

## **Testimony for the Record**

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**Appropriations Subcommittee on Energy and Water Development**  
**U.S. Senate**  
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The Nuclear Energy Institute<sup>1</sup> (NEI) appreciates the opportunity to provide testimony on Department of Energy and Nuclear Regulatory Commission programs to the House Appropriations Subcommittee on Energy and Water Development.

NEI believes the federal government's nuclear energy research and development programs in Fiscal Year 2014 should focus on (1) developing technologies and other solutions that can improve the reliability and safety of operating reactors and extend their lifetimes; (2) developing new reactor types that will enable nuclear energy to help meet the nation's energy and environmental goals; (3) developing a sustainable used nuclear fuel management program; and (4) enhancing nuclear non-proliferation programs. Specifically, the nuclear energy industry:

- Opposes reinstating a Decommissioning and Decontamination Fund tax on nuclear power plant operators to pay D&D costs at the federal government's uranium enrichment plants;
- Supports DOE funding for a comprehensive, sustainable used nuclear fuel management program;
- Supports increased funding for the DOE Small Modular Reactor licensing program;
- Opposes the cut in funding for the completion of the Mixed-Oxide (MOX) Fuel Facility; and,
- Supports the reforms necessary to make the DOE loan guarantee program a workable financing platform for clean energy technologies, including advanced nuclear power plants.

### **Another Uranium Enrichment D&D Tax Unfair to Electricity Consumers**

NEI strongly opposes the President's FY2014 budget plan to reinstate the uranium enrichment decontamination and decommissioning tax, which would have a negative impact on consumers of electricity in an economy struggling to recover. Despite its negative impact on all consumers of electricity, the Obama Administration continues to propose reinstatement of this tax as a means of raising revenue. The three uranium enrichment plants in question operated for 25 years as defense facilities and were irretrievably contaminated long before any sales of enrichment services to the commercial industry. In addition, the industry has paid twice its share of the funds necessary to clean up these facilities – first, payment was received as part of the price for DOE uranium enrichment services from the facilities, and again under the Energy Policy Act of 1992. Under the 1992 law, the tax on electric utilities was to end after 15 years or the collection of \$2.25 billion, adjusted for inflation. The industry paid this amount in full. The industry

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<sup>1</sup> NEI is responsible for establishing nuclear industry policy on matters affecting the nuclear energy industry, including regulatory, financial, technical and legislative issues. NEI members include all companies licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, engineering/construction firms, fuel facilities, and other organizations and individuals involved in the nuclear energy industry.

appreciates the support of the subcommittee in previous years to reject this proposal and again encourages members to continue to oppose this unjust tax on consumers.

### **Used Nuclear Fuel Management**

NEI asks the subcommittee to provide sufficient funds to DOE and NRC to complete the licensing of the proposed Yucca Mountain repository for used reactor fuel. NEI urges the subcommittee to provide direction and funding to DOE in support of the following Blue Ribbon Commission on America's Nuclear Future (BRC) recommendations:

- Establish a new organization dedicated solely to implementing the nuclear waste management program and empowered with the authority and resources to succeed;
- Establish one or more consolidated storage facilities for used nuclear fuel while making substantial progress toward developing a repository for fuel disposal; and
- Provide access to the annual collections and corpus of the Nuclear Waste Fund.

### **Advanced Reactor and Fuel Cycle Technologies**

NEI supports programs managed by DOE's Office of Nuclear Energy to accelerate commercial development of new reactor technologies, sustain safe operation of the reactors that provide one-fifth of America's electricity, and develop advanced fuel cycles to manage used nuclear fuel. NEI considers certain programs as extremely high priority:

- Small Modular Reactor Licensing Technical Support - \$114 million (+\$47 million)
- Fuel Cycle Research and Development - \$165.1 million
- Reactor Concepts Research, Development and Demonstration - \$72.5 million
- Energy Innovation Hub for Modeling & Simulation - \$24.3 million
- Integrated University Program - \$5 million (DOE)/\$15 million (NRC) (+\$20 million)

### **Small Modular Reactors (SMRs)**

As originally conceived, the SMR licensing support program was to promote accelerated development of these technologies by supporting cost-shared, first-of-a-kind activities for design certification and licensing activities for up to two SMR designs. One team was chosen from those that responded to the first Funding Opportunity Announcement (FOA), and DOE has released a second FOA to support an additional team or teams. NEI supports the second FOA and encourages DOE to complete the procurement process by September 2013, as it has proposed. Given the potential benefits – job creation, clean electricity supply, and exports – we encourage the subcommittee to ensure that this program is effectively and expeditiously implemented. Accelerated, near-term development is critical to ensure the international competitiveness of domestic SMR designs. However, this program has been underfunded by about 30 percent for the past two years. In order to achieve the proposed \$452 million program the committee is encouraged to provide \$114 million in FY2014. We acknowledge that DOE has now proposed a six-year cost-shared program to achieve the mission which we support. However, the Committee should recognize that additional funding may be required to accomplish the DOE's expanded plan.

### **Advanced Fuel Cycle Technologies**

NEI supports \$165.1 million for the Fuel Cycle R&D program, including \$60 million for DOE to implement generic activities recommended by the BRC on geological research, transportation options, extended fuel storage, and the consent-based siting process. The balance of the program funding supports a systematic and focused effort to develop advanced separation technologies and reactor types that can maximize the use of spent fuel from commercial nuclear power production. As budgets become more constrained, NEI believes that this program should be focused on, and guided by, reasonable prospects for commercial development and, wherever possible, coordinated with industry and similar programs being pursued by our international colleagues.

### **Reactor Concepts Research, Development and Demonstration**

DOE's advanced nuclear energy research agenda is supported by this \$72.5 million budget. NEI believes \$21.5 million for the Light Water Reactor Sustainability (LWRS) program is necessary for a program in which DOE has partnered with industry and the NRC to coordinate research needs and share costs to extend the operation of commercial reactors. DOE's long-term research into advanced small reactors, gas-cooled reactor technology and accident-tolerant fuels are also supported in this budget. NEI urges subcommittee to support these initiatives.

### **Integrated University Program**

NEI believes the administration's attempt to terminate the Integrated University Program (IUP) is folly at a time when demand for nuclear-trained workers is increasing and advances in nuclear science and technology can contribute to the U.S. economy, energy security, global competitiveness, and national nuclear security. A \$5-million program at DOE, together with an associated \$15-million NRC program, provides important nuclear science and engineering research and workforce training at America's universities and community colleges.

### **Completion of the MOX Fuel Facility**

NEI opposes the \$183 million cut in funds for the MOX fuel facility now under construction at the Savannah River Site in South Carolina. This facility is important to U.S. national security and as a demonstration of America's commitment to nonproliferation. It is approximately halfway through construction, at a cost of \$4 billion to date. When operating, the facility will convert some 34 metric tons (at minimum 17,000 weapons) of surplus weapons-grade plutonium into MOX fuel for use in commercial power reactors. It is estimated that the fuel from the MOX project would produce \$50 billion worth of electricity and enable the federal government to eliminate the expense of storage and surveillance of the plutonium. Construction and operation of the MOX plant is the result of years of work and commitments with the Russian Federation, the state of South Carolina, and thousands of workers at the site and across the country. Each of those parties made commitments to this program on the assumption that the U.S. government is a credible partner capable of fulfilling its arms control and nonproliferation commitments. Failure to complete this project will validate those critics of the government who claim it simply cannot complete complex projects, particularly those concerning nuclear materials disposition.

### **Reform DOE's Clean Energy Loan Guarantee Program**

The nuclear industry appreciates the support provided in previous years by the subcommittee for the DOE loan guarantee program for new nuclear energy plants and nuclear fuel cycle facilities. NEI urges the subcommittee to maintain the appropriated funds for projects under development.

NEI believe that the loan guarantee program has great potential. There is no cost to taxpayers for nuclear energy project loan guarantees, but there is significant benefit to consumers. The use of loan guarantees will lower the overall cost of nuclear energy projects, ultimately reducing the cost of electricity to consumers. Companies granted loan guarantees by DOE for nuclear energy projects must pay a premium (the credit subsidy cost) for use of the program, and cover all administrative costs.

New nuclear projects must have financing support—either loan guarantees from the federal government or assurance of investment recovery from state governments, or both. The states are doing their part. Throughout the South and Southeast, state governments have enacted legislation and implemented regulations to advance new nuclear plant construction. A comparable federal government commitment – in the form of a workable loan guarantee program – is in the national interest. For the nuclear energy industry, one of the most significant challenges involves determining the credit subsidy cost. NEI believes the methodology used by the Executive Branch inflates the credit subsidy cost well beyond the level required to compensate the federal government for the risk taken in providing the loan guarantee.

NEI encourages the subcommittee to require DOE – possibly through the Secretary of Energy Advisory Board – to conduct a systematic, disciplined, open assessment of implementation of the Title XVII loan guarantee program, identify the weaknesses in implementation, and develop recommendations to ensure that this program becomes the workable financing platform that Congress envisioned. This assessment must include consultation with, and participation by, the nuclear energy industry and the financial community to understand fully the successes and failures in implementation.

### **Safety-Focused and Efficient NRC Regulation**

The nuclear energy industry's first priority is operating America's nuclear energy facilities safely and reliably. The companies that produce electricity at nuclear power plants continuously incorporate lessons learned from best practices at all U.S. facilities as well as operating experience worldwide. Safety enhancements made over more than 40 years, including new processes and procedures based on lessons learned from Fukushima, have resulted in sustained high levels of safety.

The industry encourages oversight of the NRC by Congress to ensure that the agency prioritizes its activities effectively, based on safety significance, and achieves timely closure on issues. The NRC is making initial progress in these areas – addressing the cumulative impacts of its regulatory activities – and the industry believes the agency should be encouraged to continue these efforts.

The NRC's annual budget has grown from \$442.1 million in 1990 (when the agency was regulating 112 reactors) to \$1.053 billion in 2013 (when the agency was regulating 104 reactors). The number of NRC employees increased from 2,881 in 1999 to 3,927 in 2013. Recognizing that NRC licensees pay 90 percent of the proposed \$1.06 billion budget of the NRC, we appreciate the subcommittee's oversight to ensure that NRC activities and budget are more transparent and cost-effective.