

TESTIMONY OF

Matthew J. Marzano
Commissioner
U.S. Nuclear Regulatory Commission

For a Hearing

BEFORE

United States Senate
Committee on Environment and Public Works

ON

U.S. Nuclear Regulatory Commission's Proposed Budget for Fiscal Year 2027

May 13, 2026
Washington, D.C.

Chairman Capito, Ranking Member Whitehouse and Members of the Committee, thank you for the opportunity to appear before you today.

Seventy years ago, President Eisenhower stood before the United Nations to present his vision for the peaceful use of nuclear technology to a world that had crossed a threshold into the atomic age. The Atoms for Peace program that followed established the groundwork for international civil nuclear cooperation and reoriented the Atomic Energy Commission toward transparency and a dual mandate to promote and regulate nuclear technology for commercial purposes. Thus, the agency became tasked with fulfilling a defining premise of Eisenhower's address that "this greatest of destructive forces can be developed into a great boon, for the benefit of all mankind."

The nuclear enterprise in the United States sits at a similar yet distinct crossroads today. The extraordinary promise of emerging nuclear technologies has converged with a geopolitical urgency to address energy security and climate change. The interests of industry, government, and the public have aligned in ways not seen in a generation. Yet, many of the same pressures and expectations that tested the Atomic Energy Commission endure in this moment. And today, the Nuclear Regulatory Commission has inherited the responsibility to enable the safe use of this technology, while ensuring adequate protection of public health and safety.

For many years, NRC staff have identified reforms that could improve efficiency without compromising safety. Some of those ideas have been discussed, studied, but eventually deferred. Further, in the past, rulemaking has often been overly burdensome and lengthy. Multi-year rulemakings with extensive layers of internal review can create uncertainty, consume resources, and delay benefits without proportionate gains in safety. In that context, I view the directives of the ADVANCE Act and Executive Orders as providing a vehicle—and frankly, the

encouragement—to modernize and incorporate regulatory reforms that have been long contemplated but not fully realized.

But I would also emphasize that modernization must be approached with care and discipline. The NRC's credibility—earned over decades—is rooted in a deliberate, evidence-based approach to decision-making. Public trust, safety margins, and the long-term viability of nuclear energy all depend on getting this right. Moving too quickly, or without sufficient technical grounding, risks undermining the very goals we are trying to achieve.

This is particularly important when we consider the distinction between our existing fleet and emerging technologies. For today's operating reactors, we benefit from thousands of reactor-years of experience—data, operating history, and lessons learned that give us confidence in where flexibility can be responsibly applied. That depth of knowledge allows us, in some cases, to streamline processes or adjust requirements with a clear understanding of the risks.

However, that same level of experience does not yet exist for novel reactor concepts. These designs may ultimately prove to be safer and more efficient, but our regulatory approach must reflect the current state of knowledge, not anticipated outcomes. As a result, the degree of flexibility we can responsibly offer is different. That is not a barrier to innovation—it is a recognition that sound regulation must be anchored in sound engineering judgement.

Building and sustaining a regulatory system that is both modern and durable depends on two foundational elements: research and workforce.

Simply stated, robust research provides the technical basis for informed decision-making. It reduces uncertainty, supports risk-informed regulation, and broadens our capability to assess new

technologies on their merits. Without it, we are left to rely on assumptions and unnecessary conservatism where we should be relying on evidence and data.

Equally important is the strength of our workforce. The NRC's effectiveness depends on the expertise, independence, and judgment of its people. As technologies evolve, so too must our capabilities. Investing in the next generation of engineers, safety analysts, and regulatory professionals is not optional—it is essential to sustaining our mission. That is why I remain focused on addressing our workforce challenges. This involves an honest assessment of the reasons individuals may choose to leave the NRC and implementing the solutions to address them. We must better leverage our hiring and compensation authorities and implement work-life flexibilities to attract and retain talent and incentivize public service.

In closing, modernization is both necessary and achievable. But it must be done in a way that preserves the principles that have served this nation well: independence, rigor, and an unwavering commitment to safety. If we pair thoughtful reform with strong investment in research and people, we can build a regulatory framework that supports innovation while maintaining the public trust that is the cornerstone of our work.

Thank you, and I look forward to your questions.