

# MDA Director: Ship-based Missile Defense More Capable, Flexible than Land-based Options

WASHINGTON – The director of the Missile Defense Agency (MDA) accepted the declaration by Chief of Naval Operations (CNO) Adm. John M. Richardson that he wants to get his Aegis-equipped warships out of the missile defense patrol missions, but noted that the Navy ships provide better capabilities than available land-based alternatives.

Air Force Lt. Gen. Samuel A. Greaves, the MDA director, said June 26 that he understood the concern over the limited number of the multimission ships and “the strain on the crews and equipment” of keeping the multimission-capable destroyers and cruisers deployed on the ballistic missile defense (BMD) missions.

Greaves was asked at a Mitchell Institution breakfast session about Richardson’s June 12 complaint that he had six multimission ships that could go anywhere quickly to address security threats but were tied up “in a tiny little box, defending land.” The CNO said those ships could be used in emergencies, but “I want to get out of the long-term missile defense business.”

Richardson said the BMD mission could be taken over by land-based systems.

Greaves noted that “the CNO did verify that he is supportive of the Aegis BMD mission.”

“The existing ground facilities is Aegis Ashore,” Greaves said, and there is a “question if you could deploy additional

capabilities. THAAD also could do some of that," he said, referring to the Army-operated Terminal High Altitude Area Defense antimissile system.

"But the Aegis weapon system has more capability" and can reach higher altitude targets, Greaves added. He also noted the "flexibility of the (Navy) platform to respond to the threat."

"But, if the nation decides that we need to balance out, or increase the number of land-based capabilities," Greaves said that with "the demonstrated ability we have, we can do it with Aegis Ashore."

The first Aegis Ashore site in Romania was declared operational in May 2016 with a Spy-1D radar and 24 Mk 41 vertical launch systems holding Standard Missile-3 (SM-3) missiles. But the planned second site in Poland that was expected to be operational by early 2019 has run into major problems with site construction. Greaves estimated it would take another 18 months to complete.

In his address, Greaves cited his priorities of increasing the reliability of the existing BMD capabilities, increasing the engagement capabilities and keeping pace with the rapidly improve threats.

"The times for delays and studies are over," he said.

A top priority in keeping up with the emerging threats, Greaves said, was fielding a capability against hypersonic weapons. That threat is real, based on what has been seen in actions by others, he said, apparently referring to China and Russia, which have claimed to have demonstrated ultra-high-speed weapons.

Among MDA's planned projects, Greaves listed an upcoming retest of the SM-3IIA missile, which failed an intercept trial last year. He said officials have isolated the problem to a

part that worked nine out of the 10 previous tests and were working to ensure it will work in the future.

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## **Thornberry: Take “More Out of the Tail,” Put ‘More into the Tooth’ of Defense Budget**

WASHINGTON — House Armed Services Chairman Mac Thornberry, R-Texas, said he is convinced that the military’s readiness problems are far more serious than many people believe, and he is determined to get the maximum impact from the current defense funding increase to attack that problem.

That includes getting the defense authorization and funding bills enacted on time to avoid the waste and inefficiencies of the past year’s continuing resolutions and finding savings from the Pentagon’s administrative functions to “put more in the hands of the warfighters,” Thornberry said May 15.

Addressing a forum hosted by Bloomberg News, Thornberry said he did not expect any major issues to delay House passage of the 2019 National Defense Authorization Act (NDAA) that his committee approved last week.

“My goal is to get it done on time, for a change,” he said.

That means passage before Oct. 1, when the new fiscal year begins.

Thornberry noted that due to the two-year budget agreement that covers the current year and fiscal 2019, “we have had a big turnaround on funding.” But even with the 10 percent increase allowed for ’19, defense is still behind where it was

in 2010, before passage of the restrictive Budget Control Act.

"We can't count on Congress continuing to have 10 percent [growth] in the future. That means we're going to have to have more savings out of the defense budget. ... More out of the tail, more into the tooth," he said.

One of the ways the NDAA seeks to do that is in the proposal to cut personnel and administrative cost in the so-called Fourth Estate, support functions outside of the armed services. Although Thornberry had tried to enact a mandatory 25 percent cut in the cost of those programs, due to opposition in his committee, he accepted language that gives the Pentagon's new chief management officer the discretion to make whatever cuts he can in those functions.

Opposition to his proposed cuts, the chairman said, "is a key example of where Congress adds to the inefficiencies" in defense.

Perhaps another example of that is the language imposed in the NDAA that blocks the plan by the Maritime Administration and the Maritime Sealift Command (MSC) to buy a number of retired foreign-made commercial cargo ships to replace the badly aged sealift vessels MSC would need to support a major overseas conflict. Those ships could be bought and modified for a fraction of the cost of new U.S.-built ships, which the bill requires.

Thornberry said he is "sympathetic to the idea" of buying a certain number of the commercial ships, "that do not imperil your industrial base." But he said he had to "be realistic about the Buy America sentiment" among his committee members "so we can get something moving.

"I'm convinced the readiness problems that have emerged over the last 10 years are far deeper than most people think," he said.

While conceding that he did not expect to get anything like this year's 10 percent funding increase in the future, he noted that Defense Secretary James Mattis and Joint Chiefs Chairman Marine Gen. Joseph Dunford have testified they would need 3 to 5 percent more a year just to keep from falling further behind. "That's the benchmark" for the future, Thornberry said.

Thornberry said he is "skeptical" about the chances of getting North Korea to agree to "permanently and verifiably" give up its nuclear weapons. And even if that were achievable, he said, continued U.S. military presence in Asia and continued improvements in U.S. missile defense "are essential."

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## **New Technologies Drive Demand for More Power Aboard Ships**

NATIONAL HARBOR, Md. — The rapid growth of power-hungry new technologies and the accelerating drive for directed-energy weapons is requiring the Naval Sea Systems Command (NAVSEA) to put increasing efforts into new means to generate, control and store electrical energy aboard Navy ships, the director of the electric ship office said April 11.

Although NAVSEA has been working on providing electrical power to Navy ships for more than a century, what is different from the past are the "notion of directed energy," and the need for higher power radars and other sensors that reach out farther, said Stephen P. Markle, director and program manager of the electric ship office.

So the concern for designing new ships is "not only the hull, but at the end of the day, it's a combat system. The real

focus has to be on the warfighting capability,” Markle said at a briefing at the Sea-Air-Space Exposition.

Markle noted the extensive effort in his office over the last several years on meeting the higher energy demands for the DDG 51 Flight III ships, with the powerful SPY-6 radars and other sensors. That was in addition to the ongoing work on the energy requirements for the still undefined future surface combatants, which he said would be a “family of systems,” including both large warships and unmanned vessels.

Markle referred the industry representative in the audience to the upcoming 2018 Naval Power and Energy Technology Development Road Map, which would describe “the product areas we’re interested in.”

Those include control, energy storage, generators, motors, prime movers and power converters.

A major problem with electrical energy on warships, he noted, was the frequent and massive surges in power demands with activation of sensors, which requires means to stabilize the electrical systems.

There also are increasing needs to reduce the size of the electrical generators and to meet the demand for directed-energy weapons – such as lasers and the proposed electromagnetic railgun – that require instant bursts of massive amounts of power and much greater ability to store energy, he said.

Current batteries able to provide those high-levels of power would be too large, so they are experimenting with new batteries made with lithium iron and phosphate, and with fly wheels, Markle said.

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# Accelerated Acquisition Taking Shape, Producing Results

NATIONAL HARBOR, Md. – The upbeat tone for a panel discussion on accelerated acquisition April 11 was set at the start when Vice Adm. David C. Johnson declared that “accelerated acquisition is not just a theory, but something we’re doing today.”

Johnson, the military deputy assistant secretary of the Navy for research, development and acquisition, went on to cite the rapid movement of the Long-Range Anti-Ship Missile from concept to testing in three years and the truncated procurement process for the new frigate, which is expected to have contract award by 2020.

Speaking at the panel at the 2018 Sea-Air-Space Exposition, Brig. Gen. Joseph Shrader, commander, Marine Corps Systems Command, described a similarly reduced process for the new armored reconnaissance vehicle to replace the aged Light Armored Vehicles, and Rear Adm. Douglas W. Small, program executive officer, Integrated Warfare Systems, mentioned the accelerated action to field a new shipboard laser weapon system.

Michael W. Derrios, senior procurement executive and head of contracting for the Coast Guard, touted the high-speed movement toward procurement of a new polar icebreaker, which was finally authorized and partially funded by Congress last year.

Johnson and other officials on the panel attributed their

ability to move quicker on acquisition to new authorities from Congress and process-cutting directives from the Navy and Marine Corps leadership and from James F. Guerts, the new assistant Navy secretary for research, development and acquisition, who brought a record of accelerated procurement from his previous position with the Special Operations Command.

"These new approaches make maximum use of the new authorities" from Congress and the service chiefs, Johnson said.

Panel member also listed a top-down drive to decentralize acquisition authority and to delegate decision-making down to the program managers, cultural changes to shed old habits and policies, and a greater willingness to take the risk of failure for pushing new systems.

William P. Bray, deputy assistant Navy secretary for research, development, test and evaluation, said his office was studying "how do we create change in culture so we don't go down old roads."

The panelists discounted the risk associated with rapid acquisition, with Schrader saying the actions were "not just rolling the dice" but taking "intelligent risks" based on knowledge of the requirements and available technology. Schrader mentioned the series of advanced technology demonstrations the Marines have held, in cooperation with the Navy, to find promising innovation and putting them in the hands of young Marines for field testing.

Small said of his office, "we are absolutely rigged for speed. ... Getting rid of layers helps a lot."

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# Arleigh Burke Program Pushes Ahead, With First Two Flight III Ships Under Contract

NATIONAL HARBOR, Md. — The DDG 51 program is moving ahead rapidly, with 12 ships under contract, including the first two of the substantially improved Flight III ships, the program manager said April 10.

The detail design on Flight III is “just about done and we’re on track to start construction,” with work on DDG 125 expected to start at Huntington Ingalls Industries (HII) in May, and DDG 126 at Bath Iron Works later this year, said Capt. Casey Moton. “We have a good, stable design” that was approved by both yards last year with fixed-price contracts.

The major change for Flight III is the AN/SPY-6 Air and Missile Defense Radar (AMDR) “which will bring a significant improvement in missile defense,” Moton told a Naval Sea Systems Command briefing at the Sea-Air-Space Exposition.

The Flight III design also required some “enabling changes” needed to accommodate the combat changes and to restore life expectancy margins to match the current Arleigh Burke destroyers, he said.

Those included expansion of the deck house, widening the hull above the water line to improve stability and thicker “inner-bottom scantling” to increase hull strength and to lower the center of gravity to offset the heavier SPY-6 radar antenna, he said. The design also included a major increase in air conditioning capacity and electrical energy, to support the more powerful radar.

Integrating the AMDR with the Aegis combat system “is going smoothly” with tests in Hawaii and elsewhere, he said.

The cost of the new class of ships is expected to be \$1.7 billion to \$1.75 billion for the first ships, which is expected to drop with later ships, as has happened throughout the DDG 51 program, Moton said.

The program office now is focusing on executing the latest multi-year production contract, which will buy 22 ships through fiscal 2023, he said. That contract calls for three ships a year for each year, except 2020.

A total of 65 Burkes have been delivered, with another about to transfer to the Navy, Moton said.