

Written Statement of Mr. John D. Hill
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Senate Armed Services Committee Strategic Forces Subcommittee on the
“Missile Defense Budget”
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Introduction

Chairman King, Ranking Member Fischer, and distinguished members of the Subcommittee. On behalf of the Office of the Secretary of Defense, thank you for the opportunity to testify on the topic of the President’s “Missile Defense Budget.” I am honored to join Lieutenant General Heath Collins from the Missile Defense Agency (MDA), Lieutenant General Sean Gainey from the U.S. Army Space and Missile Defense Command (SMDC), and General Gregory M. Guillot from U.S. Northern Command (USNORTHCOM).

Today, I will review how air and missile threats have evolved over the last year, provide an update on our progress in policy and strategy implementation, and explain how the Department’s FY 2025 budget request of \$28.4 billion for missile defense and missile defeat programs supports continued efforts.

The Evolving Threat

As the 2022 Missile Defense Review (MDR) highlights, missiles are “a principal means by which adversaries seek to project conventional or nuclear military power.” Conflicts around the globe continue to demonstrate the centrality of missiles in modern warfare and global strategy, and the indispensable role of integrated air and missile defenses (IAMD) in protecting military capabilities, civilian populations, and national sovereignty.

It has been over two years since Russia launched its full-scale invasion of Ukraine. In response, Ukraine’s employment of a wide array of air and missile defenses – including legacy

Soviet and NATO-interoperable systems contributed by allies and partners – has been fundamental to defending Ukrainian forces and civilians, protecting critical infrastructure, and preserving freedom, self-determination, and sovereignty against ruthless, authoritarian aggression. Innovative solutions and resourcefulness have embodied these efforts, as seen through the example of the “FrankenSAM” program, wherein the Department of Defense, working with Ukrainian forces, successfully adapted legacy Ukrainian launchers to utilize Western-supplied missiles, enabling more widespread air and missile defense coverage than would otherwise be achievable. Meanwhile, Russia is adapting by bolstering its production of missiles and drones and acquiring additional systems from Iran and the Democratic People’s Republic of Korea (DPRK).

In the Middle East, Iran-backed militant groups have targeted Israel, U.S. military forces, and maritime commercial shipping operating in the Red Sea, the Bab al-Mandeb Strait, and the Gulf of Aden. Hamas, Lebanese Hizballah, the Houthis, and Iran-aligned militia groups (IAMG) in Iraq and Syria accept Iranian military support in many forms, including capabilities such as uncrewed aerial vehicles, ballistic missiles, and cruise missiles. In the aftermath of the October 7 attacks, the United States temporarily transferred its two Iron Dome batteries to Israel and replenished Iron Dome interceptors. The United States has relied on air and missile defenses, such as the Navy’s AEGIS Weapon System with Standard Missiles and the Phalanx close-range defense system, to counter threats to our forces, commercial shipping, and our partners in the region. Additionally, the United States surged Terminal High Altitude Area Defense (THAAD) and PATRIOT to the region. Most recently, Israel’s successful employment on April 13 of IAMD, with support from the United States and other countries, to defend itself against Iran’s direct attacks with drones, cruise missiles, and ballistic missiles underscored the indispensability of IAMD in modern military posture.

In the Indo-Pacific region, the People’s Republic of China (PRC) and the DPRK continue to develop a range of missile capabilities that – combined with coercive activities – threaten regional stability. As outlined in the National Defense Strategy, the most comprehensive and serious challenge to U.S. national security is the PRC’s coercive and increasingly aggressive efforts to refashion the Indo-Pacific region and international system to suit its authoritarian preferences. The PRC is also developing and growing its offensive arsenal, including rapid advancement of ballistic, hypersonic, and cruise missile capabilities. As highlighted in the Department’s 2023 China Military Power Report, the PRC is developing a hypersonic glide vehicle that is likely intended to be capable of striking U.S., allied, and partner military bases and fleets in the Indo-Pacific region.

The DPRK also continues to diversify its missile and nuclear programs in line with Kim Jong Un’s defense modernization goals. In 2023, the DPRK launched a solid-propellant intercontinental ballistic missile (ICBM) and a purported submarine-launched cruise missile. The DPRK also continues to diversify its launch platforms. The DPRK also unveiled a new ballistic missile submarine and tested an underwater drone that it claimed was nuclear-capable. Finally, in March 2023, Kim inspected what the DPRK claimed was a tactical nuclear weapon. These programs both undermine regional stability and expand DPRK missile threats to the U.S. homeland.

U.S. Missile Defense Policy

The 2022 MDR describes missile defense as “a core deterrence-by-denial component of an integrated deterrence strategy.” Missile defenses are integral to achieving the National Defense Strategy’s top priorities of defending the homeland and deterring strategic attacks

against the United States. Missile defenses undermine adversary confidence in offensive missile use by:

- reinforcing U.S. diplomatic and security posture;
- reassuring allies and partners that the United States will not be deterred from fulfilling its global security commitments;
- introducing doubt and uncertainty into adversary attack planning;
- raising the threshold for conflict by reducing adversaries' incentives to conduct small-scale, coercive attacks;
- denying the benefits of an uncontested attack by adversaries; and
- mitigating damage should deterrence fail.

In short, missile defenses, paired with advanced early warning systems, expand the decision space for our military and civilian leaders and preserve our forces' freedom of maneuver.

As Russia's war in Ukraine and the conflict in the Middle East demonstrate, kinetic interceptors remain the primary means to defend against offensive missile, artillery, and rocket attacks. To keep pace against this rapidly evolving threat requires continued improvement of our active missile defenses as well as pursuit of comprehensive missile defeat approaches to expand our response options.

To address these challenges, the Department is prioritizing efforts across the entire engagement space to improve the probability of a successful intercept and reduce interceptor salvo size. To achieve these goals, we are developing and fielding better sensors – on Earth and in space – that can provide higher fidelity warning, tracking, and kill assessment data to reduce the number of interceptors required to defeat each incoming threat missile. These investments will also deliver improved fire control and discrimination capabilities. Space-based sensors

now being deployed in proliferated constellations will contribute improvements and resilience to both homeland and regional missile warning, missile tracking, and missile defense architectures. The Department is also putting a greater emphasis on both kinetic and non-kinetic missile defeat capabilities, which encompass right-of-launch and left-of-launch capabilities, to expand our options against these threats.

Investments

For FY 2025, the President's Budget Request includes \$28.4 billion for missile defeat and defense to defend the homeland, our deployed forces, allies, and partners against increasingly complex missile threats. Important missile defense and defeat investments include:

- \$2.5 billion to develop the Next Generation Interceptor (NGI) for ground-based midcourse defense, and to extend the service life of the current Ground Based Interceptors (GBI).
- \$1.9 billion for ballistic and hypersonic defense programs, which includes \$175 million for the Glide Phase Interceptor (MDA), \$653 million for SM-6 Block IA (Navy), and \$963 million for PAC-3 Missile Segment Enhancement (Army).
- \$4.7 billion for Space-Based Missile Warning Systems, which includes \$2.6 billion in resilient low Earth orbit (LEO) and medium Earth orbit (MEO) missile warning/missile tracking systems, and \$2.1 billion in Overhead Persistent Infrared (OPIR) Systems.
- \$1.5 billion for the Army and MDA for the development and procurement of the Guam Defense System.

- \$1.3 billion for Sea-Based Weapons Systems. The Department will stop procurement of the SM-3 Block IB missile after FY 2024.
- \$1.0 billion for Army IAMD.
- \$1.0 billion for Lower Tier Air Missile Defense Sensor (LTAMDS) research, development, test, and evaluation (RDT&E).
- \$384 million for Over-the-Horizon Radar modernization and Cruise Missile Defense of the Homeland.

The Department's FY 2025 missile defense and defeat budget meets evolving threats head-on as one critical element of the Department's broader integrated deterrence strategy.

Homeland Missile Defense

As stated in the National Defense Strategy, the Department's top priority is to defend the U.S. homeland. The United States relies on strategic deterrence to address and deter large intercontinental-range nuclear missile threats to the homeland from the PRC and Russia. The Ground-based Midcourse Defense (GMD) System protects the homeland – including Hawaii and Alaska – against ICBM threats from the DPRK and potentially Iran, if it were to develop an ICBM capability. The most technically effective, least costly, and rapid approach to staying ahead of the growing DPRK threat and the potential Iranian threat is to increase our ability to successfully prosecute a missile defense engagement and reduce the numbers of interceptors needed to accomplish an engagement. To this end, in addition to sensor developments and deployments previously discussed, we are developing the NGI for ground-based midcourse defense. We plan to emplace the first NGI by 2028, and to acquire 20 NGIs for deployment at

Fort Greely, Alaska, where silos are currently available. The 2022 MDR also envisions the NGI potentially replacing the existing GBI.

In September 2023, Secretary Austin issued policy guidance for Air and Cruise Missile Defense of the Homeland. The Secretary's action followed a comprehensive re-assessment of our approach to air defense of the homeland as currently reflected in Operation NOBLE EAGLE. The revised guidance will inform development of future years' budgets for the investments necessary to pace homeland air and cruise missile defense activities to the growing multi-domain threat posed by the PRC while also accounting for the acute threat posed by Russia. In the near term, to address the emergent threat posed by advanced cruise missiles, the Department is taking such measures as fielding over-the-horizon radars and cloud-based command and control systems that will improve our ability to detect and respond to potential strikes and thereby decrease the risks from cruise missile strikes against U.S. critical assets.

Additionally, following the Deputy Secretary's 2022 designation of a lead Military Department to begin planning for and coordinating the acquisition of air and cruise missile defenses of the homeland, the Air Force, with the support of the Army, is nearing completion of a comprehensive analysis of alternatives that will inform our investments in this strategically important capability.

The 2022 MDR is clear that an attack on Guam or any other U.S. territory by any adversary will be considered a direct attack on the United States and will be met with an appropriate response. The architecture for defense of Guam against diverse missile attacks therefore must be commensurate with its unique status as an unequivocal part of the United States, its vital geography, and the numerous operational capabilities it hosts. The Department is developing and funding a persistent 360-degree layered defense capability to protect Guam against simultaneous raids of cruise, ballistic, maneuvering, and hypersonic threats. MDA is

currently conducting an Environmental Impact Statement to assess the potential environmental impacts and required mitigation associated with an Enhanced IAMD system for the defense of Guam.

The Department's efforts to create a layered IAMD architecture on Guam are neither simple nor without cost. We have to join together diverse, Military Service-specific IAMD capabilities with broader command and control systems into an optimal mix of sensors and shooters. IAMD systems – with both active and passive features – must also be linked with other elements of offensive military posture. These are just a few examples of the challenges that we face as we pursue this top priority of U.S. homeland IAMD in the Indo-Pacific region.

Regional Missile Defense

The United States has developed layered, conventionally armed, multi-domain missile defense architectures to protect our deployed forces and support our allies and partners against theater-range threats. For example:

- On land, the United States fields THAAD batteries to counter short-range ballistic missiles (SRBM), medium-range ballistic missiles (MRBM) and intermediate-range ballistic missiles (IRBM), as well as PATRIOT battalions for terminal defenses against SRBM and MRBM, cruise missiles, aircraft, and uncrewed aircraft systems (UAS). The Army will field the first Indirect Fire Protection Capability (IFPC) battery, designed to defeat cruise missiles, UAS, and rocket, artillery, and mortars, in FY 2026. IFPC is currently undergoing developmental testing and is scheduled to move to operational assessment later this year.
- In the maritime domain, the United States continues to improve AEGIS ballistic missile defense-capable destroyers and cruisers loaded with a variety of

interceptors, such as the Standard Missile (SM)-3 Block IIA and IB, the SM-6, the SM-2, and the Evolved Sea Sparrow Missile (ESSM). Additionally, in conjunction with Japan, MDA is developing the Glide Phase Interceptor to defend against regional hypersonic threats.

Space Contributions to Homeland and Regional Missile Defense

- In the space domain, the U.S. Space Force (USSF) has commenced launching tranches of LEO satellites every two years to provide robust global coverage for missile warning, missile tracking, and low-latency, fire-control quality data for weapons engagement within the Missile Defense System. USSF is leveraging the advances made by MDA's Hypersonic and Ballistic Tracking Space Sensor (HBTSS) prototype program to contribute to this roadmap. In February, MDA and the USSF launched two HBTSS prototype satellites into orbit.
- USSF plans include fielding two epochs of MEO satellites by FY 2031 to perform missile warning and missile tracking. A full LEO and MEO constellation will have the ability to detect and track hypersonic weapons, ballistic missiles, and raids in a high-clutter environment through missile burnout.
- USSF also plans to launch two Next-Generation OPIR geosynchronous Earth orbit satellites by FY 2027, and two Next-Generation OPIR polar satellites by FY 2031 to perform missile warning.

Allies and Partners

NATO

At the 2023 NATO Summit in Vilnius, NATO Allies committed to further strengthening the

Alliance's IAMD readiness, responsiveness, effectiveness, and interoperability. Building on that commitment, several ongoing NATO IAMD initiatives are increasing NATO IAMD capability, improving Allied air surveillance, increasing the Alliance's IAMD readiness and posture, and enhancing NATO's BMD capability. Likewise, NATO Allies continue to acquire their own IAMD capabilities through national, bilateral, and multilateral frameworks, including some that the United States is directly supporting, and which further strengthen NATO's deterrence and defense. NATO's announcement earlier this year that the Alliance would facilitate on behalf of a coalition of Allies the acquisition of up to 1,000 PATRIOT interceptors and support the construction of a PATRIOT production facility in Germany exemplifies this trend. As a member of the Alliance, the United States is contributing technical, programmatic, and policy expertise to inform these initiatives. In addition, the United States is on track to complete the Aegis Ashore site in Poland later this spring and transfer command and control of the capability to NATO this July.

Europe

The Department is working closely with our European Allies and partners on missile defense initiatives to increase their IAMD capabilities, improve our collective ability to share data, and increase integration between our forces. Allies such as Germany, Poland, Romania, Sweden, Finland, Norway, and the Netherlands are acquiring their own IAMD capabilities, and building multinational IAMD procurement programs such as the European Sky Shield Initiative.

Air and missile defenses remain vitally important in Ukraine. Recent passage of the National Security Supplemental budget, with broad bipartisan support, is providing critical support to Ukraine in support of United States national security interests. Because of U.S. security assistance, and that of our Allies and partners, Ukraine has been able to protect its

citizens, reduce damage to critical national infrastructure, and prevent Russia's air superiority. Through the Secretary's Ukraine Defense Contact Group, and the multinational IAMD Capability Coalition, the United States and dozens of Allies and partners continue to meet Ukraine's urgent requirements, including by developing innovative air defense solutions. This support remains important to U.S. national security, and that of our Allies and partners. The United States – alongside our Allies – remains steadfast in our commitment to help Ukraine defeat Russia's aggression.

Middle East

The Department continues to partner in the Middle East to design and implement an IAMD architecture. U.S. Central Command (USCENTCOM) is leading these efforts, which include an array of regular workshops, exercises, and trainings. These efforts, combined with security cooperation tools, battle management/command, control and communications systems, and technical assistance, advance the goal of a shared network capable of coordinated defense. Iran's attack on Israel on April 13th laid bare the importance of integrated air and missile defense. The effectiveness of our defensive efforts on April 13th is an output of USCENTCOM's years-long effort to integrate air and missile defense and early warning systems. U.S. air and missile defense deployments to the region bolster deterrence. U.S. capabilities also support our partners' access to early warning missile data and information sharing so that they are better able to defend their territory and citizens and contribute to wider regional security against Iran-backed air and missile threats.

Through an annual U.S. allocation of \$500 million for missile defense to Israel, the United States continues its longstanding cooperation on co-development, co-production, testing, and fielding of the Arrow Weapon System and the David's Sling Weapon System, and co-

production of the Iron Dome Defense System. In FY 2022, Congress provided Israel with an additional \$1 billion for Iron Dome replenishments and upgrades. Since the October 7, 2023 attacks, and as vividly demonstrated again on April 13, 2024, Israel's missile defense systems have been vital to protecting Israel's population against missile attacks from all directions.

The United States continues to work with the Kingdom of Saudi Arabia and the United Arab Emirates (UAE) to deliver the combat-proven THAAD system to defend against short-range, medium-range, and intermediate-range ballistic missile threats. The Department is currently executing a \$13 billion foreign military sales case to deliver seven THAAD batteries to the Kingdom of Saudi Arabia. The first THAAD interceptors were delivered in July 2023 and the first THAAD battery is on-track to achieve initial operational capability in 2025. The UAE has been operating two THAAD batteries since 2016 and, in January 2022, successfully executed its first real-world intercept against an incoming Houthi ballistic missile. This success has led to follow-on efforts with the UAE to acquire additional missile defense capabilities and sustain their current systems, valued at \$2.9 billion. The United States is also currently in the process of delivering to the Kingdom of Bahrain its first PATRIOT batteries and expects Bahrain to fully operate them in 2025.

Indo-Pacific Region

As we upgrade U.S. IAMD capabilities throughout the Indo-Pacific region, including Guam, we are simultaneously working closely with key international partners such as Japan, the Republic of Korea (ROK), and Australia. This is not simply a force posture issue. Extending deterrence to allies and partners in the region – which includes pursuit of a robust IAMD architecture – is an integral aspect of our mission and provides reassurance that the United States will uphold its international security commitments.

Our IAMD-related engagement with these allies is robust. Japan – one of the United States’ strongest partners on missile defense – recently concluded a visit by its Prime Minister to Washington, D.C. Given rapidly increasing Indo-Pacific threats, Japan plans to increase defense spending to roughly 2 percent of GDP by its fiscal year 2027, with significant new investments in missile defense, counterstrike, space, and other capabilities. Prominent among these efforts is the counter-hypersonic Glide Phase Interceptor cooperative development project, a top priority to which Japan will allocate \$1 billion. Glide Phase Interceptor cooperative development will build on synergies accumulated from decades of U.S.-Japan missile defense cooperation.

The overall scope of our IAMD cooperation with the ROK has expanded significantly under President Yoon’s Administration. We have improved the ROK’s support for the United States’ THAAD posture on the Korean Peninsula, and we are pursuing additional initiatives aimed at improving integration and interoperability.

Trilaterally, the Department has been actively involved in facilitating IAMD cooperation between the ROK and Japan. These efforts have resulted in new operational arrangements such as the December 2023 activation of a trilateral early missile warning data-sharing mechanism against DPRK threats.

We are also working closely with Australia to enhance its regional IAMD capabilities. Australia is investing in joint battle management systems to improve its interoperability with the United States and other allies and partners, and we are actively engaged in broad-based, IAMD-focused discussions with the Australians to help drive future bilateral collaboration.

Overall, current U.S. efforts in the Indo-Pacific region are aimed at laying the diplomatic, security and technical foundations needed for the establishment of a regional IAMD architecture. While this vision of connectivity will ultimately take years to realize, near-term achievements

are building support and common purpose among Indo-Pacific allies and partners to address diverse priorities and national perspectives.

Conclusion

As the current war in Ukraine and the conflict in the Middle East demonstrate, and as seen in the pacing challenge posed by the PRC and the destabilizing threats of the DPRK and Iran, in this era of missile centric warfare, active missile defenses are an essential element of a credible military force posture and integrated deterrence. The Fiscal Year 2025 budget request makes crucial investments in missile defenses to protect the homeland, our forces abroad, and our allies and partners around the globe.

Thank you again for this opportunity to testify and thank you for the role this Subcommittee plays in supporting our homeland and regional missile defense interests. I look forward to our discussion and to answering your questions.