Summary of Testimony
Nuclear Energy Institute
Maria Korsnick, President and Chief Executive Officer
Subcommittee on Environment and Climate Change
House Energy and Commerce Committee
June 13, 2019

Used nuclear fuel is stored safely and securely at sites in 35 states, and promising private initiatives are underway to develop consolidated storage facilities. But these measures are intended to be temporary until the federal government meets its obligation to develop a permanent solution.

Action by the federal government is long overdue. Utilities and their electricity customers have done their part, as their contributions have resulted in the $41 billion balance in the Nuclear Waste Fund. In addition, taxpayers have been saddled with the consequences of the federal government's inaction as more than $7 billion in damages has already been paid from the Judgment Fund and billions more in liability will continue to mount the longer action is delayed. And let us not forget about the communities near the facilities now used to store used fuel. Congress owes it to these communities to ensure science—not political whims—determines the fate of the Yucca Mountain repository, the nation's only authorized disposal option.

NEI urges Congress to take the following critical steps, which will put the U.S. on the path toward a viable used fuel management solution:

1. **Reach a Decision on Yucca Mountain**: The NRC has yet to decide whether it will grant the DOE's license application for the Yucca Mountain project. We support completing the Yucca Mountain license application proceeding. But to move forward, Congress must grant the NRC's and DOE's requests for funding to complete their duties.

2. **Authorize Consolidated Interim Storage**: Consolidated interim storage would enable DOE to move dry casks from nuclear plant sites to a centralized location where it can be more efficiently managed until a permanent repository is built. We support the development of a consolidated interim storage program in willing host communities and states in parallel with completing the Yucca Mountain licensing proceeding. Moving both programs forward in parallel will help to alleviate concerns that interim storage will become *de facto* disposal. This concern was highlighted just last week in a letter from New Mexico Governor Lujan Grisham.

3. **Reform the Nuclear Waste Fund and Fee Process**: Any legislation that becomes law must ensure a more equitable fee collections process and provide access to the Nuclear Waste Fund for its intended purposes. Congress should not allow DOE to impose unnecessary new fees on electricity consumers. It would be unfair to restart such fees until there is a showing, at a minimum, that (1) the annual expenses for the program's ongoing projects exceed the Fund's annual investment income and (2) the projected life-cycle cost demonstrates that additional fees are necessary to achieve full cost recovery over the life of the program.

We look forward to continuing to work with lawmakers to reach bipartisan consensus on the best approach for the long-term management of the nation's used fuel.

Testimony for the Record
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I am Maria Korsnick, President and Chief Executive Officer of the Nuclear Energy Institute (NEI).[1] I appreciate the opportunity to provide testimony on the Nuclear Waste Policy Amendments Act of 2019 (H.R. 2699), the Storage and Transportation of Residual and Excess (STORE) Nuclear Fuel Act of 2019 (H.R. 3136), and the Spent Fuel Prioritization Act of 2019 (H.R. 2995). Continuing the conversation on these issues is an important step to revitalize the federal used nuclear fuel program. It is important that Congress provide the U.S. Department of Energy (DOE) with clarifying authority to support private consolidated interim storage facilities and direction to move the Yucca Mountain application forward.

Used nuclear fuel is stored safely and securely at sites in 35 states, and promising private initiatives are underway to develop consolidated storage facilities. But these measures are intended to be temporary until the federal government meets its legal obligation to develop a permanent solution. Action by the federal government is long overdue. The failure of the federal government to implement the statutorily required used fuel management program has given the industry a black eye for far too long despite the fact that nuclear generation provides more than half of the nation's carbon-free electricity. Further, there are many advanced reactor designs being developed that can usefully be deployed in the U.S. in the near future to meet our clean energy needs. Burdening these promising technologies with the weight of a floundering used fuel management program unnecessarily and unreasonably limits the tools we have to combat climate

[1] NEI is responsible for establishing policy on issues affecting the commercial nuclear energy industry. NEI has about 300 members, including companies licensed to operate U.S. commercial nuclear power plants, nuclear plant designers, major architect/engineering firms, fuel cycle facilities, materials licensees, labor organizations, universities, and other organizations involved in the nuclear energy sector.

change at a time when we need every carbon-free generation option available.

Utilities and their electricity customers have done their part, as their contributions have resulted in the $41 billion balance in the Nuclear Waste Fund. In addition, taxpayers have been saddled with the consequences of the federal government's inaction as more than $7 billion in damages has already been paid from the Judgment Fund and billions more in liability will continue to mount the longer delay on the program continues. And let us not forget about the communities near the facilities in 35 states now used to store the used fuel. The citizens of those communities, and particularly those where there is no longer an operating plant, are an often an overlooked constituency with a significant stake in a fully functioning used fuel management program. Both they and the site owners are currently prevented from redeveloping the land on which these storage facilities sit. Congress owes it to the citizens in these communities to take whatever steps are necessary to get used fuel moving offsite.

The Importance of Nuclear Power to the United States

Nuclear energy is the largest and most efficient source of carbon-free electricity in the United States. Currently, 97 commercial nuclear power plants in 29 states provide nearly 20 percent of America's electricity and more than half of the emissions-free electricity. Because electricity generation from nuclear energy does not release carbon dioxide and other harmful air pollutants, by maintaining the domestic nuclear fleet, the United States will not have to choose between the health of its electric grid and the health of its citizens. Nuclear plants run 24 hours a day, 7 days a week producing power with unmatched reliability, and have the added benefit of 18-24 months of fuel on site. Nuclear plants are hardened facilities that are protected from physical and cyber threats, helping to ensure we have a resilient electricity system in the face of potential disruptions.

Nuclear energy facilities are essential to the country's economy and the local communities in which they operate. The typical operating plant generates $470 million each year in the sale of goods and services in the local community, and employs 700 to 1000 workers. Construction of a new nuclear plant provides in the range of 3500 jobs at peak periods. Collectively, the nuclear industry contributes about $60 billion every year to the U.S. economy, through supporting over 475,000 jobs and producing over $12 billion annually in federal and state tax revenues.

The Used Nuclear Fuel Stalemate

Unlike fossil fuel-fired power plants, which emit carbon dioxide and other air pollutants to the atmosphere, nuclear generation's primary byproduct is contained in the solid fuel it uses to produce electricity. After generating electricity for about five years, used nuclear fuel assemblies are removed from the reactor and safely stored initially in a concrete and steel fuel pool. When cool enough that the used fuel no longer needs to be stored underwater—typically several years after removal from the reactor—it can be transferred and stored in dry casks, which are large steel-reinforced concrete containers. Over the past three decades, industry has safely loaded and placed into storage over 3000 of these containers. All the used fuel produced by the U.S. nuclear energy industry in more than 50 years of operation would, if stacked end to end, cover a football field to a height of approximately 10 yards.

Used nuclear fuel is stored safely and securely at reactor and storage sites around the country, but onsite storage was never intended to be permanent. The Nuclear Waste Policy Act of 1982 (NWPA) codified DOE's obligation to dispose of used fuel generated by U.S. commercial nuclear power plants and the reciprocal obligation of plants owners and operators to offset disposal costs by paying fees into the Nuclear Waste Fund. To cement these obligations,

the NWPA required plant owners/operators to enter into the legally binding Standard Contract with DOE. Pursuant to that contractual obligation, the owners and operators of nuclear plants—and the consumers of their electricity—have paid billions into the Nuclear Waste Fund. However, despite these massive investments, the federal government has fallen far short of meeting its end of the bargain as no tangible progress has been made towards developing a durable used fuel program.

In enacting the NWPA, Congress recognized that it was important to drive the government's action to complete the project by providing statutory deadlines by which significant milestones were to be met. Most prominently, Congress directed DOE to begin accepting used fuel by January 31, 1998. To help ensure this date was met, Congress amended the NWPA in 1987 to designate Yucca Mountain as the sole candidate for a repository. Despite this statutory deadline, by the mid-1990s, DOE made clear that it could not meet the 1998 deadline. Nonetheless, as statutorily required, DOE extensively evaluated the Yucca Mountain site before formally recommending moving forward with the repository in 2002. Congress again endorsed moving forward with Yucca Mountain and established a 90-day deadline for DOE to submit a construction authorization application to the U.S. Nuclear Regulatory Commission (NRC). Missing another deadline, DOE did not submit its application to the NRC until 2008, which triggered a 2012 deadline for the NRC to complete its review of the application. This was yet an additional deadline that was missed because in 2010, DOE—without basis—shut down the Yucca Mountain project in the middle of the NRC's application review and hearing process.

The failure to meet these deadlines—and the resulting harm to the industry, consumers, taxpayers, and local communities—has spurred literally dozens of lawsuits.[2] These lawsuits were necessary to protect the rights of generating companies and electricity consumers, and required the expenditure of countless resources that would have been better used elsewhere. Two of the more recent lawsuits are particularly relevant to the current used fuel stalemate.

First, the U.S. Court of Appeals for the D.C. Circuit in 2013 ordered DOE to reduce the Nuclear Waste Fund fee to zero until either the Yucca Mountain project is revived as required by the Nuclear Waste Policy Act or Congress enacts an alternative plan.[3] This decision squarely places the ball before Congress to fund the Yucca Mountain project or develop a comprehensive alternative disposal plan. In short, the Court made clear that DOE would not be permitted to start assessing fees from electricity customers unless tangible progress in made.

Second, also in 2013, the D.C. Circuit ordered the NRC to complete safety and environmental reviews of the Yucca Mountain license application.[4] While these reviews by the NRC's technical staff have since concluded that Yucca Mountain complies with all regulations, a final decision awaits an extensive formal hearing in which Nevada and others opposing the project can present evidence and arguments challenging DOE's license application to NRC's independent administrative judges. But these hearings cannot proceed absent further congressional appropriations.

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2 *See, e.g.*, *Texas v. United States*, 891 F.3d 553 (5th Cir. 2018); *Nat'l Ass'n of Regulatory Util. Comm'rs v. DOE*, 680 F.3d 819 (D.C. Cir. 2012); *Dairyland Power Coop. v. United States*, 645 F.3d 1363 (Fed. Cir. 2011); *Pacific Gas & Elec. Co. v. United States*, 536 F.3d 1282 (Fed. Cir. 2008); *Yankee Atomic Elec. Co. v. United States*, 536 F.3d 1268 (Fed. Cir. 2008); *Alabama Power Co. v. DOE*, 307 F.3d 1300 (11th Cir. 2002); *Roedler v. DOE*, 255 F.3d 1347 (Fed. Cir. 2001); *Northern States Power Co. v. United States*, 224 F.3d 1361 (Fed. Cir. 2000); *Maine Yankee Atomic Power Co. v. United States*, 225 F.3d 1336 (Fed. Cir. 2000); *Northern States Power Co. v. DOE*, 128 F.3d 754 (D.C. Cir. 1997); *Indiana Michigan Power Co. v. DOE*, 88 F.3d 1272 (D.C. Cir. 1996).

3 *National Ass'n of Regulatory Utility Comm'rs .v DOE*, 736 F.3d 517 (D.C. Cir. 2013).

4 *In re Aiken County*, 725 F.3d 255 (D.C. Cir. 2013).

Actions to Address Used Fuel are Well Understood and Technologically Achievable

Used fuel is and can continue to be stored safely onsite or at consolidated interim storage facilities. Ultimately, however, a permanent disposal solution is needed. The consensus within the scientific and technical community engaged in used fuel management is that safe geologic disposal is achievable with currently available technology.[5] Yet the U.S. is the only major nuclear nation without a used fuel management program. To help the U.S. maintain its role as a leader in the nuclear arena, NEI urges Congress to implement the following critical steps, which will put the U.S. on the path toward a viable used fuel management solution:

1. **Reach a Decision on Yucca Mountain**: The NRC has yet to decide whether it will grant the DOE's license application for the Yucca Mountain project. We support finishing the Yucca Mountain license application proceeding. But to move forward with either Yucca Mountain or another site, Congress must grant the NRC's and DOE's requests for funding to complete their duties. H.R. 2699 would help move the Yucca Mountain licensing proceeding forward by establishing a 30-month deadline (which may be extended by 12 months if necessary) for the NRC to issue a final decision on DOE's construction authorization application. The NRC missed the original deadline because of funding shortfalls and the absence of a cooperative applicant. A new deadline would add certainty and reinforce Congress's mandate to make meaningful progress. With adequate funding and commitment by DOE, the deadline is achievable and gives the NRC a reasonable timeframe in which to consider and resolve the challenges to the application raised by Nevada and other stakeholders.

2. **Authorize Consolidated Interim Storage**: Used fuel is being safely stored in robust pools and airtight containers called dry casks. A consolidated interim storage program

[5] Blue Ribbon Commission on America's Nuclear Future, Report to the Secretary of Energy § 4.3 (Jan. 2012).

would enable the DOE to move dry casks from nuclear plant sites to a consolidated interim storage facility where it can be more efficiently managed until a permanent repository is built. We support the development of a consolidated interim storage program in willing host communities and states in parallel with completing the Yucca Mountain licensing proceeding. As the Committee recognized last year when it overwhelmingly approved H.R. 3053, moving the consolidated interim storage program 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 and will distract from repository development. New Mexico Governor Lujan Grisham's June 7 letter to DOE Secretary Perry and NRC Chairman Svinicki identified this very concern.[6]

3. Reform the Nuclear Waste Fund and Fee Process: As noted herein, because of contributions of the owners and operators of nuclear plants—and the consumers of their electricity—the Nuclear Waste Fund has a balance of more than $41 billion and each year over $1.5 billion in interest is added to this principle balance. Any legislation that becomes law must ensure a more equitable fee collections process and provide access to the Nuclear Waste Fund. Historically, congressional budgeting practices have prevented the use of this fund for its intended purpose. Meanwhile, taxpayers have been have shouldered with the more than $7 billion in damages for the federal government's inaction—an amount that grows by $2.2 million for every day the government does not act. The cost of not funding a solution is rapidly becoming greater than the cost of funding the program. NEI supports—and electricity customers and taxpayers deserve—granting DOE access to the Nuclear Waste Fund for its intended purpose without reliance on the annual appropriations process.

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[6] Letter from New Mexico Governor Michelle Lujan Grisham, to DOE Secretary Rick Perry and NRC Chairman Kristine Svinicki at 1-2 (June 7, 2019) (claiming that "the absence of a permanent high-level radioactive waste repository creates even higher levels of risk and uncertainty around any proposed interim storage site" and that "given that there is currently no permanent repository for high-level waste in the United States, any interim storage facility will be an indefinite storage facility").

Perhaps more important, however, is that DOE not impose on electricity consumers unnecessary new fees. It would be unfair to restart such fees until there is a showing, at a minimum, that (1) the annual expenses for the program's ongoing projects exceed the annual investment income on the NWF and (2) the projected life-cycle cost demonstrates that additional fees are necessary to achieve full cost recovery over the life of the program. We appreciate that the sponsors of both H.R. 2699 and H.R. 3136 recognize the need to prohibit premature imposition of the fee. Also in a good faith effort to protect electricity consumers, H.R. 2699 appropriately limits fee collection to an amount not greater than 90 percent of what is appropriate from the Nuclear Waste Fund. While short of full access to the Nuclear Waste Fund, this approach is a good first step.

Used Fuel is a Political Problem, Not a Technical One

As my testimony hopefully demonstrates, the government inaction impeding completion of a durable and permanent solution for used nuclear fuel is caused by political, not technical obstacles. But with strong leadership in Congress and in the Administration, they can be overcome.

In charting a path forward, Congress should not allow the political will of one state to stymie progress on an important project that would benefit 35 other states. This is not to say that Nevada should have no say in this process or that Yucca Mountain should be constructed without a full and fair airing of the concerns raised by those opposing the project.

Nevada and other stakeholders with technical concerns should be given every opportunity to demonstrate their perspectives on whether Yucca Mountain should be granted a license to receive fuel and operate as our nation's repository. There are approximately 300 contentions admitted in the NRC licensing hearing on Yucca Mountain. Should funding be restored and

those proceedings restarted, Nevada and others that oppose the project can make their case to NRC's independent administrative judges—allowing a licensing decision on Yucca Mountain to be determined based on its scientific and technical merits. Congress owes it to the communities around the country where used fuel is currently being stored to ensure that science—not political whims—determines the fate of the Yucca Mountain repository, the nation's only authorized disposal option.

Adding to the fair treatment of Nevada and local communities, H.R. 2699 would make it possible for the State to engage in discussions regarding federal benefits without waiving objections to the project. Thus, should the NRC deem Yucca Mountain safe and should the project move forward, the bill would ensure that, notwithstanding its opposition to the project, Nevada would be eligible to enter into a benefits agreement.

Conclusion

On behalf of NEI and its members, I wish to thank the bill's sponsors for reintroducing the Nuclear Waste Policy Amendments Act of 2019. Just last year the House passed a very similar version of that bill with an overwhelming 340-72 bipartisan vote that represented a first step of progress to solving this longstanding issue. Today, the Committee is considering three pieces of legislation to address this problem. The industry sincerely appreciates the Committee's deliberate effort to find a durable solution. We look forward to continuing to work with lawmakers to reach bipartisan consensus on the best approach for the long-term management of the nation's used fuel. We urge lawmakers to ensure that resulting legislation protects both electricity consumers and taxpayers.