



PROCEEDINGS

CURRENT AND PROJECTED GROWTH OF CHINESE NUCLEAR WEAPONS

The remarks below were delivered at a symposium on “Current and Projected Growth of Chinese Nuclear Weapons” hosted by the National Institute for Public Policy on August 27, 2024. The symposium examined the growth of China’s nuclear arsenal and how it is portrayed in the West, focusing on official Department of Defense reports as well as unofficial reports that are generally considered authoritative but tend to underestimate the size and capabilities of Chinese nuclear forces.

David J. Trachtenberg (moderator)

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The expansion of China’s military and, in particular, its nuclear forces and capabilities has been referred to as “breathtaking” by Adm. Charles Richard, former Commander of STRATCOM, who called China’s nuclear expansion a “strategic breakout.”¹ Indeed, the current Commander of STRATCOM told Congress that China now has more ICBM silos than the United States. According to Gen. Anthony Cotton, “It is not an understatement to say that the Chinese nuclear modernization program is advancing faster than most believed possible.”² Indeed, China is building and modernizing a true strategic Triad with modern, mobile, MIRVed ballistic missiles, submarines, and long-range bombers.

In fact, more than a decade ago, Chinese state media, including the CCP’s flagship *Global Times*—boasted that “The 12 JL-2 nuclear warheads carried by one single Type 094 SSBN can kill and wound 5 million to 12 million Americans.”³ Maps of fallout patterns resulting from Chinese SLBM strikes on the United States were published and later removed from the internet when Western analysts discovered them.

Despite this immense nuclear buildup, both official and some unofficial sources appear to consistently underestimate the size, scope, and capabilities of China’s burgeoning nuclear arsenal. For example, both the DoD annual China military power reports and those published by the Federation of American Scientists—which are often viewed as authoritative—tend to downplay or discount the magnitude of China’s nuclear buildup. This has significant implications for deterrence, as an accurate understanding of China’s nuclear potential is essential to determining what it takes to deter Chinese provocation or aggression.

The undercounting of China’s nuclear arsenal takes on even greater significance and carries additional risks when considering the growing entente between China and Russia and their common goal of displacing the United States as the world’s preeminent military

¹ David Vergun, *DOD News*, August 12, 2021, available at <https://www.defense.gov/News/News-Stories/Article/Article/2729519/china-russia-pose-strategic-challenges-for-us-allies-admiral-says/>.

² Haley Britzky, “China has more ICBM launchers than US, senior general tells lawmakers,” *CNN*, February 7, 2023, available at <https://www.cnn.com/2023/02/07/politics/china-icbms-us-letter-congress/index.html>.

³ Zachary Keck, “State Media Boasts of China’s Ability to Nuke US Cities,” *The Diplomat*, November 5, 2013, available at <https://thediplomat.com/2013/11/state-media-boasts-of-chinas-ability-to-nuke-us-cities/>.



power. Clearly, Beijing is less than fully transparent regarding its nuclear arsenal. But Chinese sources themselves have given us indications that the United States may be significantly underestimating the size and capabilities of China's nuclear forces.

The failure to acknowledge an opponent's true arsenal—especially when there is credible evidence to suggest the opponent possesses a capability that exceeds Western estimates that are generally considered authoritative—may serve to foster a sense of complacency regarding the true extent of the Chinese nuclear threat and may actually encourage China to engage in opportunistic aggression.

The DoD has repeatedly spoken of China as the “pacing threat.” The *2022 Nuclear Posture Review* acknowledges that China “has embarked on an ambitious expansion, modernization, and diversification of its nuclear forces.”⁴ And reportedly, the Biden Administration has revised U.S. nuclear employment guidance to focus on the rapid growth of China's nuclear potential. As one former administration official recently stated, “The president recently issued updated nuclear-weapons employment guidance to account for multiple nuclear-armed adversaries. And in particular, the significant increase in the size and diversity” of the Chinese nuclear arsenal.⁵

Nevertheless, the DoD appears to undercount the size and diversity of that arsenal in its public reports.

Finally, the growth in Chinese nuclear weapons and capabilities underpins Beijing's more belligerent military activities and its efforts to overturn the U.S.-led international order, as part of a growing entente with other authoritarian regimes. Despite this, the administration continues to seek to engage China in arms control discussions, which China has consistently rejected. Moreover, just last week, Beijing called on the United States to make “drastic and substantive cuts to its nuclear arsenal” and to end its policy of “extended deterrence.”⁶ This is what my mother would call “chutzpah.”

I will stop here and look forward to the comments of our panelists.

⁴ Department of Defense, *2022 Nuclear Posture Review*, p. 4, available at <https://media.defense.gov/2022/Oct/27/2003103845/-1/-1/1/2022-NATIONAL-DEFENSE-STRATEGY-NPR-MDR.PDF>.

⁵ Vipin Narang, “Nuclear Threats and the Role of Allies’: Remarks by Acting Assistant Secretary of Defense for Space Policy Dr. Vipin Narang at CSIS,” August 1, 2024, available at <https://www.defense.gov/News/Speeches/Speech/Article/3858311/nuclear-threats-and-the-role-of-allies-remarks-by-acting-assistant-secretary-of/#:~:text=The%20President%20recently%20issued%20updated,of%20the%20PRC's%20nuclear%20arsenal>.

⁶ Joel Gehrke, “China demands ‘drastic and substantive cuts’ to US nuclear arsenal,” *Washington Examiner*, August 21, 2024, available at <https://www.washingtonexaminer.com/news/3130176/china-demands-drastic-substantive-cuts-us-nuclear-arsenal/>.

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The annual Pentagon reports on Chinese military power are the most authoritative available but have a poor track record on Chinese nuclear weapons. If current (2022/2023) DoD numbers are accurate, then every previous version of the DoD report underestimated the Chinese nuclear threat.

The 2022/2023 Pentagon estimates of Chinese nuclear weapons are:

- 500+ “operational” nuclear weapons in May 2023.
- 1,000+ “operational” nuclear weapons in 2030,
- About 1,500 in 2035.

The Pentagon reports register a sharp disconnect between the rapid visible growth in Chinese delivery vehicles and the relative slow growth in the number of China’s nuclear weapons.

The Rocket Force is China’s main nuclear strike force, but the other services have nuclear weapons, ballistic missiles, cruise missiles, and some have aircraft. This includes 72 nuclear SLBMs and Air Force nuclear-capable bombers. All the ICBMs and SLBMs are nuclear-armed. And STRATCOM Commander General Anthony Cotton says about 1,000 IRBMs and MRBM are nuclear-capable.

In fact, DoD’s 2023 estimate of 500+ “operational” nuclear weapons is mathematically impossible. To get the number as low as 500+ all of the following dubious assumptions would have to be true:

- All MIRVed Chinese missiles are deployed with one warhead.
- China is building launchers faster than it is building missiles and building missiles much faster than warheads.
- Less capable DF-31 ICBMs are “probably” being deployed in China’s new silos.
- China has only a handful of air-delivered nuclear warheads, no nuclear-capable cruise missiles and no nuclear-capable H-6K bombers.
- China lacks nuclear-capable short-range ballistic missiles.
- China has only a small number of non-strategic nuclear warheads.

In addition, DoD’s 2030 and 2035 estimates are low. To be even close to correct, they would have to be based upon the same dubious assumptions, except for more MIRVing.

DoD’s estimate of three warheads for the large DF-41 ICBM is among the lowest estimate that exists. For example, then-Vice Chairman of the Joint Chiefs of Staff General John Hyten and then-STRATCOM Commander Admiral Charles Richard both said the DF-41 can carry ten warheads. Moreover, in 2017, China’s People’s Liberation Army (PLA) Rocket Force said there were three DF-41 warhead options: 1) one 1,600-kg warhead of 5.5 megatons; 2) six 250-kg warheads of 650 kilotons; or 3) ten 165-kg warheads of 150-kt.

By 2030 and 2035, all elements of the Chinese nuclear Triad will have been improved and numerically increased. Chinese sources report a more capable ICBM called the DF-45 or DF-51. DoD says China is developing new stealthy heavy and medium bombers. And DoD says China is developing a new missile submarine called the type 096.

Alternative assessments of China's nuclear warhead numbers indicate China has advanced nuclear weapons technology. It conducted 45-47 high-yield nuclear tests through 1996. There is evidence of continued Chinese nuclear testing. And China has stolen design information on all advanced U.S. nuclear weapons.

In addition, there is evidence that China has sufficient fissile material to arm its new MIRVed missiles promptly. In 2019, noted nuclear expert James R. Howe concluded that China had enough fissile material for 3,878 nuclear warheads. In 2021, Dr. John A. Swegle and Dr. Christopher Yeaw, both noted experts on nuclear weapons, estimated China had enough plutonium from its military reactors for 1,300 nuclear weapons. In 2021, former DoD Deputy Assistant Henry Sokolski estimated that China could produce 1,270 warheads by 2030, and stated, "If Beijing instead chooses to develop single-stage nuclear weapons using boosting, highly enriched uranium (HEU) or composite plutonium-HEU warhead designs, it could easily exceed this number by a factor of two or more."

In Congressional testimony in September 2022, Madelyn Creedon, a senior official in the Obama Administration, and subsequently Chairman of the bipartisan congressional Strategic Posture Commission, stated that, "Although estimates vary, China is projected to have between 1,000 and 1,500 nuclear weapons by 2030." In June 2024, Captain (ret.) James Fanell, former Senior Intelligence Officer for the U.S. Pacific Fleet, told Congress that, "The rapid, yet still opaque growth of the PRC's nuclear arsenal may very well exceed the U.S.'s by 2030, if not sooner. Beijing already possesses more tactical nuclear weapons and theater forces than does the U.S." And Bill Gertz has pointed out that, "If 10 warheads are deployed on the DF-41s in the new silos, China's warhead level will increase to more than 4,000 warheads on its DF-41s alone."

The reality is that by 2030, Chinese nuclear weapons numbers are likely to be much higher than the DoD has assessed.