



Webinar

Challenges and Complexities of 21st Century Deterrence

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Abstract

In April 2009, US President Barack Obama spoke about nuclear weapons in the 21st century during a speech in Prague. He warned of the dangers associated with global nuclear proliferation and the risk of terrorist access to nuclear weapons, and outlined his intent to reduce the role nuclear weapons play in US national security policy with an ultimate vision of a world without nuclear weapons. President Obama also made the following commitment: "As long as these weapons exist, the United States will maintain a safe, secure and effective arsenal to deter any adversary, and guarantee that defense to our allies." When the Nuclear Posture Review (NPR) was released a year later, it included five key objectives:

1. Preventing nuclear proliferation and nuclear terrorism
2. Reducing the role of US nuclear weapons in US national security strategy
3. Maintaining strategic deterrence and stability at reduced nuclear force levels
4. Strengthening regional deterrence and reassuring US allies and partners
5. Sustaining a safe, secure, and effective nuclear arsenal



These objectives endure today, and detailed, multi-decade planning has occurred to establish the baseline scope, schedule, and resource requirements for implementation. Since the Cold War ended in the early 1990s, the US has dramatically reduced both the overall quantity and the number of types of US nuclear weapons. These reductions are continuing under the New START Treaty, enabled by Life Extension Programs for weapons that will remain in the US nuclear arsenal, as well as important upgrades to key elements of the US nuclear weapons infrastructure.

Current restrictions on "new military capability" for the US nuclear arsenal constrain the scope of the Life Extension Programs. Life extending the Cold War stockpile is necessary to eliminate technology obsolescence and address aging concerns, and is sufficient for ensuring a strong US nuclear deterrent for the foreseeable future. However, a lot has changed since the 2010 release of the Nuclear Posture Review, both geo-strategically and technologically, and we should anticipate continuing, rapid, and perhaps even disruptive change into the future. A high level treatment of emerging threats as well as possible implications for US deterrence will be described.

About Ms. Sheryl Hingorani

Sheryl Hingorani leads Sandia's Systems Analysis and Engineering organization, which performs systems analysis, exploratory engineering, both domestic and international training exercises, and program development focused on highest priority U.S. national security needs. She is also responsible for managing Sandia's Nuclear and Radiological Security portfolio, and is the Sandia interface with the U.S. Department of Homeland Security's Domestic Nuclear Detection Office.