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**AIRCRAFT CARRIER—PRESENCE AND
SURGE LIMITATIONS AND EXPANDING
POWER PROJECTION OPTIONS**

JOINT HEARING

BEFORE THE

SUBCOMMITTEE ON SEAPOWER AND
PROJECTION FORCES

MEETING JOINTLY WITH

SUBCOMMITTEE ON READINESS

OF THE

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HOUSE OF REPRESENTATIVES, COMMITTEE ON ARMED
SERVICES, SUBCOMMITTEE ON SEAPOWER AND PROJEC-
TION FORCES, MEETING JOINTLY WITH THE SUBCOMMIT-
TEE ON READINESS, *Washington, DC, Tuesday, Novem-
ber 3, 2015.*

The subcommittees met, pursuant to call, at 2:35 p.m., in room 2118, Rayburn House Office Building, Hon. J. Randy Forbes (chairman of the Subcommittee on Seapower and Projection Forces) presiding.

OPENING STATEMENT OF HON. J. RANDY FORBES, A REPRESENTATIVE FROM VIRGINIA, CHAIRMAN, SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES

Mr. FORBES. Today the subcommittee meets to discuss our aircraft carrier fleet and the challenges we face in meeting presence and surge requirements and sustaining our ability to project power overseas. We thank all of our panelists for their patience in these votes. I am sorry we are getting started just a little bit later.

Because of that, all of us have agreed to basically waive our opening statements. We are going to put them in the record, and so we can get directly to Mr. Stackley's opening comments, and then we can go to questions.

[The prepared statements of Mr. Forbes and Mr. Courtney can be found in the Appendix beginning on page 37.]

Mr. FORBES. We have a distinguished group of panelists today that includes the Honorable Sean J. Stackley, Assistant Secretary of the Navy for Research, Development, and Acquisitions; Vice Admiral John C. Aquilino, Deputy Chief of Naval Operations for Operations, Plans, and Strategy; also, Rear Admiral Michael C. Manazir, Director for Air Warfare; and Rear Admiral Thomas J. Moore, Program Executive Officer for Aircraft Carriers.

Gentlemen, thank you all for your service to our country. Thank you for being willing to be here to testify for us today, and thank you so much for your willingness to help us and guide us as a subcommittee in making sure we are doing the right thing for our national defense.

With that, I would like to look to see if Mr. Courtney has any comments? Mr. Wittman? Mrs. Davis?

If none, then we go directly to Mr. Stackley. Thank you, Mr. Secretary for being here, and we look forward to your opening remarks.

STATEMENT OF HON. SEAN J. STACKLEY, ASSISTANT SECRETARY OF THE NAVY, RESEARCH, DEVELOPMENT, AND ACQUISITION; VADM JOHN C. AQUILINO, DEPUTY CHIEF OF NAVAL OPERATIONS, OPERATIONS, PLANS AND STRATEGY (N3/N5); RADM THOMAS J. MOORE, PROGRAM EXECUTIVE OFFICER, AIRCRAFT CARRIERS, DEPARTMENT OF THE NAVY; AND RADM MICHAEL C. MANAZIR, DIRECTOR, AIR WARFARE (OPNAV)

STATEMENT OF HON. SEAN J. STACKLEY

Secretary STACKLEY. Yes, sir. Thank you, Mr. Chairman. Chairman Forbes, Chairman Wittman, Ranking Member Courtney, Representative Davis, distinguished members of the Seapower and Readiness Subcommittees, thank you for the opportunity to appear today to address the capability provided by our Nation's aircraft carriers. And with your permission, I would like to make a brief opening statement and submit a full formal statement for the record.

Mr. FORBES. Without objection.

Secretary STACKLEY. Before remarking on the topic of this hearing, I do want to express gratitude on behalf of the Department of the Navy with regards to you all's heavy lifting in giving us a budget deal, and your work towards the National Defense Authorization Act [NDAA] for 2016. A 2-year deal goes a long, long way in terms of providing stability for planning, and now we will work with the deltas between the President's budget request and the top line that we receive, but I know it is a heavy lift on everybody's part, and it is much, much appreciated.

Today's Navy is a balanced force of 272 ships, near half of which is routinely underway, and of that number, from the Eastern Med [Mediterranean] to the Sea of Japan to the South Atlantic and points beyond, about 100 ships and more than 75,000 sailors and marines are typically deployed.

They are the providers of maritime security around the world. They are our first responders to crisis, in the aftermath of natural disaster to provide relief, in the face of regional turmoil to weigh against aggression, and when called into action to defeat our foe. They are our surest defense against the threat of ballistic missiles and they are the Nation's surest deterrent against the use of strategic weapons. Their effectiveness in providing stability is a product of their presence, their response time, and their ability to project power.

Accordingly, in determining the requirements for building, operating, maintaining, and modernizing our Navy, as necessary to conduct the full range of military operations assigned to the naval forces, we placed a priority on forward presence, current readiness, investment in those future capabilities critical to our technical superiority, and stability in our shipbuilding plan.

Against the backdrop of today's force, the Chief of Naval Operations' [CNO] Force Structure Assessment outlines the requirement to build to a 308-ship Navy by the post-2020 timeframe to meet our requirements against the projected threat of that day. We are on that path.

Inarguably, as an instrument of American diplomacy, power projection, and global security, the centerpiece of both today's and the future naval force is the aircraft carrier. In recent years, from combat operations over the skies of Afghanistan, to Iraq, to Libya, and Syria, to relief operations in response to natural disasters in Pakistan, in Japan, and the Philippines, to operations providing stability and assurance to our friends and allies around the globe, the Navy's aircraft carrier force provides the combatant commanders [COCOMs] with a first, a flexible, and a sustained response that can be scaled to meet the Nation's needs around the globe.

George Will summed it well in a recent column:

"The Navy's operations, on which the sun never sets, are the nation's nerve endings, connecting it with the turbulent world. Although the next president may be elected without addressing the Navy's proper size and configuration, for four years he or she will be acutely aware of where the carriers are."

Consistent with the 2007 National Defense Authorization Act, the 308-ship Navy outlined by the CNO's Force Structure Assessment, includes a requirement for 11 aircraft carriers. With the inactivation of the USS *Enterprise* [CVN 65] in 2013 and pending the delivery of *Gerald R. Ford*, CVN 78, in 2016, the Navy is operating at a deficit with a 10-carrier force. This will effectively be the case until the *Ford* is ready for her first deployment currently projected in 2021.

In the interim, balancing presence and surge requirements with a 10-carrier force has become more challenging with increased combatant commander demand for carrier presence during the same period. The Navy has adjusted maintenance and operational schedules by extending carrier deployment lengths to mitigate operational impacts during this period.

This increased frequency and duration of deployments, however, has resulted in increased maintenance and repair requirements back home such that not only have deployments been extended but so, too, the time required in a shipyard to make ready for the next deployment. These challenges have been further exacerbated in recent years by the budget uncertainty and impacts caused by sequestration.

The net effect of operating with fewer than 11 aircraft carriers for an extended period of time, is a degradation to the Navy's ability to provide the balanced presence and surge capacity. So to provide much needed stability across the spectrum of maintenance, training, and operations, the Navy is implementing what is referred to as the Optimum Fleet Response Plan, or O-FRP.

In simplest terms, the O-FRP targets improved planning and discipline for the conduct of maintenance and training in support of carrier and amphibious groups deployments. Adherence to the plan helps balance the tension between the demand for presence and need for surge capacity, which will be greatly relieved with the entry of *Ford* in the deployment cycle.

The *Ford*, the first new design aircraft carrier since the *Nimitz* more than 40 years ago, will bring a significant increase in carrier capability to the fleet: 33 percent increase in the rate at which we launch and recover aircraft; a propulsion plant three times the electrical generating capacity, and 25 percent more energy than

Nimitz; increased service life allowances for power, weight, and stability to enable future modernization; increased survivability; improved combat systems, firefighting systems, weapons handling, and the basic hull design. And importantly, a \$4 billion reduction per ship in total ownership cost over the ship's 50-year service life.

Those members who have visited the *Ford* under construction fully appreciate the daunting numbers that measure her. Tens of thousands of tons of structure, thousands of miles of cable and fiber optics, hundreds of miles of pipe, thousands of compartments, hundreds of ship systems, tens of thousands of sensors integrated to drive a greater than thousand megawatt nuclear power plant across the globe to its life. It is a remarkable demonstration of what American industry is able to achieve, and it is a quantum increase in capability for our warfighter, capability required by our Navy in the century ahead.

To be clear, the challenges associated with concurrent development, design, and construction of the advanced warfighting aviation and propulsion systems on [CVN] 78, has resulted in cost growth and some delay. Cost growth has been arrested, was arrested early in the ship's construction, and today, with the ship's design effectively complete and production near 95 percent complete, we are focused on completing the test program and delivering the ship next spring.

Equally important, while we confront the impacts associated with concurrency on the [CVN] 78, we made essential changes to eliminate these causes for cost growth and further improve performance on CVN 79 and 80.

In summary, the Navy is committed to providing the Nation with a force needed to perform assigned naval missions around the world, around the clock, every day of the year. From peacetime presence to crisis response to power projection, the carrier is the backbone of that force. We are working with the Joint Staff and combatant commanders to mitigate impacts to operations and maintenance in response to current demands during this 10-carrier period, while we also work to improve performance of new construction and maintenance to restore the 11-carrier force, and with it, our ability to fully meet our presence and surge commitments, and we look forward to your questions.

Mr. FORBES. Secretary, thank you for your comments.

[The joint prepared statement of Secretary Stackley, Admiral Aquilino, Admiral Moore, and Admiral Manazir can be found in the Appendix on page 41.]

Mr. FORBES. It is my understanding, Admirals, that none of you have opening statements that you wish to make at this particular point in time.

I am going to defer my questions to the end because I have a number of them, but Mr. Secretary, if I could just ask you. You have got a very impressive team with you today. Could you just let all the two subcommittees know about the team you brought with you today, and then as soon as you have done that, I am going to ask Mr. Courtney for any questions that he might have.

Secretary STACKLEY. Yes, sir. Thank you. I refer to these as our aircraft carrier brain trust. To my far left is Rear Admiral Manazir. He is our requirements officer on the CNO staff responsible for

naval aviation, both carrier force as well as the aviation side of the carrier force.

Rear Admiral Tom Moore is the program executive officer for carriers. He is responsible for construction and in-service complex refueling overhauls, lifecycle support for our aircraft carriers.

And Vice Admiral Aquilino is our head of operations for the Department of the Navy, working directly for the CNO as well as working closely with the Joint Staff.

Mr. FORBES. Mr. Secretary, all three admirals have had very impressive careers, done a lot for our country, as have you, and we just appreciate their presence here today. And with that, Mr. Courtney is recognized for any questions he may have.

Mr. COURTNEY. Thank you, Mr. Chairman and to the witnesses for all joining us here today.

Again, Secretary Stackley, as usual, you gave a great sort of chronology and update regarding what is going on with the carrier fleet. I guess, you know, the question I think that is on a lot of people's minds is, though, that these necessary adjustments that the Navy has had to make in terms of the maintenance, new maintenance program, and as well the somewhat of a delay for the *Ford* because of the shock trials. I mean, we actually now have parts of the world where carriers used to be that aren't there anymore, at least for some periods of time.

So maybe you could just sort of, for the record, again, just kind of talk about, you know, what those gaps, as the media calls it, or you know, the impact that this is having right now?

Secretary STACKLEY. Sir, I am going to turn to Admiral Aquilino to address that because he specifically has been working this issue on the Navy staff.

Admiral AQUILINO. Good afternoon, sir. Thank you for the question. As you know better than anyone, the carrier force today is the centerpiece of the Navy's deterrence factor, power projection, lethality, and across the globe provides the presence needed to deter conflict, which is our primary goal.

We are at a position now in time where due to prior, what I would call, overutilization, we are not at a position where we can push forward the amount of carrier presence we would like in a sustainable affordable manner, as well as keep in the reserve tank some surge capacity to be able to respond to crisis when needed. That is due to a number of reasons.

Admiral Moore will probably talk later about the fact that we are currently at 10. Eleven is the number that our force structure analysis tell us we need.

Based on the fact that we are at 10, that puts us at an ability—or not at the ability we need to push what we would like forward. Additionally, we severely overused the carrier force throughout the years 2011, 2012, and 2013 when we maintained a 2.0 presence in the central—in the, excuse me, the Middle East, while at the same time providing presence to the Pacific where it is also needed, and that has put us in a place where we are a little bit behind the power curve.

What we are trying to do now is to reset in stride. We have to do that because very little chance to achieve a peace dividend from a force that doesn't go back into garrison. So our operate forward

priorities did not give us the, really the opportunity to come back and reset. So the Navy is present, as you know, each and every day forward at almost the same levels that we have been operating over the past 15 years.

So the plan we have developed is figure out how to provide as much presence as we can sustain and afford, while at the same time resetting to get to the CNO's stated goal of two-plus-three carriers hopefully by 2020. Those short periods where we can't provide presence are kind of—it is kind of the bill we are paying now to get to that sustainable level we need.

Mr. COURTNEY. And I think Secretary Stackley used the term balancing in terms of trying to, again, deal with what is a long overdue need, which is to get, like you said, a maintenance schedule that is in stride, but also balancing, obviously, the demands that are out there. And I guess the question is, you know, you are going to be showered with demands, and you know, it is going to take discipline to sort of maintain this for the next 3 years or so. I mean, do you all feel confident that, you know, we are going to be able to get through this patch, and again, accomplish the goals of having a fleet that is ready to again meet all the requirements that are out there?

Admiral AQUILINO. So before the Secretary jumps in, we are confident that our model and our plan, sir, will get us to where we need to be. Absent the fact that the world gets a vote.

Mr. COURTNEY. Right.

Admiral AQUILINO. So with that, sir.

Secretary STACKLEY. I was going to punctuate his comment that it's a hypothetical in terms of what crises the Nation is going to deal with and there is going to be a continual rebalance of the risk. Today we are at 10. We are at 10 carriers, I think it is important to understand where are the carriers today.

Four of the carriers are in deep maintenance today. We have a carrier in RCOH [refueling and complex overhaul], the other three carriers in depot that are going to be tied up in the depot for a period of time. A fifth carrier, the *George Washington*, is coming back to the States to enter her RCOH, so she is not available. She will not be available for surge, so you have five carriers then that are carrying on the operating cycle, and they are going to be rotating through their deployments.

So the question that you ask regarding will we have the discipline to maintain our maintenance cycle and support—you know, maintenance, training, operational cycle to get the health of the force back up, we are operating a small number of carriers, low density, high demand, and if the temperature rises in a risk area around the world, then senior leadership is going to have to decide is it more important to do that maintenance, which is a long-term investment, or do we have to respond today to the immediate crisis? And that is going to come down to what the nature of the crisis is.

Mr. COURTNEY. I guess that is my last question. So again, if the balloon goes up or there is some real imminent crisis that threatens our Nation, I mean, there is a way that you can sort of plug things up and move carriers out, even those that are tied up back home in repairs?

Admiral AQUILINO. From an operational standpoint, sir, I think if the balloon goes up, we will, as the most flexible agile force out there, figure out how to get it done. That will accept some risk on our part with regard to the levels of training of the forces that we would have to push and the timelines in which we would have to push them, but I am pretty confident we would be able to button some of them up, not all of them.

I won't speak for my buddy next to me, the maintainer. It is pretty hard to button up a carrier in RCOH, but there is others that are at certain levels where we would be able to accelerate their getting them to sea.

Admiral MOORE. Sir, I think, you know, part of the answer to the question is could you do it? Yeah, you could do it once. Part of the challenge is, you know, we have these carriers, they are designed for 50 years, and right now we are operating them at a pace faster than they were designed. And I think not only the sustainment of the carrier but you can see the impacts on the industrial base today. So could we do it? Sure, we could do it once, but my analogy is kind of like I couldn't run a 4-minute mile. I might be able to run at that pace for 100 yards, but then I would run out of gas.

And these ships right now, and you can see the impacts with the *Eisenhower* and some of the other carriers. Right now, we are consuming the service life of these ships at a pace that is faster than they are designed, and eventually you are going to use up that service life, and then we will be in a situation where they won't make it to 50 years, and then the domino effects from that will really cause us significant problems downstream.

Mr. COURTNEY. I want to thank all of you for your testimony and your service. I yield back.

Mr. FORBES. Before we go to Congressman Wittman, can we clarify what we just said? We said "we could do it." Tell us what "do it" means and what risk we have to do it, because when you are doing these deep maintenance on these carriers, I take it you don't have sailors that are sitting there doing their training and they are sitting on the carrier at that particular point in time.

So what would you have to do if, as Mr. Courtney asked, you needed to send one of these carriers out, where are you going to get the sailors and the training, and what risk is it to those sailors to go out there if they don't have that training and they are not prepared at that particular point in time?

Secretary STACKLEY. Yes, sir. I am glad you asked the question. As I walked through and described, we have got four carriers in some level of maintenance from RCOH up to—

Mr. FORBES. And Mr. Secretary, we know what RCOH means.

Secretary STACKLEY. Okay.

Mr. FORBES. Can you, just for the record, make sure we are clarifying that. Try to stay away from acronyms—

Secretary STACKLEY. Yes, sir.

Mr. FORBES [continuing]. As much as possible because we are using this record later.

Secretary STACKLEY. The refueling complex overhaul for a carrier once in its midlife, it is about a 44-month depot period where you open her up and refuel her, as well as, do about a third of the total

modernization that the ship will get in its lifetime, so it is down hard. You are not going to pull a carrier out of an RCOH.

And then you have other availabilities that are not as invasive, but they do bring a carrier down and you are not going to be able to pull a carrier right out. You are going to have to restore systems, and at the same time you are restoring systems, you have got to rebuild the crew because when a carrier goes into a depot period, there is a lot of turnover of the crew and they are not ready to go out and start operating. They have got to go through their re-certifications to ready for sea, and then a carrier comes with the air wing. You also have to integrate the air wing back on the carrier.

So there is a very disciplined maintenance, training, operational cycle that we are trying to return to with the O-FRP. So the carriers that we have in deep maintenance today, could we pull one or two out and make it available? Maybe, but there is a timeline that you have to deal with, so you will not get the response that we have committed to in the two-plus-three regimen that the CNO has referred to, which is two carrier presence, plus three surge capable within a very limited window of time, which is factored into our operational plans for major combat operations.

We would be delinquent to providing that, depending on which carriers you pull out and how long it takes to button the carrier back up, get its systems operational again, and then integrate crew and air wing, get it ready to deploy.

Mr. FORBES. And I don't want to be facetious, but it is not like we are just putting gas in a tank and we just have to pull the hose out and put it back in the pump and call everybody back, get on the ship. And we are talking about months of training, preparation, putting crews together, getting airplanes on, so during that month period of time, we still have huge gaps in our operational plans where we wouldn't have the carrier surge, fair?

Secretary STACKLEY. Yes, sir.

Mr. FORBES. Good. Mr. Wittman is recognized for any questions he may have.

Mr. WITTMAN. Thank you, Mr. Chairman. Gentlemen, thank you so much for joining us today, and thanks for your service to our Nation.

Admiral Manazir, I wanted to jump away from the ship itself to a critical element of the ship, that is, our air wings. And as we are going from 10 to 11, as we are bringing *Ford* on, the question is, do we have the complementary aircraft to make sure that they are available so as *Ford* becomes available, we make sure that we have all the full complement across the spectrum of our carriers to make sure the aircraft is there?

I know that we look at our F-18s; we are transitioning too, to the F-35. Give me your perspective on where we are with the number of necessary aircraft to make sure we have full operational capability for all of our aircraft carriers, and then where are we with number of F-18s on the deck, and then where are we with the transition from F-18 to F-35?

Mr. MANAZIR. Yes, sir, Congressman Wittman. Thanks very much for the question. You have rightly pointed out that a key relevance of our aircraft carrier is the air wing on top. As the committee knows, we retired USS *Enterprise* in 2012 after 51 years of

service. The air wing that was on top of *Enterprise* in the Cuban missile crisis was vastly different than the air wing that was on top when we retired her in 2012, and the relevance in the fights that—the conflicts that we have had is that force.

The short answer to your question, yes, sir, we have enough airplanes to source 11 aircraft carriers when *Ford* comes online. Part of my job is to build that force and to afford that force. Right now we have a current readiness problem in our F-18Cs, and as I testified before, because of the extension of the F-35 program to the right, we have had to sustain our F-18Cs far longer than we had planned on.

Because we are sustaining them past 6,000 hours of their service life, we are running into problems with corrosion internal to the airplane that we had not seen or planned, because we hadn't planned to take them past 6,000 hours. So our near-term readiness problem is getting enough F-18Cs out to source our carrier strike groups that deploy.

What we are seeing right now is we have enough to send out F-18Cs on deployment, and we are taking—well, we have less airplanes than we need in the earlier phases of our fleet response training plan, so we are taking readiness hits there. So the forces back here at home cannot train enough because they don't have enough assets. So we are, in the vernacular, taking risk here at home to make sure that we have deployed assets.

Our F-18Es and Fs, sir, are the majority of our force going to 2035. We might even fly those airplanes close to 2040. They are relevant, very, very good airplanes, and when coupled with the F-35C coming off the carrier deck, form the most potent airplane combination of any force that is out there, and so keeping that F-18E, F, relevant all the way through past 2035 is key.

The Navy plans to IOC, initial operational capability, the F-35C in August of 2018. We will have enough squadrons to outfit over half of our carrier force with F-35Cs, complementing the F-18Es and Fs. We will have a predominant F-18E and F force to 2035 with a single F-35C squadron in every air wing by then. That complementary capability is going to give us the warfighting power that we need.

Mr. WITTMAN. I know, as I visited the depots where the work is going on in F-18s, that there is a pipeline issue there, too, where we need to get more aircraft through there. Isn't there overall, though, a strike fighter shortfall, and doesn't that create a significant problem with that backup in the depots, as you said, trying to get those [F-18] C aircraft out and where the demand is, and if there is a backup there, to me, it does create a problem, and there is an issue about the number of strike air aircraft that we have.

Mr. MANAZIR. Yes, sir. As we testified, we have a strike fighter inventory management challenge because if you look at the demands on the strike fighters into 2030, we have a shortfall. I can say that shortfall in the early part of the 2020s is about 138 airplanes; so we are taking measures to get the depot to be more efficient, near term, and then to acquire more airplanes to source that shortfall.

There are two reasons for the near- to mid-term shortfall. The first one is the extension of F-35 has caused us to have to extend the F-18Cs from 6,000 hours to 10,000 hours. That work was the level of work done to each airplane was unplanned in the depot.

The second thing that we haven't done is procured enough airplanes to offset the amount of flying we have been doing to what Vice Admiral Aquilino talked about the use of our carriers. CNO Greenert testified a year ago that we need two to three squadrons of Super Hornets to offset the attrition loss, the hours that we have flown those airplanes. That is 24 to 36 airplanes.

When you infuse 34 to 46 new airplanes into this mix, plus to get the depot to be more efficient, sir, that gets a long way towards getting at that strike fighter inventory management challenge, the shortfall if you look at supply, demand, and usage.

If we also acquire enough F-35Cs starting in the latter part of this decade in this Future Year Defense Plan, you will now be able to manage to the warfighting requirement that you talked about, getting out to those 11 carriers and having the combat capability that we need. But it is a challenge we are addressing, sir, with all of our might in the Naval Aviation Enterprise.

Mr. WITTMAN. I understand with adding more Super Hornets and being able to make up that shortfall, regardless of how quickly we can get the depots to respond with efficiencies, but can we, and is the capability there to move the F-35C to the left to make that up? So the question is, is it a situation where we may need more Super Hornets because you can't get enough F-35Cs to the fleet, or is it a reality that you can do both?

Mr. MANAZIR. Sir, we are looking for both. My definition of the near-term problem or mid-term problem of F-18Es and Fs is, if we acquire F-18Es and Fs, 2016, 2017, and 2018, 36 airplanes, 2 to 3 squadrons, and we IOC the F-35C on time in August of 2018, with Block 3F software, that we will get at the combat capability you are talking about.

Sir, we can certainly accelerate F-35 platforms to the left and buy those, but they are not the capability that the Navy wants. We specifically want 3F software. CNO Greenert testified to that, and CNO Richardson has committed that that airplane with Block 3F software is the capability that we need on our carrier flight decks to support the integrated capability we bring to the rest of our air wing. So yes, sir, we could buy airframes, but they won't be the capability that the Nation needs.

Mr. WITTMAN. I think that is the key to understand is the current capability with E and F platforms, what you would have are the 35Cs to make sure we got that complementary capability there.

Let me ask you this in closing. You talk about making the depots more efficient. To me, there is still a pipeline issue in the aircraft that we have to move through the depots to make sure we meet demand currently, not out into 2017, 2018, and 2019, but currently. Tell me where we are with making sure that efficiency is going to be there because that creates a short-term issue.

Mr. MANAZIR. Yes, sir. This gets a little bit complex, but I will simplify it for you. When we brought the initial bunch of airplanes into the depot, we applied a lean manufacturing model to the depot, and that means that when you bring an airplane in, you

have a kit that you are going to replace parts in the airplane, and the mechanic, the artisan takes a new part, replaces an old part, moves the airplane along. When we opened up these F-18Cs, given that we extended them past 6,000 hours, we found that there was so much corrosion in there, that too much engineering work could be done.

So in stride, we have changed that process to something called Critical Chain Process Management, which is looking at the actual constraint for each airplane, assessing where that constraint lies, and then attacking the constraint. We have been underway in that process now for a year. We have already increased the depot throughput by 40 percent. We expect it to get even greater than that to where we have delivered somewhere on the line of 30 airplanes from the depot a year ago. We are looking to deliver 104 airplanes a year from now.

So yes, sir, we are getting our feet under us. We had to change the whole process to understand what kind of an engineering problem we have. Thank you.

Mr. WITTMAN. Very good. Thank you.

Secretary STACKLEY. Can I—I just wanted a little bit of clarification. First, Admiral Manazir described what we are doing in terms of increasing throughput at the depots. Part of that has been bringing on additional engineers and artisans, so we have, in fact, increased the hiring to help that throughput; but we have also turned to Boeing as a facility with the expertise and the tooling required.

So we are looking to pull the right levers to increase that depot throughput. Today, we cannot—we cannot accept the numbers that we are suffering through today, and so when Admiral Manazir talked about the projected shortfall in the 2020s, we have got to improve upon the depot part of the equation to do better than that.

The other piece in terms of procurement, he described the F-35C. Just to clarify, the 2018 initial operating—operational capability for the F-35C for the Navy, that is with 3F software. F-35Cs bought in 2016 will deliver in 2018 in the 3F configuration. That is a software configuration.

So the aircraft we are procuring will have the hardware necessary to support the software. The issue is we haven't crossed that bridge yet.

Mr. WITTMAN. Thank you, Mr. Chairman. I yield back.

Mr. FORBES. Mrs. Davis is recognized for any questions she might have.

Mrs. DAVIS. Thank you. Thank you very much all of you for being here and your service.

Getting back to the issue of the number of air wings for the 11th carrier as it comes online. Did I understand, are we still behind in terms of that last air wing?

Admiral MANAZIR. No, ma'am. We have a model. We have 10 air wings, and we resourced—

Mrs. DAVIS. You have already—

Admiral MANAZIR [continuing]. At 10 air wings. Yes, ma'am. We do a—we do a tiered readiness approach to deploying our forces. That is that as we get closer to deployment, the resourcing gets higher and higher. The way that we have had to manage our F-

18C strike fighters is to take airplanes away from the earlier stages of the training, and that is what the effect has been to this depot throughput that Secretary Stackley talked about, the challenge that we have had and that I have relayed, but we can resource a number of air wings we need to deploy our carriers.

Mrs. DAVIS. And the number—and the personnel that is required as well, is the recruitment going in such a way that we know that we are going to have the pilots when we need them?

Admiral MANAZIR. Yes, ma'am. We have exceeded. The Chief of Naval Personnel will tell you that we are exceeding our accession goals and we are exceeding our retention goals for the force that we need across officers and enlisted, but we definitely have enough people to resource all the air wings and the carriers that we are pushing forward.

Mrs. DAVIS. Is there anything about that that still concerns you?

Admiral MANAZIR. I think retaining our talent is always a concern, making sure that the Navy rewards our sailors and our officers and chiefs for doing the job that they do. We can't adequately reward them because of the load, and we try to find ways to motivate them to stay. Obviously, when a new sailor comes in, we have to train them, and then that person has to get expertise in order to work for us, so always retaining the right kind of talent, retaining that high level of talent of our young Americans is a concern, but keeping the numbers, no, ma'am, I am not concerned about that.

Mrs. DAVIS. Because at one time we were using more bonuses. You are not doing that now?

Admiral MANAZIR. I have to defer to the Chief of Naval Personnel on the bonus structure for retention, but I will tell you that the report to us is that we are meeting all our retention and accession statistics.

Mrs. DAVIS. Okay. Great. I wanted to just move to the fleet response time, Optimized Fleet Response Plans, and how they affect carrier availability as well. We are first—more or less into this first cycle, but what is it again, what concerns you the most about that, how quickly could mitigation measures be put in place if the carrier strike group maintenance gets behind schedule.

Admiral AQUILINO. Thanks for the question, ma'am. I will talk a little bit about the operational aspects and defer to the maintenance questions. But the key portion of the Optimized Fleet Response Plan is that it synchronizes all the things needed to produce an aligned, fully trained, ready carrier strike group, and to include the air wing, trained to execute the high-end fight when it is needed, and it is predictable to the sailors and the people who resource it.

It aligns maintenance, training, supply, ordnance, and nine aspects that we have identified required to get that strike group out on time, again, trained to the high end. So we are confident that this will work. We have already seen aspects that we have implemented shorter portions of it to some of the strike groups, and the *Eisenhower* will be first one from start to finish out the door, deploys in 2016, comes back in 2017. I think we are on a good path.

Admiral MOORE. Yes, ma'am. As far as the maintenance goes, I think it is—you know, when we put the O-FRP together, we made

a conscious decision to put the maintenance piece first in recognition that getting maintenance done as scheduled and getting it done on time was a key part of the O-FRP, if not, the most important part.

I think that we have seen here recently as a result of being down at 10 carriers and having to run carriers at a pace that they were—faster than they were designed for. For instance, the *Dwight D. Eisenhower*, which just finished a 24-month availability, which was only scheduled for 14 months. She had deployed four times since 2008 with only one maintenance availability in there, so much faster than we had designed, consuming the service life of that ship much faster, so it is really no surprise. I think that you saw some of the impacts there.

We have got to get our arms around that. We certainly spent a lot of time looking at *Eisenhower* to figure out where we can do better going into maintenance periods. We appreciate the support of the Congress and some resources to add personnel at our naval shipyards. That is certainly going to help. But going forward, you know, getting back 11 carriers is one of the ways to get back into a maintenance cycle that will be sustainable and then will support the O-FRP.

Mrs. DAVIS. Great. Thank you. Secretary Stackley, you just briefly mentioned the budget deal, and I just—is everybody breathing a little bit easier? Does that make a difference in terms of moving forward?

Secretary STACKLEY. I think it makes a huge difference because for at least the next 2 years, the next two cycles, we will know what our top line is, and we will have some certainty going into the next year. Uncertainty is a killer when it comes to planning, when it comes to execution, and you make poor decisions when you don't know what your budget top line will be and when you will receive it.

So as I described it, we didn't get the full amount of the President's budget request. We are going to work with you all, obviously, to adjust, but having some certainty for the next 2 years goes a long, long way in terms of execution.

Mrs. DAVIS. Thank you.

Mr. FORBES. Mr. Conaway, the gentleman from Texas, is recognized for 5 minutes.

Mr. CONAWAY. Thank you. I am on the Seapower Subcommittee because I am landlocked. I don't have a boat. I don't have a dock. I don't have a homeport. I don't have nothing. Till 2006, we tried this two and three issue with 12 carriers, and now we are trying to squeeze a square peg in a round hole with 11 carriers, or 10 carriers. Can you talk to me—I don't know, Mr. Stackley or who—about did the development of the two deployed three surge concept, did it predate Putin's surge, and we talked about the balloon going up. I would rather keep the balloon going up with a deterrence factor, so how do we deter Putin in the Atlantic and the Med and deter China in the South China Sea, and keep something of the Persian Gulf. That looks like three versus two, so can you talk to me, what would be the history of the two plus three, and then how do we deter Putin and reassure our NATO [North Atlantic Treaty

Organization] allies that we are there where we need them, and when we are needed.

Admiral AQUILINO. Sir, thanks for the question. I will walk you through a little bit, I think, on how we view the deterrence portion, and don't have the history back to that far on the two plus three. But for the deterrence portion of your question, the Cooperative Strategy for the 21st Century that was signed in March by the CNO, the Commandant of the Marine Corps, as well as the Commandant of the Coast Guard, takes a view of the maritime concerns that exist and how the Navy will contribute to that deterrent requirement.

We are globally deployed, as you know, all the time, to all the AORs [areas of responsibility]. We have a forward-deployed naval force in the Western Pacific, comprised of the *Ronald Reagan* strike group, specifically. We currently are—*George Washington* is coming around. The *South America* just went through the Straits of Magellan, participating in UNITAS [annual multilateral exercise] with our South American partners. We have ballistic missile defense ships forward deployed to Rota, Spain, in support of the deterrence against the Russian piece.

Mr. CONAWAY. I know I am over here talking about carriers. So how—is it time to relook at the two plus three since nobody—does anybody on the panel know what the history of two plus three is, or how we got there? Mr. Stackley.

Secretary STACKLEY. It actually—I am going to say it was three plus three just shy of a decade ago.

Mr. CONAWAY. Okay.

Secretary STACKLEY. About the 2007 timeframe. And this—the numbers are derived from operational planning and the force that would be required to win major combat operations in the 3-0 plan.

Mr. CONAWAY. And so in that timeframe was—where was Putin and his aspirations?

Secretary STACKLEY. Like I say, sir, this goes back to the 2006, 2007 timeframe, and it has evolved over time.

Mr. CONAWAY. Yeah, yeah. Is there a group in your team that looks—that from time to time steps back and relooks at the conventional wisdom to say, when that was done a decade ago, when we set on two plus three, and we've held that through two different administrations, and now we are trying to justify that with 11 carriers that we might have at something—or 10 we got now, 11 we will have in 2019, 2020, 2021, whenever the *Ford* comes online. Is there a group that red-teams that to say, you know, we really—given that Putin is out there, we need three plus three or three plus two, what is it—is there somebody that does that?

Admiral AQUILINO. Yes, sir, the combatant commanders are responsible to identify the forces they need to meet the goals for deterrence and then ultimately to be able to respond to crisis—

Mr. CONAWAY. So General Breedlove would tell us that he doesn't need—he would not prefer a carrier somewhere in the Atlantic or the Med?

Admiral AQUILINO. So the combatant commanders via our global force management process have identified their requirements. Those get supported by the services, and then allocated per the Secretary of Defense.

Mr. CONAWAY. Yeah. I know you guys make hard choices. I got it. We limit your resources and try to make you squeeze all kinds of stuff out of it, but I guess I have got to ask for the record, would 12 carriers make this overall two plus three and the maintenance and the deployments and the training and the aircraft and all the other kinds of things that you are talking about, wouldn't it be easier with 12 than 11?

Secretary STACKLEY. Straight math, yes, sir.

Mr. CONAWAY. Okay.

Secretary STACKLEY. Straight math. The reality is, the larger the force—

Mr. CONAWAY. Yeah, I know—

Secretary STACKLEY [continuing]. The more flexible you have got, and then the issue is how do you afford that.

Mr. CONAWAY. Yeah, I know, I got you.

Secretary STACKLEY. Yes, sir.

Mr. CONAWAY. I got you. But I do think, at some point, justifying the two plus three in today's world—because I would argue that the world is not as safe today as it was in 2006 and 2007. China wasn't doing what it was doing, Russia is not doing what it is doing, and so—and maybe we need a review of that whole issue to see if we are, in effect, doing our country the right way by at least saying we need that third carrier on the—you know, out at any one point in time.

So I appreciate you guys being here, great service to our country. I am awed by the distinguished careers each of you have had, so thank you for what you have done for our country and your families putting up with all that time being away from them. So thanks on our behalf as well. I yield back.

Mr. FORBES. Mr. Conaway, thank you. And I was going to defer my questions to the end, but I want to clarify a couple of questions Mr. Conaway had just asked you.

Are we going to have a gap in our carrier presence in either the Pacific Command [PACOM] or the Central Command [CENTCOM] this year or next year?

Admiral AQUILINO. Yes, sir. We currently are experiencing what the CENTCOM commander would call a gap in the CENTCOM AOR.

Mr. FORBES. And what he would call a gap is actually a gap, isn't it?

Admiral AQUILINO. It is a—

Mr. FORBES. It is not like we are talking about terminology, syntax that's different than we won't have a carrier there. That is a gap, fair?

Admiral AQUILINO. Yes, sir.

Mr. FORBES. And coming back to what Mr. Conaway says, has the United States Navy ever made the determination that the presence of a carrier—of an aircraft carrier strike group has a significant role in deterring a conflict from going to phase zero to phase three?

Admiral AQUILINO. Yes, sir. Again, deterrence is one of the key missions.

Mr. FORBES. And it is a significant deterrence?

Admiral AQUILINO. I believe so.

Mr. FORBES. Well, let me clarify.

Secretary STACKLEY. I will go so far as to say that it is at the very core of our maritime strategy for national security.

Mr. FORBES. And the reason that we can know that is because you have no single unit that is more expensive, requires more resources to deploy than a carrier strike group, isn't that fair to say, in the national defense of this country, single unit?

Secretary STACKLEY. I'm not putting dollars against that. I am talking in terms of resources and capability that the carrier provides on scene.

Mr. FORBES. And the reason that I am saying that is because one of the things you guys come in to tell us always is the role we have to do in balancing what we have, the resources we have. So when you come in here and say that we need a carrier strike group, as Mr. Conaway said, we need two, and be able to surge three, the reason we need that is because it is so vital and so important that we place one of the most important and costly resource allocations we have, to try to deter that conflict from going to phase zero to phase three. Is that a fair statement? I see some nodding of heads, but for the record, Admiral Manazir?

Admiral MANAZIR. Absolutely a fair statement, sir. There is no replacement for a carrier strike group in any phase of any kind of conflict. There are multiple examples of when a carrier strike group was put in place to deter. Cuba in 1961; 1996, through the Taiwan Strait, two carrier strikers were sailed through there. The deterrence factor to the United States is significant, the carrier strike group, and no, sir, because of the resources the Nation puts into the carrier strike group, which is not only the carrier but the five destroyers, cruisers that go with it and all the people that go into that, it is worth that deterrence factor. Yes, sir, no replacement.

Mr. FORBES. And the last part of that question is, the United States Navy has also made the determination that the ability to surge three more carriers is incredibly important to us being able to win a conflict if that conflict were to actually go from phase zero to phase three. Is that a fair statement?

Secretary STACKLEY. Absolutely.

Mr. FORBES. Good. With that, I would like to recognize Mr. Larsen for 5 minutes.

Mr. LARSEN. If you all ever get around to building a 12th carrier, we will take it in Everett [Washington]. So I think it is Admiral Moore. Can you—we covered the two RCOH carriers. We didn't cover the three depot maintenance carriers. Could you give us a flavor of what that schedule looks like?

Admiral MOORE. Well, right now, you have got *Abraham Lincoln* in RCOH at Newport News Shipbuilding. You have got USS *Nimitz* in a 14-month availability in Bremerton. USS *Carl Vinson* down in San Diego for a 6-month availability down in San Diego. You have got USS *George H.W. Bush* at Norfolk Naval Shipyard right now with an 8-month availability at Norfolk, and then as the secretary alluded, you have right now USS *George Washington* returning from Japan to commence a refueling overhaul in August 2017. She will go back to Norfolk in December 2015, essentially she doesn't have enough gas in her tank to really—is a deployable asset.

Mr. LARSEN. Right.

Admiral MOORE. So you really have got those—in addition to *Lincoln*, you have got those three other carriers plus *George Washington* right now that is not available to us.

Mr. LARSEN. Yeah. And which of those are—which of those maintenance schedules are being pushed by a utilization that wasn't anticipated versus ones that are on schedule?

Admiral MOORE. Well, I think the ones—the *Eisenhower* is the one that we just finished, was the one that was significantly impacted by the pace that we ran the ship. Right now, it looks like *Carl Vinson* is doing fine, and as is *George H.W. Bush*. The one up in Bremerton, the *Nimitz*, is probably going to be the most challenging one to us for a couple of reasons. One, she is 40 years old. She is the oldest carrier ship of the class, so—and then, secondly, she has had a significant period of time where we've really run her at a higher op temp than some of the other carriers. So of the availabilities we have right now going on, I will tell you that the *Nimitz*, one that is in Bremerton, is the most challenging in terms of size and the work package it is on.

Mr. LARSEN. Has that added months to the maintenance schedule over than what was anticipated?

Admiral MOORE. Yes, sir. We actually, because of *Nimitz*, we were originally going to dock her this time. We decided to not dock her but put her in what is called an extended maintenance availability for 14 months, and then because of the run time of the ship we are going to deploy her, but we are going to bring her right back and put her back into a docking availability, so she is going to have, in the span of about 3 years, a significant amount of maintenance done on her to try and catch her back up, if you will.

Mr. LARSEN. And then she is due for decommissioning—

Admiral MOORE. 2025 is when she inactivates.

Mr. LARSEN. 2025.

Admiral MOORE. Yes, sir. That is when she will hit 50 years.

Mr. LARSEN. Any of this driving by the—I think the Readiness Subcommittee had a hearing where Admiral Harley testified that the *Ford* was going to be delayed 2 years, even though it is being delivered in 2016 and goes to work in 2018, there is a little delay there.

Admiral MOORE. Well, there is no doubt that being at 10 carriers, which is exacerbated by the fact that the *Ford* won't be now deployable till 2021, we will—you know, the law says you have to be 11 carriers, but it is only measured by when we commission *Ford*, and we will commission *Ford* next summer, but the reality is she is not a deployable asset now because of the way we are going to go test her until 2021, so we will be in a period of 10 carriers here until about 2021.

Back to my initial comments, you know, when we inactivated *Enterprise* in 2012, that took us down to 10, and then that—in the last 3 years, in order to meet the demand signals of COCOMs and meet the present surge requirements, we have run carriers harder than we had typically done it and harder than they were designed.

We have had—since 2012, had 7 aircraft carriers that have gone more than 300 days of deployed time between maintenance availabilities. Not all of it consecutive sometimes, but a lot of time, and that is an awful lot of run time, and that is a challenge that we

are going to have to continue to face here until we get *Ford* on the line.

Mr. LARSEN. Yeah. Admiral Manazir, could you comment—I think I know the answer to this, but I think you probably would know it with regard to the 18Gs [EA-18G Growlers]. Do we anticipate those being—do we anticipate the Navy's 18Gs being the only air base electronic attack? Are we going to have the national mission and the expeditionary as well being carrier based, or is that what the Navy is anticipating, serving other services?

Admiral MANAZIR. Yes, sir. So a couple of things in your question. The 18G Growler is the only Department of Defense airborne electronic attack platform that will be in service once the last of the Prowlers decommissions. The United States Navy has bought 153 Growlers. Thank you very much for the partnership there. We are completing a study to see if that is enough—

Mr. LARSEN. Right.

Admiral MANAZIR [continuing]. Growlers for all of the missions that the joint force would carry out.

Mr. LARSEN. Right. Good. Thank you. Thank you, Mr. Chairman.

Mr. FORBES. The gentlelady from Missouri, Mrs. Hartzler, is recognized for 5 minutes.

Mrs. HARTZLER. Thank you, Mr. Chairman, and appreciate hearing about the importance of the Growlers made in Missouri, and we certainly are trying to be supportive of making sure that you all have the assets that you need in that regard, so continue to work with us on that.

I wanted to clarify about the USS *Gerald Ford* because at the subcommittee hearing that we had earlier, it said it was scheduled to be commissioned in the early half of 2016, but then due to the shock trials, it would be delayed an additional 2 years, so that would be 2018, but then you are saying now it will be 2021 before it is commissioned?

Admiral MOORE. Yes, ma'am. If I could, just to clarify, we will deliver the ship and commission it next summer in 2016, and because it is the first ship of the class, it will have a series of initial operational tests and evaluation that we would have already done and that would have stretched out for several years to go prove that the ship does what we contracted the ship holder to do.

So she was originally scheduled to deploy—her first deployment would have been in 2019, and now, because of the shock trial, we will now deploy her for the first time in 2021, so that is the delay I was referring to.

Mrs. HARTZLER. And I know that they said in August 2015 is when they wanted to have that shock trial, and I know it has only been a few months, but have we had any development on that? Have they arrived at that point yet to do any of those?

Admiral MOORE. We will shock her in summer 2019, August of 2019, and we are making preparations to go do that now. We will bring her out of the yard. We will shake her down, and in our parlance, to make sure you kick the tires and make sure that you are getting what the taxpayer said that we were buying, and then we will go out and test her through a series of things for this brand new ship. And then we will go ahead and set her up and do a shock trial in the summer of 2019.

Mrs. HARTZLER. Okay. Well, it is concerning that it will be another 6 years basically, if I figure right, before we get to 11 full carriers again, and so hopefully we won't need them, and the world stage will allow us to have that, only 10.

But I wanted to talk more, and several people have already mentioned, but the maintenance situation. Of course, we had almost a 2-year maintenance on the *Eisenhower* after you have already talked about the extended service that it had that resulted in that, but has there been any lessons learned by these extended deployments to maintenance needs, that perhaps you can bring to the *Gerald Ford* in redesigning or to help decrease the amount of maintenance that is needed on the newer model?

Admiral MOORE. Yes, ma'am. Actually we spent an awful lot of time in the design of the ship trying to figure out how you could spend less time in maintenance and set the ship up so it would require less maintenance, so a couple of things. One, the *Ford* is designed to only have to dock the ship—dry-dock the ship every 12 years. We dry-dock the *Nimitz* carrier today every 8 years, so over the life of the ship, that is two fewer dockings, that means more time available to the combatant commander.

We looked at a lot—we used a lot of specialized materials on the ship that don't corrode as much, so a large portion of the maintenance we do on the carriers today involves opening up tanks, going in and blasting, coating, and painting those, that takes—spend an awful lot of time.

The other thing that we did that I could point out to you is a large portion of the *Ford* class, the interior of the ship is air-conditioned, and while that may seem like a great thing and you say, hey, it is nice you are doing that for the crew. Actually the reason we have done that is because one of the largest sources of corrosion and maintenance that we do on the ship is the ingestion of salt air from the environment that we work in, and so we spent an awful lot of time redesigning the *Ford* to air-condition large portions of the ship.

For instance, this is the first aircraft carrier that we have ever had that we will actually air condition the propulsion spaces, and the combination of that and then a redesign of the ship, which has resulted in the half number of valves on board, we took the steam systems which generate hot water on a *Nimitz*-class carrier, they are electric now, so we don't have steam piping running throughout the ship.

So we tried to go back and take all the lessons learned off the *Nimitz* class, a very manpower-intensive ship, great class of ship, and rolled those into the *Ford*. So I think when you see the *Ford* get out there, we projected we will spend significantly less time in depot, which means the ship is available to the combatant commander and we will spend 20 percent less on maintenance dollars.

The last thing is the class—this class of ship is designed to only go into a depot availability every 43 months as to compared to a *Nimitz*-class carrier which is right now at 36, so you are—we won't put it into maintenance as much. When we put it in for maintenance, we will do less maintenance.

Mrs. HARTZLER. That is good to hear. Thank you very much. I appreciate it. I yield back.

Mr. FORBES. The gentleman from Georgia, Mr. Johnson, is recognized for 5 minutes.

Mr. JOHNSON. Thank you, Mr. Chairman. In looking at how the carrier fleet may be updated, there is a greater focus on the use of automated systems to alleviate costs. What plans does the Navy have in terms of extending ship life and freeing up resources for other uses?

Secretary STACKLEY. Let me start with the ship life itself. It is a 50-year service life on the aircraft carrier. And today, the ship is not designed for a service life beyond 50 years. What we are trying to do is drive down the cost of getting it to 50 years. So the automation that you described, that is a critical component of that strategy because a big part of your cost in service life is the cost of people.

And so to drive down the size of the crew on an aircraft carrier, we have converted to first reducing the maintenance load that the crew has to perform, but also relying on automation. Where a sailor in the past might have taken a particular action, now we are using automation to relieve that burden from the crew.

So in total in terms of the ship's force itself, 600 sailors come off of the comparable number that puts a *Nimitz*-class carrier to sea, largely thanks to the automation that we have embedded into the systems. So that is a lifecycle cost savings. And then as Admiral Moore described, the efforts to improve reliability and reduce maintenance loads makes the carrier more available to get underway in its 50-year service life.

Going beyond 50 years, that would entail another refueling cycle for the aircraft carrier. And our experience to date is at that stage of the hull's life, you are better proceeding with replacing the hull with a new ship than to try to refuel a 50-year-old hull to get another 25 years out of it.

Mr. JOHNSON. Thank you. As our carriers operate within the carrier strike group, how do we stand as far as supporting vessels and resources that the Navy needs to ensure that every carrier group is properly supported?

Admiral AQUILINO. Sir, the Military Sealift Command [MSC] is the supporting assets to meet our carrier strike group logistics requirements. They are currently structured to meet the force structure size of 11 carriers. And they are sized rightly to do that. They forward position in some cases, they deploy with them in other cases. But currently, we are matching the need with the requirement.

Secretary STACKLEY. I would simply add, I described in my opening remarks the Force Structure Assessment that was completed by the CNO in 2012 and updated each year since. That outlines a very balanced force. So while the carrier, the 11-carrier force is the centerpiece, it also includes all the escort ships that are part of the carrier strike group, and support ships associated with replenishing supplies on the carrier and to support not just the carrier, but also the ships that would accompany her on deployment.

And so then if you look at our shipbuilding plan going forward, you will see each type of ship that is outlined in that Force Structure Assessment, its procurement plan to either build new or to ex-

tend its service life to ensure that we have the full complement described.

Admiral MANAZIR. Sir, and if I can add, the Force Structure Assessment that Secretary Stackley is describing, to go back to a question that was asked by I believe the gentleman from Texas, this Force Structure Assessment is sized for United States Navy force to conduct a complex, multi-phase campaign against a high-end adversary in one region, and be able to deter or impose costs on an adversary in another region. This force is designed to do that all the way to 2030, is our assessment.

Mr. JOHNSON. Thank you. In your opinion, does it make more sense to—well, let me ask the question this way. With respect to the sustainment phase of ship construction, how would the requested funding be allocated to sustain the carrier force as it is?

Secretary STACKLEY. I think what you are describing there, sir, is our funding in the President's budget request, we have new construction funding, which is ships, conversion, and Navy, which is SCN, but inside of our operations and maintenance account is the maintenance funding required to support the carriers and their service life.

So we talked earlier about the Optimum Fleet Response Plan. That lays out the cycle by carrier strike group for ships entering the maintenance window between deployments. And then the budget request that comes over annually provides the funding for the stack of ships that would be in depot maintenance as well as routine maintenance to execute the requirements consistent with the O-FRP. And it is done by ship type in terms of both maintenance and modernization for the specific windows.

Mr. JOHNSON. Thank you. And I yield back.

Mr. FORBES. The gentleman yields back. The gentlelady from New York, Ms. Stefanik, is recognized for 5 minutes.

Ms. STEFANIK. Thank you, Mr. Chairman. And thank you to the panelists for your testimony today and for your service and for your families' service to our Nation.

I am proud to represent Fort Drum, home of the 10th Mountain Division. And as you know, currently brigades are forward deployed in Afghanistan and Iraq, and have been since September 11, 2001. And recently, I was fortunate to embark on the USS *Truman* while she was underway. And I also accompanied Chairman Wittman on a visit to the Naval Strike and Air Warfare Center, at NAS [Naval Air Station] Fallon in order to view the entire workup and training cycle prior to deployment. And these visits, both of them, made it very clear the significant role the Navy has in providing close air support to troops on the ground.

And recently, there has been discussion about how our air wings may require some adjustments in order for the carrier strike group to be successful in the high-end fight against competitors like China. But as our Navy considers how to meet these challenges from the high-end threats, I also hope that the capabilities are maintained so that the carrier air wing can continue the support of troops on the ground like the 10th Mountain Division soldiers that I represent.

So can you please explain to me how you plan to maintain or improve the carrier air wing's current close air support capabilities

while simultaneously preparing for a high-end fight against a peer competitor?

Admiral MANAZIR. So ma'am, that is my job as the Director of Air Warfare. I will tell you that the F-18Es and Fs that are over the top of our troops in northern Iraq and Syria and in Afghanistan supporting those troops for a decade are the same fighters that we will have through 2035. And coupled with the Joint Strike Fighter F-35C, which has significant close air support capabilities, you will still have the close air support capabilities that we have enjoyed for the last 15 years in these fights in different AORs.

Those same aircraft, F-18Es and Fs and F-35Cs, are capable of operating in the high end, particularly when coupled with the E-18G Growler. So the air wing that you see on the flight decks now, augmented by the F-35C in August of 2018, will continue to be able to operate across all the phases of warfare, whether it is close air support or whether it is a high-end fight against an anti-access/area-denial type of adversary.

Ms. STEFANIK. Great. Thank you, Admiral. Any other comments?

Admiral AQUILINO. No, ma'am, other than we are completely integrated with the Army team on the ground. We have made numerous operational changes. At my last deployment I had three Army LNOs [liaison officers] who rode the ship with us in direct communications with the troops on the ground in order for the pilots who were about to take off had the latest and greatest update on the situation on the ground so they could best support them. It is the most important thing we do, and we take it very seriously.

Admiral Manazir is putting together a great list of equipment so that we are synchronized, aligned, and interoperable with our Army and Marine Corps team that is on the ground.

Ms. STEFANIK. Great. I know I speak for the 10th Mountain soldiers I represent that we are appreciative of that support. And I yield back.

Mr. FORBES. The gentlelady yields back. The gentleman from Oklahoma is recognized for 5 minutes.

Mr. BRIDENSTINE. Thank you, Mr. Chairman. And I would like to thank all of the great service members that are testifying today. I am a Navy pilot by trade. I recently traded in my wings of gold for wings of silver. But I still, at heart, am a Navy pilot.

I joined my fleet at a perfect time. I joined VAW-113, the world famous Black Eagles. And when I joined the squadron, we were in the middle of what was called at the time an interdeployment training cycle, IDTC. So I had the opportunity as a brand new guy coming out of the FRS [Fleet Replacement Squadron], had an opportunity to see the whole IDTC worked through. I got to participate in the Strike Fighter Advanced Readiness Program. I got to participate in JTFX [Joint Training Fleet Exercise], Air Wing Fallon, COMPTUEX [Composite Training Unit Exercise]. I eventually, after I finished my sea tour, I went and worked at the Naval Strike and Air Warfare Center.

But what was interesting is, it was an 18-month cycle followed by a 6-month deployment. And then we had the wars in Afghanistan start and the war in Iraq start. And what was the IDTC ended up being instead of a 6-month deployment, a 10-month deployment. And at that point, it seemed like the interdeployment

training cycle pretty much went off the rails and they started new programs, Fleet Response Plan, and now the Optimized Fleet Response Plan. And even with these plans, to get more out of less, still gaps are emerging that are in my estimation dangerous.

And one of the questions I have is, have you guys done a detailed analysis as to what the impacts would be for the training cycle if instead of 11 carriers we had 12? And I know other members have asked this question. But what would be specifically the impacts? I know that 12 is better than 11; we heard that. But what would it do, for example, for the IDTC, which of course has a different name these days? What would it do for the men and women who serve? Would they get to maybe not deploy as frequently? Would the deployments be 6 months instead of 10 months? Would there be fewer gaps, for example, in the Persian Gulf or in the Mediterranean? Would there be more time for us to stay at home training and maintaining not only the ships, but also the aircraft?

So all of these kind of things that go into determining what is the right force structure and do we need 11 or 12. Can we get specific analysis as to what are the impacts? What is the difference in the fleet if we have 12 instead of 11?

Admiral AQUILINO. Sir, I will hold off on the analysis piece, but I will get to your discussion on the training cycle. So the Optimized Fleet Response Plan is targeted to do what you highlighted as somewhat of a frustration. In that plan, the key segments of the design, the ship must get in on time for maintenance, it must get out on time. That preserves 120-plus days of basic training for the ships and the pilots to do the SFARPs [Strike Fighter Advanced Readiness Programs] and things you described. It also carves out an integrated class advance timeline of 120-some-odd days to do the COMPTUEXs and the JTFXs. And it preserves that ability to do the high-end training that previously I think we have seen was the shock absorber for when you either had to deploy early or when the ship came out of maintenance late.

We are fencing that, understanding that the only way to train to the high end is to preserve that time and then have discipline in the process. That is a critical part of O-FRP.

Mr. BRIDENSTINE. So if that time is preserved, how are you stretching? Are you getting like when you deploy, the deployments are longer? Is that the goal?

Admiral AQUILINO. We have done longer deployments in the past. But the tenet of O-FRP that the CNO needed to get to, based on a couple of questions before, was a commitment to a 7-month deployment. That is for the crews and families so that, number one, it is predictable; number two, it doesn't impact on future retention problems later. Because as you know, you know, 1 day is okay, 6 months pretty challenging, 10 months is really hard. And I think the CNO wants to get away—we need to put that predictability back in. So the commitment to 7 months as a part of our force generation model is critical.

Mr. BRIDENSTINE. When you say commitment to 7 months, meaning not to go past 7 months or do at least 7 months?

Admiral AQUILINO. Seven months is the targeted goal for a carrier strike group deployment. That is what we are bringing into the global force management process. That is the number that we use

to generate the presence needed—or presence provided under a supply-based model that we are using today.

Mr. BRIDENSTINE. Okay. I am down to my last second here. Can we get maybe for the record what that analysis would look like for those items I mentioned regarding a 12-carrier fleet vice an 11-carrier fleet?

Admiral MANAZIR. Sir, at risk of not answering your question but telling you, we referred to a Force Structure Assessment that was delivered by the Navy to the Congress in February of this year. That Force Structure Assessment looked from now until 2030 using the Optimized Fleet Response Plan and looking at the projected threat capabilities. And that assessment came down and said 11 is the minimum number we need with an acceptable level of risk to—

Mr. BRIDENSTINE. Does that mean gaps when you say acceptable?

Admiral MANAZIR. Sir, the gap part is different. That is the global employment of force. That is the global force management model gap. But 11 is the minimum force we need from a capability perspective. As Vice Admiral Aquilino testified to, a different process is used as to where to put that force. But the Force Structure Assessment was submitted by the Chief of Naval Operations to say that 11 is the number if you look across our force.

So that, sir, was the analysis that was submitted to Congress in February of this year.

Mr. BRIDENSTINE. So there is no analysis as to what would the impact be if you had 11? I am just asking. I mean nobody looked into that?

Admiral MANAZIR. From what perspective, sir? If you are talking about where we would put the forces—

Mr. BRIDENSTINE. From a gap analysis. Would it reduce gaps? Would it allow service members to spend more time at home to do training and to do maintenance and ultimately—

Secretary STACKLEY. Let me take that, sir. No, we have not done an analysis for a 12-carrier force since the *JFK* [*John F. Kennedy*] retired in 2006 timeframe.

Mr. BRIDENSTINE. Okay.

Secretary STACKLEY. To conduct that analysis, in other words to take the Force Structure Assessment that we have done and say what if we were a 12-carrier Navy, that would be not just adding a carrier, obviously, that would be adding all the elements associated with the carrier strike group, as well as the sailors that would be added to the deployment cycle, which is not a one for one. So that would be a very comprehensive assessment.

Today, what we do is, as Admiral Aquilino described, is we are a supply-side equation today, where we know the force that we have got, we take a look at the peacetime presence demands, and we take a look at major combat operations and we see can we supply the amount of force necessary to satisfy both? Clearly, there is higher demand from the combatant commanders today than we can provide in an 11-carrier force.

So there is a prioritization that takes place inside the Joint Staff in terms of the GFMAP [Global Force Management Allocation Plan]. For major combat operations, the 11-carrier force to provide

the two plus three surge carrier strike groups, we believe is what is necessary to meet our requirements. Would a 12th carrier strike group relieve some of the burden to the total force in terms of operational cycles? Yes, it would. Do we know what that would entail in terms of the total force structure, including sailors, and how that would ripple through the Optimized Fleet Response Plan? We have not done that analysis.

Mr. BRIDENSTINE. Okay. Thank you.

Mr. FORBES. The gentleman's time has expired. Let me say to you gentlemen, thank you for being here. Just a couple of wrap-up questions that I deferred from the beginning. The role of our two subcommittees that we have chosen to take today is not to point blame at Republicans or Democrats, the administration or Congress, not to point blame at the cuts of \$780 billion versus sequestration, but it is to assess risk and to see how we—and threats, and see how we can fill those gaps.

As I listened, Admiral Moore, to some of your speeches, which I appreciate and look at, you had a phrase that I have copied. And sometimes I give you credit for it and sometimes I don't. But it is that we are an 11-carrier Navy in a 15-carrier world. And you probably said it more articulately even than that. But it sums up the fact that based on what Mr. Conaway was talking about, all those risks, we probably need 15 aircraft carriers as opposed to 11.

Admiral Manazir, in all of your analysis you have told me privately, and not with any analytical backing behind it, but if we could ask you guys to go in another room and we brought our combatant commanders here, the guys who look every day into the risk that Congressman Conaway talked about, that growing risk of Russia, China, everything else in the world, they may say we need 21 aircraft carriers, but certainly more than what we have. Regardless of what Admiral Moore would say that we might need in the world, or Admiral Manazir, what we may have from our combatant commanders, the reality is that the United States Congress and the United States Navy have basically agreed we need 11 aircraft carriers. And we have less than that today.

The United States Navy has also, I think based on your testimony, concluded that the mere presence of one of those carrier strike groups has a significant role in stopping a conflict from going to phase zero to phase three. Therefore, not having that carrier creates a huge vulnerability that we cannot stop that escalation from taking place.

So I ask any of you, if you can tell us the size gap that we will have over the next 12 months in either the Pacific Command or Central Command, where we will not have a carrier strike group present?

Admiral AQUILINO. Yes, sir. There are in the next year some periods similar to what we are seeing in the CENTCOM AOR now. Again, the reason is, number one, not because we don't want to.

Mr. FORBES. No, no, this is not fault.

Admiral AQUILINO. Copy.

Mr. FORBES. And we have already established we have the gap. How large is the gap? We have heard that in non-classified statements. Can you tell me how many days that gap will be present in the next 12 months?

Admiral AQUILINO. I would prefer to tell you that offline, if that is okay, for classification purposes.

[The answer was submitted in a classified forum.]

Mr. FORBES. Okay. That would be fine. Okay. How about CENTCOM? Can you tell us what is going on there right now that is not a classified?

Admiral AQUILINO. Currently, as has been reported, there is a gap in the CENTCOM AOR.

Mr. FORBES. And when we mean gap, just so we know when we look the term up, we mean no carrier strike group.

Admiral AQUILINO. Yes, sir. That is the gap.

Mr. FORBES. And the other thing that we can agree upon that I think the United States Navy has concluded and made a judgment of, and the CNO has said, is that if we do not have that capability of having three carrier strike groups for the surge, which means we can bring them to the fight if we are not successful in keeping it from going from zero to phase three, that that has a huge impact on whether or not we can win or lose that conflict. Is that fair to say?

Admiral AQUILINO. Yes, sir. Those follow-on assets that would be needed for many of the crises that are potential, they are critical to being able to win the fight, absolutely.

Mr. FORBES. And if they are critical to winning the fight and we need three of those strikes to supplement the two that we don't always have right now, give me an idea of the timeframe that I would be looking at over the next 12 months—and let me use my friend Mr. Courtney's phrase if the balloon goes up—and maybe I would rephrase it if we had a conflict that went from zero to three. How long would it take to mobilize those three carrier groups and to send them on their way to that fight?

Admiral AQUILINO. If you don't mind, sir, I would prefer to give you those numbers offline as well.

[The answer was submitted in a classified forum.]

Mr. FORBES. Be fair to say, though, it would be a significant amount of time?

Admiral AQUILINO. Yes, sir. And definition of significant—

Mr. FORBES. I understand.

Admiral AQUILINO [continuing]. We can talk.

Mr. FORBES. Now, the last thing I would like to put on that equation too is we know we do not have—we will have times where we will not have a carrier strike group in the Pacific Command or the Central Command, that that has a huge impact on whether we can deter a fight from going from phase zero to phase three. That in addition to that, we would have what we would conclude to be a significant time period, regardless of what significant means, in when we could mobilize the three carrier strike groups we would need to surge, therefore having an enormous detrimental impact on whether we could win or lose that conflict.

When we talk about even if we win or lose, that time delay, can you tell me whether or not that could also equate to putting at significant risk the lives of men and women who would be in that fight?

Admiral AQUILINO. Absolutely, sir. So a part of the planning that goes on, absolutely, is identified by the amount of time your forces

can respond. The delay to the response of those forces absolutely increases the risk, the timelines you are on, and ultimately gets to a personal risk.

Mr. FORBES. And Admiral, you have looked at our military objectives. Can we accomplish all of our military objectives with our current aircraft carrier presence and surge posture?

Admiral AQUILINO. Sir, the 11-carrier force that is identified as needed absolutely—

Mr. FORBES. No, no, I understand that. I am talking about today, with what we have today, and the world we are living in today and the environment you have. Can you accomplish it with what you have?

Admiral AQUILINO. I would say we are accomplishing it, the requirements, at increased stress to the force and the ability to get to a sustainable posture that allows us to carry a Navy into the future to meet those same requirements over the long term.

Mr. FORBES. And when I—

Secretary STACKLEY. Sir I would just add to that, and I think it is in black and white in terms of the Force Structure Assessment that the CNO outlined. We require 11 aircraft carriers to meet our full range of military operational requirements. Today we are at 10, and we are at 10 that are highly stressed because they have been driven hard. And so we have more carriers in depot maintenance today than we would normally have under a stable, a more stable operational cycle with an 11-carrier force.

So we have the compounding impact of we are down a carrier and then driving the remaining carriers harder. We have more carriers in depot maintenance. So we have a shortfall in terms of our ability to generate the carriers with their air wings in response to crisis today. And until we get the *Ford* ready for deployment and we are back up to 11 carriers and the Optimized Fleet Response Plan catches hold in terms of restoring our operational and maintenance cycle to where it needs to be, until we get back into that state, we are going to be operating at a deficit.

Mr. FORBES. And Mr. Secretary, we are here to help you. We are just trying to define what that risk is so we can make sure we shore it up. I do have one last question for you. The Navy has proposed a two-phased acquisition strategy for the construction of the USS *John F. Kennedy*, CVN 79. Now I understand that first phase would construct the hull and superstructure of the ship and the second phase would insert the combat systems. Has the Navy ever performed a two-phase aircraft carrier strategy? And is such a strategy contemplated for CVN 80? And can you tell us the reason why we are adopting that phase?

Secretary STACKLEY. Yes, sir. The first question regarding whether the Navy has done this before on a carrier, I would have to go back and research whether we have done it with a carrier, but we have done that with surface combatants in the past where the shipbuilder would build the ship and then at a Naval Shipyard we would install the combat system.

Today, in fact, on the DDG-1000 [*Zumwalt*-class destroyers] program we are doing exactly that as well. I would have to do research in terms of whether we have done it on a carrier. The motivation for doing this, the CVN 79 is the numerical relief for the *Nimitz*,

which retires in 2025. At one point in planning, the Navy was looking at the construction schedule for the CVN 79 to support a heel-to-toe replacement of the *Nimitz*. That is not an optimal construction schedule for the shipbuilder. So there is this tension between we wanted to build the ship earlier to reduce cost of construction, but she is not required until *Nimitz* gets ready to retire. So do we ramp up a crew, have a ship operational for a period of time in advance of when she is needed? So those were the trades that we were looking at from a schedule perspective. Separately, we were looking at how can we reduce the cost of the CVN 78 class through its construction. And a couple things jump out.

One is there is work that is better tailored, better suited for being accomplished outside of the new construction yard where third parties could bid on it competitively. Two, we have this long history of a very long construction cycle for the carrier. Systems that you identify early on in the procurement process, particularly electronic systems, command, control and communication systems that are subject to obsolescence, by the time the ship is built and it is outfitted and delivered, those systems are already obsolete compared to the rest of the Navy. So we looked for an opportunity to install those systems as late as possible.

And then the third piece is a very specific system which is the radar for the CVN 79 and follow. We are in fact developing a new radar for our carriers and big deck amphibians [amphibious assault ships], the Enterprise Air Surveillance Radar. That would not be available to install in line in construction on the CVN 79, but it is available to install in the second phase.

So we looked at let's optimize the construction schedule, which means building it earlier, but then let's assign the manning more in line with the replacement of the *Nimitz*. So that created this bifurcation in terms of the schedule. And then in this phase two window we will install the C4I [command, control, communications, computers, and intelligence] equipment, the electronics equipment, we will install the new radar, and then we will complete some of this work that would be competed, frankly, with third parties and be able to be done pierside.

It seems to be the right balance. It is unique to CVN 79 because of the schedule window that we have to do this. We will not have this opportunity on CVN 80 because her schedule, her construction schedule is going to be pressed up against she will be the numerical relief for the CVN—

Mr. FORBES. So we don't have plans to use it on CVN 80?

Secretary STACKLEY. No, sir. No, sir.

Mr. FORBES. Gentlemen, thank you for being here today. As you know, each day we come into this rather impressive committee room, I look at all the things I worry about in the world and the things I am grateful for. One of the things I am grateful for is that we have talented people with the kind of commitment that you have to making sure you are defending and protecting this country. So we thank you for that.

Also, I have told you at the beginning that we wanted to give you any time that you needed to elaborate on something perhaps that we didn't discuss you felt was important for the record or to clarify

something that you would like to clarify. So at that time I would love to do that. And Mr. Secretary, we will let you start.

Secretary STACKLEY. Sir, I gave an opening statement. I have had plenty of time to discuss the issues and questions and answers. And I would defer to my colleagues here.

Mr. FORBES. Okay.

Admiral AQUILINO. Sir, I am trying not to get quoted by you, as Admiral Moore did, just so you know.

Mr. FORBES. Look, I am praising him. We would love to have another quote like that.

Admiral AQUILINO. What I will leave you with, sir, just so you are aware, you know better than anyone your Navy is forward deployed each and every day doing the things that are needed. So I thought, based on the carrier hearing, I would tell you where your current—we talked about where the five parked ones are. Let me tell you where the five working ones are.

So *Theodore Roosevelt*, just coming back from a greater than 8-month deployment that was in the north Arabian Gulf in support of the fight against Syria and ISIL [Islamic State of Iraq and the Levant]. On the way home, they went and participated with Operation Malabar with the Indian Navy. They also participated with the Japanese Navy as a part of that as well.

Ronald Reagan now deployed as the forward-deployed naval force carrier coming out of Korea, doing operations in the Western Pacific. They will participate in an operation called ANNUALEX [Annual Exercise] with the Japanese. Pretty critical to our allies and partners to stay plugged in, interoperable.

George Washington we talked about. While she is coming around to go into overhaul, she is executing Operation UNITAS on both the west side and the east side of South America, working with our partners down there across the globe.

John C. Stennis on the West Coast and *Harry S. Truman* on the East Coast, both are almost complete with their workups. They will be deploying shortly as the follow-on replacements.

And sir, I know I don't have to tell you that, but I figured you would want to hear that. Still working hard each and every day. Thank you for your time. And I appreciate it.

Mr. FORBES. Thank you, Admiral. And Admiral Moore, we would love to have another great statement.

Admiral MOORE. I will try to avoid that today, sir, if I could. Mr. Chairman, I appreciate the time today. I have had one of the great honors of my career to have the opportunity to design and build and maintain our Nation's aircraft carriers. We didn't spend a whole lot of time talking about the *Ford* class today. Despite some of the challenges we have had with *Ford*, we are going to deliver her next year. We are on a sustainable path going forward. That is going to be a great ship, built by some fantastic shipbuilders down at Newport News, which are national assets.

I did spend a lot of time talking about the *Nimitz* class and our need to maintain that ship for 50 years, and spent an awful lot of time talking about the industrial base. What I failed to mention is one of the things that we also should be worried about; I think the industrial base, no matter how hard we can run these ships, will be able to maintain the ship.

One thing I failed to mention I should have, the other thing is we are also running the sailors and the men and women on those ships extremely hard. And I have no doubt that the industrial base can put those ships back together. But I do worry about the pace that we are maintaining for our sailors. And so I would just like to add that for the record and point out again why it is so important for us to get back to 11 carriers.

Mr. FORBES. Thank you, Admiral. Admiral Manazir, we are going to let you do cleanup.

Admiral MANAZIR. Mr. Chairman, usually I am not shy as a fighter pilot, but I will try also not to make declarative statements beyond what you have already discussed with us today. And I thank you for the opportunity. I would like to clarify one point and then give some closing comments.

Chairman Wittman, when you and I discussed the Super Hornets and F-35Cs, what I needed to clarify is why we buy both of those, the impact of the F-18E/F is most impactful at 2016, 2017, 2018. The airplanes we are procuring now and that combat capability of course go together. And as Secretary Stackley said, the F-35Cs that we are procuring in 2016 to deliver 2018 is the capability impact. So I hope that is a little more clear.

Sir, thank you very much. And Chairman Forbes, Ranking Member Courtney, thank you, members of the committee today, for the opportunity to join you and for the personal investment so many of you have made in ensuring Navy's ability to defend the Nation, to protect American interests at sea, and specifically for your ongoing support of our Nation's aircraft carriers.

As your Director of Air Warfare, this is what I worry about, lose sleep at night about. But your bipartisan support, your visits to our carriers both underway and while they are being built and maintained, the assistance you and your fellow members provide truly make a difference.

Adaptations and improvements to our carrier strike group capabilities continue. And they include most recently USS *Eisenhower* recently completing a highly successful series of developmental tests for the F-35C, called Developmental Test Period Two. That is our fifth-generation strike fighter that will ensure the Navy's aircraft carriers deliver air dominance in that high-end warfight. The E-2D Advanced Hawkeye was deployed on the *Theodore Roosevelt* for the first time to bring superior long-range battle management command and control, with sensors that support offense and defense for the entire carrier strike group.

The continued delivery of the carrier-based E-18G Growler as the only tactical aircraft in the joint force that ensures electromagnetic spectrum dominance of the battlespace. And the continued development of advanced weapons for carriers and their embarked air wings in anticipation of future adversaries, such as the long-range anti-ship missile. And even high-energy lasers, which will help ensure carrier strike groups can establish sea control in any environment.

The maintenance and modernization of our current aircraft carriers and the ongoing procurement of the new *Ford*-class ships will ensure our Navy's aircraft carriers and carrier strike groups continue to outpace the threat and bring unparalleled warfighting ca-

pability for the combatant commanders. My colleagues at this table and over in the Pentagon understand and are committed to the work that remains to ensure providing these capabilities does not cost the taxpayer a dollar more than they should.

The Nation's investment in aircraft carriers is significant. Their global reach, their ability to amass firepower over sustained periods, their commanding presence and proof of our national resolve have routinely demonstrated a high return on these investments. The aircraft carrier, as the centerpiece of a carrier strike group, provides us with an unequaled hard, soft, and smart power advantage in a single, responsive, flexible, and mobile package, unfettered by geopolitical constraints. No other military capability delivers more.

Sir, thank you very much for the opportunity to testify today.

Mr. FORBES. Thank you all. We appreciate the great work your staffs do in helping as well. And with that, if there are no other questions, we are adjourned.

[Whereupon, at 4:07 p.m., the subcommittees were adjourned.]

A P P E N D I X

NOVEMBER 3, 2015

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

NOVEMBER 3, 2015

**Opening Remarks of the Honorable J. Randy Forbes
for the
Joint Seapower and Projection Forces/ Readiness Subcommittee Hearing on
Aircraft Carriers
November 3, 2015**

Today the subcommittee meets to discuss our aircraft carrier fleet and the challenges we face in meeting presence and surge requirements and sustaining our ability to project power overseas.

Our panel of distinguished guests testifying today includes:

- The Honorable Sean J. Stackley, Assistant Secretary of the Navy for Research, Development, and Acquisition
- Vice Admiral John C. Aquilino, Deputy Chief of Naval Operations for Operations, Plans and Strategy (N3/N5)
- Rear Admiral Michael C. Manazir, Director for Air Warfare (N98)
- Rear Admiral Thomas J. Moore, Program Executive Officer for Aircraft Carriers

Distinguished guests, thank you for being with us today.

In preparing for this hearing today, I was reminded of a quote by a former president: “When word of a crisis breaks out in Washington, it’s no accident that the first question that comes to everyone’s lips is: Where’s the nearest carrier.”

Even President Obama has realized that this axiom is alive today. When the ISIL blitzed across Syria and into Iraq, a forward-deployed carrier was the first responder, providing the entirety of strike capacity for the first 54 days of conflict.

Our carriers are incredibly capable platforms that can carry out a variety of missions in all the phases of military operations. But for all their advanced technology and tactics, our carriers are still only capable of being in one place at one time, and remain subject to the tyranny of distance and arithmetic.

For decades, it has been U.S. policy to maintain a “1.0” carrier presence in both the Middle East and Asia, with one carrier and its strike group continuously on station in each region. Unfortunately, if another crisis or conflict were to break out in the Persian Gulf today, and the President were to ask where is the carrier, the only sound he would hear would be the sound of silence.

This is because for the first time since 2007, the United States is unable to provide a carrier to Central Command for a three-month period. Meanwhile, despite talk of a “pivot” or “rebalance” to the Asia-Pacific, carrier gaps have been even more frequent in that region.

This shortfall in forward presence is concerning by itself, but it is only part of the carrier deterrence and warfighting equation. To deter and prevail in large-scale conflicts,

the Navy assesses it needs two carriers forward and three more carriers ready to “surge” into action under short notice. Unfortunately, as the former CNO recently said, we currently have only one carrier ready to “surge,” leaving our Navy well short of the warfighting requirement.

In short, “2+3” is what we need from our carriers—two carriers forward deployed in the Middle East and the Asia-Pacific, plus three more ready to surge.

That is the demand side of the carrier equation. But on the supply side, our ability to meet that demand is constrained by a fleet of only 10 carriers—1 below the statutory requirement—and the prospect that deployment of our newest carrier, the GERALD FORD, could be further delayed. In short, the numbers just don’t add up.

I am pleased that this administration has recognized the harm that the high OPTEMPO has been doing to the ships and sailors that make up our overextended fleet. But while we seek to stabilize the demand for carriers, we should also seek to maximize their supply.

In 2013, one of our witnesses today said that we had an “11-carrier navy in a 15-carrier world.” In the two years since, our carrier fleet has shrunk, and the world has indisputably grown more dangerous. Our “carrier equation” is out of balance, and it is incumbent upon this committee, to work with our witnesses and the rest of the Navy to make sure that our carrier fleet is capable of meeting the demands for forward presence and surge capacity in a sustainable fashion.

I am committed to making that happen, and look forward to our discussion.

With that, I turn to another leading proponent of American Seapower, our Ranking Member, Mr. Joe Courtney of Connecticut.

**Opening Remarks for Congressman Joe Courtney
Ranking Member
Seapower and Projection Forces Subcommittee
Aircraft Carrier – Presence and Surge Limitations
and Expanding Power Projection Options
November 3, 2015**

Mr. Chairman, thank you for calling today's joint hearing on aircraft carriers, presence and surge limitations, and expanding power projection options.

In terms of power projection, technology, flexibility, and global presence, it is hard to argue that there is any stronger component of American might than the aircraft carrier. Today, aircraft carriers are deployed throughout the world, on station when and where our country needs them most. They occupy a key role in our national strategy, providing a permanent and mobile presence in some of the globe's most contentious hot spots.

Just last month, for example, *USS Ronald Reagan* (CVN 76) arrived in Japan to be our nation's only permanently forward-deployed carrier in the Asia-Pacific. While we have grown accustomed to having aircraft carriers permanently on station in the Central Command and Pacific Command Areas of Responsibility, budget decisions of the past are forcing us to accept shortfalls and gaps in the present.

For example, today there is no carrier on station in the Arabian Gulf. A decade of increased operational tempo for our carrier force coupled with Congressional budget battles have led to shortfalls in fleet maintenance and training. These decisions forced our Navy to execute a carrier reset that is currently underway. This reset will periodically take the aircraft carrier capability off the table in certain regions of the world, and, as we learned a few weeks ago, it will take our carrier force five years to get back to normal.

As everyone here knows, the *USS Theodore Roosevelt* (CVN 71) just departed the Middle East last month, and is making its way to its new homeport of San Diego after six months supporting strikes against ISIL under Operation Inherent Resolve. While I know our military leaders have made every effort to mitigate the capability gap created by *Roosevelt's* absence, those mitigation efforts only take into account expected events. It is the unexpected that worries me. Unanticipated hostilities or the next humanitarian crisis could erupt at any time, requiring a mobile platform or deep strike capabilities, and we would not be able to respond with the strength and agility that our carrier force provides.

Simply put, we may be able to mitigate the absence of a carrier and its strike group, but we cannot replace it.

For this reason, it is imperative that we do everything in our power to prevent this operational shortfall from happening again. This includes a stable budget that our Navy and our military leaders can plan to, and I am pleased that we took a step towards providing some measure of this in last week's bipartisan budget agreement. It also requires a renewed focus not just on maintaining our carrier fleet, but also protecting

maintenance availabilities to ensure that near term decisions to truncate repair and training to meet operational needs do not further preclude presence and surge requirements in the future. And, finally, the Navy and Congress must continue to work together productively to ensure that we deliver our new carriers in a timely, cost-effective way to get back to the 11 carrier force as soon as possible.

Given the tremendous stakes involved, I am honored to have our four witnesses here with us today. Their expertise in acquisition, strategy, air warfare, and program management is vital to helping us understand the importance of our aircraft carriers, power projection, readiness, global presence, and cutting edge technology. As Seapower Ranking Member, this topic is vitally important to me because it underpins our naval strategy and guides our decision-making in the global domain. I look forward to the testimony of our witnesses today. With that, Mr. Chairman, I yield back.

NOT FOR PUBLICATION UNTIL RELEASED BY
THE HOUSE ARMED SERVICES COMMITTEE

STATEMENT

OF

THE HONORABLE SEAN J. STACKLEY
ASSISTANT SECRETARY OF THE NAVY
(RESEARCH, DEVELOPMENT AND ACQUISITION)

VICE ADMIRAL JOHN C. AQUILINO
DEPUTY CHIEF OF NAVAL OPERATIONS
OPERATIONS, PLANS AND STRATEGY (N3/N5)

REAR ADMIRAL THOMAS J. MOORE
PROGRAM EXECUTIVE OFFICER, AIRCRAFT CARRIERS
DEPARTMENT OF THE NAVY

REAR ADMIRAL MICHAEL C. MANAZIR
DIRECTOR, AIR WARFARE (OPNAV)

BEFORE THE

READINESS SUBCOMMITTEE

AND

SEAPOWERS AND PROJECTIONS FORCES SUBCOMMITTEE

OF THE

HOUSE ARMED SERVICES COMMITTEE

ON

THE NAVY'S AIRCRAFT CARRIER PROGRAM

NOVEMBER 3, 2015

NOT FOR PUBLICATION UNTIL RELEASED BY THE
HOUSE ARMED SERVICES COMMITTEE

I. Introduction

Chairman Forbes, Ranking member Courtney, Chairman Wittman, Ranking member Bordallo, and distinguished members of the subcommittee, thank you for the opportunity to appear before you today to address the capability provided by our nation's Aircraft Carriers.

Aircraft carriers are central to our nation's defense strategy, which calls for forward presence; the ability to simultaneously deter potential adversaries and assure our allies; and capacity to project power at sea and ashore. These national assets are equally capable of providing other core capabilities of sea control, maritime security, and humanitarian assistance and disaster relief. Aircraft carriers provide our nation the ability to rapidly and decisively respond globally to crises, with a footprint that does not impose unnecessary political or logistical burdens upon our allies or potential partners.

The aircraft carrier is the centerpiece of the Navy's Carrier Strike Groups (CSG) and central to Navy core capabilities. The Navy remains committed to maintaining an aircraft carrier force, and associated carrier air wings, that provide unparalleled responsiveness and flexibility to operational commanders across the full range of military operations. Our aircraft carrier force structure is based on a combination of operating current nuclear powered aircraft carriers (CVNs) for their full 50-year service life, maintaining an in-service aircraft carrier life cycle support program, recapitalizing the NIMITZ Class via the Refueling and Complex Overhaul (RCOH) program, and a steady state FORD Class procurement plan. This will ensure the United States Navy can operate where it matters, when it matters.

II. Vital Employment of Aircraft Carriers

The history of the United States is filled with instances when United States Navy aircraft carriers were central to our nation's response. Our recent history is no exception. In August 2013, the Navy responded to chemical weapon attacks in Syria by quickly repositioning the USS NIMITZ (CVN 68) in the Red Sea and Eastern Mediterranean while the USS HARRY S TRUMAN (CVN 75) safeguarded the northern Arabian Sea. USS NIMITZ gave the President immediate response, presence, and deterrence capability. In November 2013, the Navy and Marine Corps responded following the devastation of Typhoon Haiyan. USS GEORGE WASHINGTON (CVN 73) transited to the Philippines and was quickly in position to lead and coordinate United States relief efforts in the region. The Navy and Marine Corps team delivered supplies to the thousands of survivors left without food and water. In 2014, the GEORGE H.W. BUSH (CVN 77) CSG relocated from the Arabian Sea to the north Arabian Gulf and was on-station within 30 hours, ready for combat operations in Iraq and Syria. The CVN 77 CSG was the only United States strike option for 10 days while other assets could be repositioned and remained the primary strike option for two months while diplomatic permissions for land-based strikes were obtained. Navy and Marine Corps strike fighters from the carrier generated 20 to 30 combat sorties each day for 54 days to project power against the Islamic State of Iraq and Syria. The CARL VINSON Strike Group and CSG ONE followed, flying 12,300 sorties, including 2,383 combat missions. Now, the USS THEODORE ROOSEVELT with CSG TWELVE is returning from deployment, where it continued the battle against the Islamic State of Iraq and was able to quickly relocate from

the Northern Arabian Gulf to the coast of Yemen to respond to the Houthi insurgency, keep shipping lanes in the region safe and open, and intercept weapons shipments meant for the Houthi rebels. These examples are just a few of the most recent instances where the presence of a United States Navy aircraft carrier shaped events and enabled the President to execute the full array of foreign policy options. There is no greater proof of the tangible effects of the modern aircraft carrier on global events. No other navy in the world today has the reach, presence, capability, training, and resolve to immediately respond to and shape current events.

NIMITZ and FORD Class aircraft carriers will be the premier forward deployed asset of choice for crisis response and early decisive striking power in major combat operations for the next half-century. USS EISENHOWER (CVN 69) recently completed a highly successful series of developmental tests for the F-35C, the fifth generation strike-fighter that will ensure the Navy's aircraft carriers deliver air dominance in the high-end warfight. The E-2D Advanced Hawkeye is now deployed and brings superior long range battle management command and control with sensors that support offense and defense for the entire CSG. The aircraft carrier based F/A-18G "Growler" is the only tactical aircraft in the joint force that ensures spectrum dominance of the battlespace. Advanced weapons for carrier based aircraft continue to be adapted in anticipation of future adversaries, such as the Long-Range Air to Ship Missile, which will help ensure CSGs establish sea control in any environment.

The Navy has established a steady state FORD Class procurement plan designed to deliver each new ship in close alignment with the NIMITZ Class ship it replaces. The FORD Class design improves warfighting capability, survivability, operational availability, and quality of life for sailors, while reducing the ship's crew by 500 to 900 personnel and decreasing total ownership costs by approximately \$4 billion per ship. Advances in technology continue to be evaluated to ensure all of the Navy's aircraft carriers are prepared for any contingency, including the latest developments in high energy lasers. Modernization of current aircraft carriers, and ongoing procurement of the new FORD Class ships will ensure Navy's aircraft carriers and CSGs continue to pace the threat and bring unparalleled warfighting capability for the Combatant Commanders (COCOMs).

III. Aircraft Carrier Force Structure

In 2006, the Navy determined it could meet operational requirements with acceptable risk with a reduction from a 12 to 11 aircraft carrier force. This decision was supported by the business case analysis to decommission JOHN F KENNEDY (CV 67) in Fiscal Year (FY) 2007, the 2006 Quadrennial Defense Review decision for 11 CSGs, and was codified by the FY 2007 National Defense Authorization Act. Six years later, the Navy's 2012 Force Structure Assessment (FSA) identified a 306 ship combat force as the requirement to enable the Navy to deter and respond to crises, and protect the interconnected systems of trade, information, and security that underpin American prosperity. The 306 ship force possessed the required capability and capacity to deliver credible deterrence, sea control, and power projection to deter or contain conflict and, if called upon, to fight and win our nation's wars. This force included a requirement for 11 nuclear powered aircraft carriers that provide

immediate response and the subsequent arrival of forces needed to meet all warfighting commitments, as well as the most critical COCOMs' requirements for persistent presence in support of national goals. In the 2015 FSA Report to Congress, the requirement for 11 carriers was reaffirmed to meet the National Military Strategy for presence operations, contingency response, and warfighting capability.

The Navy is currently operating under a congressionally approved ten aircraft carrier waiver and the Joint Staff accepted moderate risk associated with this temporary force structure reduction with inactivation of USS ENTERPRISE (CVN 65) in 2013. The Navy assessed that most of the operational impacts during this period could be mitigated by adjusting maintenance and operational schedules, resulting in extended deployment lengths. The 2016 delivery of GERALD R FORD (CVN 78) will restore the aircraft carrier fleet to 11 ships. The Navy plans to make the ship deployable by 2019. Returning to and maintaining an 11 aircraft carrier deployable force is of highest priority and enables the necessary, sustained capacity in global CVN presence and Global Force Management (GFM) allocation plan support, aligned with Navy's overall force structure planning.

For the last three years, the Navy has been operating under reduced top-lines generating capability shortfalls of \$25 billion less than the President's Budget (PB) requests. With each year that the Navy receives less than requested, the loss of force structure, readiness, and future investments cause options to become increasingly constrained. The Navy has established a steady state FORD Class procurement plan that delivers each new ship closely aligned with the notional 50-year service life of the corresponding NIMITZ Class ship it will replace. PB 2016 continues procuring FORD Class aircraft carriers at five year intervals between construction starts, with CVN 80 first-year full-funding in 2018, occurring five years after the first-year full-funding for CVN 79 in 2013.

IV. Operational Implications

The effect on capabilities for power projection and global engagement due to a reduction in aircraft carrier force structure falls into two broad categories, presence and surge. Aircraft carrier presence supports COCOM peacetime operations and demonstrates resolve, deters aggression, builds partnerships, and supports ongoing operations across the globe. Surge provides additional capacity to respond to crises and meet COCOM war plan demand. Operating with fewer than 11 aircraft carriers, particularly for extended periods of time, degrades the Navy's ability to provide both presence and surge capacity, and results in less global presence and fewer days that an aircraft carrier is available for operations in a forward theater. This results in reduced global engagement opportunities to build partnerships and assure allies of U.S. commitment and ability to provide a credible response in time of crisis. Reduced presence also negatively affects the nation's ability to deter regional adversaries. This is exemplified by the recent announcement of USS THEODORE ROOSEVELT (CVN 71) exiting the Arabian Gulf. For the first time in nearly a decade, the United States does not have a carrier on station near the Middle East.

CSGs are the centerpiece of COCOM operations plans (OPLANs). Reduced carrier availability hinders our ability to execute major war plans. In terms of crisis response,

opportunistic action by an adversary who chooses to act during a period of reduced presence would limit the COCOMs' ability to immediately respond with the full range of military operations afforded them by a CSG. CVNs, with their associated CSG, provide multi-mission capability, including maritime and ground strike, close air support, command and control, and electronic attack. They are inherently flexible, with the ability to reposition as required, and allow COCOMs to respond with no concerns of obtaining basing or overflight permissions. Additionally, the CSG as a whole provides significant anti-submarine warfare, land attack cruise missile, and intelligence gathering capabilities. The slower flow of surge forces with these capabilities into a theater would jeopardize the COCOM's ability to execute his OPLANS on a timeline with an acceptable degree of risk. A reduced aircraft carrier force also has the potential to increase the time required to generate fully ready forces, and potentially reduces the maximum number of aircraft carriers that can be committed to a response. A delay in CVN 78's maiden deployment results in the Navy not fully realizing the increased operational capacity of an 11 CVN force until FY 2021.

When the Navy responded to increased COCOM demand for CSG presence beginning in 2011, the need to recover readiness in subsequent years was understood up front. The increased frequency and extension of CSG deployments increased wear on the force, leading to increased maintenance and repair requirements. Stemming from Navy's efforts to meet increased COCOM demand, sequestration's impacts to naval shipyards, and the temporary reduction in force structure to ten aircraft carriers, the Navy is unable to provide a continuous, concurrent aircraft carrier presence in both Central Command (CENTCOM) and Pacific Command (PACOM) Areas of Responsibility (AORs) until FY 2021.

Demand for CVN presence exceeds service capacity, and trends indicate that this will continue. The Navy's force offering represents the Navy's best military advice for a global allocation that can be sustained at the proper level of readiness without negatively impacting future forces. To provide more presence than the Navy can sustain consumes the service life of assets, reduces surge capacity, risks the long term health of the force, and will open up larger presence gaps later. The Joint Staff, via the GFM process, balances competing COCOM demand with available resources and strategic objectives. GFM allows the Secretary of Defense to make risk informed decisions to align United States military forces and capabilities against priority requirements. Although there is no direct replacement for a CSG, the current process addresses a COCOM's concerns when a CSG is not available to provide presence in their AOR. The Navy will continue to operate where it matters, when it matters. However, it should be noted that the Navy's ability to respond when needed will be reduced until the CVN force is restored to 11.

V. New CVN Construction

CVN 78 delivery will restore the aircraft carrier fleet to 11 ships, provide significant capability improvement, and offer 25 percent more operational days than NIMITZ Class aircraft carriers. Reduced maintenance requirements coupled with decreased crew requirements will reduce CVN 78's life cycle costs in comparison to NIMITZ Class aircraft carriers by approximately \$80 million per ship per year. CVN 78 will deliver in 2016, conduct operational testing, and execute Full Ship Shock Trials in 2019. CVN 79 is the

numerical replacement for CVN 68 to maintain the 11 aircraft carrier force level and is a major opportunity to reduce construction costs.

Stability in requirements, design, schedule, and budget are essential to controlling and improving new construction aircraft carrier cost, and therefore is of highest priority for the program. Requirements for the program are set and cannot be changed without approval from the Chief of Naval Operations and Assistant Secretary of the Navy (Research, Development and Acquisition). At the time of construction contract award, CVN 79 had 100 percent of the design product model complete (compared to 65 percent for CVN 78) and 80 percent of initial drawings released. Further, CVN 79 construction benefits from the maturation of virtually all new technologies inserted on CVN 78.

The Navy outlined its cost savings initiatives in its Report to Congress in May 2013, and is executing according to plan. One example of an initiative to reduce acquisition cost is the employment of the CVN 79 two-phase delivery strategy. Both Phase I and Phase II are funded within the CVN 79 budgeted end cost and are included within both the \$11,498 million service cost estimate and Congressional cost cap. The Navy's two-phase delivery strategy is the lowest cost option for the acquisition of CVN 79 as well as maintaining an 11 aircraft carrier force.

CVN 79's circumstances are unique in that additional time is available before CVN 79 is required as the numerical replacement for CVN 68 to maintain the 11 aircraft carriers force level. This time could be used to temporarily increase CVN force level above the minimum requirement until CVN 68 goes out of service in 2025, but this requires additional manpower to operate a 12 aircraft carrier force for a brief period. Therefore, a two-phase delivery approach allows the Navy to introduce competition for work that can be performed in the aircraft carrier's homeport.

The two-phase acquisition strategy also allows the Navy to install the Enterprise Air Surveillance Radar (EASR), a more cost effective radar than Dual Band Radar (DBR). The EASR suite will be used on large-deck aviation capable ships, including LHA(R), LPD, LX(R), and CVN 79 and later aircraft carriers. Implementing the two-phase strategy provides the opportunity to install the EASR suite on CVN 79 in the Phase II availability. The substitution of the EASR suite alone is projected to save \$180 million in Government Furnished Equipment (GFE) costs compared to the DBR installed on CVN 78.

An optimum procurement plan is required to deliver CVN 79 within the Congressional cost cap of \$11,498 million. Efficiencies are targeted and savings will be achieved by procuring and installing shipboard electronic systems at the latest possible date, thus avoiding the early installation of equipment which is likely to go obsolete and require replacement prior to CVN 79's first deployment in 2027. Additionally, CVN program manpower savings will be achieved by delaying full crew manning until the corresponding government furnished systems are installed late in ship construction. By carefully coordinating the arrival of the full crew, unnecessary and costly temporary variations in the CVN manpower and training accounts can be avoided. Finally, a number of CVN 79 systems and spaces will be installed

in Phase II with the use of competition to reduce installation cost.

VI. Conclusion

Aircraft carriers are central to the nation's defense strategy, which calls for forward presence; the ability to simultaneously deter potential adversaries and assure our allies; and capacity to project power at sea and ashore. An 11 aircraft carrier force structure represents the best balance to deliver the capability and capacity to accomplish the objectives of the Defense Strategic Guidance while continually modernizing the force to keep pace with evolving technologies. The Navy will continue to instill affordability, stability, and capacity into the nation's aircraft carriers. The FORD Class will provide major operational improvements including increased operational availability and reduced life cycle costs. The 11 aircraft carrier force will be deployed under the Optimized Fleet Response Plan to best address COCOM demands with the required maintenance program to sustain the fleet through each ship's 50-year service life, providing our nation the ability to rapidly and decisively respond globally to crises for decades to come.

The Honorable Sean J. Stackley
Assistant Secretary of the Navy
(Research, Development and Acquisition)
7/28/2008 - Present

Sean J. Stackley assumed the duties of assistant secretary of the Navy (ASN) (Research, Development & Acquisition (RDA)) following his confirmation by the Senate in July 2008. As the Navy's acquisition executive, Mr. Stackley is responsible for the research, development and acquisition of Navy and Marine Corps platforms and warfare systems which includes oversight of more than 100,000 people and an annual budget in excess of \$50 billion.

Prior to his appointment to ASN (RDA), Mr. Stackley served as a professional staff member of the Senate Armed Services Committee. During his tenure with the Committee, he was responsible for overseeing Navy and Marine Corps programs, U.S. Transportation Command matters and related policy for the Seapower Subcommittee. He also advised on Navy and Marine Corps operations & maintenance, science & technology and acquisition policy.

Mr. Stackley began his career as a Navy surface warfare officer, serving in engineering and combat systems assignments aboard USS John Young (DD 973). Upon completing his warfare qualifications, he was designated as an engineering duty officer and served in a series of industrial, fleet, program office and headquarters assignments in ship design and construction, maintenance, logistics and acquisition policy.

From 2001 to 2005, Mr. Stackley served as the Navy's LPD 17 program manager, with responsibility for all aspects of procurement for this major ship program. Having served earlier in his career as production officer for the USS Arleigh Burke (DDG 51) and project Naval architect overseeing structural design for the Canadian Patrol Frigate, HMCS Halifax (FFH 330), he had the unique experience of having performed a principal role in the design, construction, test and delivery of three first-of-class warships.

Mr. Stackley was commissioned and graduated with distinction from the United States Naval Academy in 1979, with a Bachelor of Science in Mechanical Engineering. He holds the degrees of Ocean Engineer and Master of Science, Mechanical Engineering from the Massachusetts Institute of Technology. Mr. Stackley earned certification as professional engineer, Commonwealth of Virginia, in 1994.

Updated: 14 January 2011

Vice Admiral John C. Aquilino
Deputy Chief of Naval Operations
Operations, Plans and Strategy (N3/N5)

Vice Adm. John Aquilino is a native of Huntington, New York. He graduated from the United States Naval Academy in 1984, earning a Bachelor of Science in Physics. He subsequently entered flight training and earned his wings in August 1986.

Operationally, he has served in numerous operational fighter squadrons flying the F-14 A/B Tomcat and the F-18 C/E/F Hornet. His fleet assignments include the Ghostriders of Fighter Squadron (VF) 142 and the Black Aces of VF-41. He commanded both the World Famous Red Rippers of VF-11 and Carrier Air Wing 2. He has made several extended deployments in support of Operation Deny Flight, Deliberate Force, Southern Watch, Noble Eagle, Enduring Freedom, and Iraqi Freedom.

Aquilino's shore duty assignments include duties as an adversary instructor pilot flying the A-4, F-5 and F-16N aircraft for the Challengers of VF-43; Operations officer of Strike Weapons and Tactics School, Atlantic; flag aide to the vice chief of Naval Operations; special assistant for Weapons Systems and Advanced Development in the Office of Legislative Affairs for the secretary of Defense; director of Air Wing Readiness and Training, for Commander, Naval Air Forces, Atlantic Fleet, and executive assistant to the commander, U.S. Fleet Forces Command.

His flag assignments include director of Strategy and Policy (J5), U.S. Joint Forces Command and deputy director, Joint Force Coordinator (J31), the Joint Staff, and Commander, Carrier Strike Group (CSG) 2.

Aquilino previously served as director, Maritime Operations, U.S. Pacific Fleet. He assumed duties as Deputy Chief of Naval Operations for Operations, Plans and Strategy (N3/N5) in September 2015.

His awards include the Defense Superior Service Medal, Legion of Merit, Bronze Star Medal, Defense Meritorious Service Medal, Meritorious Service Medal, Air Medal, as well as several other personal unit and campaign awards. He has accumulated more than 5,100 mishap free flight hours and 1,050 carrier-arrested landings.

Updated: 14 September 2015

Rear Admiral Thomas J. Moore
Program Executive Officer, Aircraft Carriers

A second generation naval officer, Rear Admiral Thomas Moore graduated from the United States Naval Academy in 1981 with a Bachelor of Science degree in Math/Operations Analysis. He also holds a degree in Information Systems Management from George Washington University and a Master of Science and an Engineer's degree in Nuclear Engineering from the Massachusetts Institute of Technology.

As a surface nuclear trained officer for 13 years, he served in various operational and engineering billets aboard USS South Carolina (CGN 37) as machinery division officer, reactor training assistant and electrical officer; USS Virginia (CGN 38) as main propulsion assistant; USS Conyngham(DDG 17) as weapons officer, and USS Enterprise (CVN 65) as the #1 plant station officer responsible for the de-fueling, refueling and testing of the ship's two lead reactor plants during her 1991-1994 refueling complex overhaul (RCOH). Additionally, ashore he served two years as a company officer at the United States Naval Academy.

In 1994, he was selected for lateral transfer to the engineering duty officer community where he served in various staff engineering, maintenance, technical and program management positions including: carrier overhaul project officer at the Supervisor of Shipbuilding, Newport News, Virginia, where he led the overhaul of the USS Enterprise (CVN 65), USS Theodore Roosevelt (CVN 71) and the first year of the USS Nimitz (CVN 68) RCOH; assistant program manager for In-Service Aircraft Carriers (PMS 312) in the office of the Program Executive Officer, Aircraft Carriers, Aircraft Carrier Hull, Mechanical and Electrical (HM&E) requirements officer on the staff of the chief of naval operations Air Warfare Division (OPNAV N78); and, five years in command as the Major Program manager for In-Service Aircraft Carriers (PMS 312) where he was responsible for the new construction of the George H.W. Bush (CVN 77), the RCOH of the USS Dwight D. Eisenhower (CVN 69) and the USS Carl Vinson (CVN 70) and the life cycle management of all In-Service Aircraft Carriers.

In April 2008, he reported to the staff of the chief of naval operations as the deputy director, Fleet Readiness, OPNAV N43B. In May 2010, he assumed his duties as the director, Fleet Readiness, OPNAV N43.

Moore assumed command as program executive officer for aircraft carriers Aug. 11, 2011.

Moore's personal awards include the Legion of Merit (two awards), Meritorious Service Medal (four awards), and the Navy and Marine Corps Commendation Medal (three awards).

Rear Admiral Michael C. Manazir
Director, Air Warfare (OPNAV N98)

Rear Admiral Michael Manazir currently serves as the Director, Air Warfare (OPNAV N98) on the staff of the Chief of Naval Operations (CNO). In this capacity, he is responsible for the development, programming, and budgeting of all U.S. Naval Aviation warfighting requirements, resourcing and manpower.

Manazir entered the U.S. Naval Academy from Mission Viejo, California, and graduated in 1981. He earned his Naval Aviation wings in April 1983, and deployed in the F-14A in July 1984.

Manazir commanded the Tomcatters of Fighter Squadron (VF) 31 (June 97–Sept. 98), USS Sacramento (AOE1) (Jan. 03–July 04), USS Nimitz (CVN 68) (March 07–Aug. 09) and Carrier Strike Group (CSG) 8 embarked on USS Dwight D. Eisenhower (CVN 69) (Sept. 11–June 13).

Prior to squadron command, his afloat tours included service as a fighter pilot and Landing Signal Officer aboard various aircraft carriers on the west coast. Following Navy Nuclear Power Training, Manazir served as the Executive Officer of the USS Carl Vinson (CVN 70) (July 01–Dec. 02). In 2007, Manazir was recognized as the Tailhooker of the Year by the Tailhook Association.

Ashore, Manazir served as an action officer in the Office of the Secretary of Defense, on the Chief of Naval Operations staff as F-14 requirements officer, and for the commander, Naval Air Forces, as the assistant chief of staff for Readiness.

As a flag officer, Manazir served as Director, Strike Aircraft, Weapons and Carrier programs on the Chief of Naval Operations Staff (N880) from Aug. 2009 to Sept. 2011.

Manazir qualified in the F-14A/D and F/A-18E/F aircraft and has flown more than 3750 hours and 1200 arrested landings during 15 deployments aboard aircraft carriers on both coasts.

Manazir is the recipient of various personal and campaign awards including the Legion of Merit (six), the Defense Meritorious Service Medal, the Meritorious Service Medal (two), and the Strike/Flight Air Medal (two). Manazir has been married for 31 years and has two grown children.

QUESTIONS SUBMITTED BY MEMBERS POST HEARING

NOVEMBER 3, 2015

QUESTION SUBMITTED BY MR. FORBES

Mr. FORBES. As to the two phase acquisition strategy, what would the funding profile include, by fiscal year, to realize CVN-79 in a single phase?

Admiral MOORE. Delivering CVN 79 using a two-phased acquisition strategy is essential to remaining under the Congressional cost cap, delivering the ship with CVN 78-like capability, and affordably maintaining an 11-carrier force structure. If the decision were made today to transition to a single phase acquisition strategy, it would cost ~\$532M more to deliver CVN 79 in a single phase as opposed to the current two-phased approach. The two funding profiles are shown below for comparison:

In this scenario, a single phase delivery would prevent the integration of a lower cost Enterprise Radar Suite (ERS), requiring reversion to Dual Band Radar (DBR). The additional funding required in FY2017 and FY2018 reflects the cost to procure DBR hardware and software; accomplish the planning effort with HII-NNS to reintegrate installation of the Phase II equipment into the current construction contract; and the construction impact and time-related services caused by an 18-month extension of the construction contract with HII-NNS required to support installation of DBR. This process would deliver the ship only about six months earlier than planned due to procurement timelines associated with purchasing a DBR ship set for CVN 79.

QUESTION SUBMITTED BY MR. HUNTER

Mr. HUNTER. I'm familiar with the report you provided to the Defense Committees on the Automated Test and Retest (ATRT) program. In your report you said there are significant benefits to the fleet including reducing testing cost, improving product quality, reducing the time to field new capabilities, and reducing life cycle costs. This technology can rapidly re-test in response to cyber vulnerabilities. We know this to be an issue of concern—and I've raised this issue with both Secretary of Defense Carter and Under Secretary Kendall. Can you assure me you are aggressively pursuing this technology to its full potential including implementation across our entire carrier fleet?

Secretary STACKLEY. The Navy is pursuing Automated Test and Retest (ATRT) technology for the aircraft carrier (CVN) Fleet. The ATRT technology is being used in testing the CVN Machinery Control System. The technology is also being used in CVN Ship Control System Shore Based Facility testing. The Navy intends to extend the process and technologies across additional control systems for the entire CVN Fleet.

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