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CLEANING UP COMMUNITIES: ENSURING SAFE STORAGE AND DISPOSAL OF SPENT NUCLEAR FUEL

THURSDAY, JUNE 13, 2019

House of Representatives,

Subcommittee on Environment and Climate Change,

Committee on Energy and Commerce,

Washington, D.C.

The subcommittee met, pursuant to call, at 10:03 a.m., in Room 2322, Rayburn House Office Building, Hon. Paul Tonko [chairman of the subcommittee] presiding.

Present: Representatives Tonko, Clarke, Peters, Barragan, Blunt Rochester, Soto, DeGette, Matsui, McNerney, Ruiz, Dingell, Pallone (ex officio), Shimkus, McKinley, Johnson, Long, Flores, Carter, Duncan, and Walden (ex officio).

Staff Present: Adam Fischer, Policy Analyst; Waverly Gordon, Deputy Chief Counsel; Rick Kessler, Senior Advisor and Staff Director, Energy and Environment; Brendan Larkin, Policy Coordinator; Tuley Wright, Energy and Environment Policy Advisor; Mike Bloomquist, Minority Staff Director; Adam Buckalew, Minority Director of Coalitions

and Deputy Chief Counsel, Health; Peter Kielty, Minority General Counsel; Mary Martin, Minority Chief Counsel, Energy & Environment & Climate Change; Brannon Rains, Minority Legislative Clerk; and Peter Spencer, Minority Senior Professional Staff Member, Environment & Climate Change.

Mr. Tonko. The Subcommittee on Environment and Climate Change will now come to order. I recognize myself for 5 minutes for the purpose of an opening statement.

Politics of nuclear waste disposal are unquestionably difficult. In 1982, Congress passed the Nuclear Waste Policy Act directing the Department of Energy to remove spent nuclear fuel from commercial nuclear power plants in exchange for certain fees and transported to a permanent geologic repository beginning no later than January 31 of 1998. 1998 has come and gone. And year after year, we continue to debate how Congress can help break the impasse in which we currently find ourselves.

Today, there are over 70,000 metric tons of waste, which is expected to grow significantly in the decades to come. We are also dealing with more and more reactors shutting down, many of which are decommissioning early.

I take our Nation's nuclear waste challenges seriously. Today, there is not an easy or clear solution. But while we fail to make progress, American taxpayers continue to make payments from Treasury's judgment fund. There are many members on this committee on both sides of the aisle that would like to see a fair outcome that acknowledges these challenges, finds workable solutions, and protects American taxpayers.

And I want to give credit to Mr. Shimkus for his tireless efforts on this issue. I appreciate his commitment to helping communities dealing with waste and seeking to protect taxpayers from future need to make payments from the Treasury.

Today, the subcommittee will consider three bills which take different steps to address our Nation's nuclear waste issues. First, H.R. 2699, the Nuclear Waste Policy Amendments Act of 2019, introduced by Mr. McNerney and Mr. Shimkus. It is very

similar to H.R. 3053 from the 115th Congress, which passed this committee and the House with bipartisan support. The bill makes a number of updates to the Nuclear Waste Policy Act. H.R. 3136, the STORE Nuclear Fuel Act of 2019, introduced by Ms. Matsui, directs the Secretary of Energy to establish an interim storage program. And then, finally, H.R. 2995, the Spent Fuel Prioritization Act of 2019, introduced by Congressman Mike Levin, which would require the Secretary of Energy to prioritize the removal of spent nuclear fuel from decommissioned nuclear sites in areas with large populations and high seismic hazard.

I doubt any piece of legislation alone will solve our waste challenges, but I do believe that we need to be considering all options for disposal in an effort to find the safest and, indeed, most cost-effective way to move forward.

Today's panel attempts to cover many different and critical perspectives, and I look forward to the discussion.

With that, I yield the reminder of my time to Representative Dingell for comments.

[The prepared statement of Mr. Tonko follows:]

******** COMMITTEE INSERT ********

Mrs. Dingell. Thank you, Mr. Chairman.

I am going to be very brief. But I just really want to thank you for having this hearing. We are going to hear all the reasons why it continues to be an issue.

But with more than 20 percent of the fresh water in the world being in the Great Lakes, the threat of nuclear waste being stored there continues to be an enormously frightening issue for those of us in the Midwest but should be for everyone in this country. And I will yield back.

Thank you.

[The prepared statement of Mrs. Dingell follows:]

******** COMMITTEE INSERT ********

Mr. Tonko. The gentlewoman yields back. You are most welcome.

And now the chair will recognize Mr. Shimkus, ranking member for the Subcommittee on Environment and Climate Change, surrounded by several boxes, for 5 minutes for his opening statement.

Mr. Shimkus. Thank you, Mr. Chairman.

I am glad so many of my colleagues were able to join us today, because every time we get a chance to address this, we get to continue the educational process.

So, before I address the three bills today, I do want to explain what these stacks of science beside me are and why they matter in this debate.

Together, these represent the Federal Government's scientific and technical case for the permanent geological repository we are required by law to build and operate. This is a product. The larger of the two is the Department of Energy's 16 volume applications submitted to the Nuclear Regulatory Commission in 2008 to license a permanent repository for nuclear waste to Yucca Mountain.

So, my colleagues, this is $10 billion of, actually, those of you who live in nuclear States, that you have paid for because of the rate-based funding stream.

This is a product of 20 years and more than 10 billion of scientific research by eight of our national labs, our National Academies of Science and Engineering, the U.S. Geological Survey as well as DOE staff and contractors. It demonstrates that DOE can safely build and operate the repository in compliance within NRC's regulations.

This smaller stack, I point my colleagues to this big but smaller stack, is the NRC's five volume analysis of this application. This is a product of NRC's technical staff and experts in geochemistry, hydrology, climatology, structural geology, volcanology,

seismology, health physics, as well as chemical, civil, mechanical, nuclear, mining materials, and geological engineering.

Their review of DOE's application found -- and the NRC is an independent agency of the United States Government. Their review of DOE's application found that, as proposed, a repository at Yucca Mountain would safely contain spent nuclear fuel and high-level waste for, get this, 1 million years. I trust the work done by the world-class scientists and engineers who produced these reports. I believe their work can stand up to the scrutiny of the skeptics if put to the test. Those skeptics, some of whom we will hear from today, don't believe the science. They claim Yucca Mountain is unsuitable based upon their own studies. Yet they are unwilling to make their contentions before the Atomic Safety and Licensing Board Panel of judges who are themselves scientists and engineers. That is the appropriation debate we are having. The skeptics who do not believe in science are unwilling to take their science and have it debated in front of this board.

Members have at their desk a packet with the NRC backgrounder on the licensing process -- it is in the brown folder at your desk -- a State-specific fact sheet, a map of the 121 sites in 39 States, a 1-pager addressing transportation concerns, the Peters-Duncan letter to appropriators seeking funding for the licensing, a 1-pager on the cost of doing nothing, which is $2 million a day, a chart showing the funding, or lack thereof, of appropriations since 1997.

So I would ask my colleagues to keep that in mind today as we consider the stalemate we find ourselves in. Ask yourself why those who oppose Yucca Mountain on supposedly scientific grounds would object to having their day in court.

With that said, the three bills we are here to talk about all reflect sincere efforts to

address concerns that are arising out of our present impasse. And as we examine these proposals, we must remember the broader framework of our Nation's nuclear waste policy. This framework, funded almost entirely by ratepayers, is based upon a system that ensures that there will be a permanent repository. That is the focus of the fees collected in the Nuclear Waste Fund and the focus of the contract the utilities signed with the Department of Energy to eventually dispose of the spent fuel.

It is the point of the taxpayer spending for disposing of defense waste. You cannot take shortcuts here, whether it is with allowing the scientific adjudication to go forward or develop a system that accelerates the transportation of stranded fuel from decommissioned sites.

Shortcuts lead to dead ends, and I am concerned that the proposed measure that focused solely on interim storage without integrating it into a permanent system for disposal may sound good and expedient, but they will not work and they may actually harm ratepayers and taxpayers in the long run.

I have a few more paragraphs, Mr. Chairman, but in lieu of time, I will submit those for the record.

And I will yield back.

[The prepared statement of Mr. Shimkus follows:]

******** COMMITTEE INSERT ********

Mr. Tonko. So the gentleman yields back.

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

The Chairman. Thank you, Chairman Tonko.

It has been over 30 years since Congress last made significant changes to this law. Unfortunately, in that time, very little has been accomplished to address our Nation's need to safely store and dispose of the spent nuclear fuel that is a byproduct of electricity generation at nuclear power plants across the country.

Today, there are 121 communities across the country that have nuclear waste nearby. These communities are rightfully expressing frustration as more and more nuclear plants close, but there is no concrete solution to storage or disposal of this spent nuclear fuel. Whether it is a general safety concern or the desire of the committee to redevelop the land currently housing the spent fuel, we must find a path forward to begin the process of moving nuclear waste out of these communities.

At this hearing, we will be discussing three bills that take different approaches to addressing the spent nuclear fuel stalemate in our country. Representative McNerney and Ranking Member Shimkus have introduced H.R. 2699, an updated version of the legislation reported by the committee and passed by the House in the last Congress. I want to thank both of them for their leadership on this issue. In the last Congress, then-subcommittee Chairman Shimkus worked with us to address our concerns and incorporate interim storage language authored by Representative Matsui. That led to a successful effort in the House, and I look forward to continuing to work with him and Mr. McNerney on this issue.

We will also discuss H.R. 3136, the STORE Nuclear Fuel Act, introduced by Ms. Matsui. The bill establishes an interim storage program at the DOE which will allow for consolidated temporary storage of spent nuclear fuel with priority given to waste currently stored at decommissioned nuclear power plants. Authorizing interim storage will allow DOE to consolidate waste at one or two sites instead of 121 sites in communities across the country. And consolidated storage will ensure spent nuclear fuel is managed more safely and securely, in my opinion, while allowing communities with decommissioned plants to begin working towards redeveloping those sites.

Interim storage is the best near-term solution to stop the nuclear waste stalemate, and I commend Representative Matsui for her efforts and leadership on this issue.

And, finally, the committee will review H.R. 2995, the Spent Fuel Prioritization Act, introduced by Representative Mike Levin of California. This bill prioritizes the removal of spent nuclear fuel from decommissioned nuclear plants in areas with large populations and high seismic hazard.

So, once again, I appreciate the efforts of the bill sponsors and thank them for their leadership on this important issue.

And I would like to yield the balance of my time now to Ms. Matsui.

[The prepared statement of Mr. Pallone follows:]

******** COMMITTEE INSERT ********

Ms. Matsui. Thank you, Mr. Chairman.

Finding a solution to managing the disposal of spent nuclear fuel has been a top priority of mine for many years, particularly as my district utility, the Sacramento Municipal Utility District, is one of the many across the country forced to play host to this dangerous radioactive material long after they committed to do so.

I think we all agree that this stalemate is unsustainable. The best and most pragmatic path forward involves a consolidated interim storage program that will engage with affected States and local governments through a consent-based process. That is why I have introduced the STORE Nuclear Fuel Act, which puts forward a plan that has historically garnered broad support.

The Federal Government has reneged on its promise to our constituents. A consolidated interim storage approach will allow the over 120 communities across the country to redevelop nuclear reactor sites that for many have been decommissioned for years. I believe this is one of the greatest energy challenges of our time. And I am grateful to the committee today for bring up my bill for discussion. Thank you. And I yield back.

[The prepared statement of Ms. Matsui follows:]

******** COMMITTEE INSERT ********

The Chairman. Unless someone else wants my time, Mr. Chairman, I yield back.

Mr. Tonko. The gentleman yields back.

The chair now recognizes Representative Duncan from South Carolina for 5 minutes.

Mr. Duncan. Thank you, Mr. Chairman.

Energy and Commerce Committee has an enduring and strong bipartisan record supporting nuclear energy. Nuclear is a critical component of our Nation's energy system. It also has been vital to our national security powering the nuclear Navy and providing for our common defense. Not only is nuclear power an affordable and reliable energy source, it is also emissions-free. Any serious efforts to reduce emissions from energy production to address the effects of climate change must include the continued use and expansion of nuclear power. And there is great potential, if we get the policies right, to benefit from nuclear energy far into the future.

Over the past few years, we have moved legislation to lay the groundwork for advanced nuclear and to ensure more efficient regulation of the existing reactor fleet. We have explored policies that will ensure nuclear infrastructure for tomorrow, ranging from advanced small modular reactors like those under development by Oregon-based NuScale currently in NRC licensing to advance fuel systems for the next generation of reactors.

Yet, as we look forward, we have the responsibility to ensure that we implement the existing policies that address the issue of long-term storage for spent nuclear fuel and the defense legacy waste that the Federal Government has a responsibility for cleaning up.

This is no small matter. Thirty-five years ago, Congress enacted the Nuclear Waste Policy Act into law. This law was the culmination of decades of experience by the Federal Government to develop a policy to permanently dispose of high-level radioactive waste and commercial spent nuclear fuel.

Some of the material was created during the Manhattan Project and through the Cold War at the Hanford site, a vital national security facility located on the Columbia River.

Today, this nuclear material sits on a vibrant waterway waiting to be processed and transported to Yucca Mountain repository in the Nevada desert. The Nuclear Waste Policy Act also established a fee tied to the generation of nuclear energy to finance the cost of a multigenerational disposal program. Along with 33 other States, Oregon ratepayers and South Carolina ratepayers, fulfilled their financial obligation under the law and paid the Department of Energy over 160 million to dispose of commercial spent nuclear fuel. That was Oregon. $1.5 billion from South Carolina.

As we all know, the Federal Government has been prevented from completing the licensing process for a permanent repository. The cost to the American taxpayer to pay for the Federal Government's delay in opening Yucca Mountain repository have more than doubled to $35 billion since 2009. And that figure continues to escalate rapidly as time goes on. Meanwhile, the Federal Government has been paying out nearly a billion dollars a year from the judgment fund for its failure to dispose of the waste.

Against this backdrop, Mr. Chairman, I appreciate your moving forward on examining legislative reforms that can help to restart this process. The Energy and Commerce Committee should continue to lead the effort to ensure the Federal Government meets its moral and fiduciary responsibility to clean up its defense waste

and ensure the permanent safe disposal of spent nuclear fuel which sits at 121 sites around the Nation.

We made important strides in the last Congress to reform the fundamental statute to help to accelerate this complicated process. My friend and Republican leader of this subcommittee, John Shimkus, led the work in the House to pass the Nuclear Waste Policy Amendments Act by a vote of 340 to 72. Unfortunately, that effort fell short in the Senate.

But we know from the last Congress and from the strong bipartisan support both on this committee and in the House of that legislation, how a thoughtful, deliberate, legislative process produces good policy. I am pleased to see the past work has informed the current work, particularly in H.R. 2699, led by Mr. McNerney, which follows closely to H.R. 3053 from the last Congress. This bill provides for accelerating interim storage of waste without undermining the important system for the permanent disposal established in the underlying law. This represents the best path forward for getting the Nation to a licensing decision which is necessary for public confidence in our nuclear waste program no matter the outcome of that decision.

Thank you, Mr. Chairman, for taking the lead on this legislation, and I yield back.

[The prepared statement of Mr. Duncan follows:]

******** COMMITTEE INSERT ********

Mr. Tonko. The gentleman yields back.

The chair would like to remind members that, pursuant to committee rules, all members' written opening statements shall be made part of the record.

Now we go to introduction of our witnesses. And we thank them all for joining today on what is a very important topic.

First, we have Ms. Maria Korsnick, president and CEO of Nuclear Energy Institute. Welcome. Mr. Robert Halstead, executive director, State of Nevada, Office of the Governor, Agency for Nuclear Projects. And, again, welcome. Mr. Austin Keyser, director of political and legislative affairs with the International Brotherhood of Electrical Workers. We welcome you. And Mr. Geoffrey Fettus, senior attorney with Nuclear Climate and Clean Energy Programs at the Natural Resources Defense Council. Again, welcome. And, finally, welcome to Mr. Lake Barrett, former acting director, Office for Civilian Radioactive Waste Management with the United States Department of Energy.

Again, thank you all for your time today.

And before we begin, I would like to explain the lighting system. In front of you are a series of lights. The light will initially be green at the start of your opening statement. The light will turn yellow when you have 1 minute remaining. Please begin to wrap up your testimony at that point. The light will turn red when your time has indeed expired.

At this time, the chair will recognize Ms. Korsnick for 5 minutes to provide her opening statement. Thank you.

STATEMENTS OF MARIA G. KORSNICK, PRESIDENT AND CEO, NUCLEAR ENERGY INSTITUTE; ROBERT J. HALSTEAD, EXECUTIVE DIRECTOR, STATE OF NEVADA, OFFICE OF THE GOVERNOR, AGENCY FOR NUCLEAR PROJECTS; AUSTIN KEYSER, DIRECTOR, POLITICAL & LEGISLATIVE AFFAIRS, INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS; GEOFFREY H. FETTUS, SENIOR ATTORNEY, NUCLEAR, CLIMATE, AND CLEAN ENERGY PROGRAM, NATURAL RESOURCES DEFENSE COUNCIL; AND LAKE BARRETT, FORMER ACTING DIRECTOR, OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT, U.S. DEPARTMENT OF ENERGY.

STATEMENT OF MARIA G. KORSNICK

Ms. Korsnick. Thank you, Mr. Chairman.

I am Maria Korsnick, president and CEO of the Nuclear Energy Institute. I appreciate the opportunity to testify today on the three pieces of legislation which seek to address and end the long overdue stalemate of disposing of our Nation's used nuclear fuel.

Nuclear energy is the largest and most efficient source of carbon-free electricity in the United States. Currently, we have 97 commercial nuclear power plants in 29 States, and they provide nearly 20 percent of America's electricity and more than half of our Nation's emissions-free electricity. These reactors are carbon-free workhorses essential to addressing climate change in any realistic manner.

That said, the advanced reactors of tomorrow and the current U.S. operating fleet are continually subject to reputational damage because Congress, for two decades now, has played politics with the issue of used fuel. It is vitally important that the U.S. remain a

global leader in the commercial nuclear arena. And yet we are the only major nuclear Nation without a used fuel management program.

The U.S. nuclear industry has upheld its end of the bargain. At sites in 35 States around the country, commercial used fuel is safely stored and managed awaiting pick up by the Federal Government, which was scheduled in 1998. Additionally, the Nuclear Waste Fund, which was set up to finance the development of a national repository, currently has over $41 billion in its coffers, which has been contributed by electricity consumers and nuclear generation companies. Each year, over $1.5 billion more in interest accumulates in this fund. And, finally, each day that we don't have a solution cost American taxpayers $2.2 million in damages.

In recent years, this has come to over $800 million annually, and it has the unfortunate distinction of being the single largest liability paid out of the judgment fund year after year. It is time to solve this, and I am excited to talk about how that can be achieved. We need a durable used fuel program. Politicizing this issue has stymied progress for far too long. We must allow the science, not politics, to guide us forward. But let me be clear: congressional action is necessary.

First, we need an answer on the Yucca Mountain license application. DOE submitted the application to the NRC more than a decade ago, and Congress directed the NRC to issue a decision in 2012. This deadline, like too many, was missed because DOE, without basis, shut down the Yucca Mountain project. For the sake of the communities holding stranded commercial fuel wishing to redevelop their sites and others holding high-level defense waste, we must move forward and allow Nevada's technical concerns with Yucca Mountain to be heard by NRC's independent administrative judges. This will allow a licensing decision to be determined based on its scientific merits rather than

politics.

Second, as the licensing process of Yucca Mountain moves forward, interim storage can play an important role in helping to move spent fuel away from the reactor sites. Moving interim storage forward in parallel with the Yucca Mountain project helps to alleviate State and local concerns that interim storage will become a de facto disposal facility. This point was, in fact, highlighted just last week by a letter from New Mexico Governor Lujan Grisham.

That said, I am pleased interim storage is addressed in several of the bills that are being discussed today, and I strongly believe interim storage can be successful if moved in parallel with Yucca Mountain.

Finally, the nuclear industry and electricity consumers around the country have paid their fair share to address the back end of the fuel cycle. In fact, the Nuclear Waste Fund's annual investment income alone was $1.5 billion last year. Both H.R. 2699 and H.R. 3136 correctly understand the importance of not prematurely reimposing the nuclear waste fee, especially given the substantial balance and large investment interest which accrues annually.

The industry believes the fee should not be reinstated until, one, the annual expense for the program's ongoing projects exceed the annual investment income on the fund. And, two, the projected lifecycle cost demonstrates that the fee must be reinstated to achieve full cost recovery over the life of the program.

The fact that we are here today considering three pieces of legislation that address solving the used fuel stalemate is a positive step in the right direction. The industry sincerely appreciates the committee's awareness and motivation to find a durable solution. We look forward to continuing to work with each and every one of you

to reach a bipartisan approach for the long-term management of the Nation's used fuel.

Thank you, and I look forward answering your question.

[The prepared statement of Ms. Korsnick follows:]

******** INSERT 1-1 ********

Mr. Tonko. Thank you, Ms. Korsnick.

And next, Mr. Halstead, you are recognized for 5 minutes, please.

STATEMENT OF ROBERT J. HALSTEAD

Mr. Halstead. Thank you, Chairman Tonko, Ranking Member Shimkus, and members of the subcommittee. I appreciate the opportunity to be here this morning. I am Robert Halstead. I am executive director of the Agency for Nuclear Projects, which is part of the Office of Governor Steve Sisolak. Governor Sisolak has made three points in his letter to the full Energy and Commerce Committee and to the chair and ranking member.

First, the State of Nevada opposes the Yucca Mountain project based on scientific, technical, and legal merits. Second, under the current law, only the Governor is empowered to consult with the Federal Government on matters related to siting a nuclear waste repository. And, third, Governor Sisolak has been fully briefed on the bills and specifically opposes H.R. 2699 and the Barrasso version in the Senate because it continues a central failing of the current Federal law, which was the selection of Yucca Mountain based on political science rather than Earth science. Governor Sisolak's letter is attached to my testimony. Attachment 2 explains in detail our specific concerns about H.R. 2699.

I want to thank the committee staff for helping me overcome the difficulties I had in filing my testimony for today. The rest of my comments summarize a few key points.

Yucca Mountain contradicts the foundational principle of geologic disposal, that

the site itself, its geology and hydrology, not engineered barriers designed by humans must prevent the radioactive contamination of groundwater and the accessible environment for tens of thousands to million years. Without engineered barriers, Yucca Mountain would inevitably contaminate an aquifer from which water was used for a variety of purposes, including drinking water, agriculture, food processing, and Native American religious ceremonies.

After three decades of DOE failures at Yucca Mountain, H.R. 2699 bets the farm on Yucca Mountain and doubles down on DOE. Both are bad bets. Yucca Mountain would have to survive Nevada's 218 admitted contentions and 30 new contentions if licensing restarts. It would likely be 20 years or more, if ever, before any spent fuel could be received at Yucca Mountain.

And as DOE's own studies show, walking away from Yucca Mountain and starting over with a repository in salt or shale would save tens of billions of dollars and likely be available sooner. DOE bungled the first repository program. They bungled the second repository program. They bungled the Oak Ridge monitored retrieval program in as pronuclear a State as Tennessee when now Senator Lamar Alexander was Governor. He made the decision to cast the first veto under the Waste Policy Act. The nuclear program must be taken out of DOE if you want it to succeed.

Two other measures before your committee, the Levin and Matsui bills certainly are a good first start in addressing the problem of stranded nuclear fuel. That is a furtherance of the recommendations of the Blue Ribbon Commission on America's Nuclear Future. And, also, many people probably are not aware here yet. In 2018, the Western Interstate Energy Board has also adopted a resolution that would prioritize removal of stranded fuel. However, the funding provisions of H.R. 3136, like the funding

provisions of 2699, need to be closely examined.

H.R. 2699 is not a good solution for stranded fuel because the licensing conditions would severely limit the amount of stranded fuel that could be accepted at the MRS. Yucca Mountain is not a good solution because the spent fuel at the shutdown reactors as all the reactors go into dry storage are being welded into storage canisters that are not compatible with DOE's license application. And the safety evaluation report that has been referred to by Representative Shimkus clearly says as a condition established by the NRC staff, that fuel can't be received without being repackaged.

Turning to consent-based siting, Nevada supports the Nuclear Waste Informed Consent Act, H.R. 1544, introduced by Representatives Titus, Horsford, and Lee of Nevada, and the companion bill, S. 649, to require consent agreement between any State -- but here we are particularly looking at Nevada -- between DOE, the repository host State, affected counties, affected Indian Tribes prior to the construction of a repository. This would extend consent to the State of Nevada for Yucca Mountain. This approach is also going to need to be considered for the interim storage facilities in Texas and New Mexico.

We think the better vehicle for fixing the program is S. 1234, the Nuclear Waste Administration Act of 2019. Governor Sisolak concluded his letter with a pledge. If your committee is truly interested in fixing the Nation's broken nuclear waste program, my staff and I and Nevada's congressional delegation would be happy to meet with you and explore constructive alternatives. I hope the subcommittee will consider my testimony today as a first step in fulfilling Nevada's part of the Governor's pledge.

[The prepared statement of Mr. Halstead follows:]

******** INSERT 1-2 ********

Mr. Tonko. The gentleman concludes his statement. We thank Mr. Halstead.

Next, we recognize Mr. Keyser for 5 minutes, please.

STATEMENT OF AUSTIN KEYSER

Mr. Keyser. Chairman Tonko, Ranking Member Shimkus, and members of the House Energy and Commerce Subcommittee on Environment and Climate Change, thank you for inviting me.

My name is Austin Keyser. I am the director of the International Brotherhood and Electrical Workers Political and Legislative Affairs Department. I have been asked by our president, Lonnie Stephenson, to speak on his behalf.

The IBEW is the largest energy union in the world. We represent more than 775,000 members in the United States and Canada, and we work in a variety of energy related fields including utilities, construction, telecommunications, broadcasting, manufacturing, railroads, and government.

Nuclear energy in America produces 20 percent of our electricity and accounts for 50 percent of all zero carbon power. The need for the country's only carbon-free-source that can ensure around-the-clock generation had become greater as we move toward more renewable energy.

Supporting nuclear generation is critical if the U.S. is going to reduce emissions while meeting our increasing base load energy demands. 15,000 members of the IBEW are employed full-time by the nuclear industry at 55 facilities across the United States. Thousands more IBEW members rotate through nuclear plants for maintenance and

refueling. The IBEW's history in the industry coincides with the construction of the very first nuclear facilities.

The nuclear industry supplies high wages and safe jobs. These options pay one-third more than the average jobs in the communities where they exist and tout safety records that are the high watermark for American industry. These are the types of family-sustaining careers that Americans are looking for and policymakers should support. Hundreds of IBEW members lose their jobs every time a nuclear facility closes often eliminating the biggest source of economic activity in the community. We have already seen the adverse impacts that plant disclosures cause. We fear similar fate for workers at Davis-Besse and Perry in my home State of Ohio and other communities at risk of losing their facilities.

But critical to the future of the Nation's nuclear sector is opening a permanent repository for spent nuclear fuel, SNF. Under Federal statute, a permanent geologic repository was scheduled to open at Yucca Mountain Nevada no later than January 31, 1998. Over two decades later, ratepayers and workers are still waiting for a place to safely store over 80,000 metric tons of SNF sitting at 121 sites in 35 States across the country.

The IBEW supports effort to restart the licensing process of Yucca Mountain. Going back to the late 1970s, the IBEW has endorsed legislation that ensures timely central storage, safe transportation, and permanent disposal of spent nuclear fuels. The IBEW was part of the construction of Yucca Mountain site before work halted in 2010. If work recommences there, it would create 2,000 construction jobs lasting a decade. A permanent repository would help alleviate concerns about nuclear power and boost support for nuclear generation as a foundational part of Nation's energy portfolio.

A permanent repository is also necessary to ensure public support for the next generation of advanced nuclear reactors that we hope will come online in the near future. Additionally, the IBEW supports the authorization of a consolidated interim facility to safely store SNF particularly for dry caskets and nongenerating nuclear plants.

An interim facility would allow for the redevelopment of shuttered nuclear plants bringing economic revitalization, tax review and jobs to working families and communities that were hard hit by the closures. Many close stations are ideal sites for development of other forms of electrical generation, including renewables, due to the existing electrical transmission infrastructure. A consolidated interim storage facility should have the support of the host State and local community. Authorizing legislation should have clear language ensuring that an interim facility does not become a de facto permanent storage site.

Today's hearings focus on three bills. The Nuclear Waste Policy Amendments Act, the Storage and Transportation Residual and Excess Act, and the Spent Fuel Prioritization Act. The IBEW supports the opening of a permanent storage facility as soon as one is properly licensed to build. H.R. 2699 would help resolve key issues such as land withdrawal and site infrastructure at Yucca Mountain and require the NRC to conclude its review of the application within 30 months of enactment.

This legislation would authorize the Energy Department to open interim storage facilities to consolidate SNF from sites with a decommissioned and provide a pathway for the State of Nevada and local communities to discuss benefits associated with these projects.

Similar legislation passed the House of Representatives last year with strong bipartisan support. H.R. 3136 would authorize the Energy Department to open at least

one interim facility. It would require consent from the State and local community before an interim site could be licensed.

We support the provisions in the STORE Act to prioritize SNF at closed nuclear facilities for interim storage. The IBEW would strongly prefer that Congress take action to open a permanent repository as soon as possible. But we recognize that an interim facility may be the best first step toward a comprehensive solution that will consolidate SNF at a central repository. H.R. 2995 would prioritize storage of SNF from decommissioned nuclear plants near large populations and seismic hazards.

Congress and Federal regulators should treat all communities fairly by also considering the length of time the plant has been decommissioned and the other potential environmental risks. The IBEW supports congressional action that will protect ratepayers who have paid tens of billions of dollars into the Nuclear Waste Fund for decades by ensuring fees are not prematurely reinstituted until it is demonstrated that additional moneys are necessary to achieve full cost recovery of the program.

We appreciate that the sponsors of the Nuclear Waste Policy Amendments Act and the STORE Act included these protections.

In conclusion, the IBEW respectfully urges Congress to take the necessary steps to open a permanent repository. Now is the time to come together and pass bipartisan legislation that will honor the Federal Government's promise to the nuclear industry, union workers, and ratepayers.

Thank you.

[The prepared statement of Mr. Keyser follows:]

******** INSERT 1-3 ********

Mr. Tonko. Thank you, Mr. Keyser.

And, Mr. Fettus, you are recognized for 5 minutes, please.

STATEMENT OF GEOFFREY H. FETTUS

Mr. Fettus. Thank you, Chairman Tonko, Ranking Member Shimkus, and members of the subcommittee. Thank you for the opportunity to present NRDC's views. We hope this hearing can be a new beginning. With more than 80,000 metric tons in more than half of our States and reactors moving to decommissioning, we need to reset the process. The drafts before us today, however well intentioned, will not solve the current stalemate and won't lead toward workable solutions.

For more than 50 years, Congress has offered and sometimes passed bills that are variations on these themes. Restart the Yucca licensing process or kick open a door in New Mexico for an interim storage site. When that State was promised repeatedly, no such thing would ever happen.

We sit here today because these efforts have failed repeatedly over decades. In Tennessee, in Kansas, Nevada Utah, everywhere else. Another such attempt restarts litigation and controversy, the likely result if these bills move forward: continued stalemate.

Seven years ago, President Obama's bipartisan blue ribbon commission keenly described why past attempts failed. That Presidential commission wisely asserted we can't keep doing the same thing, which is what we are doing here today. Congress must

create a process that allows any potential host State to consent and, for that matter, not consent.

Our written testimony addresses why these specific drafts won't work. So, with these 4 minutes, I present for your consideration a durable reset of how we can manage and dispose of nuclear waste and how you can and should take the lead.

Our solution can be summed up simply: Give EPA and the States power under our bedrock environmental statutes so that the States can set the terms for how much and on what conditions they could host disposal sites.

How would reapportioning the power change things? I urge you to look at the root of why we are stuck in half of a century of rancor. Radioactive waste is stranded because the Atomic Energy ACT treats it as a privileged pollutant. The act pre-empts EPA and State regulatory authority, exempting radioactivity from hazardous waste law, sizeable portions of the Clean Water Act, and several others.

By disconnecting radioactivity from the normal patterns of environmental law, we ignore the vital role States play in addressing environmental contaminates, protecting their citizens, and generally regulating what happens within their borders. We can open a path forward that respects each State rather than offering up the latest one for sacrifice. With the protection of the environmental statutes, a State can say no or yes and on what terms and not necessarily be subject to hosting the entire burden.

Such a new regime would allow for a thorough technical review without the fear that negative findings will be dispensed with as soon as it is expedient, as happened repeatedly with the Yucca process. Deep scientific review could be at the forefront, this time joined with institutional structures that would allow for public acceptance of solutions.

Our government is at its strongest when each player's role is respected. State consent and public acceptance of potential repository sites will never be willingly granted -- and we have 50 years of evidence for that, including from New Mexico, and I am hearing Texas right now -- unless and until power on how, when, and where the waste will be disposed of is shared rather than decided by Federal fiat.

I am sorry I can't give you a guarantee that eliminating these exemptions will magically solve the puzzle, but I can guarantee that trying to force open a storage or disposal site over the objections of a State, whether it is Utah, New Mexico, Texas, or Nevada will only lead to more of the same, and then the waste won't move.

We have seen these bills before, but each has been a mirror of the last. NRDC is not saying no but how to get to yes and how to do so in a way that could work in our democracy. Strong environmental laws have a proven track record. Giving States that regulatory authority will give them the ability to consent on scientific and political terms that they can live with. It is time to regulate nuclear waste the same way as every other pollutant with EPA and the delegated States taking the lead under our foundational environmental statutes.

Thank you again for having me here, and I look forward to answering your questions.

[The prepared statement of Mr. Fettus follows:]

******** INSERT 1-4 ********

Mr. Tonko. Thank you, Mr. Fettus.

We now recognize Mr. Barrett for 5 minutes, please.

STATEMENT OF LAKE BARRETT

Mr. Barrett. Thank you, Chairman Tonko, Ranking Member Shimkus, and distinguished members of the committee. It is an honor to appear before you today on the importance and urgency of moving forward to remove spent nuclear fuel from shutdown reactor sites as soon as possible while providing our grandchildren with a permanent disposal solution.

I speak to you today from the perspective of a former Department of Energy civil service executive who spent nearly two decades trying to implement the laws of the United States in this area. I retired from DOE in the 2002 after completing the statutory Yucca Mountain site recommendation process. This process included Nevada's disapproval of the Yucca Mountain site and subsequent bipartisan congressional override votes of 307 here in the House and 60 votes in the Senate.

The need for Federal performance to remove spent fuel from reactor sites is growing faster as more power reactors shut down, leaving fuel stranded at dozens of sites across the country. Meanwhile, the lawful DOE program created to solve this problem is stuck in limbo accomplishing nothing now because Nevada delegation has skillfully politically stopped program funding.

To address these issues, the country needs to keep its primary focus on a realistic geologic repository program and add integrated consolidated interim storage as an

important supplement for a more timely removal of spent fuel from shutdown reactors.

In my view, H.R. 2699 moves in that direction as it contains the necessary elements of both the repository and interim storage facility. Specifically, I urge congressional action to complete the almost finished Yucca Mountain licensing proceeding. Yucca Mountain is the most studied piece of ground on the planet with separate teams of DOE and Nuclear Regulatory Commission staff scientists concluding that all million-year safety requirements are met. Although Nevada disagrees, it is time, before impartial judges, for a safety decision.

Regardless of Yucca Mountain progress or not, the Federal Government should engage Nevada to discuss various empowerment and partnership options that further respect Nevada's host State status. It is time we break the repeating win-lose, lose-win cycle that has frustrated both Nevada and the Nation for decades. Both sides have much to gain and both sides have much to lose.

I personally believe a win-win scenario can be mutually developed to conserve the needs of both. I am confident that the Yucca Mountain repository will succeed on its scientific and regulatory merits. It is possible, however, that it may fail or be endlessly delayed by political obstructionism. And even if Yucca Mountain does go forward under current law, another repository will be needed. Thus, an alternative repository program should be promptly started.

An integrated consolidated interim storage facility should be added to the Nation's spent fuel management program because it would provide a bridge from the many dozens of temporary fuel storage locations across the country to an eventual ultimate geologic repository site in a more timely manner.

However, there are significant siting challenges for an interim storage facility

based on experience because, despite local community support, host State level leadership has generally stopped these efforts. A major reason for the blockage was that any interim storage facility without a companion realistic geologic disposal program would just become another indefinite storage facility. It is for this reason that I believe the existence of a meaningful repository program will be a necessity to enable the development of a consensus consolidated interim storage facility anywhere in this country.

Speaking as a grandparent and as an engineer, it is simply irresponsible to saddle our children, grandchildren, and future generations with spent fuel sitting in thousands of canisters in dozens of stranded storage sites scattered across this country on our rivers, lakes, and seashores, with seemingly endless financial liabilities and no place to go. It is time we act to remove spent fuel from the coast of Maine to the coast of California and from our Great Lakes and river systems in between. It is time to step up and take responsibility for decisions we made six decades ago to produce nuclear fuel and three decades ago to develop a geologic repository for an ultimate safe disposition of that fuel.

Thank you very much.

[The prepared statement of Mr. Barrett follows:]

******** INSERT 1-5 ********

Mr. Tonko. Thank you, Mr. Barrett.

We have concluded witness opening statements. We will now move to member questions. Each member will have 5 minutes to ask questions of our witnesses.

Looking at the number of colleagues here, I am reminded that we are to have votes around 11:30. And those votes are going to run for hours. So I would ask that our witnesses offer succinct answers to these questions, and I encourage my colleagues to offer, again, succinct questions. So we will be really tough with the gavel today because, in fairness, I want everyone to get their questions in. We will have, then, about 45 to 50 minutes, and we will not return. So thank you.

We will now move to questions. I will begin with that process.

As I mentioned, this is a complex and difficult challenge, but I also believe that we have a responsibility to acknowledge that this waste exists and needs to be dealt with.

I would ask everyone on the panel, what is the one thing that can -- that Congress can do that will result in the most progress in addressing our waste challenge?

Ms. Korsnick, why don't we begin with you?

Ms. Korsnick. Well, I think the best thing we can do is to move forward with the licensing process with Yucca. I think that is the linchpin. It started. It is the law. The process is under way. We need to complete it.

Mr. Tonko. Thank you.

Mr. Halstead.

Mr. Halstead. The most important thing is to extend consent to the State of Nevada regarding Yucca Mountain, as is proposed in the legislation that has been put in by Nevada's delegation.

And I would tell you the opposite. The worst way to making progress is H.R. 2699.

Mr. Tonko. Thank you.

Mr. Keyser.

Mr. Keyser. I would echo Ms. Korsnick and say to go ahead and have the hearings -- I would echo Ms. Korsnick and say that speaking up and considering the licensing of the DOE application for Yucca Mountain.

Mr. Tonko. Thank you.

Thank you. Mr. Fettus.

Mr. Fettus. To get progress started, remove the environmental exemptions in the Atomic Energy Act.

Mr. Tonko. Thank you.

Mr. Barrett.

Mr. Barrett. Complete Yucca Mountain licensing and use strong carrots and sticks to force the State of Nevada and the Federal Government to negotiate a win-win solution.

Mr. Tonko. And, Ms. Korsnick, as more reactors go through decommissioning, how will that exercise increase the urgency to resolve this standoff?

Ms. Korsnick. Well, obviously, we have more waste that needs to be disposed of. So it only challenges it further.

When we talk about nuclear of the future, and there is wonderful opportunities for nuclear of the future, one of the first questions that we get is what about the waste. So the inability to have this solution really is an Albatross around the neck of the nuclear industry.

Mr. Tonko. Okay. I will ask everyone on the panel, and perhaps this time begin with Mr. Barrett, what role should consolidated interim storage play?

Mr. Barrett. I believe it should supply a supporting role to the ultimate disposition of a geologic repository, a very important supportive role.

Mr. Tonko. Thank you.

Mr. Fettus.

Mr. Fettus. We don't object to the concept. We do object to trying to push it forward without a reset that gives the cooperative federalism of our environmental laws control so States can actually consent or not consent.

Mr. Tonko. Thank you.

Mr. Keyser.

Mr. Keyser. Yeah. I mean, we believe that there ought to be consent in the process, but it needs to happen. But we need a national repository as a backdrop. You can't have temporary facilities without them knowing they are going to be temporary facilities.

Mr. Tonko. Right.

And, Mr. Halstead, please.

Mr. Halstead. It is necessary, because there is not going to be a repository for at least 20 and possibly 25 years, whether it is Yucca Mountain or something else. But it is important that there be an integrated approach so that the fuel that is packaged at the reactors can be accepted at the interim storage facilities and then eventually at a repository.

Mr. Tonko. Thank you.

And, finally, Ms. Korsnick, please.

Ms. Korsnick. Yeah. We agree that interim storage is an important step in the overall process to getting to long-term repository.

Mr. Tonko. And would interim storage, if opened ahead of a permanent repository, help limit taxpayers' liability through the judgment fund? Anyone?

Yes, Mr. Barrett.

Mr. Barrett. Yes, it could, if it is part of the integrated Federal system.

Mr. Tonko. Okay. Anyone else want --

Mr. Fettus. I don't think it will because I don't think you are going to have an integrated Federal system. I think you are going to have a de facto parking lot.

Mr. Tonko. Thank you.

Ms. Korsnick. It doesn't meet the Federal obligation of receiving fuel, so I don't believe that it has a significant impact on the judgment fund.

Mr. Tonko. Thank you.

And, Mr. Halstead.

Mr. Halstead. The single major problem facing the program is not Yucca Mountain, not DOE, but the unresolved issue of how to manage the Nuclear Waste Fund, whether to reinstate the fee, and then how to deal with the way the Congress handles this in annual appropriations, and eventually what happens with the corpus.

So one thing I think that Mr. Shimkus and I agree on, I don't agree with his answer, but it is certainly the right question.

Mr. Tonko. Thank you very much.

With that, I will recognize Mr. Shimkus, the subcommittee ranking member, for 5 minutes to ask questions.

Mr. Shimkus.

Mr. Shimkus. Thank you, Mr. Chairman.

Ms. Korsnick, you note ratepayers contribute what amounts to $41 billion balance

in the Nuclear Waste Fund. And so, when Congress chooses not to spend money on the nuclear waste program, it is basically keeping ratepayer money for other purposes.

Would that be fair?

Ms. Korsnick. No.

Mr. Shimkus. While Congress is not spending ratepayer money on the program they paid for, it is spending taxpayer money for its failure to move forward. Is it correct that these taxpayer funded liability payments are not appropriated by Congress but automatically paid out of the judgment fund?

Ms. Korsnick. That is correct.

Mr. Shimkus. And the Congress doesn't really see that their constituents had been paying $800 million a year for failure to move forward, correct?

Ms. Korsnick. That is correct.

Mr. Shimkus. Would you agree it is only going to get worse with each day of delay in appropriating funds to complete the licensing process?

Ms. Korsnick. That is correct. It only gets worse.

Mr. Shimkus. That is why we need funding reform, and that is part of this debate.

Mr. Barrett, under the Nuclear Waste Policy Act, we gave Nevada the tools, which really means the money, they need to oppose the Yucca licensing process at the NRC. And I think that is instructive. And part of this whole process, the money that Nevada is using to dispute the science that I had directed in the opening statement came from ratepayers.

Mr. Barrett. Yes, sir, it did. Nevada received about $200 million to the State of Nevada in the university system to follow the Yucca Mountain project, which they have done.

Mr. Shimkus. We also paid for all the scientific review and analysis that I showed, and for those who came late, those boxes over there, and that review, the white binders, are the NRC analysis. We have also put money forward to do that. Is that correct, Mr. Barrett?

Mr. Barrett. Yes, sir.

Mr. Shimkus. What do we say to ratepayers if we just walk away from the Yucca Mountain licensing review and allow unadjudicated contentions to stand by default?

Mr. Barrett. It is embarrassing.

Mr. Shimkus. It is embarrassing.

Is that fair to the ratepayers?

Mr. Barrett. In my view, no.

Mr. Shimkus. So I want to -- for the folks here and for my colleagues, this is where we are at. We are acting under a law that is the current law of the land. We did the science, 10 billion over 30 years. We gave Nevada the money to contest that. The last part of this process is to go before judges who are scientists to address the contentions that Nevada has that says that those boxes of science and that review by the NRC is not adequate enough.

For us to move forward and for -- and, really, NRC too who prides themselves on science, we ought to an adjudicate the science, don't you agree, Ms. Korsnick?

Ms. Korsnick. Absolutely. For Nevada to get their day in court, that is the part of the process that we are in right now. Let's take it through the licensing process and let the judges hear it.

Mr. Shimkus. Mr. Keyser.

Mr. Keyser. Yeah. Absolutely. We think it ought to move through the licensing

process and have a fair review. And if that review turns up something we don't understand, we can reevaluate at that time. But a hearing is, I think, just in this case.

Mr. Shimkus. And Mr. Barrett.

Mr. Barrett. Yes, sir.

Mr. Shimkus. So, Mr. Barrett, let me turn to you.

What if Nevada is right? What if they say -- what if they go before these judges who are scientists, and when they lay out their contentions, and these judges who are scientists say it is not safe, per the current law of the land, the law, what happens?

Mr. Barrett. If the judges say they would reject the license application and it would stop there and it is back here, we would have to basically say this site will not go forward, and we will have to find another alternative.

Mr. Shimkus. So let me go through.

What do you mean by another alternative?

Mr. Barrett. We would have to find another repository site somewhere of this country. I would note that there was a DOE second repository program in mid-1980s that was politically terminated. It identified suitable geologic regions in 36 States across this country. Something would have to go back with that, consent or not, and decide what to do, or possibly a different approach as Mr. Fettus talked about.

Mr. Shimkus. So, in the original -- or our Founding Fathers of this whole debate, they threw out a wide net. And basically -- to have a long-term geological repository, which is the scientific consensus for long-term nuclear waste, we have to start the process all over. And every State would have the opportunity to maybe welcome a nuclear waste long-term repository.

Mr. Barrett. Yes, sir.

Mr. Shimkus. Thank you.

Mr. Tonko. The gentleman yields back.

I ask that our witnesses -- our press corps has indicated they can barely hear some of the answers. So, if you could all just move in closer, please, to the mike.

The chair now recognizes Representative Peters for 5 minutes.

Mr. Peters. Thank you, Mr. Chairman.

I want to ask a question of Mr. Fettus. You addressed political things. You didn't actually discuss any of the technical issues.

Mr. Halstead posited that the defect in Yucca was that, even though we could talk about what you could engineer to hold nuclear waste, the geological setting was not adequate.

Does NRDC have an opinion on the whether the geologies at Yucca or in general is --

Mr. Fettus. We do. We do. We think it is fraught with a series of significant technical questions. We think it is more leaky than was originally thought in the 1980s when it was chosen for, as Mr. Halstead said, political reasons. We also think there are significant questions whether it could ever survive the licensing process in any meaningful fashion.

Mr. Peters. Okay. Do you have an opinion -- does NRDC have an opinion about places in the United States where, from a geological perspective, it would be appropriate to permanently dispose of nuclear waste?

Mr. Fettus. You know, yes, in that we think that the process that Mr. Barrett just referenced, the U.S. Geological Survey process from the mid-1980s that did look at 36 States it came up with, and Mr. Barrett can correct me if I am wrong, dozens of locations

that could potentially be suitable.

My point and why I spent the time on the institutional process -- and I don't really see it as politics; I see it as the institutional framework for how to go forward -- is you won't get to that scientific review, a meaningful deep review of what is a suitable site, until you reapportion the power consistent with our environmental laws.

Mr. Peters. To me, that is obviously wrong. That is obviously wrong. I don't know if you can cite me any State that --

Mr. Fettus. Yes, I can.

Mr. Peters. -- wants to begin this.

Who is asking for this? Which State?

Mr. Fettus. This is why it won't work.

Okay. At the end of the Obama administration -- and I really appreciate the question -- at the end of the Obama administration, they wanted to look at the viability of deep borehole disposal in South Dakota. South Dakota -- red State South Dakota -- they drew up the barriers so fast, so hard. And I would encourage you to go talk to DOE about what happened. It did not go well.

The reason why it did not go well was because any time the Energy Department Starts to look for it, a State thinks it could be entirely on the hook for everything. And until you change that, until consistent with environmental law, States have the ability to set the terms by which they could accept some portion, we will not get forward progress. You will have what happened with Nevada. We even have --

Mr. Peters. But what you are saying is -- we know Nevada doesn't want it. South Dakota didn't want it either. Tennessee didn't want it.

Mr. Fettus. We don't know what will happen, honestly, if you actually reset the

process where people are not on the hook for everything. And that is the key point.

Mr. Peters. So what would be the terms with which you would approach South Dakota and say, "We are not going to give you everything; we are going to give you half of it"?

Mr. Fettus. They wouldn't be approached like that, because, basically, you would have an entire reset where -- we have right now a licensed consolidated interim storage facility in this country. You know that, right? In Utah. It exists. It is built, and it is licensed.

It will never accept a gram of waste, because Senator Orrin Hatch led the entire congressional delegation to put a wilderness around it in a circle to ensure waste will never be shipped there.

Mr. Peters. Let me just suggest, what I am inferring is that there is not a lot of enthusiasm among the States to accept any amount of undefined -- any undefined or defined amount of nuclear waste. There just isn't. You know, I have experience in local politics. No one even wants a house next to their house. I mean, to me, it is -- you know, when you talk about federalism, the magic of federalism is the supremacy clause and the ability of the Federal Government to say: You know what? I have to -- I can't -- I have to look at all you squabblers, and I have to say, from a technical perspective, that this is a safer place to put this waste in this geology, per this engineering, per this licensing process, than say next to 80 -- you know, 8 million people on the coast, on a military base, that is a better -- that this risk is lower.

I mean, I think, from a practical standpoint, I don't know where you get the idea that some State is going to come, you know, give you a high five for putting nuclear waste there. It is just not going to happen.

And it is up to this committee and the Federal Government to say: From a technical perspective, from a safety perspective, it is not going to be in these dangerous places; it is going to be in safer place.

That is why I support all three of these bills, and I think we got to move forward.

Mr. Chairman, I yield back.

Mr. Tonko. The gentleman yields back.

The chair now recognizes Mr. Walden, full committee ranking member for 5 minutes to ask questions.

Mr. Walden. Thank you, Mr. Chairman. And thanks to all the witnesses. We have got a couple of hearings going on today, so I am bouncing back and forth.

Mr. Barrett, during a hearing before this subcommittee in May of 2015, Washington State Assistant Attorney General Andy Fitz testified that the Federal Government's inaction on the Yucca Mountain license application was harming DOE's obligations to clean up defense high-level waste at the Hanford site, which is right across the river from my district.

Could you speak to the importance of completing the licensing process as it relates to sites like Hanford?

Mr. Barrett. Yes, sir.

The Federal repository, which Yucca Mountain is the site on the table right now, would take care of the commercial fuel but would also take care of all our defense high-level waste of which the primary source is at Hanford. So it would a solution for that.

Mr. Walden. And you know a bit about that the Hanford site, right?

Mr. Barrett. Yes, sir.

Mr. Walden. And the leaking tanks?

Mr. Barrett. Yes, sir.

Mr. Walden. Yeah. They were designed to last, what, 40 years, 20 years?

Mr. Barrett. Long ago.

Mr. Walden. Yeah. Like World War II.

Mr. Barrett. Yes, sir.

Mr. Walden. We have kind of exceeded their lifespan.

Mr. Barrett. Well, precautions are taken to keep them safe. But, yes, sir.

Mr. Walden. Sure.

And the clean-up will take how long.

Mr. Barrett. Long time.

Mr. Walden. Yeah.

Like a century.

Mr. Barrett. A long time, sir.

Mr. Walden. Yeah. And, meanwhile, it sits there along the banks of the Columbia River. We have got leaks. We have got tunnels that are collapsing on top of old railcars that are somewhat radioactive. I mean, they are doing their best, but they are going to reprocess, and then where does that go?

Mr. Barrett. It needs to go to a geological repository somewhere, like a Yucca Mountain facility.

And, yes, this generation has a responsibility for what we did 60, 70 years ago.

Mr. Walden. That is exactly right.

So, Ms. Korsnick and Mr. Barrett, H.R. 2699, the McNerney-Shimkus legislation provides accelerated interim storage that is integrated into a permanent storage

program. It is authorized up to 50 million per year through general appropriations until the operation repository commences.

Do you think that is enough to initiate an interim program and an appropriate source of funding?

Ms. Korsnick. I mean, I think it is a good start. The reality is we just need to get on with it, you know, get started. And there is plenty of money that has been set aside for this. And we need to move forward.

Mr. Walden. Mr. Barrett.

Mr. Barrett. Yes, sir. I think it is a good start as well. I think it needs to be complimented with a banging of the heads together between the Federal Government and Nevada to compliment that with using the principles of the blue ribbon commission of empowerment to work the needs out for both.

Mr. Walden. I think I know a couple of my colleagues are more than willing to bang some heads together.

H.R. 3136, Ms. Matsui's bill, would allow appropriations for interim storage of the Nuclear Waste Fund for up to 25 percent of the interest on the fund, or upwards of $300 million a year. It seems to me that diverting funds from the waste fund for interim storage that is not linked to Yucca risks increasing the financial burden on ratepayers to pay for a permanent repository.

Is that a fair concern? Ms. Korsnick and Mr. Barrett?

Ms. Korsnick. I think, you know, it is. But I guess I would qualify that. There has been so much money set aside. I mean, $41 billion, really, and 1.5 million in interest every year. It is almost hard to imagine that you can't build interim and a long-term repository for that amount of money.

Mr. Walden. But hasn't the $41 billion basically already been spent by the Congress in some other -- no. Okay.

Yeah. Right.

Mr. Barrett.

Under a CBO issue we ran into --

Mr. Barrett. I believe interim storage, you know, can be done. And I think it would not be a major issue as far as the funds that are set aside.

Accessing those funds that are set aside is more of a challenge that you have.

Mr. Walden. That is the issue.

So I guess the point is Mr. Shimkus and others, but especially John, has really led the effort in Congress after Congress. And we reached a bipartisan agreement in the last Congress. We got 340 votes on the House floor to resolve this issue for the ratepayers, the taxpayers, and for the environment. And for the life of me, I can't understand -- oh, that's right. The Constitution still gives Nevada two Senators every election.

We have got to solve this for the safety and security of the country, for the environment, for the ratepayers. This is nuts. And I think a lot of us on this committee understand that. Some of us have nuclear facilities right on fault lines, like in California and around, that we need to find a solution here.

And so I just -- I thank our witnesses for participating today. I remain fully committed, Mr. Chairman, to work with you or whoever or try and push this issue forward and get the solution we promised ratepayers many years ago.

Thank you. I yield back.

Mr. Tonko. You are welcome. The gentleman yields back.

The chair now recognizes the gentleman from Florida, Mr. Soto, for 5 minutes,

please.

Mr. Soto. Thank you so much, Mr. Chairman.

I guess my first question for the panel is, is there any other alternative to storing it in a place like Yucca Mountain? For instance, further deep into the Earth's core or through other methods? Or is there pretty much the only one that is known to us right now. It would be great to start from left to right.

Ms. Korsnick. Well, I think one of the biggest things to do is just look at the rest of the nuclear community in the other countries that have nuclear. And long-term repository is the solution of choice. Finland is probably the best example. They have licensed and are constructing a deep geological repository. But, you know, there are other countries, Sweden, Switzerland, France, others that are making notable progress.

So I think if you look at the broad nuclear community, deep geologic repository is the solution of choice.

Mr. Soto. Mr. Halstead, do you think there is an alternative?

Mr. Halstead. Well, first, I want to say the countries where success is occurring, as Ms. Korsnick said, are the very countries that have given up the approach we are using with Yucca Mountain. And, in fact, particularly, in Germany and France and the U.K., they started with forced siting, and it didn't work. So the first thing for finding a repository site, you have to have both good science, but you have to have the consent of the affected community.

Rather than talk more about repositories, I think there is some really interesting positive early results from the work on deep borehole disposal, and that is a whole another topic we could get into, but --

Mr. Soto. How deep --

Mr. Halstead. -- well, certainly, you are talking in some places about going beyond 2,000 meters. Pretty deep. It depends where the formation that you are seeking lies. But this is a very positive alternative. It also is a particularly attractive alternative for the waste that is at Hanford, some of which DOE now wants to reclassify as being less than high-level waste.

Now, there are pros and cons of that approach. But depending on how that decision works, there are certain types of waste at Hanford that might be a really good test for the deep borehole disposal approach.

Mr. Soto. Thank you.

Mr. Keyser, is there a possibility of -- is this what is really holding back some of the new nuclear facilities from going up? Because a lot of us want to get to renewable and clean energy by 2050 and believe that nuclear would be a part of that.

How much is this holding back that really becoming a reality?

Mr. Keyser. I think it is the biggest force of communities, opposition to nuclear power, because they are going to be stuck with waste sitting on their sites at some point.

1982 is when this promise was made that this fuel would move off. 1998, it was supposed to be moved off. So we are almost 40 years past when Congress made a program, 20 years past when the stuff was supposed to be gone.

So it is now hard to talk to communities about developing new nuclear when the promises haven't been upkept in the past. We know they are safe. We know they are efficient. But we have to get to the point where we move that fuel to a national repository. Folks know they are not going to be stuck with that fuel. We can redevelop not just the new jobs in the energy implications of new nuclear facilities, which they are -- fortunately, a couple reactors under construction now where we have thousands of

members building them, but also redevelopment of those existing sites, whether they are for new nuclear or some other source of clean generation or sit in proximity to our Nation's grid making very efficient places for redevelopment, which could bring jobs back to those communities that were hurt so badly by the decommissioning of these nuclear plants.

Mr. Soto. Thank you.

Mr. Barrett, we have a facility, Crystal River, that is closed now, two other facilities that are aging but could potentially be rehabbed.

What is the impact of a long-term -- of having a closed reactor like Crystal River with rods just sitting there right now to the long-term environmental protection of Florida?

Mr. Barrett. For safety purposes, the utilities will maintain those safe under NRC control. So there is no short-term safety issue with the fuel being stored there from our view.

I think in the long term, that is not where fuel needs to be, sitting on the seacoast right there at Crystal River and anywhere else. So I think that needs to be moved. It was never the agreement that we had. Those communities never consented to being a long-term storage. And those materials need to move somewhere that we need to have soon.

Mr. Soto. Thank you.

And just one quick question. Mr. Fettus, can you -- are these able to be recycled one day, you think, if we had the proper technology?

Mr. Fettus. No.

Mr. Soto. Okay.

Mr. Tonko. The gentleman yields back.

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

Mr. Johnson. Thank you, Mr. Chairman.

Mr. Keyser, thank you for taking time today to testify at this important hearing and for your past work with the Ohio Valley Regional Development Commission. My staff and I have great relationships with John Hemmings and the OVRDC staff and enjoy working with them on economic development opportunities in southern Ohio. OVRDC's work along with the ARC, the Appalachian Regional Commission, and the other development districts are so vitally important to ensuring eastern and southeastern Ohio receives the support it needs to be an economic player in our State and in our region.

So we are happy to have you here today representing the International Brotherhood of Electrical Workers. So tell me, what role do IBEW workers play within the nuclear industry?

Mr. Keyser. We are the largest union in the nuclear industry. We represent most of the workers in nuclear generation, so these plants are loaded with our members. Not only there but at the old enrichment facilities, at weapons grade facilities, at all these facilities I have heard named today. We have IBEW members onsite doing core work, whether it is in the operations or just the electrical construction or capital improvements or decommissioning of sites. So it is a huge workforce, about 15,000 members in generation alone.

And it is important to us to keep those jobs. So they, nuclear, out of all the utilities, employs more people per megawatt hour. So they are larger employers. These jobs pay dramatically higher wages because of the skill sets than do most jobs comparable in their communities. They are the anchors of these communities. As you

know from the Port Smith site and the workers there, without those wages in that community, where would the Portsmouth and Chillicothe and Jackson, Ohio --

Mr. Johnson. Sure.

And you sort of answered this a little bit, because I was going to ask you, these jobs are really good-paying jobs, are stable jobs. Explain that a little -- they are stable because they are so long term, right? I mean, you are there for a long time once you are going an operation.

Mr. Keyser. Right. They are stable. And in the utility space, in general, those jobs have the lowest turnover. So they are not as reflective as the marketplace. If the market takes a dip, you don't get rid of your generation workers, right? It doesn't happen. So they are immune to those sorts of downturns.

And in many places in our economy, during the Great Recession, without the utility bases in some of these communities, especially in rural areas, they would have been completely decimated with no opportunity for recovery. So they are good solid long-term jobs. These folks invest heavily either through our construction apprenticeships or through trainings in conjunction with our utility partners. And these are long-term careers. They aren't just jobs.

Mr. Johnson. Okay.

All right. Now, I know your members are eager to get to work in expanding the country's nuclear power sector.

From your perspective, this is kind of some out-of-the-box thinking. What are the main barriers preventing the expansion of nuclear power?

Mr. Keyser. I think it is public perception. And I think a lot of it comes with this argument that we are having today on the disposal of spent fuel. And since we are

focused on that, I think that is maybe the number one reason currently is the handling of fuels. And we know that it is safe. We know that our workers are in these facilities constantly.

As I said in my opening statement, the high watermark for industrial safety is at these nuclear facilities. We have very few occupational injuries in general. I don't know of a single death that has ever occurred from radiation exposure from one of our workers in these facilities.

So a very high skilled, very heavily regulated industry, very safe jobs.

Mr. Johnson. Okay. And you touched on this a little bit in a previous answer, and you just alluded to it here as well. So do you think the proposed legislation we are discussing today would help advance the nuclear industry and benefit your members? Do you want to add anything to that?

Mr. Keyser. Yeah, absolutely I do.

You know, I think an interim facility is okay. And it maybe should happen to go ahead and start moving fuel. But it can't happen, and nobody is going to opt into it voluntarily without the backdrop of a permanent facility going to come online where people can move this stuff.

So, if we are asking people to bid on interim facilities at multiple locations where they have no guarantee that that fuel is not going to be then moved away from them and into a national repository, why would they bid on that any more than Nevada would bid on Yucca Mountain?

So we do have -- to Congressman Peters' point, we do have an obligation here as a Nation to handle these fuels and put them in the safest place possible and move those and keep this -- keep the nuclear industry, which is, you know, around-the-clock

base-load power generation, especially as we move to more renewables. We have to have nuclear as a major part the generation mix.

Mr. Johnson. Okay. I am going to give you 4 seconds back, Mr. Chairman.

I yield back.

Mr. Tonko. Thank you very much. The gentleman yields back.

I am told they may call votes within 5 minutes, so we are going to ask everyone to keep their questioning to 3 minutes.

We now recognize the gentlewoman from California, Ms. Matsui.

Ms. Matsui. Thank you, Mr. Chairman.

Thank you for calling this hearing and considering my proposal, the STORE Nuclear Fuel Act.

Now, I think you know, my situation, I have a decommissioned plant in Sacramento, SMUD. And we would really like to ensure that we can remove forward on this. And, you know, this repository program is still stalled, and we have this potential for consolidated interim storage. And it is critically important this now if we want to be serious about getting something done.

And I want to be clear: My bill is not intended to act as a substitute for existing law; rather, it is an addition so that we can make here. And I think that is really very important. Until we really get to the Yucca, or whatever we are talking about, we have got to make some progress here.

Mr. Barrett, I know you have said before that it would be wise to reengage in good-faith discussions with the State of Nevada in an effort come to some sort of solution that is agreeable to all parties. But a process like this requires time and patience on all sides.

When you say "reengage to come up with a win-win," what do you have in mind? What would be the omnis, and how do we go about it?

Mr. Barrett. Well, I believe if the Federal Government engages with Nevada following the principles of the blue ribbon commission of empowerment, we can reach an agreement that would advance where we are picking up some of the points that Mr. Fettus said as part of an agreement between those two parties. So I believe a win-win can be done.

Ms. Matsui. Well, the problem is, though, is that this new relationship we are talking about with Nevada, I mean, I am just looking at this.

Mr. Halstead, can you give me some sense of how long you believe the licensing process at NRC could take and whether there are steps that the State of Nevada will take to further delay construction of a repository or an issuance of a necessary license to DOE to actually possess and begin moving used fuel to the site?

Mr. Halstead. Well, one of the questions that DOE needs to answer is exactly what licensing would cost if restarted. I think it is foolish both to force a licensing restart or appropriate funds until you know the answer. Now, we have estimated it, based on DOE, NRC, our own knowledge, at about $2 billion over 4 to 5 years.

And let me correct what Mr. Shimkus says. We are actually spending Nevada's money on this. Since 2010, we have spent about $26 million in State money. Last Federal money we got was 1.9. The State -- I have told the legislature: Don't expect any Federal money.

And the legislature has said: Tell us how much money you need.

This is how serious the opposition is.

So when we say 4 to 5 years and 2 billion, that might be a low number because

there are so many parties to the licensing proceeding. And, remember, the Timbisha Shoshone Indian Tribe and the Native Community Action Council, two Native American groups, they have not weighed in yet.

Ms. Matsui. Okay. I know I have gone beyond my time, but I just want to say that I don't believe it is fair for my constituents to have to wait through this process either.

So I yield back my time.

Mr. Tonko. The gentlewoman yields back.

The chair recognizes the gentleman from Missouri, Mr. Long, for 3 minutes.

Mr. Long. Thank you, Mr. Chairman.

Mr. Barrett, Congress is no doubt to blame for the failure to fund the licensing process. But it seems that there has been a huge gap between the Department of Energy and the State of Nevada and that they are operating using two different sets of facts and don't trust each other, which is leading, of course, to further delays.

In your testimony, you recommend the Department of Energy should increase engagement with Nevada to move this forward. In your heart of hearts, could or would that really work to move this process along?

Mr. Barrett. I think it would be better if it was another agency or some other Federal organization. I tried to use the word Federal Government to engage with Nevada, because I think there is an awful lot of old baggage with the Department of Energy, and we could have a better engagement with a different type of organization.

But the law is the law, and it is the DOE at the time. But I believe there are many better arrangements.

Mr. Long. I will take that as a no.

In order to build trust between the Department of Energy and the State of

Nevada, would one step be to complete the safety license process for Yucca so every stakeholder will be on the same page about the operational safety and feasibility of the Yucca project?

Mr. Barrett. Yes, sir.

Mr. Long. I will take that as a yes.

And there would be time to work out an agreement between the licensing and the operating permit, correct?

Mr. Barrett. That would be my goal.

Mr. Long. Switching gears here, Mr. Barrett.

One of the best ways to reduce carbon emissions is to research and develop innovative technologies that improve our current methods of electricity generation. There are excited developments in the nuclear industry with small-scale reactors that are being built as we speak.

Does the lack of progress we have made on long-term nuclear waste disposal policy hinder or discourage innovation in this field of a new type of nuclear reactors?

Mr. Barrett. Unfortunately, yes.

Mr. Long. Okay. I am an auctioneer. I did my 3 minutes in 2. I hope everyone appreciates that.

I yield back.

Mr. Tonko. The gentleman yields back.

The chair now recognizes the Representative from Michigan, Congresswoman Dingell.

Mrs. Dingell. Thank you, Mr. Chair.

And I love the gentleman from Missouri.

We have established the fact that all of us are really worried about what is happening. The waste is just currently sitting at active and decommissioned nuclear plants across the country. Michigan is one of them. So I want to focus my questions on stored nuclear fuel in the Great Lakes region and the dangers it presents. And if you don't know the answer, just tell me, because we are quick on time.

Does anyone on this panel know how many tons of stored nuclear fuel exists in temporary storage locations across the shores of the Great Lake regions?

Mr. Fettus. I think it is 10,000 metric tons in Michigan and a bunch more in Canada.

Mrs. Dingell. 60,000, yes.

Mr. Fettus. Okay.

Mrs. Dingell. So it is about 70. I am sorry. It is 50,000 in Canada.

So, in total, there are over 60,000 tons of highly radioactive spent nuclear fuel surrounding the Great Lakes. That is almost as much as all the spent nuclear fuel in the United States, which is nearly 70,000 tons.

Should we prioritize the removal of spent nuclear fuel away from the Great Lakes?

Any of you want to answer that?

Mr. Barrett. Yes.

Mr. Halstead. I think the first think you want to do is move it from wet storage to dry storage, regardless of where it is. That is a really big concern at the lakeside plants.

Mr. Fettus. Agreed.

Mrs. Dingell. What would happen if we were to have a leak into the Great Lakes?

Ms. Korsnick. I guess if I could just address that in general.

I mean, where it is stored right now, it is stored very safely. This fuel is not liquid.

It is not like it leaks. These are metal rods that are put in stainless steel casks that are stored on concrete pads. So it is not like it can sort of spring a leak, if you will. They are seismically designed and designed for a variety of hazards.

The NRC has very close scrutiny over any of this used fuel that is stored. It is stored very safely at all the sites today.

Mrs. Dingell. Do other of you agree with that?

Do you think we should be storing nuclear waste in the Great Lakes? 20 percent of our fresh water?

Mr. Barrett. I agree it is being stored safely, but it doesn't belong there for hundreds of years.

Mr. Fettus. I think we are trying to chart a way forward that can actually work and move it and faster than the road we are on now.

Mrs. Dingell. Anybody else want to comment?

Mr. Keyser. I would just agree that it shouldn't be stored there forever, but it is stored safely. We have workers in those facilities and around those facilities. They feel safe moving it. We have never had an accident. We have never had major radiation exposure to any of our members, so -- but, again, these --

Mrs. Dingell. We always say that until it happens.

Mr. Keyser. Right. These aren't designed to last forever, so, yeah, they need moved.

Mrs. Dingell. I yield back my time. I am not as good as the gentleman from Missouri, but --

Mr. Tonko. The gentlewoman yields back.

The chair recognizes Congressman Flores for 3 minutes, please.

Mr. Flores. Thank you, Chairman Tonko and leadership for holding today's hearing.

Thank you for the witnesses being here today.

I want to talk about the cost of starting over. The country lost a substantial amount of time that was very valuable and billions of dollars, tens of billions of dollars, of hardworking taxpayer money after the previous administration shut this program down.

Now opponents say that Yucca Mountain will be too time-consuming or costly to resume the licensing process.

Ms. Korsnick, do you believe it would be cheaper and quicker to complete the Yucca licensing process or to start over with a consent-based licensing process?

Ms. Korsnick. I think it would be cheaper to go forward with the Yucca Mountain process.

Mr. Flores. Okay. I am also concerned that if we don't solve the storage problem, we won't be able to deploy the new technologies that Mr. Long was talking about that are zero-based emissions technologies.

Would you also agree, Ms. Korsnick?

Mr. Barrett, based on your experience and observations at the Department, would you expect it to be significantly more effective for the taxpayers and quicker to move forward with the review of the Yucca license or starting over?

Mr. Barrett. Yes, I do.

Mr. Flores. Okay. Mr. Barrett, where would the funds come from to start a second repository process?

Mr. Barrett. I believe they could come from the Nuclear Waste Fund. The original program did. I believe the Yucca Mountain should go forward, and we should

supplement that with another search, maybe along the lines of Mr. Fettus', but we need to move forward.

Mr. Flores. Ms. Korsnick, in that case, what would the -- you know, we have got a shrinking nuclear fleet, unfortunately. What would the cost be if we had a new fee structure, a new revenue structure on top of the existing structure?

Ms. Korsnick. Yeah. So that is a significant challenge. The current plans are very stressed, as you know in the marketplace. And so to restart a nuclear waste fee on top of the challenges that they are facing today is very significant.

Mr. Flores. Okay. It would make it less economic. It would probably make it less attractive to invest in the new technologies we need to have a zero emissions economy, right?

Ms. Korsnick. That is correct.

Mr. Flores. Okay. Mr. Barrett, what would the cost be for site characterization and related design work in starting the whole NRCC process over?

Mr. Barrett. Approximately $10 billion or so.

Mr. Flores. Okay.

All right. I yield back the balance of my time.

Thank you.

Mr. Tonko. The gentleman yields back.

The chair now recognizes Mr. McNerney, for 3 minutes.

Mr. McNerney. Well, I thank the chairman. And I want to thank my colleague Mr. Shimkus for hard, persistent work on this very difficult subject.

Ms. Korsnick, would you briefly discuss again or reiterate again the need for permanent and interim storage to be considered part and parcel for a solution?

Ms. Korsnick. Yes. So the long-term answer is the long-term geologic repository. And, you know, I would also just remind the committee that we are talking about these sites that you are putting the current fuel in. There is still 95 percent good energy in these used fuel. It is really better characterized as future nuclear fuel. So you want to put it someplace where you can get it back, because --

Mr. McNerney. So it is recyclable --

Ms. Korsnick. -- in the future you are going to want it back.

That is correct.

Mr. McNerney. -- in your opinion.

Ms. Korsnick. That is correct.

You are going to want to use fuel that is in there in a different type of reactor.

And so the current place that we want to have it is a long-term repository as has been mentioned here a few times. Nobody wants to sign up for interim storage if they don't appreciate that there is a long-term repository.

But the interim repository can consolidate the fuel into fewer locations on its way to the long-term repository.

Mr. McNerney. Thank you.

Mr. Barrett, communities clearly need to be involved in the process. But as you have pointed out, I think just about every State that has had a location considered has blocked progress on that.

So what kind of framework could we use that would work in terms of getting enough buy in in the State to move forward?

Mr. Barrett. I think if both sides -- the Federal side and the individual States engage with the principles of the blue ribbon commission of empowerment and working

together, you can work out arrangements that can meet the needs of both, safetywise, clearly, but also economically. In the development of the State, things can be worked out if they can get together and get away from the emotion that has dragged us down in the past.

Mr. McNerney. I mean, I understand that Sweden has a pretty widely accepted nuclear waste repository program. Is that right?

Mr. Barrett. Yes, sir, it does. But there is a big difference between Sweden and Finland and others is they have no State level of government. If we had no State level of government here, we would have had this solved decades ago. But we have a thing called States in the United States of America.

Mr. Fettus. I firmly agree with that.

Mr. McNerney. I would like to ask Mr. Fettus, if I have time.

Your proposal of using RCRA and amending the Atomic Energy Act so radioactive materials comply with environmental laws would open up a whole can of legal issues.

Mr. Fettus. I think that can of legal issues is already open. I am trying to put a cap on it.

Mr. McNerney. I mean, I think that is a debatable whether it would make it worse or better then.

Mr. Fettus. Look at the website in New Mexico, Congressman. To the extent that there is any acceptance, it is the State RCRA authority.

Mr. McNerney. I yield back.

Mr. Tonko. Okay. The gentleman yields back.

The chair recognizes the gentleman from Georgia for 3 minutes.

Mr. Carter. Thank you, Mr. Chairman.

Thank all of you for being here. This is very important subject, obviously for us in the State of Georgia. Guess which State is the only State that has two nuclear reactors under construction right now. It is the State of Georgia. Not only is it -- not only is that important, but it is also important because it means that Georgians will be able to pull more energy from a stable and a clean source, such as nuclear power.

And, you know, I get confused and frustrated sometimes why there is so much misinformation out there about nuclear power. It is clean energy. And, yes, we do need to address the issue of the repositories and repositories and what we do with the waste. But, you know, we have got that solution in hand. We are just not taking advantage of it.

I want to start with you, Ms. Korsnick, and ask you, how often is nuclear waste actually transported across the country?

Ms. Korsnick. It is actually transported fairly regularly. There has been probably 1,300 used fuel shipments across the United States over the last few decades, all done very safely.

Mr. Carter. Can you give me some ideas of the precautions that are taken? I suspect that they are numerous.

Ms. Korsnick. Yes. If you just imagine the package to begin with, so the fueler of these long metal rods, and they are placed in a cask. The cask for every 1 ton of fuel that you have, there is probably 5 to 7 tons of cask, if you will, that are protectedly wrapped around, if you will, this fuel. These casks are designed and licensed by the Federal Government. There has been all kinds of different postulated accidents of which they are all designed against. So it is all done very safely.

Mr. Carter. It is done safely, and it is done quite often. So it is not as if this would be something that is new to us if we were to a place like Yucca Mountain to use as a

permanent site, if you will.

Ms. Korsnick. That is correct.

Mr. Carter. It appears to me that several of these bills address only the interim side and not the long-term issue that is out there.

How important is it -- I know it is important that we obviously concentrate and focus on the interim side, but how important is it that we also look at a long-term solution?

Ms. Korsnick. Well, it is critical. As we mentioned, you know, earlier, if you don't have the long-term repository, when you sign up for the interim repository, you might feel like you are signing up for the long-term repository. And so it really negates the idea of having a consolidated interim storage until people have a view that there is a long-term answer.

Mr. Carter. Right.

And just one last thing. And that is, Mr. Keyser, you mentioned about the jobs. And those are very important. Let me tell you, the construction of the plant too, the jobs that are being supported by that are just enormous.

Mr. Keyser. Yeah. Absolutely. We have over 4,000 building trades members, not just IBEW on that site every day. So massive project. And not only that, but the advanced manufacturing of some of the components of the IBEW --

Mr. Carter. Thank you.

And I yield back.

Mr. Tonko. The gentleman yields back.

The chair recognizes very patient gentleman from North Carolina -- South Carolina, Mr. Duncan, for 3 minutes.

Mr. Duncan. I was going to correct you, Mr. Chairman, but South Carolina.

Thank you so much. Thanks for being here. I sat patiently, as you said.

Let me just make a few points because a lot of questions have been asked. But the high water mark of Yucca Mountain is when the law was passed by the United States Congress for a long-term repository. Construction started, but it started the downhill spiral of folks saying no, even though we did a lot of study of a lot of different sites around the country and ultimately landed on Yucca Mountain as the ideal repository for long-term storage for nuclear waste.

And I hear a lot of talk about an interim storage site. Well, I can tell you, nobody wants to be the interim storage site, I think Ms. Korsnick said it best, because they don't believe and trust the Federal Government will ever get to a long-term repository.

Ratepayers in this country were sold a bill of goods. Nuclear waste sits at commercial sites at 121 different locations around the country, on the shores of Lake Erie and Ohio and south on the shores of Lake Keowee in South Carolina, on the shores of the Savannah River in Georgia. And we know that nuclear waste, and we have had leaks in Illinois, six different sites in Illinois.

So the American people and the States don't trust Federal Government to ever get to this point. Yucca Mountain was chosen. I have been there. I stood on top of that mountain, and I said: If we can't put nuclear waste here, we will never put it anywhere else, because we won't pick another site. There will be too much politics involved.

Back when the law was passed, and I use the word "law" because it is the law of the land to put the nuclear waste from commercial reactors and defense waste at Yucca Mountain. I say that the taxpayer, the ratepayers were sold a bill of goods. I used a number earlier. I misspoke. South Carolina ratepayers have paid $3 billion for the

operation and construction of Yucca Mountain. That is $3 billion of not taxpayer money; that is ratepayers and their utility bills, pennies at a time. But South Carolinians have paid $3 billion for this.

We have got nothing for it. And I say that no one wants to trust the Federal Government with regard to doing what they say they are going to do. They brought a bunch plutonium to the Savannah River site and said: We are going to push for MOX, mixed oxide fuel, and we are going to convert that plutonium from the nonproliferation agreements into useable fuel. Guess what, folks? MOX is mothballed.

And that plutonium still sits on a concrete pad in a metal building at Savannah River site because we are not going to convert it to MOX. That is another example where the Federal Government has lied to the American people. That plutonium can go to Yucca Mountain as well.

I think Ms. Korsnick said: We need to be able to access that. As technology gets there, we can reprocess this fuel and reuse it. Absolutely. Yucca Mountain has ingress and egress. So we can take the waste and we can remove the waste to use it.

Folks, it is the law of the land. This is time to move forward. And let's let the ratepayers of South Carolina and other States get what they are paying for, what they have paid for.

Mr. Chairman, thanks for your leadership on this. I know we have a vote.

I yield back.

Mr. Tonko. Okay. Thank you. The gentleman yields back.

I thank all of our witnesses for joining us today for your input, which is very critical to a very, very critical issue.

I remind members that, pursuant to committee rules, they have 10 business days

by which to submit additional questions for the record to be answered by our witnesses. I would ask each witness to respond promptly to any such questions that you may receive.

I also have here a series of documents approved by both sides. I request unanimous consent to enter these documents into the record.

Without objection, so ordered.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Tonko. And, with that, at this time the subcommittee is adjourned.

[Whereupon, at 11:40 a.m., the subcommittee was adjourned.]