

RECORD VERSION

STATEMENT BY

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Army Modernization

Chairman Lamborn, Ranking Member Moulton, distinguished members of the Subcommittee, thank you for your continued support and enduring commitment to our soldiers, our civilians, and their families. On behalf of the Army Senior Leadership, we thank you for the invitation to appear before you today to discuss one of our top modernization priorities, the development of the Army's Long Range Hypersonic Weapon (LRHW).

Since its inception, the Army has strived to be on the cutting edge of modernization to protect our homeland, provide aid to our allies, and to deliver warfighting capabilities to soldiers. Over the last several years, the Army has undergone significant changes across its modernization enterprise in an effort to successfully deter, and if necessary, fight and win our Nation's wars as part of the Joint Force. The Army prioritized the Long-Range Precision Modernization portfolio in order to provide an array of complementary capabilities to our Combatant Commanders at a multitude of ranges. Recently, there has been an increased emphasis on hypersonic development, with much of the interest being derived from very public reports from near-peer nation states demonstrating hypersonic weapons, such as Russia and China. The responsiveness and survivability of hypersonic weapons is unmatched by traditional ballistic capabilities for precision targeting especially in Anti-Access/Area Denial environments. Combatant Commanders have also identified the crucial need for the United States to possess hypersonic capabilities from a multitude of platforms across domains in order to put high value targets at risk and create multiple dilemmas for our potential adversaries. In support of the National Defense Strategy, the Department of the Army made the decision to shift focus and resources to pursue the development of its first hypersonic weapon system on an accelerated timeline.

Once the decision was made to pursue the development of this technology, the Army Senior Leadership assigned the mission to develop hypersonic weapons technology to

the Army's Rapid Capabilities and Critical Technologies Office (RCCTO), the Army's lead rapid prototyping directorate. RCCTO was chartered in April 2019 as part of the Army's modernization strategy to spearhead prototyping emerging technologies into capabilities delivered to combat units for operational experimentation on accelerated timelines. The RCCTO Directorate is responsible for rapid prototyping efforts directed by our RCCTO Board of Directors, which is comprised of the Secretary of the Army, Chief of Staff of the Army, Under Secretary of the Army, Vice Chief of Staff of the Army, the Assistant Secretary of the Army (Acquisition, Logistics and Technology), and the Commanding General of Army Futures Command. The first and highest priority effort that the RCCTO team was assigned was that of prototyping the Nation's first ground-based hypersonic capability, the LRHW, with the delivery of an operational prototype system in fiscal year (FY) 2023.

Cross-Service Hypersonic Development

Though most of the world has been aware of hypersonic technology only over the past few years, there has been incredible science and technology (S&T) activity conducted at Sandia National Labs for the past few decades that laid the foundation for the Services to jumpstart their weapon programs. Without the work of the scientists at Sandia, the United States would be significantly behind those adversaries that already demonstrate hypersonic capabilities. As hypersonic development is a priority across the Services, the Army partnered early with the other Services, the Navy in particular, in the development of its LRHW system. Governed by a Memorandum of Agreement across the Army, Navy, Air Force, the Missile Defense Agency and the Office of the Secretary of Defense (OSD), each Department of Defense (DoD) entity has specific roles in the development of a common hypersonic boost-glide vehicle, also referred to as the Common Hypersonic Glide Body (CHGB), a shared hypersonic design across the various programs. There is also senior leader representation in each of the Services that regularly meet to make decisions and coordinate across their various hypersonic efforts. This CHGB Board of Directors allows those in the hypersonic arena to share

lessons learned, collaborate on future capabilities, and informed Senior Leadership on areas where their assistance or support is needed.

The Army and the Navy are the most closely partnered as the Army's LRHW and the Navy's Conventional Prompt Strike (CPS) programs share common development efforts and resources. The Navy leads the design of the CHGB while the Army leads its production. As the hypersonic technology has only resided within government labs, such as Sandia, significant efforts between the Services, labs, and industry were initiated to establish the commercial industrial base's ability to produce hypersonic components and weapons at the quantities needed to meet Combatant Commander requirements. In only a few years, the first industry produced CHGBs have already come off the production line, and continue to full production capacity.

The Navy has led the development of the missile booster, a new configuration that both the Army and Navy will use as part of their hypersonic programs. A fully integrated All-Up Round, which will contain the missile booster and the CHGB, will be identical for both the Army's LRHW and the Navy's CPS programs, except the outside cannister, which will be modified to meet the requirements to fit on the Service's desired launching platforms. The Army and Navy are also partnered to execute all flight tests in a series of joint flight campaigns to validate the current designs and inform future science and technology efforts. The Army and Navy's hypersonic partnership has allowed each Service to support more aggressive timelines than separate development programs would have in order to quickly deliver hypersonic capabilities. The sharing of critical components drives cost savings for both Services based on economies of scale.

Army's Long Range Hypersonic Weapon

In April 2019, RCCTO was directed to deliver a road-mobile and C-17 transportable prototype battery of the LRHW in FY 2023. A LRHW battery consists of four Transporter Erector Launchers on modified M870A4 trailers, each equipped with two All-Up

Round+Canisters (eight in total), one Battery Operations Center (BOC) for command and control and a BOC support vehicle. In September 2021, RCCTO delivered all the ground support equipment to the first LRHW battery allowing soldiers to start hands-on training, prior to receiving the full capability scheduled for delivery in 4th Quarter, FY 2023. The Army's first LRHW battery soldiers have successfully completed required New Equipment Training, including a cumulating event in which they deployed by the LRHW battery by C-17 in a combat-like environment and demonstrated the successful full employment of the system. The unit will continue to participate in the Army and Navy Joint Flight Campaigns as additional training opportunities to ensure unit readiness. Upon the delivery of full capability of the LRHW prototype to the unit in FY 2023, the RCCTO will transition the LRHW effort over to Program Executive Office Missiles and Space, which will then be responsible for the development and fielding of the follow-on batteries and the activities associated with a more traditional program of record.

Industry

The Army leveraged support from the multiple entities within DoD for hypersonic development, and the partnership with industry has also been crucial to the current and future successes of hypersonic weapons development. Since the hypersonic technology resided solely in government labs, while the Services have been developing their specific capabilities, the commercial industrial base has also needed resources to stand up their processes to support future production. There is currently no single industry partner that can develop a hypersonic weapon system, and to the credit of industry, multiple industry partners have come together in a collaborative nature in order for us to develop a system together. Over the last few years, the Army has set up a "leader-follower" construct with the government labs so they can train industry in the technology so that the commercial industrial base can then set conditions to produce hypersonic assets in an environment conducive to developing efficiencies and cost-savings.

As hypersonic development is a priority across the Services, OSD has also invested significant resources to help build up the emerging industrial base. These multi-million-dollar investments have specifically benefitted the Army's and Navy's efforts by adding additional machining and testing equipment to help set conditions to increase production rates of the CHGBs, and additional investments have been made to reduce lead times on critical components associated with navigation.

Conclusion

On behalf of the Army, we cannot thank Congress enough for their support for our hypersonic efforts. Hypersonic development is an incredibly challenging technological area and we are managing aggressive timelines to get safe and effective capabilities to our Warfighters on behalf of our Nation as soon as we can. It is truly a joint effort by the Services, Congress, industry and the S&T communities that we are able to be here today, and it is that same effort that will get us what we need in the future.