SASC Chairman Inhofe: '$750 billion is where we need to be' for 2020

WASHINGTON – The Senate Armed Services Committee chairman is less concerned about whether overseas contingency operations (OCO) funds are increased to get the right top line for defense funding as long as the total is $750 billion.

"We've got to have adequate funding," Sen. James Inhofe said Feb. 12, when asked about reports that the Trump administration would propose a major increase in OCO funds to get the defense top line to over $700 billion without breaching the spending limit set by the 2011 Budget Control Act, which goes back into effect next year unless Congress suspends it again.

"I don't know how much it's going to be, but I think it's going to be an exaggerated figure to get up to what we need to defend America," Inhofe told a Defense Writers Group breakfast Feb. 12 on Capitol Hill.

Inhofe referred repeatedly to last year's report from the National Defense Strategy Commission's warning that the U.S. military was falling behind Russia and China and needed to have steady funding increases of 3 to 5 percent above inflation to regain its lead. That means $750 billion in the fiscal 2020 defense funding, he said.

Both Congress and the administration have argued in the past that money for the on-going conflicts and other global crises should be moved into the base budget to help the armed services better plan for the future. OCO spending is not counted against the BCA funding caps and has been used in the past to add weapons already being bought in the base budget.

“I’ve been guilty of that myself,” Inhofe said.

But, he said, “$750 billion, I think that’s where we need to be. How we you get there? Are you going to be using some amount of OCO? … You need the money, $750 billion.”

In response to a later question about the administration’s newly released demand for an accelerated drive on artificial intelligence (AI), Inhofe said, “to me, there are other things we need to do first.”

While conceding that “China is ahead of us” on AI, “I’d like to look at the other areas where Russia and China are ahead of us.” He emphasized artillery, which has long been a major priority to him, partly because the joint artillery center of excellence is at Fort Sill, in his home state of Oklahoma. He also cited the high percentage of vintage F/A-18s that are considered undeployable because of mechanical problems.

“These are things that need to be done. Our peer competitors – China and Russia – they have a lot of things that are better than ours. To me, that’s the priority. Behind that, things like AI.”

Inhofe also supported a rapid increase in F-35 production, even those the Lockheed Martin fighter is not expected to complete the comprehensive operational testing to prove it is fully combat ready until next year.

Noting the number of allied nations that are buying F-35s, in addition to the U.S. Navy, Marine Corps and Air Force, he said, “what we really need now, what our allies need, is the F-35.”

Inhofe said his committee plans to have the new National Defense Authorization Act on the Senate floor by June, despite not receiving the detailed defense budget until late March. He also urged the appropriations committees to get busier so the defense funding bill can be enacted before the Oct. 1 start of

the new fiscal year.

Asked about President Donald Trump's threat to transfer money from other accounts if Congress does not provide the $5.7 billion he wants for the Mexican border "wall," Inhofe said, if it becomes necessary, I believe he will do the emergency … If it has to be that way, leave MilCom (military construction) alone."

Final Resting Place of USS Hornet CV-8 Located in South Pacific

SEATTLE – Wreckage of the World War II aircraft carrier USS Hornet rests on the floor of the South Pacific Ocean around the Solomon Islands, 5,400 meters (nearly 17,500 feet) below the surface as discovered last month by the expedition crew of Paul G. Allen's Research Vessel (R/V) Petrel, the Navy's website said in a Feb. 12 post.

Hornet was best known for its part in the fateful Doolittle Raid that was launched in April of 1942, which was the first airborne attack of Japanese homeland targets including Tokyo. Led by U.S. Army Lt. Col. James Doolittle, all of the 16 B-25 planes that were launched from Hornet were unable to land at their designated airstrip in China, but the raid provided a boost to American morale, and put Japan on alert about our covert air capabilities.

In June, Hornet was one of three American carriers that surprised and sunk four Japanese carriers at Midway, turning the tide of war in the Pacific.

The ship was sunk during the exceptionally vicious Battle of

Santa Cruz Island that started Oct. 25, 1943. Hornet proved an especially determined ship over the next 24 hours. Enduring a relentless, coordinated attack by Japanese dive-bombers and torpedo planes, her crew was ultimately forced to abandon the ship due to damage and resulting fires. She then defied American efforts to scuttle her with 16 torpedoes and 369 rounds of 5-inch shells. When Japanese forces approached shortly thereafter and fired four torpedoes from two Japanese destroyers late in the evening of Oct. 26, Hornet finally succumbed and slipped beneath the surface. She lost 111 Sailors from her crew of nearly 2,200.

“With the loss of Hornet and serious damage to Enterprise, the Battle of Santa Cruz was a Japanese victory, but at an extremely high cost,” said retired Rear Admiral Samuel Cox, director of Naval History and Heritage Command. “About half the Japanese aircraft engaged were shot down by greatly improved U.S. Navy anti-aircraft defenses. As a result, the Japanese carriers did not engage again in battle for almost another two years.”

“Naval aviation came of age in World War II and American Sailors today continue to look to and draw inspiration from the fighting spirit of ships and crews like USS Hornet (CV 8),” Vice Chief of Naval Operations Adm. Bill Moran added. “Although her service was short-lived, it was meteoric.

“In the dark days following the Japanese surprise attack on Pearl Harbor, she and the Doolittle Raiders were the first Americans to punch back at Japan, giving hope to the nation and the world when things looked bleakest,” Moran said. “She was there when the American Navy turned the tide in the Pacific at the Battle of Midway, and she was there when America started the long drive to Tokyo in the Solomon Islands. Mortally wounded during the vicious campaign at Guadalcanal and abandoned after all attempts to save her failed, she was finally sent below by the Japanese destroyers Akigumo and Makigumo.

“As America’s Navy once again takes to the sea in an uncertain world, Hornet’s discovery offers the American Sailor a

timeless reminder of what courage, grit and commitment truly look like," Moran continued. "We'd be wise as a nation to take a long, hard look. I'd also like to thank the crew of Petrel for their dedication in finding and honoring her sacrifice."

The discovery of Hornet was made during R/V Petrel's first mission of 2019 after relocating from the Philippine Sea to the Solomon Islands to spend winter months in this arena. Operating out of Guadalcanal, the area is rich in history and prominence in terms of naval engagements.

"We had Hornet on our list of WWII warships that we wanted to locate because of its place in history as an aircraft carrier that saw many pivotal moments in naval battles," said Robert Kraft, director of subsea operations for Vulcan. "Paul Allen was particularly interested in historically significant and capital ships, so this mission and discovery honor his legacy."

The 10-person expedition team on the 250-foot R/V Petrel was able to locate Hornet's position by piecing together data from national and naval archives that included official deck logs and action reports from other ships engaged in the battle. Positions and sightings from nine other U.S. warships in the area were plotted on a chart to generate the starting point for the search grid.

In the case of Hornet, she was discovered on the first dive mission of Petrel's autonomous underwater vehicle and confirmed by video footage from the remotely operated vehicle, both pieces of equipment rated to dive down to 6,000 meters.

Ports Association Calls For

Increasing Multimodal Project Funding, Eligibility

ALEXANDRIA, Va. – In written and oral testimony tomorrow (Feb. 13) before a hearing of the U.S. Senate Commerce, Science and Transportation Committee, the American Association of Port Authorities (AAPA) – the unified and recognized voice of America's seaports – will say that nowhere in the country are there such stark examples of unmet infrastructure needs than in America's ports, and in the land- and water-side transportation connections to them, the AAPA said in a Feb. 12 release.

"During the past six decades, there've been eight evolutions of the containership, resulting in ships today having capacities of 18,000 TEUs and beyond, while our country has relied upon essentially the same infrastructure to accommodate and facilitate an astronomical growth in freight volumes," says AAPA Chairman William D. Friedman, chief executive officer of the Cleveland-Cuyahoga County Port Authority, who will testify before the Senate Commerce, Science and Transportation Committee. "Clearly, multimodal project funding levels and multimodal project eligibilities need to be improved."

Friedman will note that, in 2018, AAPA issued an infrastructure report in which its U.S. member port authorities identified more than $20 billion in multimodal funding needs over the next decade. "A top priority for the port industry continues to be multimodal funding."

To aid with finding solutions to the multimodal funding and project eligibility dilemma, among AAPA's FAST Act reauthorization recommendations are that:

• All freight program funding be 100 percent multimodal (verses being mode-specific).

• The multimodal cap on U.S. Department of Transportation INFRA (Infrastructure for Rebuilding America) grants and

formula funding be lifted.
• A maritime supply chain title be included in the next USDOT reauthorization bill that recognizes the evolving supply chain needs of the multimodal freight network.
• Funding to support freight infrastructure improvements come from a gas tax increase, a Vehicle Miles Traveled program, and/or some concept of a 1 percent charge on the domestic cost of freight movement (i.e., a "waybill fee").
• The financing fee for federal Rail Rehabilitation Innovation Financing loans be removed.
Further noting that AAPA's 2019 freight infrastructure report, The State of Freight IV, identified nearly $4 billion in port security funding needs over the next decade, Mr. Friedman adds, "We need to invest in port infrastructure and we need to secure it."
The Senate Commerce, Science and Transportation Committee hearing, titled America's Infrastructure Needs: Keeping Pace with a Growing Economy, follows a similar U.S. House Transportation and Infrastructure Committee hearing on Feb. 7, titled The Cost of Doing Nothing: Why Investing in Our Nation's Infrastructure Cannot Wait, in which AAPA is preparing written testimony that will include information on the association's long-term funding solution for harbor maintenance.

Future LCS USS Cincinnati Completes Acceptance Trials

MOBILE, Ala. – The future USS Cincinnati (LCS 20) successfully concluded acceptance trials in the Gulf of Mexico Feb. 8, following a series of in-port and underway demonstrations for the Navy's Board of Inspection and Survey, the Program

Executive Office-Unmanned and Small Combatants said in a Feb. 12 release.

Acceptance trials are the last significant milestone before the ship is delivered to the Navy, which is planned for this summer. During trials, the Navy conducted comprehensive tests of the Independence-variant littoral combat ship (LCS) to demonstrate the performance of the propulsion plant, ship-handling and auxiliary systems.

“I can’t say enough about the positive results achieved by the Navy and industry team during these acceptance trials of the future USS Cincinnati,” said Capt. Mike Taylor, LCS program manager. “She’s well into her journey to be delivered to the Navy this summer and will provide needed and cost-effective warfighting capability to the fleet and the nation.”

Following delivery and commissioning, Cincinnati will join her nine sister ships already homeported in San Diego, USS Independence (LCS 2), USS Coronado (LCS 4), USS Jackson (LCS 6), USS Montgomery (LCS 8), USS Gabrielle Giffords (LCS 10), USS Omaha (LCS 12), USS Manchester (LCS 14), the future USS Tulsa (LCS 16) and the future USS Charleston (LCS 18).

Four more Independence-variant ships are under construction at Austal USA in Mobile. Final assembly is well underway on the future USS Kansas City (LCS 22) and Oakland (LCS 24). Modules for the future USS Mobile (LCS 26) are under construction in the module manufacturing facility and construction on the future USS Savannah(LCS 28)commenced last summer. Additionally, Austal is preparing for construction of the future USS Canberra (LCS 30), Santa Barbara (LCS 32), Augusta (LCS 34), Kingsville (LCS 36) and Pierre (LCS 38).

LCS is a highly maneuverable, lethal and adaptable ship designed to support focused mine countermeasures, anti-submarine warfare and surface warfare missions. The Independence-variant LCS integrates new technology and

capability to affordably support current and future mission capability, from deep water to the littorals.

LCS is now the second-largest surface ship class in production. In 2018, five LCSs were delivered to the Fleet and three will be delivered in 2019 – a pace not seen since the 1990s.

Coast Guard Interdicts 24 Migrants off Mona Island, Puerto Rico

SAN JUAN, Puerto Rico – The crew of the Coast Guard Cutter Tahoma (WPC-908) repatriated 20 of 24 Dominican migrants to a Dominican Republic Navy vessel Feb. 11 just off Samana, Dominican Republic, following the interdiction of a makeshift boat Feb. 9, approximately five nautical miles west of Mona Island, Puerto Rico, the Coast Guard 7th District said in a Feb. 11 release.

Four men among the interdicted migrants are facing possible federal prosecution by the U.S. Attorney's Office for the District of Puerto Rico for illegally attempting to reenter the United States.

Since October 2018, Coast Guard, federal and Puerto Rico law enforcement partners have interdicted at least 969 migrants and stopped several narcotics smuggling attempts throughout the Sector San Juan area of responsibility.

"Despite challenging conditions, the Coast Guard crews involved in this event utilized their training and expertise

to successfully rescue all 24 people from the unseaworthy vessel," said Lt. Cmdr. Matthew Haddad, Sector San Juan chief of enforcement. "These illegal maritime migration voyages are extremely dangerous and put the safety of those onboard in great jeopardy. The Coast Guard, in conjunction with our partners, remain poised to intercept these smuggling events in an effort to prevent the unnecessary loss of life."

The crew of a Coast Guard HC-144 Ocean Sentry aircraft from Air Station Miami, while on a routine patrol of the Mona Passage, detected a 22-foot makeshift wooden boat late Friday night with an undetermined number of passengers aboard transiting towards Puerto Rico. The migrants were continuously bailing out water to prevent their vessel from sinking.

The Coast Guard Cutter Joseph Tezanos (WPC-118) diverted and interdicted the migrant vessel Saturday morning, when the crew embarked all 24 migrants, 20 men and four women, and destroyed the migrant boat as a hazard to navigation. Afterwards, the migrants were embarked aboard Coast Guard Cutter Richard Dixon (WPC-1113) and then to the Coast Guard Tahoma (WMEC-908) for their repatriation. The crew of the Tahoma completed the transfer of the four detained migrants Sunday to Border Patrol agents in Mayaguez, Puerto Rico.

Following at-sea interdictions, illegal migrants stopped are repatriated to their country of origin or returned to their place of departure. In some cases, those migrants found to have a criminal history with possible connection to smuggling operations are turned over to law enforcement authorities for further prosecution by the Department of Justice. Once aboard a Coast Guard cutter, all migrants receive food, water, shelter and basic medical attention.

The Joseph Tezanos and Richard Dixon are 154-foot fast response cutters homeported in San Juan, Puerto Rico, while the Tahoma is a 270-foot medium endurance cutter based out of Portsmouth Naval Shipyard in Kittery, Maine. The new Offshore

Patrol Cutter will eventually replace Tahoma and other ships in its

class, which will be able to carry out Coast Guard missions with greater endurance and interoperability with military and federal partners.

U.K. Royal Navy to Establish Permanent Squadron in Middle East; QE to Deploy with U.S. F-35s

ARLINGTON, Va. — The United Kingdom plans to establish a permanent naval presence in the Middle East, putting more ships "East of Suez" and broadening the influence of the Royal Navy. The Royal Navy's new aircraft carrier, HMS Queen Elizabeth, will deploy to the region with an air wing that will include U.K and U.S. F-35 strike fighters. The United Kingdom also plans to develop a class of Littoral Strike Ships.

In a Feb. 11 speech, Defence Secretary Gavin Williamson, addressing the challenges of great power competition and ideological enemies such as al Qaeda, outlined measures the United Kingdom to build up its overseas presence and work with allies and partners, including the NATO alliance.

"In an era of 'Great Power' competition we cannot be satisfied simply protecting our own backyard," Williamson said. "The U.K. is a global power with truly global interests. A nation with the fifth biggest economy on the planet. A nation with

the world's fifth biggest Defence budget and the second largest Defence exporter. And since the new Global Great Game will be played on a global playing field, we must be prepared to compete for our interests and our values far, far from home."

Williamson said he does "not underestimate the challenges that this approach brings. But we do start from a position of strength. Our people are already acting around the world from the North Sea to the South Pacific to protect our interests, and we already benefit from strong international partnerships. But we cannot take such relationships for granted. Our global presence must be persistent…not fitful. Patient…not fickle."

He said that, "From this spring, [Type 23 destroyer] HMS Montrose, along with five other naval vessels, will be permanently based in the [Persian] Gulf using innovative crewing and support methods to keep the ship available for more of the time.

"Today, we also go further," he said. "And I can announce the first operational mission of the HMS Queen Elizabeth will include the Mediterranean, the Middle East and the Pacific region, making Global Britain a reality. Significantly, British and American F-35s will be embedded in the carrier's air wing. Enhancing the reach and lethality of our forces and reinforcing the fact that the United States remains our very closest of partners. We share the same vision of the world. A world shaped by individual liberty, the rule of law and, of course, the tolerance of others. We have the unique ability to integrate with US forces across a broad spectrum of areas. And, we are more determined than ever to keep working together.

"We will also be using our string of global support facilities and military bases more strategically…to consistently project power both hard and soft," he said. "The Duqm

port facilities in Oman are large enough to be able to support our aircraft carriers. The Al Minhad and Al Udeid Air Bases, in the Emirates and Qatar respectively, provide strategically important capabilities. In Bahrain, our naval base and our long-standing Maritime Command make a major contribution to our activities in the region but also beyond. Further afield we already benefit from facilities in Belize, in Brunei, in Singapore as well as our bases in Cyprus, Gibraltar and Ascension Island.

"[The Royal Navy] is exerting British influence through greater forward presence," he said. "I want to capitalize on that. Investing now to develop a new Littoral Strike Ship concept. And, if successful, we will look to dramatically accelerate their delivery. These globally deployable, multi-role vessels would be able to conduct a wide range of operations, from crisis support to war-fighting. They would support our Future Commando Force: our world-renowned Royal Marines – they'll be forward deployed, at exceptionally high readiness, and able to respond at a moment's notice bringing the fight from sea to land.

Williamson said his vision is for the Littoral Strike Ships to form "part of two Littoral Strike Groups complete with escorts, support vessels and helicopters. One would be based East of Suez in the Indo-Pacific and one based West of Suez in the Mediterranean, Atlantic and Baltic. And, if we ever need them to, our two Littoral Strike Ships, our two aircraft carriers, our two amphibious assault ships Albion and Bulwark, and our three Bay-class landing ships can come together in one amphibious task force. This will give us sovereign, lethal, amphibious force. This will be one of the largest and best such forces anywhere in the world.

"I expect the Royal Navy to deploy flexibly, to be capable of being in many places at once and to ensure we have an efficient fleet of warfighting ships, looking at how they can grow both their mass and their lethality," he said.

Williamson’s entire speech can be viewed here: https://www.gov.uk/government/speeches/defence-in-global-britain

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LPD 17 Flight II Program Moves the Navy Forward With Common Rail Fuel Injection

WASHINGTON – The next generation LPD 17 Flight II Class amphibious transport
dock ships are moving forward in Main Propulsion Diesel Engine (MPDE) efficiency by installing the common rail fuel injection system on the ship’s FM Colt-Pielstick PC2.5 Sequentially Turbocharged (STC) engine, the Naval Sea Systems Command said in a Feb. 8 release. This technically advanced system replaces the existing mechanical fuel delivery system and is expected to yield significant lifecycle cost savings due to
reduced fuel usage and maintenance costs.

“We made the right decision to incorporate reduced fuel consumption, reduced emissions, less maintenance and improved reliability into our next generation of amphibious ships,” said Capt. Brian Metcalf, LPD 17 class program manager for Program Executive Office (PEO) Ships. “Innovation should be driven into all levels of design, and this is just one example of NAVSEA’s culture of affordability mission.”

The project began in 2015 with discussions between PEO Ships, NAVSEA’s engineering and ship lifecycle management directorates, and Naval Surface Warfare Center Philadelphia Division (NSWCPD), who is serving as technical lead for the contract. Fairbanks Morse engineers collaborated with MAN

Diesel and NSWCPD to develop the prototype, which was tested on a future USS Fort Lauderdale (LPD-28) engine.

Upon completion of testing, the common rail fuel injection components were removed and the mechanical fuel injection components were re-installed and
retested prior to shipment. Prototype testing on the factory engines demonstrated fuel savings across the Navy operating envelope, and an emission-reducing engine operating profile was also developed.

The future USS Richard M. McCool Jr. (LPD 29), currently under construction at Huntington Ingalls Industries Shipyard in Pascagoula, Mississippi, will be the first of many amphibious ships delivered to the Navy with common rail fuel injection MPDEs.

SECNAV Spencer: Navy Problem Solvers 'Need to Look Outside the Wire'

WASHINGTON – Naval officials need to seek solutions from industry and academia to meet the technological and acquisition challenges of the future, the civilian head of the Navy and Marine Corps said.
"One of the drums that I beat to everybody up and down the ladder is, if you are acquiring things, if you are looking for solutions to your problem, look outside the wire," said Navy Secretary Richard V. Spencer, speaking Feb. 8 at the Center for Strategic and International Studies (CSIS), a Washington think tank. "Because I will almost guarantee you: some organization out there, whether large corporate, middle

corporate, or small company has probably gone through the same problem you are or have a solution or something that looks like your solution.

“This goes to ‘should cost’ before you find out what it does cost,” he said. “Frame your argument, frame your data which you can glean from the outside. One thing that we have learned in this exercise is that corporate America and academic America will bend over backwards to help the services of this country.”

Spencer said that the Department of the Navy and the defense industry are partners in solution-providing and that the department needs to be a “responsible client” of the defense industry.

“I have to be clear on what I need and what I can provide,” he said, speaking of the need to set clear and firm requirements in an acquisition program.

With the additional resources for readiness provided by Congress in the fiscal 2017 to 2019, “the foundation for readiness has been set,” Spencer said. “Everyone understands they have the resources. This is all being done now to the mantra of urgency.

“We have money, we have plans, we cannot buy time, and that is the biggest stressing point we have right now,” he said.

Spencer said the department is “reviewing every single platform that we have as far as how we’re going to go forward with modernization, what we’re looking at to acquire, and what I call the Force 2.0, which are those weapons systems and concepts that we’re developing.”

Spencer was appearing at CSIS with his Army and Air Force counterparts, Secretary Mark Esper and Secretary Heather Wilson, respectively.

Advanced 3-D Printing Allows Marines Quick Material Production in the Field

QUANTICO, Va. – From a small plastic clip that keeps a snowshoe fastened to a multi-ton concrete replacement bridge and a wide range of items in between, Marines are using advanced manufacturing, commonly called 3-D printing, to produce in the field or in garrison rather than waiting days or weeks for the normal supply system to respond.

“We’re going hot and heavy” into advanced manufacturing, using materials from plastic to aluminum and other metals and even concrete, Capt. Matthew Friedell, the team leader on advanced manufacturing in the Rapid Sustainment Office at Marine Corps Systems Command said Feb. 7.

Systems Command has sent more than 100 3-D printers to Marine units,
mostly small, desktop size instruments, but also a number of mid-size
devices in 20-foot shipping containers and three huge machines at the
Marine supply depots, Friedell told reporters in a telephone conference
call from Marine Corps Base Quantico, Va. Some of the printers, called
tactical fabricating kits, are in the hands of infantry units, he
said.

They also send training teams to help the field units learn how to use their new equipment and provide a support service that can develop the data required to produce the needed item

and email it to the requesting unit, Friedell said.

Other crucial services the SysCom office provides are conducting tests of the material needed for the item to determine if it can be safely printed by the field unit, and studies of the original commercial source of the item to protect the company's intellectual property rights, he said.

Industry has been very cooperative, but their data rights need to be protected, he said.

But most of the time, the request is for five to 10 small parts, for which there is no real profit interest for the producer. And often the needed item is no longer being produced due to the age of the equipment being repaired.

Items produced by Marines using 3-D printers cited by Friedell and other Marine officials include the snowshoe clip, a plastic buckle on a backpack, a compressor blade for an M-1 tank and a heavy concrete footbridge built by a Marine engineer unit in a test.

The long-term thrust for 3-D printing, Marine officials have said, is to greatly improve the ability of small combat units, well separated from senior commands and supply sources under the distributed forces concept, to sustain themselves by producing critically need parts.

Flexibility is another key contribution of the printers, Friedell said, noting that the prototype machine that produced the concrete bridge could also produce a security barrier or a shelter.

Electrical power is a crucial consideration, Friedell said, because the larger printers require huge amounts of power. Current tactical generators are able to provide the needed power and the services are developing hybrid power sources that combine high-efficiency generators with powerful batteries that can reduce the fuel demands of running the generators.

Analyst: Navy Needs to Re-Configure Carrier Air Wings for Future Fight

WASHINGTON – The Navy needs to change the structure of its future carrier air wings (CVWs) in the future to meet future threats, particularly in high-end combat against potential adversaries such as China and Russia, a team of defense analysts said in a published report.

"If the U.S. Navy is going to continue to invest in aircraft carriers, it need to re-consider how it's going to configure its [carrier] air wings," said Bryan Clark, a senior fellow at the Center for Strategic and Budgetary Assessments, a Washington think tank, speaking Feb. 7 at the center about the new report, Regaining the High Ground at Sea: Transforming the U.S. Navy's Carrier Air Wing for Great Power Competition.

The Navy's current CVW "is not designed for the way we're going to

operate in the future," Clark said. "I would even go further to say,
unless the Navy is going to re-configure its air wings, it should
reconsider its continued investment in aircraft carriers."

Clark briefed the audience on worst-case scenario where an adversary such as China could launch a salvo of 600 1,000-pound-class weapons at a carrier strike group and recommended the type of defenses, including a CVW, that would be needed for a carrier to operate in the ocean in a high-end fight.

The report said that today's CVWs "lack the reach to operate at sufficient ranges from operational areas; the stealth to fight in contested environments; and the specialized capabilities in IRS&T [infrared search and track], EMW [electromagnetic warfare], and ASW [anti-submarine warfare] needed to defeat adversary platforms and systems."

Clark sees the need for a CVW to move toward including more unmanned aircraft. He recommended development of three new aircraft types: an unmanned air combat vehicle (UCAV); an unmanned refueling aircraft, initially the MQ-25; and FA-XX, a new fighter with a longer strike range.

The report's recommendations for re-configuring the carrier air wing by 2040 include:

* Sustaining planned procurement of the F/A-18E/F strike fighter through fiscal 2023.

* Sustaining procurement of the F-35C strike fighter through the first half of its planned production, ending in fiscal 2024.

* Develop an FA-XX fighter, a derivative of an existing fighter, by 2024.

* Develop a low-observable UCAV attack aircraft for production

by 2025.

* Continue development of the MQ-25 aerial refueling UAV and increase overall number of tanker aircraft to 12 per air wing. Also,
develop the UCAV as a tanker for the mid-to-late 2030s.

* Retire the EA-18G electronic attack aircraft as they reach the
end of their service lives during the 2030s and replace them with
UCAVs equipped with the Next-Generation Jammer and also with expendable UAVs and missiles.

* Field a rotary wing MALE [medium-altitude, long-endurance] UAV
(in concert with the Marine Corps) to augment the carrier-based
helicopter squadrons and assume some of the ASW missions.

Clark’s team for the report included Adam Lemon, Peter Haynes, Kyle Libby and Gillian Evans.