

Testimony of Stephen G. Burns

Former Commissioner and Chair,
U.S. Nuclear Regulatory Commission

I appreciate the opportunity to testify before the committee today. I plan to share my perspectives on nuclear regulation stemming from my experience at the Nuclear Regulatory Commission (NRC) as a former Commissioner and Chair as well as a career attorney and General Counsel and from my engagement in the international sphere through my work at the OECD Nuclear Energy Agency and with the International Atomic Energy Agency.

The nuclear industry, unlike many, was born regulated. From the very beginning, as President Eisenhower's vision of the peaceful atom was realized, a strong regulator was deemed essential to ensuring public health and safety through rigorous licensing and oversight. In the United States, that role was initially assigned to the Atomic Energy Commission (AEC), a multi-member independent agency established in 1946 which took on the regulatory responsibility under the Atomic Energy Act of 1954 that established the licensing framework for civilian applications of nuclear energy.

Concern over the combination of both promotional as well as regulatory responsibilities for nuclear energy within the AEC led to the reform under the Energy Reorganization Act of 1974 that established the NRC as the independent regulator and assigned promotion and development of nuclear energy to what is now the Department of Energy. This year marks the 50th anniversary of the establishment of the NRC. The Commission is headed by up to five commissioners, no more than three of which can be members of the same political party, and the President designates one commissioner as the Chair. The principle of separation or independence from the promotional responsibilities for nuclear energy is reflected in the Convention on Nuclear Safety (IAEA Doc. No. INFCIRC/449), the international instrument that was adopted after the Chernobyl accident to which the United States is a party. As stated in Article 8 of the Convention, member states adhering to the Convention "shall take the appropriate steps to ensure an effective separation between the functions of the regulatory body and those of any other body or organization concerned with the promotion or utilization of nuclear energy."

The fact of the matter is that the push and pull over the efficacy and appropriateness of the licensing process and the effective focus of the safety review has been with us since the dawn of civilian nuclear energy licensing in the late 1950s. There is always room to assess the efficiency and effectiveness of the regulatory process and adapt it to the evolution of nuclear technologies and their implementation. Recognizing that, past and current NRC commissioners and technical staff have set in motion changes to reduce the regulatory burden and speed the deployment of reactors at lower cost. The changes are prudent and reasonable and support the promise of expanded reliance on nuclear energy. Some of these actions have been at the NRC's own initiative; others were established under legislation that the Congress has passed including the 2019 Nuclear Energy Innovation and Modernization Act (NEIMA) and the Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy (ADVANCE) Act signed into law in 2024.

The NRC has protected the health and safety of Americans for 50 years without a single civilian reactor radiation-related death. The lessons of the Three Mile Island accident have long been woven into the safety regime, and every commercial reactor in the United States is safer today because of major safety steps taken after the destruction of reactors at Japan's Fukushima Daiichi facility by a massive earthquake and tsunami. Since the Three Mile Island accident in 1979, the agency has licensed approximately 50 power reactors to operate. It has recently issued construction permits for advanced reactors ahead of schedule. And the NRC has cleared utilities to boost the power of many existing reactors and has licensed them to run longer than originally planned.

The administration has established ambitious goals to increase the nation's nuclear energy capacity by 300% by 2050. Recent executive orders propose significant changes in regulatory processes, an 18-month wholesale revision of safety regulations, and shortening schedules for new reactor reviews while at the same time suggesting the downsizing the NRC. While these orders mention safety, their primary focus appears to be reducing regulation and accelerating licensing. Moreover, the involvement of OMB and DOGE, lacking substantial nuclear regulatory expertise, is concerning as their focus should be limited to financial and organizational matters. If directing safety requirements, they would be in direct conflict with the Atomic Energy Act and related legislation that gives the NRC the sole authority to establish safety requirements.

One significant nuclear safety event could derail the entire effort as was seen after the Three Mile Island accident which set back the industry for years due to loss of public support. Maintaining that support requires adhering to the NRC's principles of good regulation: independence, openness, efficiency, clarity, and reliability. The commitment to nuclear safety and adherence to these principles have resulted in the United States safely maintaining the largest fleet of nuclear reactors in the world and the safety standards the international nuclear community strives to meet.

I have concerns about the unintended safety consequences that reduced NRC independence and a schedule-driven regulatory paradigm threaten to bring. The loss of public confidence that can befall a safety agency is a risk when expediency is seen to be given priority. Reducing the NRC's independence while mixing promotion of nuclear energy and responsibility for safeguarding the public and environment is a recipe for corner-cutting at best and catastrophe at worst. Transforming the nuclear energy program on such an ambitious schedule is complex and carries inherent risks. While I support continued focus on increasing NRC efficiency, great care must be taken in streamlining licensing and regulatory processes to preclude erosion of nuclear safety standards. For the revised nuclear energy framework to deliver reliable power, clear guidance on safety is paramount, avoiding any mixed messages that prioritize speed over safety. There are rarely second chances in the nuclear arena; the program cannot succeed without being fundamentally safe. Nuclear safety, not regulatory acceleration, must be the bedrock of this effort.

I am also concerned that steps to undercut the independence of the NRC and the commitment to ensuring safety could undermine the reputation of U.S. reactor vendors in the rest of the world. A design licensed in the United States now carries a stamp of approval that can facilitate licensing elsewhere, including the many countries that plan to embark on a nuclear power program. If it becomes clear that the NRC has been forced to cut corners on safety and operate in a less transparent manner, U.S. reactor vendors will be hurt. The nuclear industry is helped by the fact

that it has a strong independent regulator behind it. In sum, the administration's objectives will fail if it does not encourage a healthy nuclear safety culture with nuclear safety as its highest priority and adhere to the principles of good regulation. These are critical for operational success and preserving the United States' world-class reputation. Successful expansion of nuclear energy demands an unwavering commitment to safety, driven by independent and unbiased safety assessments. A regulatory process that is supported by the public and that is clear and predictable to the nuclear industry is also essential.