



THE NATIONAL DEFENSE STRATEGY AND NUCLEAR POSTURE REVIEW: NO URGENCY ON NUCLEAR ARMS CONTROL

Lawyers Committee on Nuclear Policy, November 2022

The Biden Administration, at the end of last month, released its unclassified version of the National Defense Strategy (NDS) and Nuclear Posture Review (NPR). Several significant flaws in the Administration’s NDS and NPR have already been the subject of extensive commentary.¹ The most glaring contradiction in the NPR is the stated desire for “a world free of nuclear weapons,” while it describes no concrete or measurable steps to achieve this goal, justifying this by stating a requirement of “enduring improvement in the security environment” before pursuing abolition.² Another serious gap, however, has generally received much less attention: the failure to recognize the impact of the rapid development of disruptive military technology on a shrinking window of time to negotiate effective nuclear arms control agreements.

Although the NPR does reaffirm a United States commitment to arms control, and Administration officials have said that discussions with Russian representatives will begin “in the near future,”³ nothing in the NDS or the NPR indicates any requisite urgency.

Some important impacts of emerging disruptive technology were concisely summarized in an article this summer by former Under Secretary of State for Arms Control Rose Gottemoeller. She writes that

with advances in sensing technology states may soon be able to track and target their adversaries’ nuclear missiles.... Advances in big data analysis and quantum

¹ See Lisbeth Gronlund, “[The new US nuclear posture review is a major step backward](#),” Bulletin of the Atomic Scientists, 4 November 2022; Victor Gilinsky, “[What the new posture review says—and does not say—about the future of nuclear weapons](#),” Bulletin of the Atomic Scientists, 14 November 2022; Daryl Kimball, “[New Nuclear Posture Review Sends Mixed Signals at Time of Heightened Nuclear Danger](#),” Arms Control Association, 26 October 2022.

² US Department of Defense, [2022 Nuclear Posture Review \(NPR\)](#), p. 2.

³ US Department of State spokesperson Ned Price, press conference, 8 November 2022. See Simon Lewis, “[Russia, U.S. to hold first talks under nuclear treaty since Ukraine war - State Dept.](#),” Reuters, 9 November 2022.

computing may enable real time tracking and targeting of mobile nuclear missiles and in the future even submarines.⁴

She notes that with “such real time tracking and targeting even the stealthiest or most well protected nuclear weapons will become vulnerable in the future.”⁵ Ms. Gottemoeller cites these developments as an argument against spending enormous sums on weapons systems that may be obsolete before they are deployed. However, the same facts have grave implications for the future of arms control. She notes that “[c]onfidence in the survivability of second strike capabilities...has been a strong factor in maintaining the stability [sic!] of nuclear deterrence.” Clearly “stability” here is a relative term at best, since the mutual deterrence system has brought us several times within minutes of accidental nuclear war.⁶ However, it is certainly true that increases in the perceived vulnerability of second strike capabilities can only increase the likelihood of catastrophic escalation in response to a false alarm.

Ms. Gottemoeller’s concern is supported by extensive research from scientists and arms control experts. In 2015, a panel of retired military experts, chaired by a former Vice Chairman of the Joint Chiefs of Staff, warned that developments in technology were shortening warning and decision times, thus increasing the risk of “catastrophic” human error.⁷ In the intervening seven years, numerous scientists and arms control experts have reported that developments in such fields as cyber warfare, artificial intelligence, satellite and other sensing techniques, and hypersonic missiles are sharply increasing the danger.⁸

⁴ Rose Gottemoeller, [“The Case against a New Arms Race,”](#) Foreign Affairs, 9 August, 2022.

⁵ *Id.*

⁶ William J. Perry and Tom Z. Collina, *The Button: the New Nuclear Arms Race and Presidential Power from Truman to Trump*, Ben Bella Books 2020, pp. 59-65.

⁷ Global Zero Commission on Nuclear Risk Reduction, [“De-alerting and Stabilizing the World’s Nuclear Force Postures,”](#) April 2015.

⁸ See, e.g., Federation of American Scientists, [“Emerging Disruptive Technologies and Their Potential Threat to Strategic Stability and National Security,”](#) 2018; Edward Geist and Andrew Lohn, [“How Might Artificial Intelligence Affect the Risk of Nuclear War?”](#) Rand Corporation 2018; Nuclear Threat Initiative, [“Nuclear Weapons in the New Cyber Age,”](#) 26 September 2018; Beyza Unal and Patricia Lewis, [“Cyber Security of Nuclear Weapons Systems”](#) Chatham House, 11 January 2018; Vincent Boulanin, Lora Saalman, Petr Topychkanov, Fei Su, and Moa Peldán Carlsson, [“Artificial Intelligence, Strategic Stability, and Nuclear Risk,”](#) Stockholm International Peace Research Institute, June 2020; Sylvia Mishra, Katarzyna Kubiak, and Graham Stacey, [“New Technologies, Complexity, Nuclear Decision Making and Arms Control,”](#) European Leadership Network, June 2021. For additional reports, see Christopher Cyba, [“New Technologies and Strategic Stability,”](#) Daedalus (2020) Vol. 149, No. 2.

In October 2022 a report involving 30 international experts,⁹ funded by the German Federal Foreign Office, summarized these concerns and warned that efforts at arms control “face an uphill battle” because of the rapid advance of technical development.¹⁰

These facts are also relevant to the Administration’s evaluation of issues presented by China as articulated in the NPR, including the necessity to press for talks on stability, transparency, and confidence building measures.¹¹ It should not automatically be assumed that recent planned increases in the Chinese arsenal reflect a retreat from China’s No First Use (NFU) policy; confidence in the survivability of a retaliatory capability has been a stated condition of Chinese NFU policy from the beginning, and we can be certain that experts in Beijing have been closely following the literature cited in this paper. Missile defense must be a topic in any Sino-U.S. discussions.

The existence of serious conflicts in Ukraine, the Taiwan Strait, and elsewhere should not delay the resumption of negotiations. A world free of great power conflicts will not exist in the foreseeable future. The danger of nuclear catastrophe is too great to permit further delay, the technical issues needing to be resolved are too complex, and time is not on our side. The Biden Administration’s NDS and NPR presented an opportunity to finesse US policy in support of concrete and measurable steps toward disarmament; instead it further entrenches long-standing and dangerous policy to falsely promote nuclear weapons as a beacon of protection, rather than recognizing the intrinsic existential risks they pose to the world. There can be no true “responsible stewardship”¹² of these weapons of mass destruction, and the US must press forward in the pursuit of effective multilateral arms control.

⁹ Marina Favaro, Neil Renic, and Ulrich Kühn, “[Negative Multiplicity: Forecasting the Future Impact of Emerging Technologies on International Stability and Human Security](#),” Institute for Peace Research and Security Policy at the University of Hamburg, September 2022.

¹⁰ *Id.*

¹¹ 2022 NPR, p. 17.

¹² 2022 NPR, p. 25.