

## Testimony on United States Nuclear Strategy and Policy

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Good morning, Chairman Reed, Ranking Member Mr. Inhofe, and Committee members, it is my honor to appear before the Senate Armed Services Committee today and I thank you for the invitation. You have asked me to comment on the future of arms control; in particular, my views on arms control agreements in the context of a possible post New START world with Russia, as well as how China's rise will be taken into account for any future arms control agreements beyond New START. I am happy to comment on these matters, as well as any other particular issues that you wish to raise with me. I will abbreviate my prepared remarks, however, in the interest of time, and ask, with your permission, that they be placed in full on the record.

As the Trump Administration debated whether to extend New START in November 2019, I argued that the success of our U.S. nuclear modernization depended on the Treaty.<sup>1</sup> The Russians had already completed over a decade of their own nuclear modernization program, and continued to build missiles, including several concerning new types.<sup>2</sup> By extending New START, I underscored, we could hold the Russians to the central limits of the Treaty—1,550 warheads and the 700 delivery vehicles (missiles and bombers) on which they are deployed.

Of course, we would have to watch carefully for any sign of Russian non-compliance with the Treaty. If they continued to comply, the Treaty would give the United States a significant level of predictability about the status and size of the Russian strategic nuclear forces. Therefore, we would be able to enjoy a stable and predictable environment in which to carry out our own urgently needed nuclear modernization.

At the time, one of the concerns I had was that the Russian nuclear modernization already well underway had given the Russians hot production lines for both their missile and their warheads. Russian missile production and warhead manufacturing were up and running at high capacity, having been modernized to enable the Russian triad modernization. New machine tools had been acquired for missile production plants and warhead production facilities had been updated.

By contrast, the United States, at the beginning of its nuclear triad modernization, was scrambling to find missile and warhead pit production capacity. The U.S. had significant work to do before it could begin the active production of new intercontinental ballistic missiles (ICBMs). Furthermore, warhead pit production required new facilities that would take years to build.

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<sup>1</sup> <https://www.nytimes.com/2019/11/08/opinion/dont-let-the-new-start-treaty-lapse.html>

<sup>2</sup> <https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/russias-exotic-nuclear-weapons-and-implications-for-the-united-states-and-nato/>. The heavy ICBM SARMAT and hypersonic glide vehicle AVANGARD would fall under the limits of the New START Treaty once deployed.

In this situation, I was concerned that if the New START Treaty suddenly went away, then the Russian Federation could quickly outrun the United States in deployed nuclear warheads. It could immediately upload more warheads on its existing missiles, and it could quickly produce more missiles capable of carrying more warheads.

In fact, this scenario was beginning to take shape with the emergence of the SARMAT heavy ICBM. This is a modern version of the SS-18 missile first deployed in the 1970s, which was capable of carrying over ten warheads per missile. As long as the SARMAT fell under the limits of the New START Treaty, the Russians would be constrained from deploying too many of them and from loading them with too many warheads. The Russians have indicated that they consider the SARMAT to be an ICBM that by definition falls under the limits of the Treaty.

Another concerning development in 2019 was the emergence of a Chinese nuclear modernization program. In the 50 years since the United States and the Soviet Union, later Russia, had been negotiating about bilateral nuclear restraint, the Chinese had never been part of the process. They had expressed restraint through a national no-first-use policy and dependence on a second-strike retaliatory posture, keeping their nuclear arsenal small.

But their effort to acquire a nuclear triad during their modernization process, adding strategic strike submarines and long-range bombers to their ICBM force, seemed to augur a major shift in their nuclear policy and doctrine. Perhaps the Chinese had even begun striving for nuclear parity with the United States and Russia, which would mean a big build-up in their nuclear forces, including the number of deployed nuclear warheads.

In the four years since 2019, nothing has happened to assuage my concerns. In fact, just the opposite has occurred: The Russian Federation is still capable of producing new nuclear warheads and missiles, but now it is also engaged in a bloody war with Ukraine of its own making. Its leading figures, especially President Vladimir Putin, have engaged in egregious nuclear saber-rattling that has been unheard of since the Cuban Missile Crisis, sixty years ago this October. Russia is behaving like a big nuclear pariah state.

My concerns about China also have deepened, with the discovery of an estimated 300 ICBM siloes dug in the desert north and west of Beijing and continued emphasis on nuclear modernization. These signs of its nuclear ambitions are very worrisome—even more so because China has not shared information about its modernization program. Its nuclear intentions remain opaque at a time when its conventional deployments in air and sea have become more active and its threats of military action—especially against Taiwan—more bellicose.

At this moment of crisis in Europe and the Indo-Pacific, neither Russia nor China seems much invested in nuclear stability and restraint. It is a dangerous time, but one that argues strongly for carrying forward a careful but intensive modernization of our U.S. nuclear weapon systems. As President Barack Obama first said in his Prague speech in April 2009, as long as nuclear weapons exist, the United States must maintain a safe, secure, and effective nuclear arsenal.

The modernization program for the nuclear forces of the United States is moving into a more active phase, with steadier funding. I know that this committee keeps a keen eye on the budget

for nuclear modernization, and I thank you for it. Decisions are finally being made about building up production capacity for both missiles and warhead pits. Replacing the submarines, intercontinental ballistic missiles, and bombers will take well over a decade, but the process is vital to ensure that the United States remains secure from nuclear attack during a fraught period of global competition.

In particular, the United States must watch China. As noted above, China has gone from a nuclear posture depending on a small force of missiles intended for second-strike retaliation to something else. Still, there is no need to panic. Even if it quintuples its stockpile over the next decade, as some experts are predicting, China's number of warheads will still be well below the numbers in the U.S. arsenal in 2030.

Washington must remain alert as well to what Russia is doing. The country is a highly capable and experienced nuclear power with a leader, Vladimir Putin, whose belligerence is breathtaking. His nuclear threats are unlike anything seen in the over seven decades since nuclear weapons were last used to attack Hiroshima and Nagasaki at the close of World War II.

But a modernized U.S. nuclear force posture will help keep these threats in check, ensuring a strong deterrent, one in which Washington can be confident. The fact that New START continues in place ensures that the United States has a predictable and stable environment in which to carry forward its nuclear modernization. The Russians cannot outrun us by quickly deploying more missiles and warheads as long as the Treaty remains in force. The fact that our nuclear modernization will be far from finished when the Treaty does go out of force in February 2026 is *the* most important reason, in my view, to work hard to replace New START.

People often ask me how we can bear to negotiate with Russians when their regime is perpetrating a bloody and needless war in Ukraine. My answer is in three parts. First, we cannot always choose our negotiating partners. Hostage negotiators know this: they must deal with dreadful terrorists or criminals to secure the release of innocent victims. If it is in our interest to negotiate, then we should be ready to do so.

Which leads to my second point: it is squarely in our national security interest to negotiate a follow-on to New START. As I noted above, a new treaty will ensure that we have a stable and predictable environment in which to carry forward our nuclear modernization and complete it in the 2030s.

Which leads, finally, to my third point: a completed nuclear force posture modernization will ensure that we have the industrial base in place should others choose to launch a nuclear arms race. Today, we are working hard to ensure that we have adequate production capacity to build new ballistic missiles and warhead pits. We are not finished with that process, however, and new production facilities for some components of the nuclear force posture will only fall into place later in this decade or into the next. Therefore, it is also in our national security interest to sustain legally binding reciprocal limits on the nuclear forces of Russia and the United States. Put most bluntly, we are not ready for a nuclear arms race.

China is well below the New START limits today, but if they try to build up to 700 delivery vehicles and 1,550 deployed warheads, Washington will see it coming with enough time to respond. The United States, in other words, will have sufficient strategic warning of a Chinese sprint to parity.

In the meantime, our immediate objective with China should be to seek greater understanding of what they are expecting to achieve with their nuclear modernization. We need to understand why they are building so many ICBM silos in their western regions: is it to play a shell game, as the USSR did in the 1950s and 1960s? Or is it to challenge the United States to a peer nuclear competition?

Indeed, we need *reciprocal* understanding, since the Chinese no doubt have their own concerns about the U.S. nuclear modernization program. If we can launch into a balanced discussion that moves beyond the formulaic to produce mutual predictability, then we will have achieved significant gains in confidence in both countries. Of course, we are nowhere near that state of mutual confidence and understanding today, thus we need to keep a sharp eye on developments in the Chinese nuclear force posture.

Secure on the nuclear modernization front, the United States must renew its attention to the technological revolution. China's intention is to dominate the new technology space.<sup>3</sup> It has the clear goal of being the world leader in artificial intelligence (AI) by 2030, and it is putting substantial resources into achieving that objective. Beijing has already put AI to work in tightening the security bubble around China's society and economy, gaining an enormous amount of experience with the technology in the process. If the United States is not careful, China will outrun the United States not on the nuclear front, but in AI innovation, leading to a dangerous gap in military capabilities. And AI is only one arena where the Chinese are seeking dominance. Beijing also has biotechnology, quantum computing, and other sectors in its sights.

Choosing to focus on this technological competition is not easy at a time when the Russian Federation is pounding Ukraine in an unprovoked and unwarranted military invasion, China is menacing Taiwan, and both are modernizing their nuclear forces. I strongly believe, however, that the future security of the United States as a whole depends on our ability to stay in the technology race, to compete, and to succeed.

In sum, the United States should not be the one to launch a nuclear arms race, but it must be ready to respond immediately to others who do. This point relates not only to the continued strength and viability of our nuclear deterrent, but also to our ability to compete successfully in technology and innovation. The last thing that the United States needs, as it is trying to prevail in new technologies, is a nuclear arms race.

The wisest choice for Washington, then, is to modernize its nuclear force posture as planned while putting its main emphasis on developing and acquiring new technologies for military applications. If we are forced to enter into a nuclear arms race, then we will be sidetracked in a

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<sup>3</sup> For my views on this matter, see <https://www.foreignaffairs.com/articles/russia-fsu/2022-03-09/how-stop-new-nuclear-arms-race>.

direction that is not in the U.S. national security interest. If we must engage in a nuclear arms race, we will, but we should do everything that we can to avoid it.

As I close, I would like to make one final point. I am horrified at the way in which Russia is perpetrating dangerous strikes near nuclear power plants—at Zaporizhzhia, but also at a nuclear power plant in southern Ukraine, far away from the front lines of fighting. I am horrified but not surprised. Russian military experts have been writing of such targets in their military journals for years. But these attacks naturally lead to the question: how can we negotiate with such people?

My answer comes down to the point that we cannot always choose our negotiating partners—we must instead look to our national interests. It is squarely in the national security interest of the United States to constrain Russian nuclear weapons, and a proven way to do so is at the negotiating table.

Chairman Reed, Ranking Member Mr. Inhofe, distinguished members of the Committee, thank you for your attention to my remarks and I look forward to your questions.