:
Secretary Granholm
Secretary Blinken
Pacific Northwest Congressional Delegation
Andrew Light, Assistant Secretary for International Affairs, Department of Energy
Melanie Nakagawa, Special Assistant to the President & Senior Director for Climate & Energy

Resolution 22-12

**Sponsors: Oregon Municipal Electric Utilities Association; Northwest Public Power Association;
Northwest Requirements Utilities; Washington Public Utility Districts Association;
Oregon People's Utility District Association; Idaho Consumer-Owned Utilities Association;
Benton Public Utility District; Cowlitz Public Utility District; Franklin Public Utility District; City
of Richland; Chelan Public Utility District; Grant Public Utility District; Douglas County Public
Utility District**

**In Support of Hydropower, the Federal Columbia River Power System, and
Opposing Breach of the Lower Snake River Dams**

1 Hydropower is a premier renewable resource that provides cost-effective, clean electricity. It plays a
2 critical role as our nation works to lower greenhouse gas emissions and maintain an affordable, reliable,
3 and resilient grid. As policies are adopted to increase the electrification of other sectors of the economy,
4 such as transportation, it has become increasingly important. Hydro generation is unique in its ability to
5 instantly increase or decrease generation and in maintaining the constant balance of generation and
6 electric demand. It provides a foundation for reliability that is necessary with increasing levels of variable
7 renewable resources, such as wind and solar.

8

9 The recently concluded Columbia River System Operation (CRSO) Environmental Impact Statement
10 (EIS) studied the environmental, biological, power supply, and socioeconomic impacts of the entire
11 Federal Columbia River Power System, which is marketed by the Bonneville Power Administration
12 (BPA). This multi-year, \$50.4 million analysis of the system was conducted by federal government
13 experts with consultations by federal natural resources agencies, state and tribal entities, and with input
14 from the public. The EIS included analysis of the impacts of removing or breaching the Lower Snake
15 River Dams (Lower Granite, Little Goose, Lower Monumental, and Ice Harbor). The unambiguous
16 conclusion of this comprehensive federal study is that the Lower Snake River Dams play a critical role in
17 the Northwest power system and economy, and that their continued operation does not jeopardize the
18 existence of endangered or threatened salmon species.

19

20 The Lower Snake River Dams are among the lowest cost generating resources in the region and are a
21 critical part of providing affordable, clean electricity to several of the region's most vulnerable
22 communities. On an annual basis, the plants on the Lower Snake River provide about 1,000 average
23 megawatts of electricity, enough to serve over half a million Northwest businesses, industries, and
24 households.

25

26 The continued operation of the Lower Snake River Dams is central to reliably meeting the region's clean
27 energy goals, providing dispatchable capacity to prevent blackouts and ramping capability to integrate
28 other renewable resources. The Lower Snake River Dams can provide over 2,000 megawatts of sustained

29 peaking capacity and represent a quarter of the Federal Columbia River Power System's reserves holding
 30 capability. As extreme weather events, like ice storms and heatwaves, have become more commonplace,
 31 the Lower Snake River Dams have also proved critical to ensuring public safety.

32

33 The Lower Snake River Dams are important to maintaining an affordable power supply for Northwest
 34 communities. Breaching the Lower Snake River dams and replacing them with other non-emitting
 35 resources—the most likely scenario given coal plant retirements and state clean energy policies—could
 36 raise BPA's power supply rates up to 50 percent. For most utilities relying on BPA, that translates to a 25
 37 percent rate increase for their customers.

38

39 Public power utilities are committed to scientific, cost-effective mitigation for the impacts of the federal
 40 hydro system. Costs related to fish and wildlife mitigation, including the cost of lost power generation,
 41 comprise a quarter or more of BPA's power rates. The Lower Snake River Dams feature state-of-the art
 42 fish passage technology greatly improving in-river fish survival, achieving spring juvenile survival at 96
 43 percent and summer migrating fish survival at 93 percent. Academic studies have shown that fish survival
 44 through the Federal hydro system is comparable to undammed rivers, such as the Fraser River in British
 45 Columbia. Removal of the Lower Snake River Dams is not a clear path to recovery of endangered species
 46 or overall abundance of salmon. More attention is needed to the threats of ocean conditions, avian
 47 predation, and over-fishing.

48

49 In addition to delivering affordable and reliable clean power, the Lower Snake River Dams contribute to
 50 the region's economy by providing irrigation, navigation, recreation, and employment.

51

52 **NOW, THEREFORE, BE IT RESOLVED:** Consistent with environmental protection, the American
 53 Public Power Association (APPA) opposes efforts to remove productive dams that provide, or have the
 54 potential to provide, clean and economic hydropower generation; and

55

56 **BE IT FURTHER RESOLVED:** That APPA opposes proposals to breach the Lower Snake River
 57 Dams, or the development of additional federal studies that presuppose removal of the Lower Snake River
 58 Dams, and encourages collaboration to help salmon in every part of their life cycle.

Adopted at the Legislative & Resolutions Committee Meeting

March 1, 2022

Sunsets in March 2030

Resolution 22-11

Sponsors: Colorado River Energy Distributors Association; Irrigation and Electrical Districts Association of Arizona; Arizona Municipal Power Users Association; Utah Associated Municipal Power Systems; Southwest Public Power Agency; City of St. George; Wyoming Municipal Power Agency; Utah Municipal Power Agency; Municipal Energy Agency of Nebraska; Heber Light & Power; Arizona Power Authority

In Support of Colorado River Basin Drought Assistance

1 The Colorado River is the life blood of the West. Congress has authorized federal multiple-purpose and
 2 transmission projects in the Colorado River Basin to provide water, clean hydroelectric power, and a wide
 3 range of significant benefits to over forty million people. These benefits from the largest of the Projects,
 4 the Boulder Canyon Project (Hoover), Colorado River Storage Project (CRSP), and Parker-Davis Project
 5 (Parker-Davis), include, but are not limited to:

- 6 • Flood control;
- 7 • Water storage and delivery;
- 8 • Hydroelectric power generation and transmission;
- 9 • Public recreation;
- 10 • Fish and wildlife propagation and Endangered Species Act (ESA) compliance; and
- 11 • Regulation, reliability, and resilience support to the Western Interconnection.

12
 13 Despite the multitude of benefits these projects provide, they have historically not relied on federal
 14 appropriations. Each Colorado River Project has its own unique congressional authorization, rates,
 15 repayment obligations, and customer base. Collectively, an estimated 300 non-profit customers, including
 16 over 70 tribal entities located in some of the most underserved areas of this country, provide through
 17 long-term contracts the revenues necessary to sustain the Colorado River Projects. These revenues are
 18 maintained in the Upper Colorado River Basin Fund (Basin Fund) or the Colorado River Dam Fund (Dam
 19 Fund), depending on the project. The revenues provide funding for:

- 20 • Repayment of the federal investment in the water storage, generation, and transmission facilities
 21 (with interest);
- 22 • Irrigation assistance;
- 23 • Operation, maintenance, and replacement of generation and transmission facilities;
- 24 • Replacement power costs (when the hydropower resource is insufficient);
- 25 • Staffing expenses of the Bureau of Reclamation (Reclamation) and Western Area Power
 26 Administration (WAPA);

- 27 • Non-power costs associated with the Colorado River Salinity Control program, Glen Canyon
- 28 Dam Adaptive Management Program, Upper Colorado and San Juan Rivers Endangered Fish
- 29 Recovery Programs, and Lower Colorado River Multi-Species Conservation Program.

30

31 The Colorado River Basin is entering its twenty-second year of drought. Lake Mead (Hoover Dam) and
 32 Lake Powell (Glen Canyon Dam) water elevations are at the lowest since they were filled and are
 33 approaching critical levels where power generation will cease.

34

35 A combination of reduced generation due to extreme drought, costs associated with environmental
 36 programs and experiments, and wholesale power market conditions has resulted in unstable, unsustainable
 37 cash flow conditions in the Basin Fund, double-digit customer rate increases with added risk and cost of
 38 replacement power, deferred maintenance of federal facilities, while energy deliveries are declining.
 39 Neither Congress nor the federal agencies contemplated this drought situation and the ensuing economic
 40 and financial impacts to the Projects and customers.

41

42 **NOW, THEREFORE, BE IT RESOLVED:** To mitigate impacts resulting from the current drought, the
 43 American Public Power Association (APPA) urges the Bureau of Reclamation and Western Area Power
 44 Administration to continue implementing cost-cutting measures and strategies to sustain the Upper
 45 Colorado River Basin Fund (Basin Fund) and the Colorado River Dam Fund (Dam Fund), and stabilize
 46 rates for the Boulder Canyon Project, Colorado River Storage Project, and Parker-Davis Project, and to
 47 work in partnership with customers to develop operational, financial, and rate-setting strategies.

48

49 **BE IT FURTHER RESOLVED:** That APPA encourages Congress to provide non-reimbursable
 50 appropriations to the Basin Fund and Dam Fund to mitigate drought-related impacts and ensure funding
 51 of annual obligations to maintain the viability of the federal Colorado River Projects.

Adopted at the Legislative & Resolutions Committee Meeting

March 1, 2022

Sunsets in March 2030



Confederated Tribes and Bands
of the Yakama Nation

Established by the
Treaty of June 9, 1855

May 4, 2022

Sent via Electronic Mail

RE: PROPOSED "UNCOMMON DIALOGUE" AMENDMENTS TO THE FEDERAL POWER ACT

Dear Congressional Representatives:

I write on behalf of the Confederated Tribes and Bands of the Yakama Nation ("Yakama Nation") regarding proposed Federal Power Act amendments ("Proposed Amendments") developed through the Uncommon Dialogue on Hydropower, River Restoration, and Public Safety ("Uncommon Dialogue"). The Yakama Nation supports those provisions in the Proposed Amendments that strengthen tribal authority, protect Treaty-reserved rights, and address environmental effects during the federal licensing process for hydropower projects.

Since time immemorial, the original, free, and independent tribes and bands that later confederated as the Yakama Nation have depended on the rivers and streams of the Pacific Northwest for cultural, spiritual, and economic wellbeing. In Article III of the Treaty with the Yakamas, U.S. – Yakama Nation, June 9, 1855, 12 Stat. 951 ("Treaty of 1855"), the Yakama Nation expressly reserved the right to fish at within and at "usual and accustomed places" outside of the Yakama Reservation. The Yakama Nation's Treaty negotiators knew that securing this right was crucial to guaranteeing the vitality of their people. For the Yakama Nation's people, the exercise of fishing rights was "not much less necessary...than the atmosphere they breathed."¹

Not long after the Yakama Nation and the United States signed the Treaty of 1855, non-Indian communities began utilizing the rivers and streams of our Treaty Territory for hydropower purposes. These hydropower projects affected the Yakama Nation's Treaty-reserved rights and resources. Nevertheless, the Yakama Nation was rarely consulted or had any role in the development or licensing of hydropower projects.

The Proposed Amendments are a positive step forward in correcting this history. We understand the proposed amendments are the product of a year-long effort by the Uncommon Dialogue participants, including Native Nations, industry representatives, and environmental stakeholders, to develop a package of changes to the Federal Power Act. The Proposed Amendments add provisions to the Federal Power Act which: promote tribal sovereignty and decision-making authority; ensure that Treaty-reserved

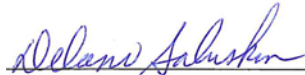
¹ *U.S. v. Winans*, 198 U.S. 371, 381 (1905).

rights are considered; and require evaluation of environmental effects, including how climate change impacts a hydropower project's overall environmental effect.

The Yakama Nation supports these additions to the Federal Power Act. We appreciate the opportunity to weigh in on the Proposed Amendments and look forward to further engagement with the Uncommon Dialogue participants regarding this matter.

If you have any questions regarding this letter, please contact Mr. Ethan Jones, Lead Attorney for the Yakama Nation Office of Legal Counsel, at (509) 865-7268 or ethan@yakamanation-olc.org.

Sincerely,



DELANO SALUSKIN, CHAIRMAN
YAKAMA NATION TRIBAL COUNCIL

May 12, 2022

Chairman Frank Pallone, Jr
2107 Rayburn House Office Building
Washington, DC 20515

Ranking Member Cathy McMorris Rodgers
1035 Longworth House Office Building
Washington, DC 20515

Chairman Bobby Rush
2107 Rayburn House Office Building
Washington, DC 20515

Ranking Member Fred Upton
1035 Longworth House Office Building
Washington, DC 20515

RE: Hearing on “Modernizing Hydropower: Licensing and Reforms for a Clean Energy Future”

Dear Chairman Pallone, Chairman Rush, Ranking Member Upton, Ranking Member McMorris Rodgers and Members of the Committee;

Thank you for the opportunity to submit a letter for the record regarding the Uncommon Dialogue proposed modifications to hydroelectric licensing and policies.

The following comments are based on experience with developing hydroelectric power on existing dams, irrigation canals and conduits. The efforts by Uncommon Dialogue, some environmental organizations, Tribes, and hydroelectric developers working together to negotiate a path forward are to be commended. Based on experience in developing small hydroelectric projects, we respectfully raise concerns with some of the proposed policies and language as to potential unintended consequences.

My name is Jim Price, I am the President of Noah Corporation. Since 1980 I have prepared and had approved a license at about 23 U.S. Army Corps dams; fifteen were licensed; 8 licenses were surrendered as unfeasible; five plants were built and are operating. Developing hydroelectric projects has become more difficult to achieve: the opportunities are less desirable than they were 40 years ago; the power prices defined as Avoided Cost, the PURPA rate state utility commissions approve are rather low; and the environmental regulations are time consuming, expensive, and unnecessary. Retail prices for power have never been higher in the areas where I work, development costs are relatively high, yet power sale prices to utilities have seldom been lower than they are today.

We do know that the only solution to Climate Change seems to be a great reduction in atmospheric release of carbon oxides, particularly from power plants and gas combustion engines. This implies that we need to emphasize renewable power generation and electricity generation that avoids releasing carbon oxides. The more generation we achieve by renewable resources seems to be a step in the right direction. The proposed legislation appears to make the development of new, small hydroelectric projects even more challenging.

Modifying regulations to operate existing hydropower in a way that generates as much renewable power during the peak period of high demand as possible would be beneficial, but is contrary to the FERC and U.S. Army Corps Memorandum of Understanding that usual hydroelectric licenses require no variation in river flow. This is not the way to get the most from renewable resources. The U.S. Army Corps does an excellent job of operating their own hydroelectric projects, so well that they can provide firm power, power that can be dispatched to meet peak demand periods.

We look forward to further collaboration and discussion on these important policies to ensure that the commendable goals cited in the Uncommon Dialogue are achieved. Small hydropower facilities are some of the most environmentally sound and beneficial renewable resources available in the United States. In our efforts to move to a carbon-free future, it is important to be cognizant of the relative burdens placed on these smaller developers. It is vital to ensure that policies are carefully tailored to achieve proper oversight without being so onerous as to stop beneficial utilization of this important resource.

Include hydropower in the definition for “small power production facility”

Congress and the Biden-Harris Administration have a goal to reduce greenhouse gas emissions. Hydroelectric production, especially developed on existing infrastructure, free flowing water, or from marine hydrokinetics have one of the lowest greenhouse gas emitting footprints for electric generation. Hydroelectric power needs to be included as “small power production facility” to put on par with other renewable resources.

Detailed Cost Data to be Shared with Congress

The draft proposal requiring the submission of detailed project costs and data creates yet another bureaucratic burden on the small hydro developers. The data is then to be reported to Congress. Releasing proprietary information to Congress creates financial risks to developers by competitors potentially accessing the information.

Resource Studies to be conducted by the Federal Energy Regulatory Commission

The proposed draft directs the Federal Energy Regulatory Commission to conduct studies on existing non-powered dams, free flowing water, and non-operating hydropower. Given the experience of working with FERC staff who are already stretched to meet deadlines with their existing workload, we question whether the Commission has the employee base or expertise to conduct such studies. Directing the Commission to redo studies that have been conducted several times already starting in 1978 by the Department of Energy or some of the National Laboratories, will most likely create delays in licensing and re-licensing efforts and not add in a substantive manner to that which has already been analyzed.

Addition of “Addressing the effects of Climate Change”

Addressing the effects of Climate Change analysis could result, and has already resulted, in hydroelectric projects and licenses being denied due to any potential yet unknown impacts of hydrologic flows. The scientific analysis of water flow changes is still in the development/speculative stage¹. The burden on a small hydroelectric developer would be too costly to try and demonstrate otherwise with different models. If the GHG analysis is limited to only the emissions from the hydroelectric facility or the grid stability that hydro provides in light of other intermittent renewables, that may be helpful to encouraging the facilities. The proposed language only discusses “the effects of climate change” which

Opperman, J.J. et al. Using the WWF Water Risk Filter to Screen Existing and Projected Hydropower Projects for Climate and Biodiversity Risks, *Water*, 2022. 14. 721.

Conversation with Jeffrey J. Opperman, the primary author of the paper, confirmed that the knowledge of what will happen with hydrologic flows is speculative at this time and that predictions of where and when large rainfall or droughts could occur is not suitable for planning at specific sites.

is overly broad and has already been a hindrance toward hydroelectric project development. The U.S. Army Corp already denied a 1.5 MW project based on potential water flow changes in a region where there are no known concerns about water flow.

Environmental Effects

The draft language discussing “Environmental Effects” appears to be vague and as written could create more barriers to the development of hydroelectric power instead of streamlining the efforts and regulations.

Maintenance and Repair of Infrastructure

The proposed language appears to place the full burden of infrastructure maintenance on the potential hydroelectric owner/operator if developed on existing infrastructure. Presently, hydroelectric developers are responsible for maintenance and repairs on the portion of the infrastructure where the hydroelectric facility is located. Placing the entire burden on the hydroelectric developer, when they are not operators of a lock & dam or requiring the full dam repair and maintenance when other entities benefit from the infrastructure does not seem to be in alignment with trying to encourage, stable, low greenhouse gas emitting electricity sources. If the goal of Congress and the Biden-Harris Administration is to reduce GHG emissions in a cost-effective manner, all low emitting sources must be encouraged, not discouraged. The IJA included significant funds to repair and upgrade existing dams. Congress would do well to consider allocating funds for the portion of the dams and locks that are not being used by the hydroelectric developer for repair and maintenance. By adding more and most costs on the hydroelectric owner, they will NOT be able maintain a break-even business and such projects will not be pursued. A more equitable allocation of costs for the repairs and maintenance of existing infrastructure is needed.

FERC Process for Exempt Hydropower Projects

The FERC process for smaller, exempt hydroelectric facilities works. We question the need to modify the process. Further, there is an addition for review of exemptions by “affected” Indian Tribes. We understand that tribal participation is vital to the Uncommon Dialogue and to our national energy and environmental discussions. However, we would like some clarification on what is meant by “affected” in this context, as it does not seem to appear in other sections and could have a wide variety of interpretations. For all developers, but for small hydropower developers in particular who are making investments in these opportunities, clarity is critical.

Micro Hydropower Facilities

We question the need for the Commission to conduct workshops for identifying micro hydropower facilities and if anything, recommend incorporating micro hydropower exemptions into the exempted processes already existing at the Commission to try and streamline the processes.

Respectfully Submitted,

Jim Price

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Congress of the United States
Washington, DC 20515

May 12, 2022

The Honorable Bobby Rush
 Chair
 Subcommittee on Energy
 House Energy and Commerce Committee
 2125 Rayburn House Office Building
 Washington, D.C. 20515

The Honorable Fred Upton
 Ranking Member
 Subcommittee on Energy
 House Energy and Commerce Committee
 2322 Rayburn House Office Building
 Washington, D.C. 20515

Dear Chair Rush and Ranking Member Upton:

Thank you for holding this important hearing today to discuss issues on hydropower licensing. We appreciate the opportunity to submit this letter for the record in support of H.R. 3399.

As the primary sponsors of H.R. 3399, we are in strong support of this bipartisan bill requiring the U.S. Department of Interior (DOI), which oversees the U.S. Fish and Wildlife Service (FWS), to consider the threat of invasive species when it makes decisions on hydropower licensing. In the 116th Congress, this bill was filed as an amendment to H.R. 2, the Moving Forward Act, where it passed by a vote of 229-189. In the 115th Congress, this bill was filed as an amendment to H.R. 3043, the Hydropower Modernization Act, where it passed the House floor by a voice vote. While these bills ultimately did not become law, the amendments have set an important precedent for the House to prevent the spread of the invasive species.

As background, an Alliant Energy subsidiary, Wisconsin Power and Light, owns and operates a dam located in Prairie du Sac, Wisconsin on the Wisconsin River. The Prairie du Sac dam (PDS), now over 100 years old, is responsible for the formation of Lake Wisconsin, which serves as an enormous recreational and wildlife resource for our state.

Nearly 20 years ago, the FWS sought to impose a fishway requirement on the license for the dam, essentially calling for a "fishway" to be installed to allow for the upstream migration of native fish. Since that time, however, scientists and state officials have discovered the existence of an invasive fish species, Asian carp, at the base of the dam. If a fishway were now installed, it is clear these invasive carp would be able to migrate – and thereby endanger native fish populations upstream, including Lake Wisconsin.

H.R. 3399 would ensure that, in this particular case, FWS would be required to consider the threats posed by invasive species before imposing a fishway condition on a hydroelectric license. We strongly believe that such decisions should be predicated on the most up to date information available, and H.R. 3399 will help guarantee that invasive species are not permitted to threaten the Lake Wisconsin watershed, and beyond.

To underscore the regional importance of PDS as a permanent barrier to Asian carp in the Great Lakes region, the U.S. Army Corps of Engineers (USACE) published the Great Lakes and Mississippi River Interbasin Study (GLMRIS) Report in 2014. In this report, USACE positively attributed the PDS as a permanent barrier to upstream movement of Asian carp. Additionally, the report identified two pathways that Asian carp could enter the Great Lakes if they were permitted to venture above the dam. Congress has been diligently investing hundreds of millions of dollars to prevent the spread of invasive carp in the Great Lakes through programs like the Brandon Road Lock and Dam project, the FWS Asian Carp Program, Great Lakes Restoration Initiative, among many others. It would be foolish to discard all the positive work these projects have achieved by ignoring a simple regulatory fix to hydropower licensing requirements.

Thank you again for the opportunity to submit comments today. We believe we in Congress all share the common goal of restricting the spread of invasive species through the Great Lakes and other bodies of water. We continue to look forward to working with this committee to advance H.R. 3399 this session.

Sincerely,



Glenn Grothman
Member of Congress



Mark Pocan
Member of Congress