



INFORMATION SERIES CONVERSATIONS ON NATIONAL SECURITY

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Conversations on National Security is a series of interviews with key national security experts. This interview was conducted by National Institute Research Scholar Dr. Michaela Dodge.

An Interview with Major General Michael J. Lutton, Commander, Twentieth Air Force, Air Force Global Strike Command.

Q. Why is it necessary to modernize the ICBM leg of the Triad?

A. Minuteman III nuclear forces have been a bedrock of U.S. national security for more than five decades. As one looks ahead to the next five decades, the question of investing in U.S. nuclear force modernization is as relevant today as ever. Our nation and allies face an uncertain future full of many challenges. In an era of Great Power Competition, we are playing an infinite game with adversaries playing, not to win once and for all, but to survive and keep playing.

Specifically, Russia, China, and North Korea, share five themes in foreign nuclear development and proliferation:

- Increasing numbers or capabilities of weapons in existing programs;
- Enduring security threats to weapons and material;



- Developing delivery systems with increased capabilities;
- Developing nuclear weapons with smaller yields, improved precision, and increased range for military or coercive use on the battlefield;
- Developing new nuclear weapons without conducting large-scale nuclear tests.

As Admiral Charles Richard, Commander, U.S. Strategic Command says, “Strategic deterrence is the most important mission in the Department of Defense. Or said another way, every O [operational] plan in DoD and every other capability in the Department of Defense assumes that strategic deterrence is holding and if it doesn't, nothing else in the department works the way that we designed it to do.”

Q. How will the GBSD be different than Minuteman?

A. The Ground Based Strategic Deterrent (GBSD) will ensure our nation’s nuclear force is ready to meet the warfighting needs of today and tomorrow. GBSD is a modern weapon system optimizing fully integrated launch, flight and infrastructure systems with modern command and control features.

GBSD also meets our Combatant Commander and Air Component Commander requirements. GBSD will also take advantage of modern technology for security and logistics and require less invasive maintenance, increasing our overall readiness and making our operations even more efficient. In addition to filling operational requirements and utilizing modern technology, GBSD will also minimize the amount of manpower needed to perform routine maintenance, reducing the number of Airmen needed to ensure readiness and surety.

Q. Some say ICBMs are dangerous because they are on “hair trigger” alert. How do you assess this argument?

A. Simply put, “hair trigger” alert is a tactic designed to scare not inform and it is irresponsible to use when discussing U.S. nuclear forces.

Every day, across the nuclear enterprise, nuclear surety and safeguards are at the core of our business—every process and every procedure. Meticulous checks and balances, disciplined and rigorous training, as well as direct oversight, have been designed into our operational system. The Airmen who operate our weapon systems know that and are highly trained.



Q. Some favor moving to a Dyad by eliminating ICBMs because they are vulnerable or redundant with SLBMs. What unique characteristics make ICBMs valuable? What important characteristics do they have for deterrence that cannot be matched by the other two legs of the strategic Triad?

A. ICBMs maintain the highest degree of nuclear command, control, and communications as well as being the most responsive leg of the nuclear triad--on day-to-day alert 24/7/365.

ICBMs also present an insurmountable strategic dilemma for any adversary willing to attempt to strike the United States or an ally. Furthermore, the ICBM is the most cost-effective leg and provides a deterrent umbrella for the United States and our allies.

Q. How expensive would it be to further life extend Minuteman for another two decades as compared to deploying GBSD?

A. The Minuteman III (MM III) was designed for 10 years of service life. It now has been on alert for 50 years, 24/7/365.

An analogy might be, imagine if you had a family emergency where time, technology and equipment was vital to ensuring your loved one's survival. You would want the absolute best ambulance with the best equipment available. However, now imagine that ambulance and equipment was not modern and instead was a 1970's classic. Since it's a 50-year-old car, it needed tune ups, equipment replaced, and restoration over the years, but the vendors, equipment and mechanics are no longer available and you're in search of mechanics and companies that must build components from scratch. This also includes the 50-year-old tools and garage to maintain and operate the ambulance. Specifically, with the MM III, it is even more challenging than replacing the parts in a car because there were significantly less missiles made and that number continues to decrease.

Bluntly, because of old age, the subject matter experts who originally engineered the system are no longer around to recreate parts. This also applies to a majority of the original vendors - missing vendors = missing parts, and few current manufacturers can still make parts with now-obsolete technology.

Q. Would further life extension of Minuteman vice deploying GBSD entail increased operational risk - such as safety and security, or survivability?

A. GBSD's modular design is key to lowering lifecycle costs, while providing flexibility as digital engineering and model-based systems engineering are key to lower future costs. Other benefits include:

**Operations:**

- The Command and Control system maximizes the modular design for affordable modernization, maintainability, flexibility and effectiveness.
- There will be enhanced targeting capabilities, while retaining the responsiveness.
- Personnel: work conditions will be improved for an Airmen's quality of life.

Security:

- Due to modularity, GBSD will minimize the amount of time it takes to conduct maintenance allowing access to the entire missile without having to remove parts of the weapon system or opening the silo cover for regular maintenance tasks. This reduces hours and exposure of the missile for each issue, which results in a safer and more secure weapon system.

Maintenance:

- Improves meantime between failure and reduced component replacement.
- Provides modular (line-replaceable/upgradeable) hardware.
- Incorporates enhanced diagnostics.
- Enables predictive analysis and logistics data collection with supply integration.
- We own the technical baseline. Therefore, if components need to be modernized, we own the baseline to do so instead of contracting for it.

Q. Critics contend ICBMs are only relevant to deterring an attack on the U.S. homeland. Can you elaborate on the importance of the GBSD program for U.S. allies?

A. The twenty-first century strategic deterrence that Air Force Global Strike Command (AFGSC) provides is vitally important to the defense of both our nation and its allies. A modernized force ensures the nation has a reliable, safe and lethal nuclear deterrent. This also extends to our allies, who know they can rely on and trust our lethal force.

To paraphrase Gen. Tim Ray, AFGSC commander, the extended deterrence provided to them by Global Strike is an important part of their strategic calculus. Strategic deterrence looms large in the minds of our partners and allies every day.

Q. Russia appears to be advancing its strategic missile defense capabilities. Does this have implications for extending Minuteman vs. deploying GBSD? Or for the value of ICBMs in general?

A. ICBMs are the most responsive leg of the nuclear triad and have been operating for 50+ years. For the Minuteman III to be usefully life extended, the United States would need to replace a number of major components which, even if accomplished at cost and on time, would



still fall short of the Defense Department's requirements – including accommodating modern safety and security features and technologies.

Several analyses and continued validation of previous findings conclude it is more cost-effective to replace the system and repurpose the silos. GBSD provides a more capable ICBM within the cost estimate for reprocurring the existing Minuteman III capability. Additionally, the GBSD design will provide the United States with a system that is more readily adaptable to evolving threats while significantly reducing the total cost of ownership for the ICBM. To put it simply, a Minuteman III SLEP costs more and is less efficient than a system replacement while providing no additional capabilities to close our operational gaps both now and in the future.

Q. The GBSD Environmental Assessment states that "It is in the best interest of national security to replace the Minuteman III weapon system... before age, diminishing manufacturing sources, and material shortages make Minuteman III sustainability difficult, putting the nation at risk." What is the "risk" referring to??

A. One would need to speak to the author of the Environmental Impact Statement (EIS); however, risk is likely referring to an ability to sustain Minuteman III and that sustainment of the deterrent force is at risk ... thus the nation is at risk.

Gen. John Hyten, then the commander of U.S. Strategic Command, said it best during a 2017 interview: "If you look at every element of the nuclear enterprise, it has to be modernized. All our stuff is old. It's still ready, safe, secure, reliable; but it's old."

Minuteman III was designed for only 10 years of service life. It has now been operating for more than 50 years, 24/7/365. Every single day, it is getting harder and harder to maintain due to the components and manufacturers, which may longer be in existence.

Q. Those who oppose the GBSD program argue that the original Analysis of Alternatives assumptions on which the Air Force recommended a new missile rather than a Minuteman III life extension are no longer valid, among other reasons because the costs of the GBSD program went up. Is this assessment accurate?

A. It's important to note that GBSD is not just a new missile but optimal, fully integrated launch, flight and infrastructure systems with modern command and control features. An analysis of alternatives for GBSD was conducted under the Obama administration which determined that while the MM III SLEP was possible it came with a higher cost than replacement by a technically-advanced successor--GBSD. This was revalidated for a report to Congress in October 2019. Capability cost trades revealed billions of dollars saved by going with GBSD versus sustaining MM III. Furthermore, in order for SLEPing not to affect ICBM availability,



the extension strategy would have had to begin years ago. There is no margin left in the existing weapon systems to stretch the MM III any further -- this is not the kind of business where you want to invite a sustainment lapse that gets you into a security and safety issue. More importantly, the longer we wait to modernize, our adversaries continue to upgrade their nuclear capabilities.

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