

September 21, 2021

The Honorable Marcy Kaptur
Chairwoman
House Appropriations Committee
Subcommittee on Energy and Water
Development, and Related Agencies
2186 Rayburn House Office Building
Washington, DC 20515-3509

The Honorable Mike Simpson
Ranking Member
House Appropriations Committee
Subcommittee on Energy and Water
Development, and Related Agencies
2084 Rayburn House Office Building
Washington, DC 20515-1202

Chairwoman Kaptur, Ranking Member Simpson, and House Appropriations Subcommittee on Energy and Water Development, and Related Agencies Membership:

I write on behalf of the 10,000 members of the [American Nuclear Society](https://www.ans.org) (ANS) to provide comment and perspectives on fiscal year 2022 (FY22) appropriations legislation for Energy and Water Development, and Related Agencies.

First, ANS is grateful for your continued support of nuclear technology research and development (R&D) and the education and training of skilled nuclear professionals. We recognize that appropriators are continually faced with difficult decisions about competing funding priorities, yet through two administrations and shifts of control in Congress, you have provided a consistent and growing level of federal stewardship for nuclear science and engineering that has been instrumental in advancing a new generation of technologies and in supporting a new generation of professionals who will design, build, operate, and maintain them.

Earlier this year, the ANS Task Force on Public Investment in Nuclear Research and Development¹ issued a report on the federal R&D-related funding needed to ensure that the U.S. is prepared for a commercial scale-up of advanced nuclear technology in the 2030-time frame. Overall, we find the total funding level for the Department of Energy (DOE) Office of Nuclear Energy (NE) in the House bill to be more consistent with the recommendations of the report, and thus, we strongly urge you to adopt it as the basis for conference negotiations. We would also like to highlight two issues that the Subcommittee will need to consider as you begin conference discussions on FY22 appropriations.

DOE Nuclear Energy University Program (NEUP)

Since its inception in 2008, NEUP has served as the primary vehicle through which the DOE supports nuclear energy–related R&D at America’s college and universities. Administered by DOE NE, NEUP provides peer-reviewed, competitively awarded grants to departments of nuclear engineering and related disciplines for mission-related R&D focused on advancing nuclear energy technologies.

¹ ANS Task Force on Public Investment in Nuclear Research and Development. “The U.S. Nuclear R&D Imperative.” 39 pages. American Nuclear Society. La Grange Park, Illinois (Feb. 2021).
<https://www.ans.org/file/3177/2/ANS%20RnD%20Task%20Force%20Report.pdf>

While never specifically authorized or appropriated by Congress until recently, the DOE has consistently over three presidential administrations kept its commitment to dedicate approximately 20 percent of funds appropriated to its R&D programs for “work to be performed” at U.S. colleges and universities. In practice, the DOE has provided \$50–\$60 million in peer-reviewed, competitively awarded NEUP funding each year since FY09. These awards have created numerous collaborations between universities, national labs, and industry partners and have contributed to some of the most innovative advanced reactor designs being developed today. When combined with university projects funded directly by the DOE and national laboratories, total DOE NE support for universities has hovered consistently around 20 percent of its overall R&D budget.

In 2019, the DOE abruptly diverted roughly \$20 million in NEUP funding from the Fuel Cycle R&D account to fund high-assay, low-enriched uranium enrichment activities. This action eliminated roughly one-third of NEUP’s funding well after the release of its FY19 Funding Opportunity Announcement, resulting in a significant disruption of educational and research activities at U.S. universities. Thousands of hours of effort toward creating research proposals were summarily lost, and many university research faculty members were effectively shut out from federal research funding for at least a year, and sometimes longer. The decision also impacted a significant number of students interested in pursuing degrees in nuclear technology–related fields, as fellowships and stipends suddenly dried up due to the lack of funding.

In FY20, NEUP funding was restored to historic levels, and Congress passed the Energy Act of 2020, which included a provision requiring the DOE to dedicate, “to the maximum extent practicable,” 20 percent of its R&D budget for work performed at universities. Since enactment of this provision, reports have emerged suggesting that the DOE’s interpretation of the Energy Act language has resulted in funding shortfalls for national laboratory–based technology demonstrations and an uneven, unpredictable application of the language overall. Finally, we are aware of language in the Senate version of the FY22 Energy and Water Development, and Related Agencies appropriations bill that would waive the Energy Act NEUP for funding provided in the bill.

ANS believes the recent NEUP funding perturbations have been bad for both universities and national labs and that Congress and the administration should work together to find an equilibrium point that provides stability to the process and avoids unnecessary volatility. We find the Senate NEUP provision to be unnecessary, but not harmful to achieving this objective. However, we strongly oppose the inclusion of any additional legislative language that would seek to reshape NEUP and its funding sources by exemption or mandate. We believe that the DOE should be given an opportunity, specifically in its FY23 budget request, to lay out a comprehensive plan for stewardship of the U.S. nuclear education enterprise in a manner that does not compromise other research and technological demonstration priorities. Likewise, we believe the DOE has the flexibility under current law to resolve current funding imbalances in its R&D and technological demonstration portfolio without compromising university nuclear education and research or the commercialization of advanced nuclear energy technologies.

Versatile Test Reactor (VTR)

There is strong consensus in the nuclear technical community that a dedicated fast neutron test facility is an essential element of our nuclear science infrastructure and will help ensure a successful commercial scale-up of advanced nuclear energy in the 2030 timeframe.



The Advanced Reactor Demonstration Program (ARDP) has resulted in significant progress toward building advanced nuclear plants that, if deployed widely, will make game-changing contributions to deeply decarbonizing the electricity sector, the transportation system, and industrial processes such as hydrogen production and desalination of seawater. While ANS does not believe the lack of domestic high-flux irradiation capacity presents an insurmountable roadblock to the completion of the first two ARDP demonstrations, we are very concerned that subsequent commercial scale-up, operation, and continued improvement of innovative advanced designs could be tangibly hamstrung by the lack of suitable testing capabilities. One need only look at the value the Advanced Test Reactor has brought to the existing fleet of U.S. light water reactors to understand the importance of testing and validation.

ANS is disappointed that neither the House nor Senate version of the FY22 bill includes dedicated funding for the VTR. We hope the committees' respective marks are a result of the need to manage conflicting priorities within a tight spending allocation, rather than an outright repudiation of the project itself. If so, we strongly encourage you provide some level of funding, or at least allow the DOE to use existing authorities, to continue work on the VTR-related work scope in FY22. Simply zeroing out the project would completely dismantle the VTR project team and set the U.S. back years in its efforts to keep pace with our Russian and Chinese competitors.

In closing, we again thank you for your continued support of the U.S. nuclear science and engineering discipline. Please feel free to contact me with questions at cpiercy@ans.org.

Sincerely,

Craig H. Piercy

A handwritten signature in black ink, appearing to read "C. H. Piercy", written in a cursive style.

Executive Director/CEO
American Nuclear Society

cc: Rep. Wasserman Schultz
Rep. DeLauro
Rep. Bustos
Rep. Frankel
Rep. Kilmer
Rep. Kirkpatrick
Rep. Lee
Rep. Ryan
Rep. Watson Coleman

Rep. Granger
Rep. Calvert
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Rep. Newhouse
Rep. Reschenthaler