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HEARING

ON

NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEAR 2013

AND

OVERSIGHT OF PREVIOUSLY AUTHORIZED PROGRAMS

BEFORE THE

COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES

ONE HUNDRED TWELFTH CONGRESS

SECOND SESSION

SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES HEARING

ON

OVERSIGHT OF U.S. NAVAL VESSEL ACQUISITION PROGRAMS AND FORCE STRUCTURE OF THE DEPARTMENT OF THE NAVY IN THE FISCAL YEAR 2013 NATIONAL DEFENSE AUTHORIZATION BUDGET REQUEST

HEARING HELD
MARCH 29, 2012

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HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES,
Washington, DC, Thursday, March 29, 2012.

The subcommittee met, pursuant to call, at 10:04 a.m. in room 2118, Rayburn House Office Building, Hon. W. Todd Akin (chairman of the subcommittee) presiding.

OPENING STATEMENT OF HON. W. TODD AKIN, A REPRESENTATIVE FROM MISSOURI, CHAIRMAN, SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES

Mr. AKIN. The hearing will come to order.

Heavenly Father, we just thank you again for the freedom we enjoy and for the people who have sacrificed for that. We ask your blessing on our deliberations. Help us to be wise, help us to be good planners, and good stewards. And we pray that you help us with the somewhat busy schedule this morning, and the votes and all. And I pray in Jesus' name. Amen.

Gentlemen, we have got a little bit of a curveball that has been handed to us because they have got votes on kind of 1-hour bases all through the morning. So I have talked to Assistant Chairwoman Davis, and we have agreed that we are going to just postpone making our comments and just leave those for the record and go directly to our witnesses and—is that the call for votes? We have already got votes on? Okay.

I think what we will do is run for about 7 minutes or so, or maybe 10 minutes, then we will be running to vote—time for a cup of coffee if you haven't had one—and then we will probably be back I am guessing roughly 20, 25 minutes, but I don't know the exact number of votes. So let's just go ahead and proceed.

Is it just one vote? Okay. We may be back quicker than that.

[The prepared statement of Mr. Akin can be found in the Appendix on page 43.]

Mr. AKIN. So, Admiral Blake, do you want to go first, any—or—okay.

Secretary STACKLEY. Yes, sir.

Mr. AKIN. Sean, fire away.

STATEMENT OF HON. SEAN J. STACKLEY, ASSISTANT SECRETARY OF THE NAVY FOR RESEARCH, DEVELOPMENT, AND ACQUISITION; VADM JOHN TERENCE BLAKE, USN, DEPUTY CHIEF OF NAVAL OPERATIONS FOR INTEGRATION OF CAPABILITIES AND RESOURCES (N–8); AND LTGEN RICHARD P. MILLS, USMC, DEPUTY COMMANDANT FOR COMBAT DEVELOPMENT AND INTEGRATION AND COMMANDING GENERAL, MARINE CORPS COMBAT DEVELOPMENT COMMAND

Secretary STACKLEY. Yes, sir. Mr. Chairman, distinguished members of the subcommittee, thank you for the opportunity to appear before you today with Vice Admiral Blake, and Lieutenant General Mills to discuss Navy shipbuilding. And thank you, of course, for your steadfast support in support of our Navy, Marine Corps, sailors, and marines who are meeting the Nation's commitments around the world.

And with the permission of the committee I would like to make a brief opening statement and provide a more formal opening statement for the record.

Today we are a battle force of 282 ships, nearly half of which on any given day are under way performing missions around the globe: supporting operations in Afghanistan; providing maritime security along the world's vital sea lanes of communication; missile defense in the Mediterranean and Sea of Japan; intelligence, surveillance, and reconnaissance where needed, as needed; global presence at sea; and with embarked Marine expeditionary forces ready to move ashore, conducting antipiracy patrols, global partnership stations, humanitarian assistance, training to ensure constant readiness in preparation for the next deployment, next operation, and all the while quietly, reliably on patrol providing strategic deterrence.

In support of the defense strategic guidance we are building towards a battle force of 300 warships, platforms that will provide our sailors and marines the capability and, two, the capacity needed to maintain our maritime superiority today and for the foreseeable future. This objective is cast alongside the fiscal realities that come with the Budget Control Act of 2011, and so in reshaping our shipbuilding plan of a year ago to reflect the priorities of the new defense strategy and the new budget top line this year's shipbuilding plan strikes a balance between capacity, capability, affordability, and the industrial base.

We have important work to do as we continue to assess, plan, and execute in order to close out-year gaps and risks identified by the long-range shipbuilding plan. In doing so, we need to drive the equation to deliver the full capability our warfighters need at the lowest possible cost.

The Secretary of the Navy remains strongly committed to investing in shipbuilding and we have put that commitment to work over the last year. Since this time last year two destroyers, a submarine, a dry cargo ammunition ship have joined the fleet and the LPD [Landing Platform Dock Ship] *San Diego* and submarine *Mississippi* will commission this spring. Another half-dozen ships are being christened while keels have been laid for the lead ship of the DDG 1000 class [USS *Zumwalt* Class Destroyer], the next littoral

combat ship, the next *Virginia*, and the next T–AKE ship [Dry Cargo/Ammunition Ship].

In total, since December 2010 we have awarded contracts to procure 38 ships, including options—most competitively awarded, all fixed-price contracts, and we are on track to increase that number to 40 this spring with the anticipated awards of the next Amphibious Assault Ship, LHA 7, and the 11th and final ship of the LPD 17 [USS *San Antonio*] class. Stable production and mature designs represented in these fixed-price contracts provide an important degree of certainty to our industrial base in an otherwise uncertain period in defense spending.

We recognize, however, that we must remain focused relentlessly on improving affordability in shipbuilding programs, but we must sustain our planned investment in modernizing the current force. To this end, our fiscal year 2013 budget request includes funding for 10 ships and asks for multiyear procurement authority for the *Virginia* class and the DDG 51 *Arleigh Burke* class.

The shipbuilding program includes 41 ships to be procured over the 5 years of the 2013 Future Years Defense Program, a reduction in ship count compared to the 2012 Future Years Defense Program, reflecting the fact of life top-line reductions consistent with the Budget Control Act of 2011. However, within these controls we have been careful to maintain priority on the capabilities called for in the new defense strategy.

The strength of our shipbuilding plan is closely coupled with the strength of our shipbuilding industrial base. The critical skills, capabilities, and capacities inherent to our new construction shipyards and weapon systems developers inarguably underpin the U.S. Navy's dominant maritime position. Accordingly, in the course of balancing resources and requirements in the formulation of the shipbuilding plan, the effect of program decisions on the industrial base must be closely weighed.

Over the past several years the Navy has placed a priority on increasing shipbuilding rates and providing stability for the shipbuilding industrial base. Stability translates into retention of skilled labor, improved material purchasing and workforce planning, strong learning curve performance, and the ability for industry to invest in facility improvements; all resulting in more efficient ship construction and a more affordable shipbuilding program.

The strategy going forward must continue to center upon improving affordability. One of the greatest challenges to our future shipbuilding program, and therefore to elements of our industrial base, is the rapidly increasing cost of our ship programs. To this end, in addition to the emphasis on stability discussed above the Navy is establishing affordability requirements and investing in design for affordability for future ship programs; mandating use of open system design; leveraging competition where it exists in shipbuilding; employing fixed-price contracts to control cost for ships and weapon systems in production; imposing strict criteria limiting disruptive changes to contracts; investing in industry-wide manufacturing process improvements through the National Shipbuilding Research Program; and incentivizing capital investment in facilities where warranted.

Ultimately, we recognize that as we balance requirements, affordability, and industrial base considerations it is ever more important that our shipbuilding plan closely align with the priorities outlined in the new defense strategy. And it is equally important that we—Navy and industry—continue to improve the affordability within our programs in order to build the Navy that our sailors and marines need for future force.

Mr. Chairman, thank you for the opportunity to appear before you today. We look forward to answering your questions.

[The joint prepared statement of Secretary Stackley, Admiral Blake, and General Mills can be found in the Appendix on page 47.]

Mr. AKIN. Well, thank you for your comments. And I think because of the fact we have got 7 minutes left on the vote we are going to scoot and then come back for the testimony.

And, Mr. Stackley, appreciate your comments. I will have a question or two on the *Virginia* class here, but we will take a break and get back to you. I am hoping maybe it is in as short as, oh, 10 or 15 minutes now maybe.

Thank you.

[Recess.]

Mr. AKIN. Subcommittee will come to order again and we will continue with the testimony.

Mr. Stackley, I believe you were finished with your opening comments. You had some things for the record which we will accept for the record.

And then, who is going to go next?

Admiral, you want to be next, and then General? Okay.

Admiral BLAKE. Sir, I don't have an opening statement. We were all on Mr. Stackley's statement.

Mr. AKIN. You were all on Mr.—so we are ready for questions, then?

Admiral BLAKE. Yes, sir.

Mr. AKIN. Well, you guys get things done in a hurry. That is good.

Okay. I guess first off the question I have is I understand for purposes of budgeting and trying to make the numbers fit, which we all have to do—we live within those constraints to a degree, perhaps those of us in Congress less so even than yourselves—but somehow or other just the logic of the *Virginia* class—we have got those things building on, you know, two-a-year kind of cycle and all of a sudden what we are going to do is to break that, not build one for 1 year, and somehow, then, we go back to the two-a-year cycle in the years that follow.

It seems to me that there are some costs for making that kind of a decision in the sense it interrupts the supply chain and the labor force. And ultimately, we are—it seems like from a need point of view the—those ships, there is a very high demand on them. So could you comment on what is the kind of hidden cost of doing this and is there some way, perhaps, that we could try to move that up so we stay on that two-a-year build cycle?

Secretary STACKLEY. Yes, sir. Let me start with the build cycle. As you are—the committee is well familiar, the *Virginia* class program was at a one-per-year rate for an extended period of time and

then set the target to get to two boats per year by 2012. And in fact, the program achieved that in 2011 by driving down program cost.

So the goal of what was referred to as "2 for 4"—which is $4 billion—"in 2012"—this is all old-year dollars—became "2 for 4 in 11." So the program didn't just drive costs down but actually tuned production for two boats per year through the vendor base, through the shipyards. And it is important not just for affordability reasons but also for the force structure.

The Navy's requirements for 48 boats near-term and long-term is in jeopardy as we look out ahead to the decade of late 2020s and 2030s. Because of that extended period of one boat per year that creates a force structure valley out in the 2030s. So everything we can do to sustain two boat per year procurement and production rate is critical for affordability and for national security.

Mr. AKIN. The affordability is—first of all, the national security is farther out, a little bit longer term, or is it all the way along the line?

Secretary STACKLEY. It is farther out. It is in the late 2020s and 2030s is when we see the force structure numbers start to draw down——

Mr. AKIN. Okay.

Secretary STACKLEY [continuing]. But the concern is you have to address that now.

Mr. AKIN. Right.

Secretary STACKLEY. You can't wait until then to prop your numbers back up. So the one boat that you are looking at in the 2014 year is of concern from both cost and force structure.

Now, the way we end up there, this goes back to the impact of the Budget Control Act. Two boats per year was a priority and remains a priority for the Navy as it built the budget, but when the top line came down the impact was felt greatest in the 2014 year and we lost the second *Virginia* in 2014 along with a second destroyer in 2014 in that regard.

Now, we are using the multiyear—the 5-year multiyear to try to mitigate the impact in terms of the industrial base, in terms of the cost impact, but in fact, there is an unavoidable impact through every element of cost, whether it is material procurement and economic order quantities, whether it is learning across both of the shipyards that are involved in producing the *Virginia*, whether it is the business base rates impact at both yards, impact to the second-tier suppliers. So there is a cost impact that—while we retain nine boats across the multiyear there is a cost impact by having that single boat in 2014.

Mr. AKIN. So part of what is going on here, you could maybe make a parallel to we were talking about building some ships out in San Diego and you had a place where you have a demand for a whole lot of welders, then there is a year where you don't need any welders, then you need a whole lot more welders. And the fact is it is hard to, you know, turn things on and off.

And from a logic point of view you would say you want to try to smooth that demand and we have got the same problem. We have got to burp financially 2014 and because of the numbers you had to plane off two ships. Which, from a more practical point of view,

if you weren't just exactly to the line of the numbers, would make a whole lot of sense to keep them in the budget and under different budget circumstances would be a priority. Is that correct?

Secretary STACKLEY. Yes, sir. And along those lines, the reality is that if you take the nine-boat *Virginia* multiyear, and if we had the top line to add that 10th boat in 2014 that would not just save the cost of that 10th boat but throughout the follow ships all their costs would come down. So what we stare at is an upfront investment cost to get the boat but downstream savings that offset the upfront investment.

Mr. AKIN. So in a way, if you could build the boat the first thing you get an extra submarine——

Secretary STACKLEY. Yes, sir.

Mr. AKIN [continuing]. Which is desirable, particularly in the 2020s. The second thing is it keeps the cost of additional boats somewhat lower as well, because you have smoothed the demand over that time period.

Secretary STACKLEY. Yes, sir.

Mr. AKIN. I am at least open-minded to looking at this, see if there is something that we can do that perhaps DOD [Department of Defense] can't do to take a look at that problem. Unless you have a strong or rigorous objection I am going to ask our staff people to take a look at that.

Anybody want to jump in on this particular point or subject? Would you like to——

Mr. COURTNEY. Sure, Mr. Chairman.

Again, just as Mr. Stackley said, the two-a-year was pulled up from 2012 to 2011, which was partly because of, again, the great work in terms of bringing costs down; but it was also because Congress intervened. Again, we, in fact, pushed the advanced procurement add-on in the 2007–2008 budget cycle, which provided that opportunity to get to two in 2011.

And as you said, Mr. Chairman, you know, hopefully we can facilitate a solution to this problem that we just discussed here today, again, using, hopefully, this subcommittee as sort of the tip of the plane, which is, again, exactly what happened in 2007.

And I guess, you know, the—well, I am sure your office would be able to give us information in terms of, you know, what the costs would be in—for 2013 in terms of trying to fix this problem as well as maybe other strategies to, again, get to that 10 in the Block IV contract.

Secretary STACKLEY. Yes, sir. As you well know, the submarine is procured over multiple years, so 2013 would be an advance procurement year for a second boat in 2014.

Now, one of the challenges that the Department needs to guard against is basically getting partial funding for an additional boat and leaving the Department with a significant bill in 2014, recognizing that that is the difficult year for us. So we will provide additional information to your staff so you can see what we see across the FYDP for the *Virginia* multiyear—the nine-boat versus the 10-boat and the challenges that we faced with the budget.

Mr. COURTNEY. And just one other quick follow up, is this—you will also give us the impact in terms of the fleet size over the next couple decades, which should, I think, show some pretty dramatic

benefit if we are able to really fill that hole. The ripple effect lasts for years, and I know you have already worked on some of those——

Secretary STACKLEY. Yes, sir.

Mr. COURTNEY [continuing]. Metrics.

Secretary STACKLEY. Yes, sir. In fact, that information is included in our long-range shipbuilding report, but we can lay it out graphically for you, as well.

[The information referred to can be found in the Appendix on page 113.]

Mr. AKIN. Thank you. I think I have used up my time all fair and square.

Let's see. Who is going to be next? Is it Mr. Courtney, or——

Mr. MACKENZIE. It was going to be Mr. Courtney.

Mr. AKIN. Okay, so you are okay? Okay.

Somebody has got to have a question here.

Mr. Hunter.

Mr. HUNTER. Thanks, Mr. Chairman.

Gentlemen, thank you all for your service. Of course, you guys get that a lot. I think you are serving in a very tough position right now due to what is happening—not a fun time to be doing what you are doing. There have probably been better times where you like to be in the position that you are in. So thanks for doing what you are doing.

First question, General Mills, on amphibs [Amphibious Assault Ship]—you probably saw this one coming—what is the Marine Corps' bottom line number on amphibs?

General MILLS. Sir, we have been I think clear and consistent on our requirement, which is the assault echelons for two MEBs [Marine Expeditionary Brigade] to be delivered by amphibious warships to the point where they are needed. Over the years we have accepted more and more risk to the number of ships who actually deliver that force. And in partnership with the Navy we have arrived at a figure of 30 operationally ready ships at the time that we need them at the place that we need them ready to sail.

Mr. HUNTER. So to have 30 operational ships how many total ships is that? How many ships would you have being in dock and getting fixed up? Four or five?

General MILLS. Sir, the plan that we have right now calls for, I believe, 32 over the course of the 30-year shipbuilding plan. It chases a slightly larger number in the out years. But again, our requirement has been 30 operational ships at the point of need.

Mr. HUNTER. With that, I would just—I am just curious—they are not getting 30 operational ships. The strategy shifted, you can argue that there is more need for amphibs now than there was even—unless we think there aren't going to be anymore humanitarian crises or bad people in places that we would have to ship marines to. So I am just curious about that, because we are below that by two ships at some points, one in—right now, I believe, so——

Admiral BLAKE. So let me sort of widen the aperture on that and as we looked at it, the Navy and the Marine Corps sat down and we came to the conclusion that it was 38 ships fiscally constrained to 33. Currently in the inventory we have 29 ships and we are

going to build to 31 by 2013, and then that number will drop back down to 30.

When we had to apply the strategy and we had to understand for the two MCO [Major Contingency Operation] requirement, we looked at it and we said what do we need in order to hit the requirement? And the position taken was that we needed to have 30 operationally available.

So what you are looking at is if, in fact, you need to address it from that perspective then what we want to do is we want to say, all right, we know we are going to have to build to that number. We want to get to that number and that is our goal. And so what we ended up having to, if you will, look at was how were we going to mitigate that?

So when we are at 31 ships we are—we would have to, if you will, push out the door 30 in order to hit the number—operationally ready. So we have taken risk and we recognize we have taken risk, but our eventual goal is to get us back to around 33 ships in order to be able to push out 30 operationally ready.

Mr. HUNTER. Let me ask you this: Do you agree with the two MEB requirement and the—do you—would you validate the process by which the Marine Corps came up with their numbers?

Admiral BLAKE. You mean the two MCO requirement? That is a valid requirement.

Mr. HUNTER. No, the two MEB requirement.

Secretary STACKLEY. No. Two MEB—he——

Mr. HUNTER. The way that he got to his numbers—the way that General Mills got to his numbers—would you validate the process that the Marine Corps used to analyze what they need and the risk assessment that they did to say, here is the number of ships that we need, or did the Navy do a different type of analysis?

Admiral BLAKE. No. The Navy and Marine Corps sat down and it was not done separately; it was done—we did it in conjunction with each other.

Mr. HUNTER. If you were to build the amphibs where would you prioritize? I mean, where would you take money out of to be able to get the Marine Corps to where they need to be?

Admiral BLAKE. Here is the issue we deal with: I don't have the luxury of dealing with any single issue in isolation; I have to deal with it across the entire——

Mr. HUNTER. Well, we can. That is why I am asking.

Admiral BLAKE. Well, we have to deal with it, though, across the entire portfolio.

Mr. HUNTER. Sure.

Admiral BLAKE. And so what we have to do is we have to balance the requirement for amphibs, the requirement for surface combatants, the requirement for the carriers, the submarines—every category of ships that we have. And so when we do that we then have to say, all right, as we balance across that where are we going to be able to assume more risk? And that is how we—that is how we end up where we are.

Mr. HUNTER. So you are saying there is less risk but still risk in the Marine Corps being short on amphibs than there are in the other—the rest of the picture?

Admiral BLAKE. No. I am saying that we have assumed risk in all areas. The best example I can give you: It was only a short time ago, if we tried to fill all the COCOM [Combatant Command] needs we said the number was around 400 ships we would need in the fleet. Today—and we see no abatement in that commitment or the——

Mr. HUNTER. No—signal.

Admiral BLAKE. Today we look at it and we see that we would—if we wanted to hit 100 percent of all the COCOM requirements we would need in excess of 500 ships. So what we end up having to do is we go through the global management process and we look at it and we say, here are our highest priorities, these are how we are going to address them, and then we have those units available and we push that——

Mr. HUNTER. I understand.

I am going to yield back in just 1 second.

So I would take from your statement, then, that you did go through a prioritization process and the amphibs are not at the top of that list. And second, when you say that you assume risk all the way around I would argue that when you do your risk assessment and you prioritize your needs the fact that the COCOMs wanted more ships and needed more ships due to the international environment and where we find ourselves with the world today, going down is probably—it is going the wrong way.

We all know that, but I would argue that your prioritization—I would like to see that, if you don't mind, the way that you analyzed this and the way that you said, hey, we are going to keep them there to make sure that we have this over here. That is all I am asking for.

Admiral BLAKE. Okay. When we put it together we do it across the entire spectrum; we don't—and by that I mean, as we look at the entire requirement we say, this is what we need to do in order to be able to meet the COCOM demand signal.

And, for example, we not only took out, as you are aware, for decommissioning, looked at two amphibs, we also looked at seven cruisers additionally. As Mr. Stackley just mentioned, we knew 2014 was our hardest year and we had to go in there and, if you will, rephase or shift to the right a destroyer and a submarine. So in addition to that we had to look at our small surface combatants and we had to mitigate those numbers.

So we have to do it across the entire portfolio. We can't just go and focus on one single area. We have to balance it across the entire system for ourselves.

Mr. HUNTER. Thank you.

I yield back.

Mr. AKIN. Yes, I am going to allow a little piggybacking here.

Originally, General, what you needed in the MEB was 18 ships. Is that correct? A couple years ago that is what we thought was the right number.

General MILLS. Sir, I believe it was 17 was——

Mr. AKIN. Seventeen?

General MILLS [continuing]. For MEB——

Mr. AKIN. Okay, and that left, what is it, about four for getting repaired or whatever it is?

General MILLS. Yes, sir.

Mr. AKIN. Okay. And so we have gone from 17 down to what is it now—not quite 15? You are going to be 14 or 15, somewhere in there?

General MILLS. Sir, it is 15. It is 15. And that is an assumption of more risk, obviously, and an understanding that the MAGTF [Marine Air-Ground Task Force] commander would have to scrub his equipment list prior to embarkation, but we feel that 15 is acceptable at this point.

Mr. AKIN. What would be scrubbed from that list?

General MILLS. Sir, that would depend, I think, on the—where he was going, what his mission was. He would take a look at his entire equipment list, decide what was specifically needed forward initially for what his mission was, and then he would reduce those things—perhaps logistics, maybe some of his heavy armor, for instance. Again, depending on what that mission set was going to be when he arrived, what he actually needed on the ground.

It is not unusual to do that. MAGTF commanders who go forward routinely leave things back that they can call forward if they need them. So I would say it would depend on what his mission was, where he was going, what the threat was when he arrived.

Mr. AKIN. Thank you.

Okay, Mr. Langevin.

Mr. LANGEVIN. Thank you, Mr. Chairman.

Gentlemen, thank you for being here this morning and for your great service to our country. I would like to turn back, if I could, to talking about the *Virginia* class submarine and the possibility of adding the second boat—one of the—one boat that is left outside the FYDP and talking about alternative funding.

So obviously we have previously seen alternative funding mechanisms in ship programs such as the LHDs, LHAs, the *Nimitz* class carriers, and the DDG 1000, as well as the USS *Jimmy Carter*. And I know we have talked a little bit about the alternative funding this morning, but with a little more specificity with that in mind, and knowing that the most unmet demand signal from our combatant commanders is for submarines, what alternative funding options have you considered for procuring the fiscal year 2014 boat?

Secretary STACKLEY. Yes, sir. The principal alternative funding mechanism that we took a look at was incremental funding. And so we do use incremental funding today for aircraft carriers, large-deck amphibs, and when we looked at the funding constraint we had with the top line and moved the 2014 boat out of the FYDP, that is a constraint in the near term that gives away savings in the longer term, okay, so not only did we move the boat out and we moved the funding for that boat out, but we also lost the savings or the efficiencies that we would have been able to hold on to through continuous learning, through EOQ [Economic Order Quantity] material, et cetera.

So that is a top line constraint. The reality is in shipbuilding your—what we refer to as your outlay rates are stretched out over time. So in a full funding policy, where you put all the money up front in the year of procurement, a lot of that money sits idle waiting for the expenditures in the course of building submarine over

5 to 6 years. So if you unlock full funding then all of a sudden—and you get closer to cash flows, which is more in tune with incremental funding, what it says is there is asset in the budget that we submitted for nine boats to fund that second boat in 2014 on a cash flow basis, and then there are savings downstream that you get by adding that 10th boat that offsets the upfront cost that we would have incurred——

Mr. LANGEVIN. And that goes to the heart of my second question. Yesterday the subcommittee was told that should a fiscal year 2014 boat be added into the block buy it would effectively 25 percent self-fund through efficiencies gained in the future year of boats. So how does the Navy weigh these efficiencies in the budgeting process?

Secretary STACKLEY. Yes, sir. Now this goes back to the funding policy. So in a full funding policy we have to put 100 percent of that boat up across the fiscal year 2013 year, which is the advance procurement year, and the fiscal year 2014 year, which is the full funding year. So while we have those potential savings by adding that boat we didn't have the top line to make room for that boat within full funding so we could not—complying with full funding policy, we did not have adequate top line to get to that second boat in fiscal year 2014.

Mr. LANGEVIN. So did you complete your answer on the alternative funding?

Secretary STACKLEY. I think I covered that. The way the math works, if you were relieved from full funding policy, in fact, we would not be requesting additional funding across 2013 and 2014; we would have downstream savings and that would make the boat affordable. But within the constraints of full funding it is not affordable in 2013 and 2014.

Mr. LANGEVIN. Well, I know that we are all anxious to work with you to see what we can do to get that fiscal year 2014 boat added within the FYDP if possible.

Last question I had is, I am following with great interest the ongoing development of the AMDR [Air and Missile Defense Radar]. Can you share with us how development is going and how you plan to integrate this capability into the existing naval force structure?

Secretary STACKLEY. Yes, sir. The development is going great. We have got three industry competitors that are working on the development. They have each been able to leverage other systems that have been developed using the technology associated with the AMDR radar, and so when we kicked off the competition they were well out in front in terms of level of maturity of the technology.

We are going through—I will call it a small scale prototype development to demonstrate, you know, proficiency of the respective designs that will be leading to a downselect. I am very upbeat on the progress we are making on AMDR and I am highly confident that that program is right on step to support introduction on 2016 DDG 51.

Mr. LANGEVIN. Very good.

Thank you, gentleman.

And I yield back, Mr. Chairman.

Mr. AKIN. Thank you.

Mr. Wittman.

Mr. WITTMAN. Thank you, Mr. Chairman.

Admiral Blake, Secretary Stackley, General Mills, thank you so much for joining us. We appreciate the opportunity.

Secretary Stackley, I want to begin with you. In reviewing the long-range plan for construction for naval vessels for fiscal year 2013 it seems like to me we continue to push the difficult decisions, the more expensive decisions outside of the FYDP. And in looking at the FYDP from 2013 to 2017 we are going to construct 41 ships, 16 of which—that is 39 percent—are the relatively inexpensive LCS [Littoral Combat Ships] ships. Also within that, there is no funding for the weapons modules, which we know in order for there to be capable warships we have to have those weapons modules onboard.

In the next 5 years, from 2018 to 2022, we are building 52 ships, 15 of which—that is 29 percent—are also LCSs. Additionally, those 52 ships include the *Ohio* class replacement and we are going from building 9 SSNs [Nuclear Propulsion Attack Submarine] to building 12 SSNs in addition to some large-deck amphibs. So as you can see, we are still constructing a relatively large number of the less expensive LCS ships.

In short, from 2013 to 2017 we buy 11 fewer warships than from 2018 to 2022 and we also buy a much higher percentage of the less expensive warships in the immediate years, and then in the out years we are buying the more expensive ships. I understand this makes the math looks better; I understand the budget restraints that we are in right now.

But I think we have to be asking ourselves the broader perspective picture, and that is this: Is this in the best interest of national security, not just based on today's needs but what we project out into the future? Is it right for the Navy? And is it right for the industrial base? I am concerned at all those different levels—our capabilities both on the defensive side and our industrial base capabilities.

So I would like to get your reflection on this trend that we are seeing in the shipbuilding plan.

Secretary STACKLEY. Yes, sir. I am going to share this response with Admiral Blake, but let me first start by describing balanced force. It is a combination of what your force structure requirement is driven by several factors. One is the capability, another is the capacity, it is global presence requirements, it is response to major combat operations, as well as lesser scale operations. And a balanced force is necessary to meet that full range of missions that are called for within affordability top line, you know, constraints.

So today, in fact, what we have are we have DDG 51s, for example, performing operations and responding to issues and concerns that an LCS in theater would be quite suited for if not better suited for. So we have a high-end, 300-plus—roughly 300-man crew on a $1.5 billion warship responding to an issue that we would really prefer a $500 million ship with a 75-man embarked crew taking care of.

We can't go all high-end when we look forward in terms of the force structure we need across the full range of missions. So that is one of the reasons why LCS is firmly placed in terms of our long-term shipbuilding plan.

The concern regarding pushing the difficult decisions outside the FYDP, that is—there are some tough decisions that we made. We talked about the *Virginia*; we talked about the movement of the destroyer, which stays inside the FYDP but we moved it outside of the budget year.

Two key decisions that I didn't touch on directly but I think are on point: One is the decision to delay the introduction of the *Ohio* replacement, which was in 2019; we have moved that to 2021. That was a tough decision. There were trades that were associated with that.

In making that decision, what we did was we moved $8.5 billion of investment beyond this next decade.

Mr. WITTMAN. Right.

Secretary STACKLEY. That goes towards investment in other areas of shipbuilding or other priorities within the Department of the Navy. In doing that and in moving that boat 2 years to the right we can't simply mark time; we have got to take advantage of the additional time to work on technology development, design maturity, retiring risk so when the time comes we award that boat. We are staring at a much more mature, more complete design so we can execute on schedule.

The downside is, what we just did was we pushed out the introduction of the *Ohio* replacement by 2 years and that introduces a degree of operational risk out into the 2030s when the *Ohio* replacement is replacing the *Ohio* strategic deterrent. And so we have got to manage that operationally.

When we look across the balance and we say to ourselves, we have got $8.5 billion worth of asset we can create, we have 2 years of additional time to manage the risk for the introduction of the *Ohio* replacement, and we have got operational risk we have got to manage on the back end in the 2030s, we concluded that that operational risk was manageable and that upfront time and investment opportunity was important to take advantage of. And that drove that specific decision.

Similarly, when you march program by program looking at the trades that were being forced by the top line, we did our best to strike that balance looking at what is the capability we need? What is the capacity we need? How do we stay within affordability limits and not create undue risk?

Mr. WITTMAN. Okay. Very good.

Let me ask—go ahead.

Admiral BLAKE. If I can just add, sir, as we looked at this, I mean, we all knew, if you will, the elephant in the room was the 2011 Budget Act. It came in and what it essentially did is, for the Department we had to address a bill of $58 billion—approximately $58 billion inside the FYDP. And as Mr. Stackley already mentioned, 2014 was our hardest year; 2013 was our next hardest year.

And then what we had to do is we had to look at, as you referred to, the high-end low-end mix, if you will. So when we looked at it we said—we went down, if you will, the list, and we said, all right, we are going to take out 11 JHSVs [Joint High Speed Vessel], we are going to take out one T–AGOS [Tactical Auxiliary General Ocean Surveillance], we are going to take out one DDG, we are

going to take out one SSN, and we are going to take out—or we are going to take out, if you will, inside the FYDP, two LCSs.

So as you look at that you can see our focus was the recognition that there is a high-end issue that we have to deal with, so we, as best we could, had to stay—tried to stay away from going against that high-end requirement. However, because 2014 was our hardest year we looked at it and said, there is no other way we can do this and still hit the numbers that we had to hit in each of the years, and we had to hit our numbers in each year.

We couldn't have that give and take to give back—you know, we couldn't move between years. We had to hit the numbers in every one of them. So that drove us to what we did. So our approach was to mitigate as much as possible and apply it as best we could to the strategy that we were given.

Mr. WITTMAN. That is very good.

Secretary Stackley, and following up on that I want to ask, looking back historically, in 1983 and 1988 the *Nimitz* class carriers were purchased in block—two in 1983 in a block buy, two in 1988 in a block buy. Understanding that CVN [*Ford* Class Supercarrier] 79 [USS *John F. Kennedy*] is partially paid for, is there the possibility that CVN 79 and CVN 80 could be done in a partial block buy? It looks like to me there would be a significant amount of savings there, upwards of $500 million.

With our challenges elsewhere in shipbuilding it seems like those resources could go into trying to plug some of these gaps, whether it is the SSN build in 2014 or some of the other areas where we know we are struggling to try to fix those gaps. So I would like to get your perspective on the historical elements of block buys and savings that can occur with CVNs.

Secretary STACKLEY. Yes, sir. Let me focus on affordability of the CVN 78 class. We are right now about 40 percent complete construction of the CVN 78 [USS *Gerald R. Ford*] and we are running into some very difficult cost growth issues across the full span—design, material procurement, and production—material procurement on both contractor and government side.

So our first focus right now is to stabilize the lead ship. Let's get cost under control so we can complete this ship as close to schedule at the lowest cost possible.

But in parallel, the Navy is working very closely with the shipbuilder to take a step back and say, one, what are all the lessons we just learned on CVN 78? Two, CVN 78 is a very different ship from the *Nimitz*; we cannot expect to build the 78 the way we built the 68 [CVN 68 USS *Nimitz*] and get to an affordable ship construction plan. So we are pressing on the way the carrier is built—the build plan for the carrier—to arrive at a more affordable CVN 79.

Now, in the process of doing that we will take a hard look at what opportunity there is across 79 and 80, recognizing that we are going to be limited, again, by top line. But there are going to be some opportunities that jump out at us. We don't want to have to re-plan each carrier. We have a vendor base that is stretched out with the carrier build cycle that for some components that are carrier-unique, that vendor base is just struggling to hold on between the 5-year gaps.

So we have to take a hard look at where does it make sense after we have gotten to what I am calling an optimal build plan for CVN 79 and then be able to come back and say, okay, here—on CVN 79 here are some opportunities that if we could, in fact, reach out to CVN 80 we can either avoid a gap in a production line or avoid unnecessary cost growth on that follow ship.

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

Ms. PINGREE. Thank you, Mr. Chair.

Secretary Stackley, Vice Admiral Blake, and Lieutenant General Mills, thank you very much for being here this morning and for your service to our country. I am going to continue on a little bit about scheduling and the shipbuilding.

In highlighting the Navy's shipbuilding plans, particularly about the importance of maintaining the stability for the future and the Navy's capability and capacity, I really appreciate your previous testimony. As you discussed, a budget includes a request for two *Arleigh Burke* destroyers for fiscal year 2013 in addition to reauthorizing a 5-year multiyear procurement through 2017.

It is great for us to hear that this 9-year ship procurement will help support the need to provide BMD [Ballistic Missile Defense] capabilities to the fleet and is also projected to save $1.5 billion. That is wonderful.

However, previous multiyear procurements of DDG 51s have occurred at an average rate of three ships a year instead of two. Given that the steps need to be taken to mitigate the significant projected shortfall in cruisers and destroyers do you believe a sustained annual procurement rate of more than two DDG 51s annually is required long-term to fully provide for our sea-based BMD missions?

And let me just ask one other part of that question: Additionally, the FYDP shifted the second DDG 51 in fiscal year 2014 to fiscal year 2016. Won't reducing the procurement rate by half, from two to one, in fiscal year 2014 disrupt the supply chain and potentially increase the cost?

Admiral BLAKE. So I think, ma'am, what you are asking about is you are looking at the requirements saying, these are the requirements. How are you going to address them as you are dealing with, if you will, the current fiscal environment we are in?

Ms. PINGREE. Yes.

Admiral BLAKE. As we look at it, I am required to balance across the entire portfolio, and I have to look at the top line I am given in each year and then apply those dollars as efficiently as possible within it. So if someone were to say to me, we want you to buy, say, a third DDG, I understand the investment there and taken in isolation I can do that. The question becomes, where do you want me to divest, all right? Do you want me to build one less submarine? Do you want me to build one less amphibious ship? Do you want me to build one less aircraft carrier?

Well, no one ever tells me to build one less of anything, and so that is—what I end up having to do, as we work through SCN [Ship Construction, Navy] plan I say these are—this is how I am going to balance within the top line that I am given and these, I think, are the most efficient ways I can get there. And it is simple math.

Ms. PINGREE. And I understand. I just want to interject a little bit. Since Mr. Courtney is not sitting here I can certainly say, well, if you have to build one less submarine that is the way things go.

But also I would say, just sort of the supply chain economics, I mean, one of the things that we have consistently seen is that the more ships that are being built the more consistently we plan. You know, we talk a lot in here about our industrial base, of the economies of scale. I understand the big numbers and I certainly understand the constraints you are under, but looking at it from the other side, those are some of the concerns I am looking at.

Admiral BLAKE. Let me just focus for a second on the industrial base, because that is an excellent question. When we are determining what and how we are going to build and where we are going to build we have to take a look at the industrial base, and one of the concerns we have is if we make a decision can that—and it adversely affects a piece of the industrial base, does that decision allow us to, if you will, at some future date, reconstitute that capability?

If the answer is yes then we would say, all right, we will go down that path. If the answer is no then we have to present to our leadership the fact that this may be an irreversible decision. You may go down this path and if you do, you may not be able to recover in the future.

And that is the dialogue we have with the leadership when we bring those forward and we propose the plan. I can assure you, they are lively meetings when we sit in there and we put this forward to them because when they realize the—not only the effect—the primary effect, but then the second and third order ramifications to the industrial base and the fact that we may not be able to reconstitute that at some future date then the question takes on an even more serious tone.

Secretary STACKLEY. I would like to address the question regarding the second destroyer in 2014. A couple of important facts: First, the—we restarted DDG 51 construction in 2010 and we have got four ships under contract, and a result of the four ships that we have placed under contract is we have prior year savings in this program that are—work in our favor when we consider future procurement for the 51s.

We also have a unique situation where we have got competition on this program—two builders building the 51s, and the competition has been healthy with both builders. We also have a very significant cost associated with government-furnished equipment, so not only did we restart construction at the shipyards; we also restarted manufacturing lines at our weapon systems providers.

So in this process we were able to restart 51s virtually without skipping a beat and we are seeing the continued learning curve that we left off on back with the 2005 procurement. So when we march into this third multiyear for the 51s we are looking to capitalize on the same types of savings that we saw prior, and our top line, again, allowed for 9 ships to be budgeted, but when we go out with this procurement we are going to go out with a procurement that enables the procurement of 10 ships, where that 10th ship would be the second—potentially the second ship in 2014 if we are able to achieve the savings that we are targeting across this

multiyear between the shipbuilders in competition as well as the combat systems providers as well as all of the other support and engineering associated with this program.

So we want to leverage the strong learning, we want to leverage the strong industrial base, we want to leverage the competition to get to what we need in terms of both affordability and force structure, and I think we have a pretty good shot at it.

Ms. PINGREE. That is good——

Mr. AKIN. Thank you. We are out of time.

I think if we do it just right we may be able to get all the questions in. If you can keep it—if you could keep it shorter that is good because we have got votes coming in about 10 minutes, or so.

Mr. Palazzo is next.

Mr. PALAZZO. Thank you, Mr. Chairman.

And I would like to thank our distinguished guests for being here and the services that you provide to our country. Thank you very much.

I will keep my questions kind of short. I mean, it is always good to talk about, you know, the things, the decades of financial mismanagement that have actually led us here today to talk about our 30-year shipbuilding plan and that we are actually taking ships out of it and we are not going to be able to meet our targets, which does—I think is going to impair us to be able to meet our emerging threats in the future. So I will keep my question kind of short.

You know, the Navy has made some wonderful progress in controlling costs in their shipbuilding programs over the years, and it is a shame that we have gotten so far to the edge of the financial cliff in this country that those successes aren't able to be touted in the increase in our shipbuilding targets. And, you know, such things as the use of multiyear procurements, keeping the production lines hot, keeping costs down while producing a better product for the Navy at a better cost to the taxpayer,extremely—two things that are extremely important.

So, Secretary Stackley, my question for you is the next amphib, the LHA 8, is scheduled to have a well deck, which is a big change from both the LHA 6 and the LHA 7. Obviously a major change like this requires a great deal of planning and pre-engineering.

Can you give us any insight about the best ways to save money on this ship, and especially the savings that could be seen if we dedicate funds to begin the engineering process ahead of schedule?

Secretary STACKLEY. Yes, sir. Let me start with the decision to go back to a well deck was made in the course of the last 1 to 2 years. But once you have made the decision now you have to—what is the best material way to get there, and so we conducted what I would call a mini analysis of alternatives, looking at different alternatives to not just restore the well deck to LHA 8 but then look at all the new capabilities that that ship was going to be—basically have to handle with regards to introduction on Joint Strike Fighter, the horizontal lift capabilities, and do that all within an affordability target.

So the AOA [Analyses of Alternatives] is wrapping up, and in this year's budget request we have some funding to start the R&D [Research and Development] side of LHA 8 design, and that continues through the FYDP. We did move the LHA 9 to the right 1

year—that ties in with all the previous discussion regarding the effects of the Budget Control Act. But that remains a very high priority inside of our shipbuilding program, and what is critical to ensure that when we go back to a well deck we keep a handle on affordability, and that means getting that design matured so when we go into procurement we are dealing with a very high level of completion of design and not a high level of risk in construction.

Admiral BLAKE. Sir, if I can just add to that, it was about 2 years ago when the Commandant and the CNO [Chief of Naval Operations] sat down and had a discussion about adding a well deck into that particular ship, and then I sat down with General Mills' predecessor, General Flynn, and we looked at where—how we were going to deal with the issue because we needed to consider cost and we also needed to consider tradeoffs. So because of the fact that you are going to put a well deck back in as well as a reduced island on this ship there has to be some level of tradeoff, and that is what we are currently looking at right now—where do we make the tradeoffs, because the requirement is going to be that the Marine Corps needs a well deck?

And the CNO was attuned to that. He said, I understand; we will do it, but we have to also look at the cost and keeping it within the constraints we have, so where do we make the tradeoffs? And that is what we are dealing with right now.

Mr. PALAZZO. Well, I agree, and that is why I think, you know, making those funds available for pre-engineering is extremely important because it is going to provide the product that the Navy and the Marine Corps wants and needs and it is going to be at the best cost to the taxpayer.

Thank you all for your time.

Chairman, I yield back.

Mr. AKIN. Thank you. You redeemed a minute-and-a-half. You get the prize for the morning.

Okay. Mrs. Davis.

Mrs. DAVIS. Okay, I will try and do the same.

Admiral Blake, I wanted to ask you about the early retirement of ships, because there is some confusion about that. I think a statement was made yesterday that in the 30-year plan that there would be a commitment not to retire them early, and yet we know that in the plan now there is a plan to do that, and—before their service life is completed.

So what can you tell us about that? What confidence can you give us that when we make that upfront investment in new ships that the Navy will continue to maintain them and modernize them in order to make their expected——

Admiral BLAKE. Ma'am, we would have preferred not to have decommissioned any ships at all, but given the current fiscal environment we had to make some very hard decisions, and they—we arrived at those decisions after a number of deliberations. So in the case of the cruisers, we had to, if you will, look at each one of those and say, where can we recoup the greatest savings as we are going forward? So we looked at the seven cruisers in particular. One of them has had significant issues because of a grounding that occurred earlier in its career.

And then we looked at the others and we said we have a requirement for ballistic missile defense. We have not updated these other six units with the ballistic missile defense. We have also not given them the significant HM&E [Hull, Mechanical, and Electrical] upgrades that are required. And so when we chose those seven units we said, this is what we are going to have to do in order to be able to get it.

I will tell you, to give you an idea of the magnitude, just for those cruisers alone it would require in excess of $4.1 billion if we were to put them back in the system, if you will, so—and that just is not possible in the current fiscal environment. And I think if you decided that—if we were directed to put those back in I can only go to so many, if you will, pots of money. I would have to go and find something that would probably be equally egregious as I went forward in order to hit the balanced numbers, or in order to balance my numbers.

Mrs. DAVIS. It might be helpful to really be able to look at that issue in the whole context. If we can do that, and perhaps you have been trying to provide that information, because I do think there is a lot of concern about that. I mean, we have obviously spent a lot in that development and I think—would you suggest that the—on balance—I understand what you are saying, but what else could we do? What else would be—if people are uncomfortable with that decision?

Admiral BLAKE. Well, actually, I would——

Mrs. DAVIS. Where do we go from there?

Admiral BLAKE [continuing]. I would open the aperture even wider because I think it is not only the cruisers; it is the amphibs we had to take; it is the fact that we are not going to be able to build that SSN in 2014 and the DDG in 2014 that we have already put in. And you look, there is little to no wiggle room. We are where we are. There is little to no wiggle room at this point if you want to hit those—if you are expected to hit those numbers. And we were told we would hit those numbers and we did.

Mrs. DAVIS. Could you address, as well, I know the concerns when we spread out the construction we obviously are unable to reap some savings that would be done if ships were built closer together or in some other fashion, you know, grouping. What kind of dollars are we really losing because we are having to spread those out? I understand the budgetary constraints, but I think just in terms of, again, that larger picture and where those costs are going to be lost.

Admiral BLAKE. Well, I may be wrong but I think you are referring to, like, doing multiyears, for example. That is an efficiency.

Whenever we do a multiyear it is a double-edged sword, and by that I mean we do recoup savings but at the same time, when—given the current fiscal environment, it limits me in what I am able to do because once you put a multiyear in place if you want to go back and break that multiyear the penalty is going to be so egregious that it is going to be unacceptable.

So while I do want to achieve multiyears and I want to get them there, I also have to look at it and say, okay, because of that I then have to go to a limited number of accounts in order to come up with those assets to pay a bill.

Secretary STACKLEY. Let me join in, if I could. We, in fact, have come across with three multiyear requests with this budget—the 51s, the *Virginias*, as well as a multiyear request for MV 22s [Osprey Tiltrotor Aircraft], and we place a lot of care and consideration into looking at, is it a firm, solid requirement? Are there, in fact, substantial savings? Do we know we are going to buy this thing?

Then let's buy it with a multiyear because that is the best way to achieve savings and provide stability that the industrial base needs. So we do leverage multiyears where we can.

The other side, though, what you are describing is, well, how about those programs where, in fact, you have got a sawtooth effect, or peaks and valleys, that impacts not just the prime contractor but also the vendor base below them? We are struggling in a couple of areas, and frankly, none more so than the auxiliary shipbuilding sector today.

And today the last of our auxiliary ships under construction, T–AKE, followed by the four-ship MLP [Mobile Landing Platform] class, where we have got three authorized and appropriated and we are coming forward with a request for the fourth. We are fighting that sawtooth effect in the auxiliary sector, and that is near the top of our list of concerns because of the impact that is associated with the industrial base, both at the prime contractor and the sublevel.

So on PB13 [President's Budget FY 2013] what you are seeing is a first line of defense against that. We do not have a long-term solution in that particular case at this point in time.

Admiral BLAKE. Yes, ma'am. The only thing I would add is, while we are—we have our eye firmly focused on the requirements we also have our focus on that industrial base because of the concerns we have that it is fragile and we don't want to, if you will, go back to a position that we can't recover from.

Mrs. DAVIS. No. I agree. I think, obviously, coming from an area like San Diego, we know how critical those issues are, and so if, as you say, you don't have a solution we—I think we would love to work with you to try and find one.

Secretary STACKLEY. Well in fact, if we can talk San Diego for a second, okay, so the shipbuilder NASSCO has a history of commercial and military shipbuilding, and at no point in time can we suggest that we are going to be able to carry NASSCO's future on the back of Navy ship construction. Their success has been the combination of commercial and military.

So what we have tried to do over the last couple of budget subnets is address our requirements for auxiliary shipbuilding, keep in mind their requirements to be a viable shipbuilder, and try to build a base that allows them to be more competitive for commercial shipbuilding as well as fill our need for auxiliary shipbuilding on a program-by-program basis. So we can't provide the whole solution but we do look to try to provide a base, just like we would for our other shipbuilders, but in this case so they can also be competitive in commercial.

Mrs. DAVIS. Right. Thank you, sir.

Thank you, Mr. Chairman.

Mr. AKIN. Thank you.

And, Mr. Platts.

Mr. PLATTS. Thank you, Mr. Chairman. I will try to be quick.

Certainly thank each of you for your testimony and most importantly for your service. We are grateful for what you have done for all of us fellow citizens.

Mr. Secretary, a really quick follow-up on Mr. Wittman's questions about the CVN 79 and the carrier plans: It is my understanding that you are extending CVN 79 by a year, what the rationale is there, and won't that have a negative impact on cost, and what, if any, impact on the vendor and the industrial base would you anticipate?

Secretary STACKLEY. Yes, sir. First, we held the year procurement into 2013, so the 78 was a 2008 ship; the 79—we are requesting the 79 to be authorized and appropriated in 2013. This is in addition to the years of advanced procurement.

In the case of CVN 79, she is the replacement for the CVN 68, which does not retire today until—the long-range shipbuilding plan describes that CVN 68 goes out of service in 2023. So what that means is there is an extra 2 years of I will call it margin for the build span for CVN 79.

Now, in regards to what does that mean for cost, discussing earlier that first focus on carrier construction is to get CVN 78 right. We have got to right that ship. And in the course of doing so we are working closely with the shipbuilder to come up with a better build plan for CVN 79, and in doing that we have got to get the front end fixed.

A lot of the issues that we are dealing with on CVN 78 are front end issues associated with design planning and material—not just the procurement of the material but the arrival of the material to support the production and build plan. We have got to get that front end fixed, so that is going to be our first focus.

And when we are done that build plan then we get to take a look at what is the proper build span for CVN 79 to arrive at the best cost? It does not necessarily mean—more time does not necessarily mean more cost. If you set out with a build plan that is not proper then you are going to end up using that additional time just doing more work later when it is more costly in the construction process. That is what happened on CVN 77; that is what we are fighting against on CVN 78; and that is the plan I want to correct for CVN 79.

When we are done, if that arrives at a different delivery date than what is projected today then the Department of the Navy will have a discussion about, okay, what is the optimal now, in terms of introducing that ship, because there is more than just the ship construction costs that are—that come into play. We have all the costs associated with the crew, the operations, and support costs when the ship enters service. So we have to look at total cost, both construction, operating, and support; recognizing that we have the added flexibility associated with the CVN 68s——

Mr. PLATTS. So the year extension, though, is more uncertain at this point, until you get 78 right? Am I understanding that correctly?

Secretary STACKLEY. I would say that the year extension is not on the books. In terms of planning, we plan on CVN 79 to deliver on time, in time to support CVN 68's decommissioning. I am look-

ing to work with the shipbuilder to—let's relieve ourselves of a scheduled delivery date. Let's look at how we can best build that carrier reliably——

Mr. PLATTS. Based on what you are learning from 78 and going forward?

Secretary STACKLEY. Yes, sir. And that I expect to occur in the—we will go through this in the course of the next year and then I will be able to bring that information back to POM–14 [Program Objective Memorandum]. It may or may not affect our planning dates today, but at least in making that decision it will be better informed than it is today. Because today the only information we have to go on is CVN 78 experience and that does not drive any decision to deliver 79 earlier.

Mr. PLATTS. Thank you, Mr. Secretary.

Yield back, Mr. Chairman.

Mr. AKIN. Thank you.

Unfortunately, we have just got 8 minutes left in the vote. We have two 15-minute votes. I would assume we could resume sort of in the 12 o'clock range, so we are going to call an adjournment here for just a moment.

[Recess.]

Mr. AKIN. I believe Mr. Larsen is going to be next, but I am taking the chairman's prerogative in asking one simple question, Admiral, and a cup of coffee is riding on the answer to your question, okay, so just make sure you answer it the right way, okay? I am going to read it just the way the question is written.

Admiral BLAKE. Is it with cream and sugar, sir, or black?

Mr. AKIN. If I win I will get it the way I want it.

I don't envy the task you had in trying to balance requirements and resources. Knowing it is your job to protect the President's Budget, what is the one or two things that you would have preferred to see stay in the budget request if you had more resources—one or two things?

Admiral BLAKE. If I had to choose one or two things I would probably choose the DDG and the SSN that we had to give up in 2014.

Mr. AKIN. Go to the head of the class. I just won my coffee. The bet was you wouldn't answer the question, so I came out okay.

I thought you were going to do it. Thanks. I owe you half a cup of coffee.

Mr. Larsen.

Mr. LARSEN. Thank you, Mr. Chairman.

Based on what the value of the prize was—coffee for getting a—I was concerned that you had to answer a question and you were going to be the winner. You are very fortunate, based on the coffee that we have here, that——

[Laughter.]

That you only had to provide an answer but was not—were not tied to the prize.

Question for Mr. Stackley, regarding the SSBNs, and the tears slip on this—in your written testimony it is not quite clear to me so if you can be more clear in response to this question—was—did you make the decision on SSBN 2-year delay in conjunction with STRATCOM [U.S. Strategic Command]?

Secretary STACKLEY. STRATCOM was fully involved in the decision to come forward with the 2-year delay. We all recognize the STRATCOM requirements and that by going down from today's force structure down to a 10-boat force structure for a period of time it places greater stress on meeting their requirements, but given that, if you take a look at the 12-boat plan for the *Ohio* replacement, in fact, in the 2050s, when that class is going through its extended refit period, we are back to 10 boats again.

We believe that operating—meeting their requirements does increase the risk, but at the front end of a new ship class unplanned maintenance and overhauls and extended refits that aren't a part of that schedule, that it is acceptable risk. So they were party to the discussion; they understand the decision process that went forward.

Admiral BLAKE. Sir, if I can just——

Mr. LARSEN. Yes, sure, Admiral.

Admiral BLAKE. So when we looked—when we looked at the SSBN(X) [*Ohio* Replacement Ballistic Missile Submarine] and the 2-year delay, what we did was we sat down with all the parties involved and we went to the 2030 to 2040 timeframe and we—and that is the period when you would drop down to 10 boats. But one of the ways you are able to mitigate that is because as you are bringing those 10 boats online they are all new we don't have to start their refit periods until later on in the period, around the 2040 timeframe.

So to answer your question, yes, we think we can take on that risk in that timeframe, but we still think, given the current state of the criteria for the requirement, that we would eventually we would have to go back to the 12 boats, because when those 10 boats start going through their refit periods that is when we need them to go—the number has to go back up to 12 in order to maintain the requirement for the continuous number of boats at sea.

Mr. LARSEN. That is fine. I understand that. If that is the case then why wasn't this the plan in the first place, if it is a risk you can take now? Maybe it is sort of revisiting that question.

Admiral BLAKE. Well, I think it was based on the economic or the fiscal realities that we faced as we had to, if you will—we were concerned with how many—what areas were we going to be able to take additional risk in and still meet our requirements? That is what it came down to. It was just the overall fiscal situation that we ended up in.

Mr. LARSEN. All right. I would imagine that—we also have a Strategic Forces Subcommittee and this might be a question we are going to explore there, as well. Does this have any impact on—thanks for starting the clock; I am going to have to speak quickly—does this have any impact on the 16-tube versus 20-tube discussion that we are having on the design?

Secretary STACKLEY. We did take a look at—in doing the analysis of alternatives for the Ohio replacement we looked at 24-, 20-, and 16-tube, and STRATCOM was very central to those discussions——

Mr. LARSEN. Right.

Secretary STACKLEY [continuing]. And that decision, as well. And the other alternative that, frankly, we looked at was can we afford

to go down to a 10-boat class for the long term? Concluded that we needed 12 boats for the long term—16 tubes with 12 boats meets—meets 85 percent of the New START [Strategic Arms Reduction] Treaty warhead allowance.

Mr. LARSEN. Right.

Secretary STACKLEY. What we give up in going from 20 down to 16 is some flexibility on loadouts. So we give up some flexibility, we get the affordability that comes with a 16-tube boat, and we maintain the total force structure 12 boats for operational availability, and that seems to be the sweet spot in terms of balancing——

Mr. LARSEN. But with this period of time where you are at 10 boats, is that a problem?

Secretary STACKLEY. No, sir. No, sir.

Mr. LARSEN. Why not?

Secretary STACKLEY. Why not?

Mr. LARSEN. Yes. Because if 12 boats and 16 tubes is, you know, great flexibility at some point for a period of time——

Secretary STACKLEY. You don't have the missile inventory to load out 12 boats, so your missile inventory doesn't go to that point.

Mr. LARSEN. Okay.

Finally, we had some discussion about this question with regard to CVNs and trying to find a way to squeeze some costs out and one of the ideas was to do some—do block buy of certain components of CVN components. And have you considered that, and what is your thought on that on block buy on components from 79 to 80, or whatever, 79, 79 to 80, and so on?

Secretary STACKLEY. Yes, sir. At this point in time the Navy and the shipbuilder are sitting side by side putting together a build plan for CVN 79. We are 40 percent complete construction of the 78; we have got a lot that we have got to, I will say, do different on the 79 and follow from the lead ship. It is a very different ship class.

So we are taking a hard look at the build plan. We need to get that locked down. And associated with that is the complete bill of materials for the *Ford* class.

At that point in time we will be able to take a look at——

On this, call it bill of materials, what does it make sense—what makes sense in terms of looking long term, beyond the immediate ship?

Mr. LARSEN. Right.

Secretary STACKLEY. Are there areas of the industrial base that are stressed to the point that it does make sense to look at coupling the CVN 79 and CVN 80 buy?

We are not at that point yet. I described earlier that I think after we get through this build plan review then we will be able to come back in 2014 and identify potential critical items that warrant a block buy approach.

Mr. LARSEN. Yes. Okay. Thank you.

Thank you, Mr. Chairman.

Mr. HUNTER. [Presiding.] Mr. Coffman.

Mr. COFFMAN. Thank you, Mr. Chairman.

First, thank you all for your service.

Lieutenant General Mills, would you say that it is—that the forced—forcible entry requirement is—to satisfy that requirement is two Marine Expeditionary Brigades?

General MILLS. Yes, sir. That is the requirement that we are planning to.

Mr. COFFMAN. Okay. And then ideally, would you say for that requirement that we would have 38 ships out with 4 probably down for maintenance, so ideally the requirement would be 42 amphibs?

General MILLS. Sir, we would assume risk to take 15 amphibious warships—15 per MEB in the assault echelon, that is—for a total of 30 operationally ready ships to deliver that—those two MEBs to the right place at the right time. That is the number that we are currently—is acceptable to us.

Regarding the inventory, we—you know, we support the—what the Navy is looking at, which is 32 ships under the current plan to deliver to us 30 operational ships at the time and place in which we need them.

Mr. COFFMAN. Now, how much risk would that take? I guess you would have noncombatants for—on the follow-on carrying equipment, marines?

General MILLS. Yes, sir, that is correct. And, you know, the follow-on echelons could—would be made up of the MPS [Maritime Prepositioning Ships] ships that we have. We have 14 ships in those two squadrons that carrying equipment designed to support two additional MEBs as they would flow in after the assault echelon has made its entry.

There is risk in what would go out with the initial assault force. Again, it is the MAGTF Commander who would have to make some decisions as to what he loaded out depending on what the mission was, what the threat was. That would be made at the time, I think, and place of his assignment.

Mr. COFFMAN. Okay. So if now we have revised and revised that number down we are accepting greater risk.

But what is the—Mr. Stackley, what is the date, then, that we will be actually at 32 ships?

Secretary STACKLEY. Sir, I am not going to do this all from memory, but basically, at the end of this decade we basically start to build back up. Today we are at 29. We will be delivering—we have five LPD 17 class ships that are in some stage of construction that we will be delivering serially over the course of this decade, as well as the LHA 6. So somewhere towards the end of this decade we get up to the 32, 33 ship level. And then the long-term plan has us sustaining that level with the introduction of the LSD [Landing Ship, Dock] 41 class replacement, the LSD(X), and continued construction of the big-deck amphibs.

Mr. COFFMAN. So then out of the 29 ships that are currently in service how many of those ships are in service life extension programs?

Secretary STACKLEY. LSD 41/49 class is the only ongoing service life extension program for the amphibs. The LPD 17 class obviously is a new ship class, and the big decks don't have a specific midlife extension but they do go through, in their class maintenance plan, continued series of modernization as well as maintenance and repair through their overhaul cycle.

Mr. COFFMAN. So out of the 29 ships how many of them are deployable right now?

Admiral BLAKE. Sir, I would have to take that question for the record and get back to you. I don't have that number right in front of me.

[The information referred to can be found in the Appendix on page 113.]

Admiral BLAKE. But I would tell you that as we look at the delivery of ships, such as *America*, we go back and we say, all right, if the delivery is delayed then we look at the large-deck amphibs we have in order to—and extend them beyond what we were going to do for their initial decom date and push them out. So we recognize that we want to keep that capacity around.

Mr. COFFMAN. Okay.

Thank you, Mr. Chairman. I yield back.

Mr. HUNTER. Does anybody have any secondary questions? If you do now is the time.

Otherwise, thank you all very much for your service and time and we are going to change out panels.

Okay. We are going to restart the hearing here, and some other folks are going to come in. I don't have an opening statement, so—nor do I have your introductions, I don't think. Let's see, biographies. I will tell you what, why don't you introduce yourselves in your opening statements?

STATEMENT OF PHEBE N. NOVAKOVIC, EXECUTIVE VICE PRESIDENT, MARINE GROUP, GENERAL DYNAMICS CORPORATION

Ms. NOVAKOVIC. —executive V.P. at General Dynamics for marine systems—that is all of our shipyards. And I appreciate the committee's invitation to testify. In the interest of time I have some very short oral remarks. My written statement further amplifies these themes.

First, our shipyards: We have got four shipyards with approximately 21,000 employees. Bath Iron Works, in Maine, designs and builds destroyers. Electric Boat, in Groton, Connecticut, and Quonset Point, Rhode Island, designs, builds and repairs nuclear submarines. And NASSCO, in San Diego, designs, builds, and repairs Navy auxiliary ships and ships for the Jones-Act market. NASSCO also has a repair yard in Norfolk.

I would like to extend an invitation to each of you to come visit our yards and see firsthand the kinds of ships we build and the capabilities of our workers, of whom we are very proud.

You asked for our view of the Navy's long-range shipbuilding plan. Let me answer that by focusing on the fiscal year 2013 FYDP programs that affect our businesses.

First, the Navy's destroyer plan: We strongly support the Navy's plan to execute a multiyear procurement for nine more DDG 51 submarines. We are grateful for the committee's support of prior DDG 51 multiyears. Your support on this one will ensure that Bath can continue to reduce costs of these ships.

We also appreciate the increased clarity and stability of the Navy's plan. A stable plan provides the predictability necessary for

us to manage our workforce and make informed decisions about future facilities investments.

That said, as we have talked about this morning at some length, the FYDP shifts the second DDG 51 from fiscal year 2014 to 2016. We intend to work closely with you and the Navy to ensure that any risk from this disruption is mitigated.

While not part of the 2013 plan, I want to thank this committee for your support of the DDG 1000. Construction on the first ship is 60 percent complete and going very well. Construction on the second ship is more than 25 percent complete. And Bath begins work on the third and final ship in April.

Next I will address the *Virginia* class submarine program. For years these boats have been under multiyear contracts, which allowed Electric Boat to reduce costs and reduce production cycle times. These successes would have been impossible in the absence of multiyear authority, which provides greater predictability and stability, and we thank this committee for your constant support.

The Navy has requested your approval to contract for at least nine more submarines in Block IV in a multiyear. We urge the committee to continue supporting multiyears for this program.

I am sure that I speak for our teammate, Newport News, when I congratulate this committee for accelerating the *Virginia* class procurement from one to two submarines a year. This increased rate ensures that we can do our part to build these ships faster and at a significantly reduced cost to the Navy.

As we talked about earlier today, the budget shifts the second *Virginia* class in fiscal year 2014 to fiscal year 2018. While we are pleased that the Navy remains committed to Block IV, the delay of the second fiscal year 2014 submarine is not without consequence. The shift interrupts the two-a-year production plan, impacting the costs of Block IV and the stability of the supplier base. We will work hard to support all efforts to find cost effective solutions to address this delay.

Turning to the *Ohio* replacement program, over the last two decades Electric Boat has made great strides in designing ships to optimize construction and reduce costs; and I believe, can design, build, and construct the new ballistic missile submarines on time and on cost. Imperative to this, however, are two factors: first, stability in design and construction funding; and second, clear, cost-sensitive requirements that, once established, do not change. Regarding the recently revised *Ohio* replacement plan, we ask that the Navy and the Congress provide predictable, level loaded R&D funding to support the most efficient design profile.

Finally, I will address the Navy's auxiliary ship program. We appreciate the acceleration of the final T–AKEs and mobile landing platform ships, enabling NASSCO to provide significant cost savings to the Navy. MLP is a capable, flexible platform and the President's Budget seeks a fourth MLP ship in fiscal year 2014. We would also ask your support for that platform.

In the interest of time—you had asked about shipyards—preserving shipyard critical skills—I would refer to you my written testimony that has a quite extensive section on that. I do, however, want to talk about cost efficiency and risk reduction.

You had asked about initiatives to drive low-cost and lower-risk Navy ships. Cost efficiency and risk reduction are central to General Dynamics. We have a culture of continuous improvement, which means that every process is subject to rigorous cost analysis and process improvement.

In addition, we believe in investing in our proven businesses when there is sufficient volume and stability to justify the deployment of shareholders' capital. These investments help our businesses reduce costs and improve quality.

At E.B. [Electric Boat] we use a disciplined, cost-driven approach, called design for affordability, that optimizes the *Virginia* design for production. As a result, we eliminated 3 million hours of E.B. labor and contributed to a unit cost reduction of about $400 million per ship.

On *Ohio* replacement, Electric Boat is attacking design, construction, and lifecycle costs concurrently in the outset of the program. Already our engineers have instituted 510 cost reduction initiatives and we are reviewing another 1,200 for implementation.

At Bath we are cutting overhead through initiatives such as consolidating leased facilities and dramatically reducing our energy and water consumptions. Thousands of lower-level process improvements using lean manufacturing principles and Lean Six Sigma resulted in $58 million in savings in the last 2 years alone.

At NASSCO the T–AKE, the last of the class, will deliver for 38 percent of the hours on the lead ship, and rework is less than 1 percent. This was achieved through comprehensive process improvements. We modified the design to make it more producible, increased throughput, and focused the entire organization on changes that improve efficiency.

In short, the unit cost of all of our platforms that we build are lower, not higher, from each unit to the next.

Finally—and we have talked about it quite a bit this morning, but let me address the health of the shipbuilding industrial base. As prime contractors each of our shipyards is healthy, highly productive, and well facilitized. As primes, however, we have a responsibility to our suppliers.

Our submarine industrial base consists of highly specialized suppliers with unique skills and capabilities, which, if allowed to atrophy or disappear, cannot be reconstituted quickly or affordably. The base is stable but it is limited. Multiyear procurements with economic order buys and advanced procurement allow suppliers to invest in human capital and facilities. However, we have a number of one-of-a-kind suppliers who possess designs, facilities, and people not replicated elsewhere.

The recent revisions to the *Virginia* and *Ohio* replacement programs have troubled the community. Many suppliers had accelerated production based on expectations of higher workload. They now face a workload valley with the attendant loss of learning.

At BIW [Bath Iron Works] we have roughly 3,000 suppliers in 47 states, most of whom remain healthy. However, the supply chain is increasingly consolidated. Today, roughly 29 percent of the value of materials and components is committed to single or sole-source suppliers.

The auxiliary ships delivered by NASSCO are built to commercial standards, which allow for a more diverse supplier base. That said, the auxiliary ship markets require stability to ensure lower cost solutions.

This concludes my oral remarks, and thank you for the opportunity to testify, and I look forward to answering any of your questions.

[The prepared statement of Ms. Novakovic can be found in the Appendix on page 65.]

Mr. COFFMAN. [Presiding.] Mr. Mulherin.

STATEMENT OF MATTHEW J. MULHERIN, PRESIDENT, NEWPORT NEWS SHIPBUILDING, AND CORPORATE VICE PRESIDENT, HUNTINGTON INGALLS INDUSTRIES

Mr. MULHERIN. My name is Matt Mulherin. I am corporate vice president of Huntington Ingalls Industries and the President of Newport News Shipbuilding.

Distinguished members of the Seapower and Projection Forces Subcommittee, thank you for this opportunity to share what we at Huntington Ingalls Industries believes are the issues facing our U.S. military shipbuilding. I want to limit my oral remarks to a brief summary of my written testimony, which I respectfully request be submitted for the record.

Today I would like to discuss the health of the industry, the cost of ships, and what we believe are obstacles to more affordable ships. I would characterize shipbuilding and its associated industrial base as healthy but fragile, and one critical to our Nation and economic security.

We live in an era where freedom of global commerce on the seas is taken for—as a given. We have been and still remain a maritime nation and the sea is our conduit to the rest of the world.

Our Navy is the only force capable of maintaining that conduit. Clearly, then, it is essential for the Nation to maintain a healthy shipbuilding and industrial base.

At Huntington Ingalls Industries we defined a healthy industry as one that attracts talent, capital, and the technologies necessary to meet its commitments to maintain and grow the business. We compete with other industries for critical skills and we must make a career in shipbuilding attractive to the next-generation workforce.

We must also have the access to capital by demonstrating the viability and return on investments while offering an acceptable balance of both risk and reward. But building America's most complex ships reaches far beyond our shipyard's gates. We have a highly skilled industrial base made up of 4,000 suppliers across all 50 states.

Some of our suppliers have chosen to leave shipbuilding to focus on more steady business. As they leave we lose critical manufacturing skills across our Nation.

A stable shipbuilding plan is crucial. We are sizing ourselves today to support the Navy's plan, but the potential for sequestration could have a devastating impact to our healthy but fragile industrial base.

Much has been said and published concerning the rising cost of military ships. The reasons for these increases are quite complex with many variables, and I will try to discuss specifically how the estimating and budgeting process impacts cost.

The current methods do not factor in the increased complexity of warships or how new technologies have altered the way we build them. For example, new ship designs incorporate many more miles of cable to monitor ship conditions and to operate systems.

From an operational standpoint, these innovations provide great benefit and cost savings over the life of the ship. From a design and construction standpoint, it makes today's ships vastly more complex to construct, integrate, test, and deliver.

The current estimating and budgeting processes do not reflect these factors. Until they do we will significantly underestimate and incorrectly budget for today's complex ships.

I would also like to mention "should cost" analysis. These estimates differ from traditional evaluation methods because they do not assume that a contractor's historical cost reflects efficient and economical operation.

"Should cost" estimates do provide value and may identify areas for improvements that can yield real savings. The difficulty of such analysis is that it may also quantify a theoretically possible yet realistically improbably outcome, potentially resulting in unrealistic estimates, budgets, and ultimately, unachievable targets.

There are two other significant factors that affect cost and I would like to discuss each briefly. They are changes to the current ship programs, and procurement strategies.

Currently we are facing a build-rate reduction on *Virginia* class submarines and DDG 51 class destroyers in fiscal year 2014. While delaying construction starts or changing the quantity of vessels in a class may result in decreased funding demands for any given fiscal year, overall they will have detrimental impacts to a shipbuilder and the industrial base. The realities of budgeting and funding to an optimal plan may not always be achievable, but the effects of stretching or gapping programs are also realities that cannot be ignored in assessing cost growth.

Regarding procurement strategies, in recent years we have seen greater use of multiyear procurements for submarines and destroyers, and most recently, the block buy contracts for the Littoral Combat Ship. These types of contracts enable greater economic efficiency to provide the shipbuilder and industrial base with a stable, relatively long-term business base that helps us justify process investment and infrastructure improvements. We encourage the Congress to make broadest use of multiyear contracts and block buy contracts, and we believe they result in overall lower cost to the taxpayer.

In closing, I would like to report that today American manufacturing is alive and well in our shipyards and in our supplier companies across the Nation. Together we are building the finest ships the Navy has every sailed.

Thank you, and I look forward to answering any questions you may have.

[The prepared statement of Mr. Mulherin can be found in the Appendix on page 91.]

Mr. COFFMAN. Let me ask a couple.

First of all, I think to both of you, as you look to the future, what is your biggest concern for the shipbuilding industrial base, if you were to identify one as being your top concern?

Ms. NOVAKOVIC. For us it is stability and predictability of funding. We can adjust to lower volumes of new ship constructions—construction, to a point. I mean, there becomes a critical mass that you need. But the single largest thing that we have to have is consistency and stability, because that allows us, then, to work with the industrial base and our suppliers to craft their support of us and our—and frankly, our entire build strategy and our entire shipyard, to meet the requirements of the Navy.

So right now would we all wish that we had more volume? Sure. But within today's volume I think it is manageable as long as these plans stay in place and they get funding that we can rely on.

There is nothing that perturbs the work plan of a shipyard more than changes in a longstanding program. It is costly and ultimately ends up costing—we have learning issues, but ultimately it ends up costing the Navy a considerable amount of money.

Mr. COFFMAN. Mr. Mulherin.

Mr. MULHERIN. I would have to agree that says that stability is a very big issue. Big issues facing Huntington Ingalls Industries have to do with amphibious ships, both the timing of LHD 8 and the timing of LSD(X) that drives workload valleys at Ingalls Shipbuild, and that we—that would be—that drive costs in the programs.

Mr. COFFMAN. Let me just ask you one—given this shipbuilding plan that is being presented by the Administration, by the Department of Defense, is it such that it is inefficient to keep—is it enough to sustain the number of shipbuilding yards that we have in the United States today, or do we—given the workflow from—the reduced workflow from this plan, what is the net effect in terms of being able to keep alive the number of shipbuilding yards that we have?

Mr. MULHERIN. As you may be aware, at—within H.—Huntington Ingalls Industries we are right-sizing our footprint in the shipbuilding business, so we are in the process of winding down military ship construction at Avondale Industries, in New Orleans, and that shipyard will cease being part of that military shipbuilding industrial base after delivery of the second LPD that we are building there. So I think at least within our realm that that will size the industry will have about the right footprint.

Ms. NOVAKOVIC. I think that, again, thinking about our three major shipyards, the FYDP adequately supports the capital footprint that we have got at each of those shipyards. I think it is contractors' responsibilities to size their business to meet the demand. So when the demand slows we have got to take costs out of our business and out of programs in order to effectively and efficiently meet those lower volumes.

That said, the movement of the—and the delay on Virginia in 2014 and of the DDG 51 is troubling, not so much for the footprint of the—or the capital structure of the shipyards, but because of the efficiency of which we can build these ships. It is just going to cost more.

Mr. COFFMAN. Mr. Larsen.

Mr. LARSEN. Mr. Chairman, I will yield my time to Mr. Courtney.

Mr. COFFMAN. Okay.

Mr. Courtney.

Mr. COURTNEY. Thank you, Mr. Chairman.

You know, obviously you have out very well sort of a challenge we have got in terms of maintaining the momentum in your programs that you have been working on. And again, looking back, when we—when this subcommittee actually sort of put a bet down in 2007 that advanced procurement above what the administration gave was hopefully going to pan out in terms of, you know, getting all that momentum in terms of a more efficient, cost effective program.

I mean, clearly the numbers speak for themselves. I mean, that was a bet that did pay off. A fixed-price approach also sort of challenged both yards to sort of hit, again, budget constraints from the government.

So in terms of trying to look at what we can do as a subcommittee to try and avoid the damage that you have laid out here—again, there are other ideas that are floating around about possibly using some form of flexibility in the contracting process to, again, avoid the problems that you have described. And I guess the question is, you know, are we at a point in both programs—the DDG and the *Virginia* class—where we should feel confidence that if that opportunity was given that it is something that, you know, within even the budget constraints that we are all dealing with would really work? And I just wonder if you could comment on that.

Ms. NOVAKOVIC. As a predicate to what I am going to say, I wanted to share with the committee that I used to run the national security division at OMB [Office of Management and Budget] so I understand the catechism around the bad words of incremental funding. But that said, it is, in my view, appropriate with long-term national security programs that have been performing well. We are well into 15 years of excellent performance on *Virginia* class. If there was a program that met the test of incremental funding I think this is it.

And frankly, we have crossed that Rubicon already, and while precedence isn't in some people's mind as positive, it is in mine. It is a way—it is, frankly, the only way to get the velocity into that—those shipyards, because you are putting more work on a yearly basis just funded in a more rational profile.

We haven't talked about it, but I suspect that if the sequencing of the money is right this can be a very effective tool to buy more submarines for the amount of appropriated dollars that we have over that period. So that is on the *Virginia* class.

With respect to the 51s, I think Sean mentioned that we are looking to work with the Navy and then we will ultimately need this committee's help. Because of the savings that were accrued to the Navy—to the Navy's benefit from the competition that Ingalls and Bath participated in, those funds may be available to again resequence the available monies and appropriated dollars over the period that we—and perhaps even throw in another ship.

So I think we are premature in that. I have yet—and I don't know if you all have, but I have yet to see what that sequencing would look like, what funds are available. I think the Navy is beginning to look at that but that is something that—be all back up here once we have got some clarity to talk to you about.

Mr. MULHERIN. I would agree. I think split funding that kind of aligns how the Navy outlays funds with what my obligations are in any year does make sense.

Obviously you have to look at it and make sure that it doesn't impede the program as you go through the years of that construction. So as long as it doesn't, I think it makes sense.

Mr. COURTNEY. Well, it sure seems like we are—again, we are not talking about programs that are in their infancy. We are talking about mature programs that are well along, again, and that have really, I think, should give the Government a lot more confidence that, you know, stepping outside the catechism may be, you know really justified, because clearly with the Budget Control Act caps minus sequestration, I mean, we are all going to have to put our thinking caps on to come up with creative ways to stretch the dollars out farther, and really under almost any scenario.

So we look forward to working with you if, again, there are some ideas in terms of accomplishing that goal.

The other sort of question—quick question I just wanted to ask was that, you know, you sort of talked a little bit about sort of the carryover from *Virginia* to the *Ohio* replacement program. I mean, that is sort of another dividend to sort of, you know, getting—keeping that momentum going, because clearly there are going to be lessons learned as far as getting the cost of the *Ohio* replacement down from what you have done in the *Virginia* class. And just thought maybe you could just sort of underline that point.

Ms. NOVAKOVIC. Yes, in two respects. We are using the lessons learned in the design of *Virginia* on—in the design of *Ohio*. And we have a new tool in place, so between our lessons learned and the design tool that we are very, very familiar with, we are getting some astounding efficiencies on the design side.

We also, though, to test the design and our ability to accurately use all of the tools and the lessons learned we have built some prototypes. And they have been perfect.

So this early into a program we are retiring construction risk years before construction starts. I consider that a major accomplishment. And we will continue to do that iteration throughout the design and engineering of the *Ohio*, but it is why we appeal for—we need that funding level loaded. It is pushing that ship out 2 years, if we don't get that design done and all the risks retired in the design and all—and do considerably more of this kind of prototyping we are talking about—all bets can be off on the construction.

Mr. COFFMAN. Mr. Wittman.

Mr. WITTMAN. Thank you, Mr. Chairman.

Mr. Mulherin, Ms. Novakovic, thank you so much for joining us today.

Mr. Mulherin, I want to begin with you and follow up on a question that I asked with our previous panel, and that is with the current state of CVN—we heard Secretary Stackley talk about the cost

with 78—I would like to ask you your thoughts about the idea of a block buy. We have seen historically where block buys create some certainty, they create some cost assurance, they also create some significant cost savings, which these days we are all looking at ways to attain.

Give me your thoughts on a block buy scenario for the remaining portion of purchase on CVN 79 and CVN 80 and then subsequent scenarios for block buys.

Mr. MULHERIN. Yes, sir. You know, historically you go back, you were exactly right, if you look at the contracts that bought the CVN 72 and 73 there was huge savings that flowed to the second ship, both in the ability to go buy materials, a block buy and get discounts there, but also that you did the engineering up front the first time for both hulls so the second ship you really just had the answer, problem, paper and some of those kind of things the—kind of the normal course of business to support the waterfront.

So I wouldn't see any different. I think if we were able to do it both for material, for the engineering to be able to go pump out drawings that had two-ship applicability—plus, I think it brings the—CVN—if we were to do a two-ship buy for 79 and 80 it would ensure CVN 80 was a copy of CVN 79, no change into the contract or very minimal, you are not having a—on the material side you get economic order savings, you don't have to deal with obsolescence.

So absolutely. I think there is huge opportunity to go do that. You know, you talk to the vendor base. They would love to see it. It gives them the ability to go look at what investments they need, what work is out in front of them, and go invest in training and tools to be able to go support that.

Mr. WITTMAN. Well, thank you. I know as I have heard from suppliers, their big concern is in the 79 and 80 build structure to look at spreading those build cycles out, spreading those centers out. For them, many times spreading that out takes them out of the availability of being able to survive those longer periods of time as suppliers, and we all know that our supplier base is absolutely critical.

I want to ask both of you a question about DDG 51. As you know, the—I want to ask this: Do we know the estimated cost per unit on the DDG 51 Flight IIIs? And I understand that there are going to be 33 ships in this class as they are being developed, and I understand, too, as we are making decisions about how to, again, block buy those ships there is also the air missile defense radar upgrades there.

We are looking at, you know, what the cost structure are associated with them. And how much will that cost be integrated into this future cost structure for the Flight III DDG 51? And how will efficiencies in Flight IIA be utilized to streamline construction on Flight III?

And do you see this—as we get into Flight III do you see this developing into an entirely new class of ship? Because as you know, we are doing the three DDG 1000s. The decision has been made to stick with it, at least for the time being, and at least with the next bid for the next nine ships to be DDG 51.

But the question is, with Flight III, you know, where are we going with modernized systems, with the hull type itself? Is all of that going to integrate as the years go down the road?

So I would like to hear both of your comments about that.

Ms. NOVAKOVIC. We are approaching this multiyear, should we get that authority, and certainly this block of ships in the same way that we have approached each competition that we are in. I don't see any particular additional uncertainty as we think about these ships.

We do not understand that radar. We are going to have to understand it better and its interfaces with the ship. We have got a long way to go until we are at that point where we need to go bid and size. That we work with the Navy customer and, frankly, the other industry partners who have been very, very helpful.

I will give you an example. We are doing the combat systems integration with Raytheon. We have a tiger team with Raytheon because we are not electronics guys, right? So the extent—they have been very useful in teaching us a lot about how their systems work so we could optimize the integration of that system into the ship hull.

It is that kind of process that we will apply to a—whatever the changes are in the—and even if they are substantial changes—in the configuration of the 51s. So we can bid as long as we understand we can—and understand that—the risk areas and that you are properly protected around those risk areas, and everybody is reasonable about understanding what they are I think is——

Mr. COFFMAN. Thank you, Mr. Wittman.

Mr. WITTMAN. Thank you, Mr. Chairman.

Mr. COFFMAN. Ms. Pingree.

Ms. PINGREE. Thank you very much.

Thank you two for both—for testifying today and really for doing a good job of talking about the efficiencies that both yards are working on and the importance of a healthy shipbuilding base. I know my colleagues are going to want to go vote so I will try to be brief here.

I am very fortunate to represent the 1st Congressional District of Maine, which has Bath Iron Works, and the 5,500 wonderful workers and the great shipbuilders at that yard and the long tradition of producing incredible ships under budget and on time.

And I appreciate your testimony, Ms. Novakovic. It is great to hear you talk more about the efficiencies that have been achieved and how the multiyear funding really can be helpful, and I know my colleagues are thinking a lot about that.

But I just wanted to give you an opportunity to talk for a minute or two about the DDG 1000. It is nice to know that it is 60 percent complete, and I know we have two more along the way, and if you want to just talk a little bit about the progress of them and how——

Ms. NOVAKOVIC. Yes. For those of you who haven't visited the shipyard I would recommend it, and in particular, Bath, because while we all can intellectually understand the constructs of these—and sizing of this ship it is really quite remarkable when you see it. It is a large ship with enormous capacity to carry very sophisticated equipment. This is going to be quite a warfighting ship. I am

outside my lane to talk about, you know, what the Navy is going to love and not love, but I have a feeling, in fact, betting a cup of coffee, that this is going to be a game-changer for the Navy once we get it delivered to them.

So we are 60 percent complete. The deckhouse that Ingalls is building, is on track. We have got the—BAE is providing the magazines; we have installed several of those. We have yet to hit any design-construction discontinuity.

And we have these fully outfitted, as well. When we say complete they are complete with full outfitting.

So we are very pleased with where we are at this juncture. Now, the risk in shipbuilding, and as we—those of us who have lived and watched this—tends to be at the back end of the ships, and we are very mindful of that. So we have risk mitigation plans A through Z to address whichever one of these variables can affect us.

The work on the second DDG 1000 is progressing extremely well and I believe it is, I think, next week that we start on the third. So they are on schedule. We are on cost.

The first ship, by the way, is a cost-plus; the second two are fixed-price. I personally am an advocate of fixed price, assuming that you can get the risk properly identified and fenced off and understood.

So I think that there is a real possibility that these ships are going to be done exactly the way the Navy wants them in a very affordable price. So we are actually excited about this program. Thank you.

Ms. PINGREE. Well, thank you very much for your testimony.

I wanted to just thank Mr. Wittman for coming to visit the yard, and I know he was impressed, as everyone is, to see the incredible systems that have been developed for shipbuilding today. It is really a phenomenal use of technology and great workers' skills. So thank you very much.

Mr. COFFMAN. Thank you.

With that, the committee hearing is—oh, I am sorry.

Mr. Palazzo? Mr. Palazzo.

Mr. PALAZZO. Sorry about that. Thank you, Mr. Chairman.

And thank our guests for being here today. It is great to actually get an industry perspective. I was particularly impressed with Mr. Mulherin's, you know, comments about the efficiencies of multiship buys.

Is there anything else you or Ms. Novakovic would like to add to help us do our job—help us understand what you, the industry, is doing to provide the customer and the taxpayer with the best ships and the best possible price for America?

Mr. MULHERIN. I guess I will just go real quick. I want to tell you, in building ships it is a full-contact sport. There is no stone not turned over looking for ways to take out cost. The Navy has stood up a—under Admiral Eccles' review team that looks at ship specifications for how can we change those ship specifications to make them more producible and still maintain the warfighting capabilities of the ship? That has been helpful.

Our supply base leans into it. You know, we have just spent yesterday and today with our aircraft carrier industrial base council, and part of that was a panel to ask suppliers for their ideas on how

we can take out costs. So we are trying to lean on everybody and we have got a great bunch of shipbuilders who spend every day trying to figure out how do they go, you know, work safer, work with higher quality, take out costs, and meet schedule.

So I think we are doing all that we can and I think—but again, we need to do more. So I have nothing more to add.

Ms. NOVAKOVIC. I just quickly, to your point about multiyears, two subset examples: At the shipyard it allows us to level load the workforce, and that preserves—improves their efficiency and preserves their skill sets. So that is critical for us, and then we have some predictability that we can man at that level, and that is the best way to build ships efficiently.

Looking from the—at the supplier base, the block material buys that can be done in sufficient economic order quantities give you an enormous leverage in driving down the price of your suppliers. You cannot do that on one-off ships; you can do it in block buys of many ships—classes of material.

It just is the basic law of economics. Volume reduces their cost, just as it does in our—for us. So that is really the beauty of—those are two—if I think about it, those are the two simplest metrics.

Mr. PALAZZO. Well, thank you all both so much, again, for what you all are bringing, helping the Navy and helping the taxpayers understand that you are out there trying to control costs. And congratulations. I think you all are participants in the last great American industry in our country and we need to do everything we can to preserve it, promote it, and protect it.

Thank you.

Mr. COFFMAN. Thank you.

[Whereupon, at 1:03 p.m., the subcommittee was adjourned.]

APPENDIX

MARCH 29, 2012

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

MARCH 29, 2012

Statement of Hon. W. Todd Akin

Chairman, House Subcommittee on Seapower and Projection Forces

Hearing on

Oversight of U.S. Naval Vessel Acquisition Programs and

Force Structure of the Department of the Navy in the

Fiscal Year 2013 National Defense Authorization

Budget Request

March 29, 2012

This morning the Seapower and Projection Forces Subcommittee meets to discuss naval shipbuilding as presented in the fiscal year 2013 budget request and the force structure it supports. The Constitution states that Congress shall "maintain a Navy." To do this we must ensure the Navy has the resources required to build ships that will sail in harm's way, operated by America's sons and daughters. Today's Navy is by far the most capable in the world. Our job is to make sure it stays that way.

There are some worrisome indicators in the fiscal year 2013 budget request delivered to Congress last month. There are significant changes in this request from that anticipated for the same period just last year. The Shipbuilding and Conversion Account is 20% lower, at $13.7 billion, with the procurement of 10 ships instead of 13. The account is 8% lower in the next 5 years than it was in the last 5 years, with 16 fewer ships, going from 57 to 41. In many ways, it makes little sense to be shrinking our Navy just months after the announcement of a strategy that would shift emphasis to Asia, the Pacific, and the Mideast—areas where a strong naval presence is an imperative.

To address these and other issues we have two panels. I want to thank all of our witnesses today for taking valuable time out of their schedules to be here with us. The first panel represents the acquisition and requirements leadership in the Department of the Navy, and for the second panel we have two executives from some of our largest shipyards to discuss impacts of the budget on their industrial base, and particularly on their talented and unique workforce. They are:

Panel 1

- Hon. Sean Stackley, Assistant Secretary of the Navy for Research, Development and Acquisition;

- Vice Admiral Terry Blake, USN, Deputy Chief of Naval Operations for Integration of Capabilities and Resources (N–8); and
- Lieutenant General Richard Mills, USMC, Deputy Commandant for Combat Development and Integration and Commanding General, Marine Corps Combat Development Command.

Panel 2

- Ms. Phebe Novakovic, Executive Vice President, Marine Group, General Dynamics Corporation, and
- Mr. Matt Mulherin, President, Newport News Shipbuilding, and Corporate Vice President, Huntington Ingalls Industries.

Thank you again and we look forward to your testimony.

Statement of Hon. Susan A. Davis

House Subcommittee on Seapower and Projection Forces

Hearing on

Oversight of U.S. Naval Vessel Acquisition Programs and

Force Structure of the Department of the Navy in the

Fiscal Year 2013 National Defense Authorization

Budget Request

March 29, 2012

I would like to thank all of the witnesses for appearing here today and for their service to the country.

Both the Department of the Navy's FY13 budget and the recently received 30-year shipbuilding plan highlight the challenges the Navy and Marine Corps team are currently facing and will continue to face long-term.

The short-term implications of the budget constraints imposed by the Budget Control Act, forced the Navy to make difficult choices such as moving a *Virginia* class submarine from FY14 to FY18. This single move only further exacerbates the capability gap the Navy will be facing beginning in the mid-2020's with regard to fast attack submarines. Other difficult choices included the early retirement of cruisers and amphibious ships and the move of one DDG-51 from FY14 to FY16. I look forward to hearing from the witnesses about any potential ways we as Congress can help mitigate any shortfalls those moves have caused.

I am concerned about the cost growth with regard to the USS *Gerald R. Ford* (CVN 78). I understand that this is the lead ship in a new class of aircraft carriers and several systems that had been planned to be incrementally fielded were pulled forward causing additional challenges. I would appreciate hearing from our witnesses about what lessons learned we have gained from CVN 78 and how they can be applied to the follow-on CVN 79.

As I review the 30-year shipbuilding plan, I see that the challenges continue as we move into the out-years. Today, the FY13 new ship construction budget stands at $13.7 billion. The 30-year plan clearly points out that the budget required to meet future demands is simply not attainable under current budget levels. The plan states that the required average annual spending on new ship construction in the near-term planning period will be $15.1 billion per year and during the mid-term planning period between FY2023 and FY2032, average yearly spending will climb to $19.5 billion per year. This growth is due in large part to the recapitalization of its Fleet Ballistic Missile Submarine (SSBN) force. In order to meet this plan, added resources in the Navy shipbuilding account will be necessary. I hope the Department of the Navy will continue to work with Congress and try to find a solution given the tight budget environments we are facing.

Recent world events have further proven why it is necessary to have a Navy and Marine Corps that is capable of quickly respond-

ing when needed. Whether that means reacting to flashes of unpredicted violence, as we saw in Libya, or responding to a natural disaster and the subsequent humanitarian crisis like the situation that occurred in Japan after the earthquake.

This subcommittee remains committed to ensuring our Navy and Marine Corps are prepared to meet the challenges of today and the future. I want to thank the witnesses again for being here today and their service to our country.

I also want to thank the industrial base panel witnesses for being here today. I look forward to hearing your estimates on how the FY13 budget and future budgets will impact not only your industrial base but the second- and third-tier suppliers you depend on.

NOT FOR PUBLICATION UNTIL RELEASED
BY THE HOUSE ARMED SERVICES
COMMITTEE SUBCOMMITTEE ON
SEAPOWER AND PROJECTION FORCES

STATEMENT

OF

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

AND

VICE ADMIRAL JOHN TERENCE BLAKE
DEPUTY CHIEF OF NAVAL OPERATIONS
FOR INTEGRATION OF CAPABILITIES AND RESOURCES

AND

LIEUTENANT GENERAL RICHARD P. MILLS
DEPUTY COMMANDANT
COMBAT DEVELOPMENT AND INTEGRATION &
COMMANDING GENERAL, MARINE CORPS COMBAT DEVELOPMENT COMMAND

BEFORE THE

SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES

OF THE

HOUSE ARMED SERVICES COMMITTEE

ON

NAVY SHIPBUILDING ACQUISITION PROGRAMS AND BUDGET REQUIREMENTS
OF THE NAVY'S SHIPBUILDING AND CONSTRUCTION PLAN

DATE: MARCH 29, 2012

NOT FOR PUBLICATION UNTIL RELEASED BY THE
HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES

Mr. Chairman, Representative McIntyre, and distinguished members of the subcommittee, thank you for the opportunity to appear before you today to address Department of the Navy (DoN) shipbuilding. The Department is committed to build the fleet that best supports the Defense Strategic Guidance that emerged from collaborative efforts of the Services, Combatant Commanders, Chairman of the Joint Chiefs of Staff, the Secretary of Defense and the President. The Fiscal Year 2013 President's Budget Request for shipbuilding provides for platforms that will evolve and adapt, allowing our war fighters to fight and win the nation's wars, remain forward and be ready. While the Budget Control Act of 2011 placed new constraints on the DoN budget, which required hard choices and prioritization to address, our shipbuilding plan attempts to balance capacity, capability and the industrial base.

Today's Navy is a Battle Force of 282 ships. As described in the Long-Range Plan for Construction of Naval Vessels for Fiscal Year 2013, which outlines the DoN's five-year shipbuilding plan (included in the Fiscal Year 2013 President's Budget request) and provides a projection for new ship construction and planned ship retirements over the following 25-year period, the Navy is building for a 21st Century Battle Force of about 300 warships.

The last year has proven eventful for Navy and Marine Corps operations across the entire spectrum of the Maritime Strategy from building maritime partnerships to executing our core capabilities of forward presence, deterrence, power projection, sea control, maritime security, and humanitarian assistance and disaster response.

As 2011 began, the ENTERPRISE Strike Group sailed east from Norfolk, headed out on a penultimate deployment for the carrier. The VINSON Strike Group was already operating in 7th Fleet and sailing toward the Arabian Sea where it would join the KEARSARGE Amphibious Ready Group supporting Marines of I Marine Expeditionary Force in theater. KEARSARGE, in its fifth month of deployment, had left Norfolk in the summer of 2010 with the 26th Marine Expeditionary Unit (MEU) embarked, on a mission to provide disaster relief to the flood stricken people of Pakistan. With relief efforts complete, the 26th MEU moved on to Operation Enduring Freedom in Afghanistan.

Shortly after ENTERPRISE deployed, REAGAN, CHANCELLORSVILLE and PREBLE would get underway from San Diego to conduct multinational training in the Western Pacific before relieving the watch in the Indian Ocean.

And then, a month later, a fuse was lit in the Middle East—unleashing instability, causing governments to topple, jeopardizing American citizens and interests in this strategic region. As the Arab Spring emerged, KEARSARGE and 26th MEU would sail to the Mediterranean and ENTERPRISE would swing west. Amphibious ships BOXER, GREEN BAY and COMSTOCK and the 13th MEU would get underway from San Diego.

And then in March last year, half the world away, unimaginable devastation swept away whole villages and towns along the coast of Japan, claiming an untold number of lives while leaving the smoldering threat of greater destruction and loss. Before the world fully grasped the situation, Marines, stationed in Okinawa, would airlift to the region for disaster response. The ESSEX Amphibious Group, forward deployed to Japan, would get underway and the REAGAN Strike Group, now in the Western Pacific, would sail north, joining ESSEX, to provide critical supplies, medical services and rescue efforts. Operation Tomodachi would eventually employ 22

ships, 140 aircraft and 15,000 Sailors and Marines to deliver more than 260 tons of relief supplies to earthquake and tsunami survivors.

Meanwhile, as Muammar Qaddafi launched his army in an assault against his own citizens, guided-missile destroyers STOUT and BARRY and attack submarines PROVIDENCE and SCRANTON and the guided missile submarine FLORIDA, as well as British ships and submarines, launched their cruise missiles against Libyan air defense, surface-to-air missile sites and communication nodes, demonstrating our extraordinary power projection capability. Over the course of the NATO operation, FLORIDA would launch more than 90 Tomahawks of the more than 200 total.

And aircraft of the ENTERPRISE and 26th MEU operating from KEARSARGE, joined by the first deployed EA-18G Growler squadron, would leave Afghanistan and redeploy to the Mediterranean to join coalition forces in establishing a no-fly zone to halt the Libyan army and the bloodshed it threatened.

That same week, BATAAN, MESA VERDE, WHIDBEY ISLAND, and the 22nd MEU would surge from Norfolk to strengthen the coalition Operation "Odyssey Dawn."

Through 2011, carrier air wings embarked aboard ENTERPRISE, ABRAHAM LINCOLN, CARL VINSON, JOHN C. STENNIS, RONALD REAGAN, AND GEORGE H.W. BUSH, on her first-ever combat deployment, would fly nearly 15,500 sorties totaling more than 49,000 flight hours in support of coalition forces on the ground in Iraq and Afghanistan and Operation New Dawn.

What is most remarkable about this story of the first three months of 2011 is that it is replayed month after month in Navy and Marine Corps operations. On any given day in any given year, nearly half of our battle force ships are underway, supporting missions around the globe—conducting anti-piracy patrols, global partnership stations, under-ice operations, supporting operations ashore, strategic deterrence, missile defense missions, amphibious operations or humanitarian assistance missions, such as the hospital ship COMFORT in Operation Continuing Promise. And today, ENTERPRISE, commissioned in 1961, is once again on deployment, this time, for the last time.

No other military and no other nation on earth today, has the reach, the presence, the capability, the training and the resolve to maintain this pace or breadth of operations. Global reach, persistent presence, and operational flexibility, the inherent characteristics of U.S. seapower articulated in the *Cooperative Strategy for 21st Century Seapower*, are demonstrated in all we have done in 2011 and continue to do in 2012. These tenets, along with the Defense Strategic Guidance, guide the priorities and direction of the Department of the Navy's Fiscal Year 2013 President's Budget request.

The Fiscal Year 2013 Budget Request

The Fiscal Year 2013 President's Budget request funds ten ships: one GERALD R. FORD Class aircraft carrier, two VIRGINIA Class fast attack submarines, two DDG 51 ARLEIGH BURKE Class destroyers, four Littoral Combat Ships (LCS), and one Navy Joint

High Speed Vessel (JHSV). In addition, the Department is requesting Multiyear Procurement (MYP) authority for the Virginia Class (Fiscal Year 2014 through Fiscal Year 2018 ships) and the DDG 51 ARLEIGH BURKE Class (Fiscal Year 2013 through Fiscal Year 2017 ships).

Aircraft Carriers

Our aircraft carriers are best known for their unmistakable forward presence, ability to deter potential adversaries and assure our allies, and capacity to project power at sea and ashore; however, they are equally capable of providing our other core capabilities of sea control, maritime security, and humanitarian assistance and disaster relief. Our carriers provide our nation the ability to rapidly and decisively respond globally to crises with a small footprint that does not impose unnecessary political or logistic burdens upon our allies or potential partners.

The GERALD R. FORD is the lead ship of our first new class of aircraft carrier in nearly forty years. GERALD R. FORD Class carriers will replace aging NIMITZ class carriers and are expected to be the premier forward deployed asset for crisis response and early decisive striking power in a major combat operation through the remainder of this century. While the GERALD R. FORD aircraft carrier design uses the NIMITZ class hull form, it is essentially a brand new ship with new technologies and interior arrangements that improve war fighting capability, operational availability, and quality of life, while reducing crew size (approximately 1200 sailors including air wing reductions) and total ownership costs (TOC). TOC reduction by hull is expected to result in $5 billion over the 50 year service life of each ship of the GERALD R. FORD Class.

The Fiscal Year 2013 President's Budget requests the first year of full funding for the second ship of the GERALD R. FORD Class, CVN 79, effectively maintaining aircraft carrier construction starts on five year intervals. This is an important benchmark for sustaining the large vendor base that supports this unique ship class. The build duration for CVN 79, though, has been extended by two years. This adjusted profile provides for delivery no later than 2022, which aligns with the end of service life for NIMITZ, the ship CVN 79 will functionally replace to maintain an eleven carrier force structure. This extended build period will also allow for production efficiencies which are discussed in more detail below.

Inarguably, this new class of aircraft carrier brings forward tremendous capability and life cycle cost advantages compared to the NIMITZ Class she will replace. However, the design, development and construction efforts required to overcome the technical challenges inherent to these advanced capabilities have significantly impacted cost performance on the lead ship. In the course of this past year, the Navy conducted a detailed review of the GERALD R. FORD Class build plan to improve end-to-end aircraft carrier design, material procurement, production planning, build and test. This effort, taken in conjunction with a series of corrective actions with the shipbuilder on the lead ship, will not erase cost growth on GERALD R. FORD, but should improve performance on the lead ship while fully benefitting CVN 79 and following ships of the class. The added build duration planned for CVN 79 allows the Navy and shipbuilder to develop and implement a more affordable, optimal build strategy that incorporates the findings of the end-to-end review as well as lessons learned from design and construction of the lead ship. This year's budget request includes prior year completion funding to address increases incurred to

date in GERALD R. FORD government furnished equipment, non-recurring design, and ship construction.

Among the new technologies being integrated is the Electromagnetic Aircraft Launch System (EMALS) which will support FORD's increased sortie generation rates. EMALS testing continues and has been successful. To date, EMALS has launched more than 1500 dead loads and 134 aircraft launches from the full scale EMALS production representative unit using five different types of test aircraft, including an F-35C Joint Strike Fighter. EMALS' production schedule supports the planned delivery of GERALD R. FORD in September 2015.

Advanced Arresting Gear (AAG) is also a new technology planned for GERALD R. FORD. This technology will provide the capability to recover all existing and future carrier-based fixed wing air vehicles, including those too heavy or too light for current systems. Testing of a full-scale, land-based installation of AAG is ongoing. It, too, supports the planned delivery of GERALD R. FORD.

Dual Band Radar (DBR) will also be introduced on GERALD R. FORD. DBR integrates an X-band Multi-Function Radar with an S-band Volume Search Radar to provide a single interface to the ship's combat system. Its active planar arrays enable GERALD R. FORD to be designed with an island smaller than those on current carriers, which contributes to the ship's increased sortie generation rate. With the truncation of the DDG 1000 program at three ships and subsequent removal of the S-band radar from the DDG 1000 baseline, GERALD R. FORD will be the lead ship for DBR developmental testing. DBR production schedule supports the planned delivery of GERALD R. FORD.

GERALD R. FORD's newly designed reactor delivers more core energy and nearly three times the electrical output of the current carrier's plant, yet will need only half as many sailors to operate and will be easier to maintain. GERALD R. FORD also incorporates several survivability enhancements to counter current and emerging threats.

With more than half of the service life of the NIMITZ Class still remaining, the Refueling Complex Overhaul (RCOH) continues as a key enabler for the enduring presence of the aircraft carrier fleet. This year's budget request includes prior year completion funding for the RCOH of the fourth ship of the NIMITZ Class, THEODORE ROOSEVELT, whose availability was extended due to unexpected growth work discovered during execution. In addition, the budget request includes incremental funding to initiate the RCOH of ABRAHAM LINCOLN and advance procurement funding for the RCOH of GEORGE WASHINGTON.

The Submarine Fleet

Submarines have a unique capability for stealth and persistent operation in an access-denied environment and to act as a force multiplier by providing high-quality Intelligence, Surveillance, and Reconnaissance (ISR) as well as indication and warning of potential hostile action. In addition, attack submarines are effective in anti-surface ship warfare and anti-submarine warfare in almost every environment, thus eliminating any safe-haven that an adversary might pursue with access-denial systems. As such, they represent a significant conventional deterrent. While our attack submarine fleet provides considerable strike capacity already, our guided missile

submarines provide significantly more strike capacity and a robust capability to covertly deploy special operations force (SOF) personnel. Today the Navy has four guided missile submarines (SSGN). To mitigate the loss of strike capacity when SSGNs retire in the next decade, the Navy has requested Research and Development funding in Fiscal Year 2013 to begin design of a modification to the VIRGINIA Class SSN, the VIRGINIA Payload Module. This added capability would contain four SSGN-like tubes for strike and future payloads. Pending the future fiscal environment, modified Virginia Class SSNs could be procured starting no earlier than Fiscal Year 2019. This would permit Navy to sustain undersea strike capacity without requiring the Navy to construct a purpose-built ship to replace the SSGN – an option that would be cost prohibitive.

The Fiscal Year 2013 President's Budget requests funding for two VIRGINIA Class submarines in Fiscal Year 2013 as well as advance procurement and economic order quantity funding for the Fiscal Year 2014 through 2018 boats. The Fiscal Year 2013 boats are the last two submarines under the Block III (Fiscal Years 2009 through 2013 Multiyear Procurement (MYP) contract). Now in its 15th year of construction, the VIRGINIA program reliably delivers this critical undersea capability affordably and on time, in large part due to the cost savings and stability provided by the program's multiyear procurement strategy. The Department expects continuation of this strategy to yield similar benefits, and is including a legislative proposal for the authorization of a nine-ship MYP for procurement of the next block of VIRGINIA Class submarines (Fiscal Years 2014 through 2018) with the Fiscal Year 2013 President's Budget request. The Navy estimates 14.4 percent savings on this MYP versus single ship procurement, as result of economic order quantity opportunities, improved workforce planning and workload sequencing, optimized construction scheduling, increased opportunity for facilities investment, and reduced support and engineering workload; all made possible by leveraging the stability offered by the MYP.

The Navy is mitigating the impending attack submarine force structure gap in the 2020s through three parallel efforts: reducing the construction span of VIRGINIA Class submarines, extending the service lives of selected attack submarines, and extending the length of selected attack submarine deployments.

Ballistic missile submarines are the most survivable leg of the Nation's strategic arsenal and provide the Nation's only day-to-day assured nuclear response capability. They provide survivable nuclear strike capabilities to assure allies, deter potential adversaries, and, if needed, respond in kind. The OHIO Replacement Program inventory is assumed to be 12 ships. The Nuclear Posture Review (NPR) completed in April 2010 determined that the U.S. would retain a nuclear triad under New START and that, for the near-term, the Navy would retain all 14 SSBNs in the current inventory. The NPR stated that, depending upon future force structure assessments and how SSBNs age in the coming years; the U.S. will consider reducing from 14 to 12 OHIO Class submarines in the second half of this decade. To maintain an at-sea presence for the long term, the U.S. must continue development of the follow-on to the OHIO Class submarine. Due to budget constraints, the Department has shifted procurement of the lead OHIO Replacement submarine by two years (from Fiscal Year 2019 to Fiscal Year 2021). The delay results in a temporary reduction to 10 available SSBNs in the 2030s during the transition period between OHIO and OHIO Replacement SSBNs. Because there are no major SSBN overhauls planned during this period, an available force of 10 ships will be able to meet the current U.S. Strategic Command's

at-sea presence requirements, albeit with increased operational risk that stems from the reduced force levels. The Fiscal Year 2013 budget requests funding to continue development of the Ohio Replacement Program and ensures Common Missile Compartment efforts are on track to support the United Kingdom's Successor Program's schedule. All aspects of the OHIO Replacement Program will continue to be thoroughly reviewed and aggressively challenged to drive down engineering, construction, and operations and support costs.

As threats evolve, it is vital to continue to modernize existing submarines with updated capabilities. The submarine modernization program includes advances in weapons, integrated combat control systems, sensors, open architecture, and necessary hull, mechanical and electrical upgrades. These upgrades are necessary to retain credible capabilities for the future conflicts and current peacetime ISR and Indication and Warning missions and to continue them on the path of reaching their full service life. Maintaining the stability of the modernization program is critical to our future Navy capability and capacity.

Modernization is also critical to sustaining the current combat capabilities of the submarine fleet. Through extensive use of Commercial Off-The-Shelf (COTS) equipment, modern submarine C4I systems are maintained with a minimal industrial logistics tail. Regular replacement of electronics through the Tech Insertion process prevents part obsolescence and related impacts to operational availability. This successful COTS model has sustained the submarine fleet for the past decade at a fraction of legacy combat system costs. Maintaining the stability of the modernization program is critical to our future Navy capability and capacity.

Large Surface Combatants

Guided missile cruisers (CGs) and guided missile destroyers (DDGs) comprise our large surface combatant fleet. When viewed as a whole, these ships fulfill broad mission requirements both independently and in conjunction with a strike group. The demands for increased capability and capacity in Ballistic Missile Defense (BMD), Integrated Air and Missile Defense (IAMD) and open ocean anti-submarine warfare (ASW) have resulted in a shift of focus on the type and quantity of these ships. The Navy's ongoing analysis is influenced by the emerging shift of focus for large surface combatants; the increased demand for capability and capacity in integrated air and missile defense; and open ocean anti-submarine warfare resulting from changing global threats. BMD forward presence is assumed to be "in stride" meaning that a BMD capable ship can transition rapidly between BMD and other operations historically assigned to these classes of ships.

The DDG 1000 Zumwalt guided missile destroyer will be an optimally crewed, multi-mission surface combatant designed to provide long-range, precision naval surface fire support to Marines conducting littoral maneuver and subsequent operations ashore. The DDG 1000 features two 155mm Advanced Gun Systems capable of engaging targets with the Long Range Land Attack Projectile at a range of over 63 nautical miles. In addition to providing offensive, distributed and precision fires in support of Marines, it will provide valuable lessons in advanced technology such as signature reduction, active and passive self-defense systems, and enhanced survivability features. The first DDG 1000 is approximately 65 percent complete and is scheduled to deliver in FY 2014 with initial operating capability planned in 2016.

The Fiscal Year 2013 President's Budget requests funding for two Flight IIA DDG 51 ARLEIGH BURKE Class destroyers as well as advance procurement and economic order quantity funds for the Fiscal Year 2013 through Fiscal Year 2017 Multiyear Procurement (MYP). These two ships are planned as part of the Fiscal Years 2013 through 2017 MYP. The Flight IIA ships will incorporate Integrated Air and Missile Defense (IAMD), providing much-needed BMD capacity to the Fleet. In evaluating the merits of a MYP contract for Fiscal Years 2013 through 2017 DDG 51s, the Navy projected $1.5 billion in savings for nine ships across that time period and has leveraged these savings in the procurement of the nine ships.

The Navy is proceeding with the Air and Missile Defense Radar (AMDR) program to meet the growing ballistic missile threat by greatly improving the sensitivity and longer range detection and engagement of increasingly complex threats. This scalable radar is planned for installation on the DDG 51 Flight III ships to support joint battle space threat awareness and defense, including BMD, area air defense, and ship self defense. The AMDR radar suite will be capable of providing simultaneous surveillance and engagement support for long range BMD and area air defense. Three Fixed Price Incentive Technology Development phase contracts were awarded in the fall of 2010. AMDR technology development is on track and successfully completed the three System Functional Reviews in December 2011. Prototype development to demonstrate critical technologies is well underway. The program remains on schedule for the Preliminary Design Reviews in the fall of 2012 and the Navy plans to award an Engineering and Manufacturing Development contract in early Fiscal Year 2013. Pending the successful demonstration of technical maturity and final determination that production risks have been suitably mitigated, the Navy intends to conduct a separate fixed price competition for installation of the AMDR Engineering Change Proposal into DDG 51 ships, commencing in Fiscal Year 2016.

To counter emerging threats, the Navy continues to make significant investments in cruiser and destroyer modernization to sustain combat effectiveness and to achieve the 35 year service life of the Aegis fleet. Destroyer and cruiser modernization programs include Hull, Mechanical, and Electrical (HM&E) upgrades, as well as advances in warfighting capability and open architecture to reduce total ownership costs and expand mission capability for current and future combat capabilities. The Fiscal Year 2013 President's Budget request includes funding for the modernization of three cruisers (one Combat Systems and two HM&E) and five destroyers (two Combat System and three HM&E). Beyond Aegis modernization, the Navy is continuing development of Hybrid Electric Drive (HED) at the Land Based Engineering Site to mature this promising technology. An initial shipboard demonstration of HED is targeted for installation in a DDG 51 ship in early Calendar Year 2013.

The Aegis Fleet serves as the Surface Navy's sea-based BMD force. The Advanced Capability Build 12/Technology Insertion 12 (ACB 12/TI 12), also known as Baseline 9, constitutes the most significant combat system upgrade of the Aegis Fleet. In service DDGs will undergo a comprehensive modernization of their combat system, and new construction DDGs starting with DDG 113 will be outfitted with ACB 12/TI 12. ACB 12/TI 12 brings the Integrated Air and Ballistic Missile Defense (IAMD) capability to Surface Combatants. IAMD allows Aegis Destroyers to perform the BMD mission without any degradation to their ability to conduct Anti Air Warfare (AAW) simultaneously through the introduction of the Multi-Mission Signal Processor (MMSP). ACB 12/TI 12 software development is 97 percent complete and on

schedule. JOHN PAUL JONES's ACB 12/TI 12 modernization will begin in the fall of 2012. JOHN PAUL JONES will be the first IAMD capable destroyer, paving the way for backfit into existing destroyers as well as forward fit on new construction ships in the restart of the DDG 51 Class. ACB 12/TI 12 also provides a platform for rapid introduction of additional BMD capabilities.

As in the past, cruisers and destroyers will continue to deploy with strike groups to fulfill their traditional roles. Many will be required to assume additional roles within the complex BMD arena. Ships that provide BMD will sometimes be stationed in remote locations, away from strike groups, in a role as theater BMD assets. The net result of these changes to meet demands for forward presence, strike group operations and BMD places additional pressure on the existing inventory of surface combatants. In addition, the constraints of the current budget resulted in the Navy having to retire seven CGs (four in Fiscal Year 2013 and three in Fiscal Year 2014) before the end of their service lives. While the specific CGs chosen for decommissioning were selected with a view toward minimizing the impact their loss will have on BMD capability and capacity, the loss of these ships will necessitate other ships fulfilling their roles in non-BMD situations – further exacerbating the demands for large surface combatant structure. To support the President's Phased Adaptive Approach for defense of Europe, Navy plans on placing four BMD capable DDG 51 platforms in a Forward Deployed Naval Forces (FDNF) status in Rota, Spain, significantly reducing the number of ships required to source this mission. Further, the Navy will continue to explore alternatives that will redistribute assets currently being employed for missions of lesser priority to meet the missions contained in the updated defense strategy.

Small Surface Combatants

The Navy remains committed to an inventory of 55 Littoral Combat Ships (LCS). These ships expand the battle space by complementing our inherent blue water capability and filling war fighting gaps in the littorals and strategic choke points around the world. LCS design characteristics (speed, agility, shallow draft, payload capacity, reconfigurable mission spaces, air/water craft capabilities) combined with its core C4I, sensors, and weapons systems, make it an ideal platform for engaging in Maritime Security Operations.

The Navy's Fiscal Year 2013 President's Budget funds four LCSs in Fiscal Year 2013, with a total of 16 to be procured across the Future Years Defense Program (FYDP). Affordability remains the key factor in acquiring the needed future capacity of these highly flexible and capable ships. The Navy remains on course to deliver these ships in the quantities needed through the execution of the two competitive block buy contracts (for ten ships of each version) awarded in Fiscal Year 2010. Each ship brings unique strengths and capabilities to the mission and each has been designed in accordance with overarching objectives for reducing total ownership cost.

LCS capabilities address specific and validated capability gaps in Surface Warfare, Mine Countermeasures, and Anti-Submarine Warfare. The concept of operations and design specifications for LCS were developed to meet these gaps with focused mission packages that deploy manned and unmanned vehicles to execute a variety of missions. The first two Mine Countermeasure (MCM) Mission Modules (MM), first two Surface Warfare (SUW) MMs , and

the first Anti-Submarine (ASW) MM have been delivered. The Fiscal Year 2013 President's Budget requests approximately $300 million in Research and Development funding for continued development of mission modules, and Procurement funding to buy common mission module equipment and three mission packages (one MCM and two SUW).

Amphibious Ships

Amphibious ships operate forward to support allies, respond to crises, deter potential adversaries, and provide the nation's best means of projecting sustainable power ashore; they provide the best means for providing humanitarian assistance and disaster relief. Amphibious forces comprised of Sailors, Marines, and ships provide the ability to rapidly and decisively respond to global crises without a permanent footprint ashore that would place unnecessary political or logistic burdens upon our allies or potential partners. There are two main drivers of the amphibious ship requirement: maintaining the persistent forward presence, which enables both engagement and crisis response, and delivering the assault echelons of up to two Marine Expeditionary Brigades (MEB) for joint entry operations.

The Chief of Naval Operations and Commandant of the Marine Corps have determined that the optimal force structure for amphibious lift requirements is 38 amphibious ships to support the operations of 2.0 MEBs. Balancing the total naval force structure requirements against fiscal projections imposes risk on meeting this requirement. Based on the footprint of a 2.0 MEB force, the minimum number of operationally available ships necessary to meet the assault echelon requirement is 30: a force made up of ten Amphibious Assault Ships (LHD/LHA), ten Amphibious Transport Docks (LPD) and ten Dock Landing Ships (LSD). The DoN can meet this requirement as long as all ten of each type is operationally available when needed. Historically, the Navy has carried more than this minimum number of ships to mitigate the impact that long-duration maintenance has on their availability when they are tasked to respond during conflict. Planning factors call for a force of 33 ships to achieve this availability. Today, the Amphibious Force Structure stands at 29 ships, which includes 9 LHD/LHAs, 8 LPDs, and 12 LSDs.

The Navy is commencing recapitalization of the large deck amphibious assault ships with the construction of AMERICA (LHA 6). AMERICA is now more than 60 percent complete and is scheduled for delivery in Fiscal Year 2014. The Fiscal Year 2013 President's Budget request includes a funding request to complete construction of AMERICA, which will cover government liabilities up to the contract ceiling and impacts from the Pension Protection Act of 2006. Beginning with LHA 8, which is planned for procurement in Fiscal Year 2017, the Navy will reintegrate the well deck into the large deck amphibious assault ships to provide necessary surface lift capacity. Funding to design this reintegration of the well deck is included in the Fiscal Year 2013 President's Budget request.

The SAN ANTONIO Class LPD (LPD 17) serves as the replacement for four classes of older ships: the LKA, LST, LSD 36, and the LPD 4. Six of the eleven authorized and approved ships of this class have been delivered to the Navy. Lessons learned from the effort to resolve material reliability concerns identified in the early ships of the class are being applied to ships currently under construction. Quality continues to improve with each ship delivered as the Navy continues to work closely with the shipbuilder to address cost, schedule, and performance issues.

The utility of this class was best demonstrated by USS MESA VERDE (LPD 19) as she recently returned after 19 months of deployed operation over a twenty five month period.

LSD (X) will replace the aging LSD 41/49 WHIDBEY ISLAND/HARPERS FERRY Class vessels and will perform an array of amphibious missions. An Analysis of Alternatives (AoA) will be conducted in Fiscal Year 2012. The Fiscal Year 2013 President's Budget requests funds for Research and Development required for technology development and initial design efforts resulting from the AoA. Affordability will be a key factor in acquiring the needed future capacity and operational capabilities of this highly flexible multifaceted ship.

A fully funded LSD mid-life program, to include repairs, is essential for ensuring the LSD 41/49 ships are able to meet their readiness for tasking requirements and meet their expected service life. Funding for LSD mid-life is included in the Fiscal Year 2013 President's Budget request.

Auxiliary Ships

Combat Logistics Support ships fulfill the vital role of providing underway replenishment of fuel, food, repair parts, ammunition and equipment to forward deployed ships and their embarked aircraft, to enable them to operate for extended periods of time at sea. Combat Logistic Support Ships consist of T-AOE fast support ships, T-AKE auxiliary dry cargo ships, and T-AO fleet oilers. The T-AO and T-AKE ships tend to serve as shuttle ships between resupply ports and their customer ships, while the T-AOE tends to serve as a station ship, accompanying and staying on-station with a Carrier Strike Group (CSG) to provide fuel as required to customer ships.

Support Vessels such as the Mobile Landing Platform (MLP) and the Joint High Speed Vessel (JHSV) provide additional flexibility to the Combatant Commander within the operating area. The MLP enables at sea transfer of vehicles from cargo ships and facilitates the delivery of these vehicles, equipment, personnel and supplies between the sea and restricted access locations ashore. The JHSV provides a high-speed, shallow draft alternative to moving personnel and material within and between the operating areas, and to support security cooperation and engagement missions. Other support vessels, such as salvage ships, fleet tug boats, and submarine tenders serve in various supporting roles, but are not counted as part of the battle force.

The Fiscal Year 2013 President's Budget requests Research and Development funds to mature the Navy's concept for the replacement T-AO fleet oiler in Fiscal Year 2016. The Analysis of Alternatives (AoA) is nearing completion. The new oilers will have a double-hull design to ensure compliance with the environmental protection requirement for this type of ship.

In support of the enhanced Maritime Prepositioning Ship Squadron (MPSRON) concept of operations, two T-AKE auxiliary dry cargo ships are being allocated to the Maritime Prepositioning Squadrons (MPS) to provide sea-based logistic support to Marine Corps units afloat and ashore. Further, the Navy recognizes the need to provide for at-sea transfer of vehicles from a cargo ship and to provide an interface with surface connectors. The Mobile Landing Platforms (MLP) (support vessels) will provide an enhanced throughput option for the

MPS and increase capacity to support Combatant Commander requirements. It will facilitate delivery of vehicles, equipment, personnel, and supplies between the sea base and restricted access locations ashore. The Navy has awarded a contract for three MLPs. As part of the Fiscal Year 2013 budget deliberations, the Department will retain 2 MPSRONs and return the third to U.S. Transportation Command for common sealift support. The first two MLPs will be built to support the 2 MPSRONs.

During the Fiscal Year 2013 deliberations, Central Command submitted a Request for Forces for Afloat Forward Staging Base (AFSB) capability with capacity for Mine Warfare. In the past, the Navy has provided fleet assets to address the AFSB demand. In order to avoid diverting a fleet asset to fulfill this request, the Department has elected to convert PONCE to provide an interim AFSB capability until Fiscal Year 2016. To meet the enduring AFSB mission, Navy plans to modify the MLP 3 (Fiscal Year 2012 ship) to become a dedicated AFSB asset and will request an MLP 4 in Fiscal Year 2014 to provide an additional MLP variant for the AFSB mission. This will result in a class of four MLPs – two dedicated to the 2 MPSRONs and two dedicated to the AFSB mission. The two dedicated MLP/AFSBs are required to provide continuous AFSB support anywhere in the world. Advance Procurement funds for the Fiscal Year 2014 ship as well as Research and Development funds for AFSB are included in the Fiscal Year 2013 budget request. MLP 3 is planned for delivery in order to replace PONCE by Fiscal Year 2016.

The Fiscal Year 2013 President's Budget request includes funding for construction of the tenth and final JHSV (support vessel). A Memorandum of Agreement with the Army transferred programmatic oversight and mission responsibility for the entire JHSV program, including operations and maintenance, to the Navy. All delivered JHSV's will be operated by the Military Sealift Command and manned by civilian or contract mariners.

Decommissionings/Inactivations

As a result of fiscal constraints, the Navy chose to prioritize readiness over capacity. The Fiscal Year 2013 decision to decommission seven TICONDEROGA Class guided missile cruisers (CG), four in Fiscal Year 2013 and three in Fiscal Year 2014, and two LSDs exemplify our resolve to provide a more ready and sustainable Fleet within our budget constraints. The resources made available by these retirements will allow increased funding for training and maintenance. Both the cruisers and the LSDs were in need of significant maintenance investment and six of the seven cruisers required further investment to install BMD capability. Inactivating the CGs resulted in approximately $4.1 billion in savings across the FYDP, including manpower and maintenance savings and costs avoided by not executing combat system and hull, mechanical, and electrical upgrades. These savings were shifted to other portions of the Fleet. Inactivation of the two LSDs in Fiscal Year 2014 saved approximately $293 million across the FYDP. These ships will be placed in Mobility "B" category, allowing for re-activation should conditions warrant. The reduction in cruiser and amphibious capacity and shift to a more sustainable deployment model will result in some reductions to the amount of presence the Navy will provide overseas in some select areas, or a change in the nature of that presence to favor innovative and lower-cost approaches.

Affordability and the Shipbuilding Industrial Base

The strength of our shipbuilding plan is closely coupled with the strength of our shipbuilding industrial base. The critical skills, capabilities, and capacities inherent to our new construction shipyards and weapon systems developers inarguably underpin the U.S. Navy's dominant maritime position. Accordingly, in the course of balancing resources and requirements in the formulation of the shipbuilding plan, the effect of program decisions on the industrial base must be closely weighed.

Over the past several years, the Navy has placed a priority on increasing shipbuilding rates and providing stability for the shipbuilding industrial base. Stability translates into retention of skilled labor, improved material purchasing and workforce planning, strong learning curve performance, and the ability for industry to invest in facility improvements; all resulting in more efficient ship construction and a more affordable shipbuilding program.

The past VIRGINIA Class and DDG 51 Class MYPs, the DDG 1000 Swap/DDG 51 Restart Agreement, the LCS dual block buy, the three ship MLP procurement, the continuation of CVN 78 Class procurements on constant five year centers, and the heel-to-toe CVN RCOH induction-to-delivery cycle have provided critical stable workload for the affected shipyards and their respective vendor base. The Fiscal Year 2013 President's Budget request for the next VIRGINIA Class and DDG 51 Class MYPs will help to further stabilize the surface combatant and submarine industrial base through this decade. Likewise, the funding requested to procure a fourth MLP, and to configure MLP 3 and MLP 4 as AFSBs will also provide for added workload within the auxiliary shipbuilding sector.

However, the shipbuilding plan submitted with the Fiscal Year 2013 President's Budget request also reflects difficult choices guided by the strategic priorities and fiscal constraints brought with two governing works; the 2011 Budget Control Act and the recently released 'Sustaining U.S. Global Leadership: Priorities for 21st Century Defense.' The decisions to truncate the JHSV program, to delay starting the TAO(X), LSD(X), and SSBN(X) programs, and to defer a destroyer, a submarine, LHA 8, and two LCS ships to later years in the FYDP (or beyond) are decisions which place added stress on the industrial base and on the affordability of the respective programs; yet best match our resources to our requirements.

Any strategy which seeks to improve upon these projections by relying upon increasing investment above the current plan for shipbuilding is, at best, high risk. In fact, the current shipbuilding program calls for significant added investment through the FYDP and beyond (particularly during the period of SSBN(X) procurement). Accordingly, the Navy must continue to explore and implement alternatives to improve upon these projections for shipbuilding and the industrial base through other means.

The strategy going forward must continue to center upon improving affordability. One of the greatest challenges to our future shipbuilding program, and therefore to elements of our industrial base, is the rapidly increasing cost of our ship programs. To this end, in addition to the emphasis on stability discussed above, the Navy is establishing affordability requirements and investing in Design for Affordability for future ship programs; mandating use of open systems design; leveraging competition where it exists in shipbuilding; employing fixed price contracts to

control cost for ships and weapon systems in production; imposing strict criteria limiting disruptive change to contracts; investing in industry-wide manufacturing process improvements through the National Shipbuilding Research Program; and incentivizing capital investment in facilities where warranted. There are additional mechanisms to improve affordability, which have required or will require Congressional support:

- Strong industry performance in restarting DDG 51 production has yielded substantial savings for the Fiscal Year 2011/2012 ships placed under contract. The Navy is targeting additional savings through the competitive Fiscal Year 2013 to Fiscal Year 2017 MYP.
- Provision of a Shipbuilding Capabilities Preservation Agreement (SCPA), to improve a Navy shipbuilder's competitiveness for commercial work, is particularly effective for auxiliary shipbuilders that possess the skills and capabilities common to both Navy and commercial shipbuilding. Navy has signed one SCPA agreement in the recent past.

The Navy will continue to aggressively pursue the mutual objectives of improving the affordability of our shipbuilding program and increasing the strength of our shipbuilding industrial base, and is committed to working closely with Congress on these efforts.

Acquisition Workforce

The Navy has embarked on a deliberate plan to strengthen the acquisition workforce over the FYDP. The Navy's position is to continue its current plan as stated in the Department of Navy (DoN) Acquisition Workforce (AWF) Strategic Plan, to rebuild the DoN civilian acquisition workforce. In the past two years, the DoN AWF has hired approximately 4,300 full time equivalents and has improved its education and training programs in shipbuilding program management and contracting.

The Navy continues to emphasize the need for a professional cadre of on-site Supervisor of Shipbuilding (SUPSHIP) personnel co-located with the nation's shipbuilding industrial base in an oversight role. Over the last year, the number of onboard SUPSHIP staff reached 1146. This marks a continued growth trend of SUPSHIP staffing from approximately 900 onboard in Fiscal Year 2007 and marks another successful year of achieving hiring targets, as SUPSHIPs have done every year from Fiscal Year 2007 to Fiscal Year 2011. Preserving these staffing gains made over the past four years is critically important to ensuring sufficient oversight and management of the Navy's shipbuilding programs.

Summary

The Navy continues to instill affordability, stability, and capacity into the shipbuilding plan and to advance capabilities to become a more agile, lethal and flexible force to address the challenges and opportunities facing the nation. The carrier force will sustain a five year interval for construction starts to better align delivery of the GERALD R. FORD Class ships with the ends of service life for the NIMITZ Class ships while ensuring the Navy maintains an eleven carrier fleet. The submarine force will continue to be preeminent in the world as the Navy continues to invest in VIRGINIA Class submarines via multiyear contracts, submarine modernization, and prepare for replacement of the ballistic missile capability. The plan also continues DDG 51 construction via a multiyear contract to leverage a stable design and mature

infrastructure to achieve affordable capabilities. LCS will address specific and validated capability gaps in Mine Countermeasures, Surface Warfare, and Anti-Submarine Warfare, and the selection of both LCS designs leverages the unique capability delivered by each platform while providing stability to the shipbuilding infrastructure. The Navy's amphibious force will remain capable with full funding of LSD mid-life upgrades, replacement of the LSD 41/49 Class ships with LSD(X), construction of the LHA Replacement Class, and successful deliveries of the LPD 17 Class ships. Finally, the Navy is investing in the auxiliary fleet with the procurement of the last JHSV and 4 MLPs, with variants supporting the MPS and the AFSB demands.

The Navy and Marine Corps, on the high seas and closing foreign shores, stand ready to answer the call of the nation. We thank you for your continued support and request your approval of the Fiscal Year 2013 President's Budget request for shipbuilding.

Assistant Secretary of the Navy
(Research, Development and Acquisition)

7/28/2008 - Present
The Honorable Sean J. Stackley

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

United States Navy
Biography

Vice Admiral John Terence Blake
Deputy Chief of Naval Operations, Integration of Capabilities and Resources (N8)

Vice Admiral John Terence Blake was appointed to the United States Naval Academy from the state of New York, he graduated in 1975. His sea duty assignments include: USS *New* (DD 818), USS *Sarfield* (DD 837), USS *Joseph Strauss* (DDG 16), USS *John Young* (DD 973), USS *Chandler* (DDG 996), USS *Leahy* (CG 16), and USS *Blue Ridge* (LCC 19).

Blake commanded the destroyer USS *O'Brien* (DD 975), served on the 7th Fleet Staff as current operations and assistant chief of staff for Operations, commanded the guided-missile cruiser USS *Normandy* (CG 60) and served as commander, Carrier Strike Group 11.

His shore duty assignments include: flag lieutenant to commander, Navy Recruiting Command; Naval Post Graduate School where he earned a masters degree in Finance; Navy Staff (N80) head, Sea Control Section and program manager for the Navy Shipbuilding account; National War College where he earned a masters degree in National Security; Joint Staff (J8) division chief and head of the Combat Identification Joint Warfare Capability Assessment Team; director, Programming Division (N80); director, Operations Division, Office of Budget in the Office of the Assistant Secretary of the Navy (Financial Management/Comptroller); director, Operations Division, Fiscal Management Division in the Office of the Chief of Naval Operations; deputy director for Resources and Acquisition on the Joint Chiefs of Staff (J8) and deputy assistant secretary of the Navy for Budget.

Blake is currently assigned as deputy chief of Naval Operations, Integration of Capabilities and Resources in Washington.

He is authorized to wear the Navy Distinguished Service Medal, Defense Superior Service Medal with oak leaf cluster, the Legion of Merit with four gold stars, the Meritorious Service Medal with two gold stars, the Navy and Marine Corps Commendation Medal with two gold stars and various service and campaign medals.

Updated: 2 July 2010

Lieutenant General Richard P. Mills
Deputy Commandant for Combat Development and Integration

A native of Huntington, New York, Lieutenant General Mills was commissioned via Officer Candidate School. As a Lieutenant he served at the battalion level in two Marine Divisions as a rifle platoon commander, weapons platoon commander, rifle company executive officer, and adjutant. As a Captain he attended Amphibious Warfare School, served at Parris Island as a series officer and commanded a recruit company before joining the 6th Marines, 2d Marine Division, as the Commanding Officer of Alpha Company and Regimental Assistant Operations Officer.

As a Major, he was assigned to the Officer Assignment Branch, Headquarters Marine Corps, attended the Marine Corps Command and Staff College, was a Military Observer with the United Nations Truce Supervision Organization in Palestine, and served as the Air/Ground Liaison Officer, Marine Air Group 29, 2d Marine Aircraft Wing.

Lieutenant Colonel Mills served as Operations Officer, 26th Marine Expeditionary Unit (Special Operations Capable) (MEU SOC) taking part in operations off Bosnia and Somalia, was assigned as the Amphibious Exercise/Operations Officer on the staff of the Commander, United States Sixth Fleet in Gaeta, Italy, and as Commanding Officer, 3d Battalion, 6th Marines (deploying as Battalion Landing Team 3/6, 24th MEU (SOC)).

While a Colonel, he studied at the Royal College of Defense Studies, London, England, was the Officer-In-Charge of the Special Operations Training Group, II MEF before commanding the 24th MEU (SOC). While under his command the 24th MEU (SOC) participated in Operations Joint Guardian in Kosovo, Enduring Freedom, and combat operations ashore in Iraq as part of Task Force Tarawa.

Next Colonel Mills went to Headquarters, United States European Command (EUCOM) in Stuttgart, Germany for duty as the Assistant Chief of Staff then, selected to Brigadier General, was the Deputy Director of Operations at EUCOM. Subsequently he was Director, Manpower Management Division at Headquarters Marine Corps before assuming command of the 1st Marine Division.

From 2007 to 2009 Brigadier General Mills served concurrently as Assistant Division Commander, 1st Marine Division and upon promotion to Major general as Commander, Ground Combat Element, Multi-National Forces - West, Al Anbar Province, Iraq. Upon returning from Iraq he again assumed command of the 1st Marine Division and then was selected to command the I Marine Expeditionary Force (Forward) which deployed to Afghanistan as part of the International Security Assistance Force (ISAF). In June 2010, he assumed command of the newly-created Regional Command (Southwest) and in October 2010 he relinquished command of the 1st Marine Division. In March 2011 he relinquished his duties as the Commander, Regional Command (Southwest). Lieutenant General Mills is the first Marine Corps General Officer to command NATO forces in combat. In July 2011 and upon promotion Lieutenant General Mills assumed the duties as the Deputy Commandant for Combat Development and Integration.

Phebe N. Novakovic
Executive Vice President – Marine Systems
General Dynamics Corporation

Testimony before the
House Armed Services Committee
Seapower and Projection Forces Subcommittee
112th Congress, Second Session

Shipbuilding Industrial Base

Washington, D.C.
March 29, 2012

**NOT FOR PUBLICATION UNTIL RELEASED BY
HOUSE ARMED SERVICES COMMITTEE –
SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES**

Chairman Akin, Congressman McIntyre, members of the subcommittee, thank you for your invitation to testify today and for the committee's long history of support for United States shipbuilding.

Following a brief introduction of General Dynamics Marine Systems shipyards, I will address the issues requested in your invitation letter. Specifically, I will comment on the Navy's FY13 shipbuilding plan, our efforts to preserve shipyard skills, our initiatives to reduce costs and an assessment of the shipbuilding industrial base.

Introduction to General Dynamics Marine Systems Shipyards

General Dynamics Marine Systems business segment includes four shipyards, Bath Iron Works in Bath, Maine; Electric Boat in Groton, Connecticut, and Quonset Point, Rhode Island; and NASSCO in San Diego, California, and Norfolk, Virginia. Combined, these shipyards employ nearly 21,000 people. The group designs, builds, repairs and supports submarines, surface combatants and auxiliary ships for the United States Navy, and commercial ships for the U.S. Jones Act commercial market.

BATH IRON WORKS

Bath Iron Works (BIW), located on the Kennebec River in Bath, Maine, since 1884, delivered its first ship to the United States Navy in 1893. Since then, BIW has delivered 244 military ships. BIW is the lead designer for both classes of U.S. Navy destroyers that are currently in production – the DDG-51 and the DDG-1000 Class destroyers. BIW's Planning Yard activities sustain 80 percent of the Navy's active surface combatant fleet, offering a full range of surface combatant engineering, design, production support and lifecycle support services. BIW is Maine's largest single-site private employer with over 5,500 highly skilled engineers, designers and shipbuilders who, on average, have over 20 years of ship design and construction experience.

ELECTRIC BOAT

Electric Boat, headquartered in Groton, Connecticut, with a major construction facility at Quonset Point, Rhode Island, and an engineering and design facility in New London, Connecticut, has been designing, building and repairing submarines for the U.S. Navy since 1899. Starting with the first nuclear submarine, the USS NAUTILUS, Electric Boat has designed and built the lead ship for 16 of the 19 U.S. nuclear submarine classes, and delivered a total of 102 nuclear submarines to the U.S. Navy. Electric Boat employs 11,000 engineers, designers and tradespeople, focused on the

design, construction, repair and lifecycle support of nuclear submarines. Electric Boat is currently building Virginia-class submarines and is beginning the development of the next SSBN, the Ohio Replacement Program.

NASSCO

NASSCO's primary facility, located in San Diego, California, has designed, built and delivered 137 new ocean-going vessels (Navy and commercial) over the last 52 years. It is the only remaining private, full-service shipyard on the West Coast designing, building and repairing large vessels for the U.S. Navy and commercial Jones-Act customers. NASSCO is the largest industrial manufacturer in San Diego where it employs 3,160 engineers, designers, and skilled shipbuilding craftspeople, plus 300 long-term, on-site subcontractor partners supporting the shipyard. NASSCO is currently building the T-AKE Lewis and Clark-class dry cargo/ammunition ship and the Mobile Landing Platform. NASSCO also has a shipyard in Norfolk, Virginia, where our 500 employees and an additional 300 subcontractor partners conduct surface ship repair for the U.S. Navy.

Navy's FY13 FYDP Shipbuilding Plan

First, I would like to address the Navy's large surface combatant procurement plan. The Navy is committed to executing a multi-year procurement for nine DDG-51 class destroyers and we strongly support that action. We are grateful for the Committee's support of prior DDG-51 multi-year procurements, and your support of this latest multi-year authority will ensure Bath can continue to reduce the cost of these ships.

The FY13 FYDP shifted the 2nd DDG-51 in FY14 to FY16, which could disrupt production at Bath. We will work closely with the Navy and the Congress to ensure that the risk of any disruption is mitigated. Although the number of DDG-51s in the current plan does not reach the historically optimum production levels of previous DDG-51 multi-year procurements, on average three ships a year, we are very pleased with the clarity and stability in the Navy's procurement plan. A stable plan provides the predictability necessary for Bath to manage properly the workforce and the supply chain and make informed decisions about future facility investments.

While no additional DDG-1000 ships are contained in the FY13 Shipbuilding Plan, I would like to thank the Committee for its support of the program. This highly innovative and capable three-ship class is a major part of BIW's workload over the next

several years. We are over 60 percent complete in manufacturing on the first ship and the construction is progressing extremely well, on time and on cost. Construction of the second ship of the class is over 25 percent complete, and we will begin construction of the third and final ship next week. We are constructing these ships concurrently with DDG-51s, the 34th and final one of which, the PCU MICHAEL MURPHY (DDG-112), will deliver to the Navy May 2012.

Next, I'll address the Virginia-class submarine program. These submarines have been contracted for the last 14 years under a block buy followed by two multi-year contracts, which enabled Electric Boat to drive down costs through greater predictability of funding and stability in the acquisition process. The successes in cost reduction and the dramatically reduced production cycle times that we have achieved in this program would have been impossible without this committee's support for multi-year procurement. As an example, the lead ship schedule of 84 months has been reduced to 62 months on the next EB-delivered ship, about one year ahead of contract delivery.

We are currently under contract to build 10 Block II and III submarines and the President's budget requested your approval to contract for an additional nine submarines in Block IV from FY14 to FY18 in a multi-year procurement. We urge the Committee to continue its support of multi-year authority for this program.

I would also like to congratulate this Committee for its key role in accelerating the Virginia-class procurement rate from one to two submarines per year in FY11. The resulting increase in the production rate at our shipyard ensures that we can build each of these ships faster, more efficiently and at significantly reduced costs to the Navy.

As you know, the FY13 FYDP plan for Virginia-class procurement shifts the 2nd submarine in FY14 to FY18. While we are pleased that the Navy remains committed to at least nine ships for Block IV, the delay of the 2nd FY14 submarine does not come without consequences. The shift interrupts the two-ships-per-year series production plan and adds instability in the build plan and within the industrial base. Secretary of Defense Panetta has voiced his interest in restoring the 2nd FY14 submarine if the required funding can be found. We would encourage Congress to restore the 2nd Virginia-class submarine in FY14 by adding funds in FY13 for the necessary advance procurement of long-lead material for that ship. Continuing to support two Virginia-class submarines per year within a multi-year procurement ensures the most cost-efficient acquisition possible.

I will now address the Ohio Replacement Program (ORP). Over the last two decades, Electric Boat has made great strides in design-build, modular construction and design for affordability. These advancements in shipbuilding have contributed to excellent on-time delivery performance of three unique ship designs (the Virginia-class SSN, the SSGN Conversion and the USS JIMMY CARTER Multi-mission submarine) over a brief 14-month period in 2004 and 2005. I raise these accomplishments by way of demonstrating that Electric Boat can design, build and construct the new class of ballistic missile submarines on time and on cost. Imperative to this commitment are two key factors: first, stability and predictability in design and construction funding; and second, clear, cost-sensitive requirements that once established do not change. Under these two conditions, Electric Boat will deliver these ships in the most cost-effective approach possible.

With respect to the recently revised ORP plan, which moves the acquisition of the lead submarine from FY19 to FY21, we would urge the Navy and the Congress to ensure predictable and level-loaded Research and Development (R&D) funding. This ensures that we are able to maintain the most efficient design profile, driving down both design costs and ultimately the cost to construct the submarines.

Finally, I will address Navy's auxiliary surface ship programs. I would like to compliment the Committee for accelerating the final T-AKE ships as well as the Mobile Landing Platform (MLP) program, enabling NASSCO to continue providing significant cost savings as the Navy modernizes its support fleet. The MLP-class is a very capable and flexible platform, and the President's FY13 budget request added a 4th MLP in FY14. We ask the Congress for its continued support of this important class of ships, with the authorization and appropriation of the FY14 MLP.

Shipyard Skill Preservation

Producing naval warships requires an uncompromising commitment to quality. Not only dimensional quality to meet the demands of modular construction techniques, but also quality that ensures the safety and reliability of platforms and the crewmembers that go into harm's way. Preserving the necessary skills in many cases means preserving the culture of quality resident at our shipyards.

BIW, for example, has some of the most experienced shipbuilders in the industry. Our production workforce averages over 20 years of experience building ships for the U.S. Navy. During the past several years we have integrated the completion of the DDG-51s with the startup of the DDG-1000 ships in order to stabilize employment and

retain our skilled workforce. Going forward, we have integrated the restart DDG-51s and the remaining DDG-1000s to increase our production employment level slightly and to enable a process of skill transfer from our experienced mechanics to new employees.

Beyond production skills, our technical staff is vital to maintaining the ability to design and plan complex surface combatants. To that end, since the reduction of our engineering and design staff following completion of the DDG-1000 design, we have been working with Electric Boat to try to stabilize employment and provide design support to EB programs. The key here is to optimize and rationalize our engineering capabilities across our shipyards to reduce costs and preserve critical skills.

BIW also utilizes a program of employee development to advance our personnel from apprentice-level to executive-level. This includes developing core shipbuilding skills in the production trades and highly technical skills for designing ships. BIW also has programs for supervisor and leadership development. Another important part of capitalizing on our skilled workforce is involving them in the improvement of the shipbuilding process. Over the past six months, they have provided over 1,600 working-level suggestions, of which more than 400 are now incorporated that directly impact performance and create safer working conditions.

Similar results are being achieved at Electric Boat, which includes 85 apprentices in the five-year Marine Draftsmen Association Apprentice Program as well as 156 people trained in our two-year Business Leaders Group Program. Electric Boat has invested nearly $1 million in its Plateau Learning Management System, which continues to provide valuable training for the entire workforce – engineers, designers and tradespeople.

We also strive to ensure that the training people receive is reinforced with actual, meaningful, hands-on work in trade, program and functional departments throughout the shipyard. This is a critical complement to our training that allows our employees to demonstrate their developmental skills and judgment on the production floor and ship deckplates.

At NASSCO, we have recently adapted a process called Training Within Industry, or "TWI," to teach our trade workforce the skills necessary to work safely and efficiently. This training technique has been applied to standardize over 500 shipyard tasks and has significantly contributed to improvements in safety, quality, efficiency and skills retention.

In addition to TWI training, NASSCO has employed a Supervisory Development Program to improve our management approach in scheduling, work execution, Earned Value Management System (EVMS) and leadership skills. NASSCO supervisors now perform administrative duties more efficiently allowing them to spend 84 percent more value-added time at job sites.

Cost Efficiency and Risk Reduction

Cost efficiency, overhead management and risk reduction are central to all businesses throughout General Dynamics. We have a culture of continuous improvement which means that every process – including engineering, manufacturing, supply chain management, human resources and finance, to name a few – is subject to rigorous cost analysis and process improvement. Our imperative is to reduce our costs, day in and day out.

In addition, General Dynamics believes in investing in our proven businesses, when there is sufficient volume and stability in our customers' plans to justify the expenditure of our shareholders' capital. Increasingly, we have had the necessary volume and stability in our programs to permit these investments. These investments are key factors in the reduction of costs and improvement of quality throughout our shipyards.

I will address these subjects as they apply by shipyard.

Electric Boat

At Electric Boat, Block II construction program success has been the result of leveraging the original modular design and making selective capital investments to develop and execute a four-module build plan. Assembling fewer large modules is more efficient and costs less than the past practice of welding together many smaller sections. In fact, cost reduction program efforts on Block II have led to delivery of the first four Block II ships early and below cost. We are now following the four-module build process with an improved final assembly and test process that is being realized on PCU MISSISSIPPI. The MISSISSIPPI is on track to be delivered nearly one year ahead of the contracted date and considerably below target cost.

Cost reduction on Virginia Class has been a continuous focus. We began to redesign the Virginia Class in 2006 to incorporate new technologies and lessons-learned to reduce the cost of Block III ships. We used a disciplined, cost reduction-

driven approach called Design for Affordability to ensure that the Virginia's design was optimized for production. As a result, we have eliminated three million hours of Electric Boat construction labor and contributed to a unit cost reduction of about $400 million per ship. In doing so, we achieved the U.S. Navy's goal of $2 billion per ship in FY05 dollars.

In 2008, we signed a fixed-price incentive contract for a multi-year procurement of all eight Block III submarines. The first ship of this block, now three years into construction, is ahead of the build pace of any ship to date. We expect our culture of process improvement will result in EB's continued positive performance on Block III construction.

On the Ohio Replacement Program, Electric Boat is applying modular-build techniques that were refined greatly on the Virginia-class program. Through early prototyping, we have demonstrated a new build strategy for the missile compartment that can save $45 million per hull and remove 15 months off the legacy Ohio-Class build schedule. Electric Boat is attacking design, construction and lifecycle costs concurrently, at the onset of the program.

To date, we have achieved 12 percent savings off our original estimate for design. Over the next two years, we will continue to further reduce the cost of the program using a variety of approaches including: cost versus capability trade-offs with the U.S. Navy; implementing revised business processes in conjunction with a state of the art electronic design tool; simplifying the platform design; and using components and parts from the Virginia-class program. Our engineers have already instituted 510 cost-reduction initiatives and we are currently reviewing another 1,200 for implementation. This level of effort is unprecedented so early in a multi-decade program.

Underpinning many of these improvements has been our investment in our businesses. Since 2000, we have invested over $500 million at Electric Boat to support submarine construction, maintenance and modernization work. Major capital improvements include:

- Graving Dock repair
- Modular Transportation System upgrades to 1,800-ton capacity which supports the Virginia-class four-module build plan;
- A new hull coatings facility at Quonset Point, Rhode Island;
- A pre-launch Final Assembly Facility at Groton, Connecticut.

BIW

Similarly, General Dynamics has made numerous capital investments at BIW to support the DDG 51 and DDG 1000 programs, including approximately $350 million for the:

- State-of-the-art Land Level Transfer Facility completed in 2001
- Ultra Hall facility in 2008
- Machine Shop and Construction Platen upgrades in 2011.

The Ultra Hall facility allows units of up to 5,000 tons to be erected and outfitted indoors in a controlled environment. Building in this type of environment enables higher levels of completion earlier in the build sequence resulting in significant cost savings. Most recently, BIW reconfigured the footprint previously used for its three historic inclined ways into a unit assembly and outfitting area.

We continue to drive down overhead costs through initiatives such as: consolidating leased facilities, dramatically reducing energy and water consumption, and using innovative approaches to ensure that what we pay for these commodities is favorable.

In addition to the macro shipbuilding process improvements associated with facility changes, myriad lower-level continuous process improvements associated with lean manufacturing principles and Lean Six Sigma have become culturally ingrained in our workforce over the last decade. Our culture of continuous improvement and the innovative spirit of BIW's skilled mechanics and managers have resulted in over $58 million in savings in the last two years alone. This included aggressively re-engineering all major organizations in order to eliminate duplicate or unnecessary processes.

BIW has also expertly employed numerous new information technology tools to improve planning, design development and the flow of information. Capitalizing on best practices, process innovations and sharing across all GD shipyards, BIW has further evolved concepts used by Electric Boat and NASSCO to benefit the DDG-1000 and DDG-51 Programs. The design/build concepts used on the Virginia-class submarine program were incorporated during the early phases of the DDG-1000 design, and structural assembly process improvements transferred from NASSCO have yielded benefits on DDG-1000 and DDG-51 production.

NASSCO

The T-AKE dry cargo and ammunition ship program has the best learning curve in the industry. As T-AKE 14, the last ship of the class, is nearing launch, the learning curve for the class stands at 79.2 percent. T-AKE 14 will deliver to the U.S. Navy for 38 percent of the touch-labor hours it took to build the lead ship of the class. The T-AKE program achieved a reduction in rework to 0.8 percent on the final ship. This was achieved through the deployment of a comprehensive continuous process improvement initiative started in 2006. Since that time, we have modified the design to make it more producible, made substantial facility investments to improve throughput and focused the entire organization on process changes that have dramatically improved efficiency.

One such example is the T-AKE's ammunition-magazine sprinkling system design. Working in close cooperation with the Navy technical community, we replaced decades-old Navy standard equipment with a modern, commercially available system that is cost effective to install and maintain. Our systematic approach to continuous improvement has reduced total ownership cost of the T-AKE class and has resulted in a system design that can be readily applied on future U.S. Navy ship classes. These ships are delivering under budget and cumulatively years ahead of schedule.

The Mobile Landing Platform (MLP) is demonstrating the value of completing ship design before starting construction. The 1st MLP, now 45 percent complete, is on schedule and budget. As a result of completing design and production planning prior to construction, MLP is already performing near where T-AKE is finishing, with a 0.9 percent rework rate.

The dedication to continuous process improvement extends to our Repair programs in both San Diego and Norfolk. As an example, for two recent LSD-Class mid-life modernizations in San Diego, we demonstrated over 20 percent cost reduction on repeat work items. These lessons learned are shared between our east and west coast facilities allowing us to provide the best practices and lowest cost approach on our Repair projects.

Across the business, NASSCO incorporated 10,845 process improvements in 2011, including 163 Lean Six Sigma projects, accounting for approximately $19.5 million of cost reduction.

Since 2000, General Dynamics has invested approximately $300 million in capital to improve NASSCO's efficiency and throughput capacity. The deployment of this capital

was targeted based on numerous studies and analyses including benchmarking with two of Korea's most productive shipyards – DSME and STX. Areas of emphasis include:

- Increased steel capacity and efficiency
- Increased block lift capability (two 300-ton cranes and two 320-ton transporters)
- Dedicated blast-and-paint facility
- Established an additional stage of construction for pre-outfitting blocks including increased buffer storage capacity
- Complete overhaul and renovation of our floating dry-dock.

Health of the Shipbuilding Industrial Base

Finally, let me address your question about the health of the shipbuilding industrial base from General Dynamics' perspective. As prime contractors, each of our shipyards is healthy, highly productive and extremely well facilitized. As I noted above, key to our success has been a stable, predictable Navy budget and commitment to shipbuilding that has allowed us to reduce our costs, improve our performance and ensure the health of our suppliers. On that subject, let me expand. It is difficult to paint the entire industry with a broad brush, so I will address the submarine and surface industrial base separately.

Submarine Industrial Base

The U.S. submarine industrial base consists of highly specialized suppliers possessing unique skills and capabilities which, if allowed to atrophy or disappear, could not be reconstituted quickly or affordably. The technology, facilities and personnel that are employed by this supplier base are critical to the continued viability of U.S. submarines.

The submarine industrial base is stable, but limited. Multi-year procurement, with economic order quantity buys and adequate advance procurement funding at a two-ship-per-year level has allowed the supplier base to have confidence in the market and therefore reinvigorate their investment both in human capital and facilities. However, the base is limited because we have a number of one-of-a-kind suppliers who possess designs, facilities and people not replicated elsewhere. The number of submarine suppliers has been reduced from over 17,000 during the Los Angeles- and Ohio-class build-up to now fewer than 6,000. Roughly 300 suppliers possess one-of-a-kind skills and capabilities. In excess of 70 percent of the subcontracted value of a Virginia-class

submarine is committed to single- or sole-source suppliers. Many suppliers have elected to exit the market over the last 15 years for a variety of reasons.

The current stability in the submarine industrial base is the result of the Navy's ability to provide a predictable build rate for Virginia-class ships, the transition to a two-ships-per-year build rate and the commencement of the Ohio Replacement Program. These factors have facilitated renewed interest in capital investment, reinvigorated hiring and training and reduced the exodus of suppliers from the market.

The submarine industrial base embraced the challenge of achieving the $2 billion target cost for Virginia-class submarines (in FY05 dollars), contributing in excess of $200 million in cost savings per ship. Multi-year procurement utilizing both Advance Procurement (AP) and Economic Ordering Quantity (EOQ) funding has been particularly beneficial to the submarine industrial base. The ability to contract for multiple ship sets of material has allowed for reduced cost from raw material procurements, stable production runs, predictable volumes used to calculate indirect rates and reductions in service and support ratios. The submarine industrial base has benefited from 72 percent ($3.5 billion) of the Virginia-class Block III material funding being committed to them in the first 36 months of the contract. Equally important, the suppliers have expended roughly 75 percent ($2.6 billion) of these commitments, creating significant economic benefit and job creation in their communities. The U.S. government has shared in this positive performance as material is running below target cost whereby the savings based on the prime contract share lines accrues to them in part.

The recent revisions to the Virginia-class Block IV plan (shifting one of the two FY14 ships to FY18) and to the Ohio Replacement Program (lead-ship construction start moved from FY19 to FY21) have created concern within the supplier community. In response to the Navy's need for lower costs and quicker build cycles, many of the suppliers accelerated production based on the expectation that their workload would benefit from the Block IV plan (two ships per year, FY14 through FY17). The loss of the second FY14 Virginia-class submarine would create a workload valley and interrupt the current learning curve. The psychological impact from the revision to what has been a period of predictability and stability is significant, and is causing recollections of the Seawolf Program termination with many in the supplier base. Many are very cautious and concerned.

Surface Ship Industrial Base

Not unlike the submarine industrial base, the surface combatant ship supplier base has challenges. BIW maintains a supply base of roughly 3,000 suppliers in 47 states to secure goods and services needed to construct our complex products. Over a third of these suppliers (1,100) are small businesses. While most of these suppliers remain healthy, declines in U.S. Navy shipbuilding have caused a few companies to cease operations. Some companies leave the military market, and many others attempt to diversify their product lines to make non-military products a much larger portion of their portfolios.

While diversification is good news from the perspective of sustainability in a constricted market, the incentive to invest in specific facilities and tooling to support Navy programs, and the ability of the prime contractors to obtain favorable schedule and pricing agreements, is diminished. For example, a raw material and component market base (excluding major equipment) that 10 years ago was nearly 100 percent competitive now contains a significant single- and sole-source element for more than 65 different materials and components used in surface combatant construction. Today, roughly 29 percent of the value of raw materials and components used by BIW in surface ship construction is committed to single- or sole-source suppliers.

Recent announcements regarding proposed multi-year procurements of DDG-51 class ships are welcome news to the surface combatant supplier base. It is important to send this message of stable sustained programming for ship construction to promote affordability and a constant supply of needed raw materials and equipment.

Finally, to promote cost savings, BIW executes the establishment of supply contracts for configuration-managed major equipment useable by the surface combatant shipyards to secure Economic Order Quantity pricing for class programs such as the DDG-51 and DDG-1000 programs.

The auxiliary ships delivered by NASSCO are built to commercial standards, which allow for a more diverse potential supplier base than the surface combatant ship programs. With literally thousands of large commercial ships being constructed worldwide on an annual basis, NASSCO enjoys a healthy supplier base. However, low quantities and long timelines in between firm orders on programs can significantly reduce the number of bidders, constraining our ability to drive to the lowest possible price. Serial production runs provide the best incentive to the supplier base to continue to participate in the U.S. Navy surface ship market.

To ensure the continued health of our shipyards and to shore up, where weak, our supplier base, we must have predictable ship programs in sufficient volume. Reductions in ship buys once the program is on-going, or gaps between classes of ships, will drive businesses out at all levels of the industrial base.

Summary

In summary, Mr. Chairman, the shipbuilding industry has benefited from the Navy's efforts to stabilize their shipbuilding plans and address their program requirements. Likewise, significant cost savings have been realized by the actions of Congress through authorization of multi-year procurement contracts, advanced procurement and advance construction funding. To fulfill our role, General Dynamics' shipyards will remain dedicated to delivering high-quality ships to our Navy at the lowest possible cost.

GENERAL DYNAMICS

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Biography

Last Updated: February 2011
Contact: General Dynamics Public Affairs
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Phebe N. Novakovic
Executive Vice President – Marine Systems

Phebe N. Novakovic became an executive vice president of General Dynamics in May 2010. She is responsible for the Marine Systems group, which includes three companies: Bath Iron Works, Electric Boat and NASSCO. Novakovic had been senior vice president – Planning and Development since July 2005, where she was responsible for Government Relations, Communications, International, Investor Relations and Strategic Planning. She also has served as vice president – Strategic Planning, a position to which she was appointed in October 2002.

Novakovic began her career in 1979 as an analyst for the McLean Research Center where she performed operational analyses on Department of Defense weapon systems. From there, she served for three years, 1983 to 1986, as an operations officer for the Central Intelligence Agency.

Novakovic joined the Office of Management and Budget in 1992, where she served until 1997 in a number of capacities, culminating in her selection as Deputy Associate Director for National Security where she was responsible for managing and submitting the President's budget for the Department of Defense and U.S. Intelligence Agencies.

Immediately prior to joining General Dynamics, Novakovic served as The Special Assistant to the Secretary and Deputy Secretary of Defense from 1997 to 2001. In that capacity, she was responsible for managing processes for all major Department of Defense budget and policy decisions for the Secretary and Deputy Secretary of Defense.

In 2010, Novakovic was elected to the Board of Directors of Abbott Laboratories.

She also serves on the Boards of Directors for several charitable organizations including Project HOPE, the Wolf Trap Foundation for the Performing Arts, National Military Families Association and the Senior Advisory Board for the Naval Historical Foundation.

Novakovic received her Master of Business Administration from the University of Pennsylvania's Wharton School in 1988; her undergraduate studies were completed at Smith College in 1979.

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DISCLOSURE FORM FOR WITNESSES
CONCERNING FEDERAL CONTRACT AND GRANT INFORMATION

INSTRUCTION TO WITNESSES: Rule 11, clause 2(g)(5), of the Rules of the U.S. House of Representatives for the 112th Congress requires nongovernmental witnesses appearing before House committees to include in their written statements a curriculum vitae and a disclosure of the amount and source of any federal contracts or grants (including subcontracts and subgrants) received during the current and two previous fiscal years either by the witness or by an entity represented by the witness. This form is intended to assist witnesses appearing before the House Armed Services Committee in complying with the House rule.

Witness name: Phebe N. Novakovic

Capacity in which appearing: (check one)

___Individual

X Representative

If appearing in a representative capacity, name of the company, association or other entity being represented: General Dynamics Marine Systems

FISCAL YEAR 2012

Bath Iron Works 2012

Federal Grant(s) / Contracts	Federal Agency	Dollar Value	Subject(s) of Contract or Grant
N00024-11-C-2305	NAVSEA	$655,016,688	DDG 116 Construction

Electric Boat 2012

Federal Grant(s) / Contracts	Federal Agency	Dollar Value	Subject(s) of Contract or Grant
2005-340	ATI	$157,800	Service Agreement No. 2005-340
2007-511	SCRA	$592,516	Sail Deck Grates & Cableway Plates
N00024-12-C-2100	NAVSEA	$21,133,458	Reactor Plant Planning Yard / Moored Training Ship Shipyard
P.O. 4500394871	HII-NNS	$119,692	Product Model Driven Weld Management (PMDWM)
P.O. 47708	DRS Technologies	$33,000	Support Replacement of LSV-2 Equipment
10888-C-5373	Shaw/Areva/MO X Services LLC	$14,276,383	Engineering Services
N00024-05-C-2103	NAVSEA	$22,133	Virginia Class R&D & Follow-Ship LYS
N00024-11-C-2109	NAVSEA	$94,450,519	CONFORM

N00024-10-C-2118	NAVSEA	$204,258,361	VA Class R&D Follow Ship Lead Yard Services
N00024-11-C-2111	NAVSEA	$429,162,324	OMNIBUS VIII
N00024-96-C-2100	NAVSEA	$885,356	Virginia Class Design and Construction (SSNs 774-777)
N00024-03-C-2101	NAVSEA	$68,201,408	VIRGINIA Class Construction (SSNs 778-783)
N00024-09-C-2104	NAVSEA	$1,286,045	VIRGINIA Class Block III (784-791)
P.O. 4500294414	Newport News Shipyard	$727,860	CVN-78 Detail Design and Construction
P.O. 4500323492	Newport News Shipyard	$187,752	CVN RPPY and ATIS Development & Distribution
P.O. 7100009460	Lockheed Martin	$145,165	SWFTS
N00024-09-C-2100	NAVSEA	$207,906,653	Common Missile Compartment
P.O. 6012733	BMPC-KAPL	$208,000	KAPL S8G/MARF: Follow-on Engineering Design Services
P.O. 7001244	BMPC-KAPL	$259,727,586	S6G Moored Training Ship (MTS) Conversion Project
P.O. 6016179	Bechtel Marine Propulsion, Inc	$65,935,349	Advanced Nuclear Plant Studies (ANPS) ORP
PL00108950	KAPL	$4,007,164	KAPL VA Class Shipyard Services
EGG0029832	EG&G	$46,328	Fleet Technical Support Services
N00024-07-C-4401	NAVSEA	$2,650,000	Navy Certified Graving Dock Exercise Option FY-12
N00024-10-C-4301	NAVSEA	$1,282,961	GOCO Shipping Port (ARDM-4) FY 12 & Adjustments for the Previous Awarded Years
N00024-10-C-4302	NAVSEA	$24,932,926	Nuclear Regional Maintenance Dept
N00024-10-C-4304	NAVSEA	$526,724	Misc Overhaul & Repair Orders (FY 12)
N00024-10-G-4315	NAVSEA	$479,697	Supplies & Services Orders (FY 12)
N00024-11-G-4319	NAVSEA	$6,038,294	Tech & Eng Supplies & Services Orders (FY 12)
N00024-12-C-4312	NAVSEA	$41,616,738	New England Maintenance Manpower Initiative (FY 12)
N00104-11-G-A751	NAVSEA	$187,452	SPM/SPU Refurbishment (FY 12)
N32253-10-D-0004	Pearl Harbor Naval Shipyard	$111,314	Maintenance Repair & Modernization @ Pearl Harbor
N62789-10-G-0001	NAVSEA	$1,658,435	Nuclear Support Agreement Orders

NASSCO 2012

Federal Grant(s) / Contracts	Federal Agency	Dollar Value	Subject(s) of Contract or Grant
N00024-09-C-2229	NAVSEA	$349,572,264	MLP Third Ship Award
WO-2012-7288	ATI	$99,727	Tank Boundary and Penetration Testing Study
WO-2012-7289	Elzly Technology Corp	$41,130	Compatibility of "Single Coat" Tank Coating Study
WO-2012-7292	ATI	$468,416	Evaluation of Copper Free Antifouling Coating Study
WO-2012-7113	ATI	$209,359	Cost of Survivability in Naval Engineering Systems Study

FISCAL YEAR 2011

Bath Iron Works 2011

Federal Grant(s) / Contracts	Federal Agency	Dollar Value	Subject(s) of Contract or Grant
N00024-09-G-2304	NAVSEA	$192,409	DDG 107 PSA (ER04)
N00024-09-G-2304	NAVSEA	$9,400,000	DDG 111 PSA (ER05)
N00024-11-C-2306	NAVSEA	$936,510,923	DDG 1001 Construction
N00024-11-C-2306	NAVSEA	$895,998,083	DDG 1002 Construction
N00024-11-C-2305	NAVSEA	$699,600,348	DDG 115 Construction
N00024-09-G-2304	NAVSEA	$221,080	DDG 110 PSA (ER06)
N00024-09-G-2304	NAVSEA	$13,432,294	DDG 108 PSA (ER01)

Electric Boat 2011

Federal Grant(s) / Contracts	Federal Agency	Dollar Value	Subject(s) of Contract or Grant
2005-340	ATI	$18,228	Support for NSRP International Shipyard Visits
2007-511	SCRA	$346,573	Composite Sail Covers
2008-601	ATI	$2,975,944	NSRP - Simulation Models 2
6269-001-EB	Oceaneering International	$99,187	Oceanneering Planning Yard Services for Dry Deck
BOA-NMC-GDEB	CTC	$146,679	SHT Debond Detector
BOA-NMC-GDEB2	CTC	$1,059,710	CTC BASE CONTRACT
N00024-07-C-2103	NAVSEA	$26,858,034	Reactor Plant Planning Yard Services
N00030-08-C-0031	Strategic Systems Programs	$1,965,974	US/UK Trident SWSS and AWSS Technical Services
N00030-11-G-0025	Strategic Systems Programs	$505,000	US/UK Trident SWSS Technical Services Program
P.O. 2010-322	ATI	$1,581,102	CNST Base Agreement

P.O. 4100065760	Lockheed Martin	$145,500	RMS Critical System Review, Phase 1
P.O. 4500027880	General Atomics	$100,637	GA EMALS Pilot Program Phase 1
P.O. 7100073746	Lockheed Martin	$4,300	VIRGINIA Weapons Handling Trainer
P.O. 7100075052	Lockheed Martin	$15,500	TRIDENT Torpedo Tube Repairs
P.O. ISMCS-EB-20100301	Mystic Innovations Group Inc.	$10,405	Integrated Ship and Motion Control System (ISMCS)
P.O. PAX 101869	CSC	$29,500	Launch System Industry Classification System
P.O. PAX101884	CSC	$23,740	MLP Site Visit Follow-On
10888-C-5373	Shaw/Areva/MO X Services LLC	$1,688,408	Engineering Services
P.O. 4500357617	Westinghouse	$490,384	Engineering Services
N00024-05-C-2103	NAVSEA	$115,000	Virginia Class R&D & Follow-Ship LYS
N00024-11-C-2109	NAVSEA	$125,177,755	CONFORM
N00024-10-C-2118	NAVSEA	$184,542,124	VA Class R&D Follow Ship Lead Yard Services
N00024-04-C-2100	NAVSEA	$493,830	OMNIBUS VI
N00024-09-C-2101	NAVSEA	$1,013,185	OMNIBUS VII
N00024-11-C-2111	NAVSEA	$417,062,741	OMNIBUS VIII
N00024-96-C-2100	NAVSEA	$19,313,606	Virginia Class Design and Construction (SSNs 774-777)
N00024-03-C-2101	NAVSEA	$114,856,250	VIRGINIA Class Construction (SSNs 778-783)
N00024-09-C-2104	NAVSEA	$17,935,042	VIRGINIA Class Block III (784-791)
P.O. 4500294414	Newport News Shipyard	$2,809,301	CVN-78 Detail Design and Construction
P.O. 4500308263	Newport News Shipyard	$6,299,153	CVN-79 Engineering and Design Support
P.O. 4500323492	Newport News Shipyard	$63,912	CVN RPPY and ATIS Development & Distribution
P.O. 4500053933	Newport News Shipyard	$296,440	FY00-FY06 CVNX IPMP Engineering Services
P.O. 7100009460	Lockheed Martin	$1,150,519	SWFTS
N00024-09-C-2100	NAVSEA	$239,418,358	Common Missile Compartment
P.O. 8200148594	NGMS	$10,749	Repair Order
P.O. 6012733	BMPC-KAPL	$4,893,882	KAPL S8G/MARF: Follow-on Engineering Design Services
KS6002608	KAPL	$32,873,325	Kesselring Site Maintenance Contract

P.O. 6016179	Bechtel Marine Propulsion, Inc	$274,642,970	Advanced Nuclear Plant Studies (ANPS) ORP
PL00108950	KAPL	$49,624,608	KAPL VA Class Shipyard Services
EGG0029832	EG&G	$203,963	Fleet Technical Support Services
P.O. 15004-2412	IMIA	$117,205	Engineering Support to IMIA
SPRMM1-11-C-PA59	DLA MARITIME MECHANICSBURG	$475,000	MOTOR, ALTERNATING C - SPM
N00024-05-G-4417	NAVSEA	$2,049,220	Submarine Support BOA (Fiscal YR 2011)
N00024-07-C-4005	NAVSEA	$45,598,001	New England Maintenance Manpower Initiative (FY 11)
N00024-07-C-4401	NAVSEA	$2,650,000	Navy Certified Graving Dock Exercise Option FY-11
N00024-10-C-4301	NAVSEA	$9,805,464	GOCO Shipping Port (ARDM-4) FY 11
N00024-10-C-4302	NAVSEA	$26,999,952	Nuclear Regional Maintenance Dept (FY 11)
N00024-10-C-4304	NAVSEA	$47,291,436	Misc Overhaul & Repair Orders (FY 11)
N00024-10-G-4314	NAVSEA	$44,811,686	Navy Shipyard Orders (FY11)
N00024-10-G-4315	NAVSEA	$3,175,507	Supplies & Services Orders (FY 11)
N00024-11-G-4319	NAVSEA	$12,085,889	Tech & Eng Supplies & Services Orders (FY 11)
N00104-06-G-A751	NAVSEA	$6,892	SPM/SPU Refurbishment (Cal YR 10 FY 11)
N00104-11-G-A751	NAVSEA	$578,424	SPM/SPU Refurbishment (FY 11)
N62789-10-G-0001	NAVSEA	$2,894,807	Nuclear Support Agreement Orders
N66604-10-D-034A	NAVSEA	$1,091,483	Design & Engineering Work NUWC
N00024-09-C-4413	NAVSEA	$2,913,509	SSN 768 Hartford RAV Changes (Awarded 08/05/09)
N00024-09-C-4417	NAVSEA	$23,637,327	Multiple Ship DSRA (SSN 761 SSN 755, SSN 757)

NASSCO 2011

Federal Grant(s) / Contracts	Federal Agency	Dollar Value	Subject(s) of Contract or Grant
N00024-09-C-2229	NAVSEA	$804,129,956	MLP Design, LLTM, and Award of Ships 1 & 2

WO 2011-7110 (Mod)	CSC	$540,832	MLP Studies
WO 2011-7285	CSC	$56,640	T-AGM – 25 Sea Trials Support
WO-2011-7246	ATI	$99,966	Development of Course Material for Training Rigging Engineers Study
WO 2010-9704 (Mod)	ATI	$7,376	Large Scale Computer Modeling System Enhancements Study
WO 2010-9705 (Mod)	ATI	$5,864	Streamlining Shipyard Rigging Analysis Study
WO-2011-9706	ATI	$900,751	Naval Vessel Ice Capability Optimization Study
WO-2011-9707	ATI	$939,869	Swaged Bulkhead Analysis Verification Study
WO 2011-7243 (Mod)	ATI	$4,000	Swage Panel Analysis Study
WO 2011-7247	Federal Equipment Co.	$124,172	Support for High Rate Equipment Testing on Take-11
WO 2011-9708	Bollinger Shipyards	$23,015	Design for Maintenance and Repair Methodologies Study
WO 2011-7286	IMECO	$31,133	Design Replacement Pie-Shaped Fire Dampers Study

FISCAL YEAR 2010

Bath Iron Works 2010

Federal Grant(s) / Contracts	Federal Agency	Dollar Value	Subject(s) of Contract or Grant
N00024-09-G-2304	NAVSEA	$315,659	DDG 105 PSA (ER02)
N00024-09-G-2301	NAVSEA	$2,340,920	LCS2 PSA (ER05)
N00024-09-G-2301	NAVSEA	$1,000,000	LCS2 PSA (ER06)
N00024-09-G-2304	NAVSEA	$9,492,040	DDG 109 PSA (ER03)
N00024-09-G-2304	NAVSEA	$221,080	DDG 110 PSA (ER06)

Electric Boat 2010

Federal Grant(s) / Contracts	Federal Agency	Dollar Value	Subject(s) of Contract or Grant
0275-SC-20256-0217	Penn State Electro-Optics Center	$62,651	Fiber Optic Test and Evaluation
2005-340	ATI	$873,851	Navy Product Data Initiative
2007-511	SCRA	$212,292	Lower Cost Composite Fairings and Array Support Pl
2010-357	ATI	$940,816	NSRP - Virtual Welding Phase 2

2010-621	ATI	$2,018,497	NSRP - CPC Enhancements Project
2010-627	ATI	$1,198,920	NSRP Integrated Logistics Environment Program.
6269-001-EB	Oceaneering International	$95,599	Oceaneering Planning Yard Services for Dry Deck
BOA-NMC-GDEB	CTC	$1,090,335	BOA BASE CONTRACT
N00014-10-D-0142	ONR	$570,462	ONR NGIPS Compact Power Conversion (IDIQ)
N00024-07-C-2103	NAVSEA	$18,964,532	Reactor Plant Planning Yard Services
N00030-08-C-0031	Strategic Systems Program	$885,092	US/UK Trident SWSS and AWSS Technical Services
P.O. 2010-322	ATI	$5,069,477	CNST Base Agreement
P.O. 2010-516	SCRA	$7,250	Travel for European Benchmarking
P.O. 4661	ACIT	$4,168	Shipyard Tool Benchmarking and Best Practices Stud
P.O. 4832-A	ACIT	$8,300	Emerging Technologies Survey Review
P.O. 51766-E	Kollmorgen Electro-Optical	$120,000	Electrically Actuated Submarine Control
P.O. 6400041661	Honeywell	$118,207	Electrically Actuated Submarine Control Services
S0009-B2PCOE	ACIT	$97,942	American Competitiveness Institute BOA
S07-1003	Edison Welding	$487,443	EWI Welding Base
S6560072	CSC	$100,075	Advanced Electric Ship Demonstrator
SC 52270-1714	PSI	$34,000	Tank Level Indicator System
SUB3-00103	Foster-Miller	$119,508	Electric Actuated Submarine Control
10888-C-5373	Shaw/Areva/MO X Services LLC	$2,825,601	Engineering Services
P.O. 4500357617	Westinghouse	$2,169,940	Engineering Services
P.O. 4500273727	Westinghouse	$5,488,773	Engineering Services
P.O. 4500024701	General Atomics	$2,213,469	Engineering Services
N00024-05-C-2103	NAVSEA	$10,521,956	Virginia Class R&D & Follow-Ship LYS
N00024-10-C-2118	NAVSEA	$174,331,465	VA Class R&D Follow Ship Lead Yard Services
N00024-04-C-2100	NAVSEA	$3,412,480	OMNIBUS VI
N00024-09-C-2101	NAVSEA	$223,061,554	OMNIBUS VII
N00024-96-C-2100	NAVSEA	$44,174,484	Virginia Class Design and Const (SSNs 774-777)

N00024-03-C-2101	NAVSEA	$98,109,195	VIRGINIA Class Construction (SSNs 778-783)
P.O. 4500294414	Newport News Shipyard	$7,902,464	CVN-78 Detail Design and Construction
P.O. 4500360119	Newport News Shipyard	$18,035,259	A1B Support FY11 - 12 and CVN 79 Class Wide Planning
P.O. 4500308263	Newport News Shipyard	$186,863	CVN-79 Engineering and Design Support
P.O. 4500361425	Newport News Shipyard	$6,184,449	CVN 78 PPLAN
P.O. 7100009460	Lockheed Martin	$665,378	SWFTS
N00024-09-C-2100	NAVSEA	$156,609,771	Common Missile Compartment
P.O. 6012733	BMPC-KAPL	$40,300,000	KAPL S8G/MARF: Follow-on Engineering Design Services
KS6002608	KAPL	$10,438,176	Kesselring Site Maintenance Contract
PL00108950	KAPL	$175,386,025	KAPL VA Class Shipyard Services
P.O. 3000664	BETTIS	$1,600,000	Propulsion Plant Design Yard (PPDY) Services
83W005716	L-3	$7,138,768	WSQ-9
EGG0029832	EG&G	$113,801	Fleet Technical Support Services
N00024-02-C-4063	NAVSEA	$1,385,590	GOCO Shipping Port (ARDM-4)
N00024-05-G-4417	NAVSEA	$29,156,910	Submarine Support BOA (Fiscal YR 2010)
N00024-07-C-4005	NAVSEA	$43,727,922	New England Maintenance Manpower Initiative (FY 10)
N00024-07-C-4401	NAVSEA	$2,650,000	Navy Certified Graving Dock Exercise Option FY-10
N00024-10-C-4301	NAVSEA	$5,196,037	GOCO Shipping Port (ARDM-4 New Contract) FY 10
N00024-10-C-4302	NAVSEA	$24,999,954	Nuclear Regional Maintenance Dept (FY 10)
N00024-10-G-4314	NAVSEA	$31,328,649	Misc Submarine Support Services (Fiscal YR 2010)
N00104-06-G-A751	NAVSEA	$1,643,544	SPM/SPU Refurbishment
N62789-10-G-0001	NAVSEA	$679,772	Nuclear Support Agreement Orders
N66604-10-D-034A	NAVSEA	$364,659	Design & Engineering Work NUWC
N00024-09-C-4404	NAVSEA	$1,355,788	SSN719 DSRA Repairs
N00024-09-C-4413	NAVSEA	$2,470,997	SSN 768 Hartford RAV Changes (Awarded 08/05/09)
N00024-09-C-4417	NAVSEA	$23,106,482	Multiple Ship DSRA

NASSCO 2010

Federal Grant(s) / Contracts	Federal Agency	Dollar Value	Subject(s) of Contract or Grant
N00024-09-C-2229	NAVSEA	$134,289,977	MLP Design, VFI, LLTM, and Studies
N00024-02-C-2300	NAVSEA	$824,642,437	Fully Exercise T-AKE 13 & 14 Option
WO 2010-9704	ATI	$1,073,619	Large Scale Computer Modeling System Enhancements Study
WO 2010-9705	ATI	$378,186	Streamlining Shipyard Rigging Analysis Study
WO 2010-7100 (Mod)	CSC	$122,000	Notional Command Ship Concept Studies
WO 2010-7110	CSC	$1,910,043	MLP Studies
WO 2010-7242	ATI	$68,168	Safe Practices of Common Shipyard Rigging Equipment Study
WO 2010-7243	ATI	$99,215	Swage Panel Analysis Study
WO 2010-7278	ATI	$34,919	Cable Tag Reduction Study

Federal Contract Information: If you or the entity you represent before the Committee on Armed Services has contracts (including subcontracts) with the federal government, please provide the following information:

Number of contracts (including subcontracts) with the federal government:

Current fiscal year (2012): 38
Fiscal year 2011: 76
Fiscal year 2010: 71

Federal agencies with which federal contracts are held:

Current fiscal year (2012): See Contract List
Fiscal year 2011: See Contract List
Fiscal year 2010: See Contract List

List of subjects of federal contract(s) (for example, ship construction, aircraft parts manufacturing, software design, force structure consultant, architecture & engineering services, etc.):

Current fiscal year (2012): Ship Design, Construction, Maintenance and Conversion
Fiscal year 2011: Ship Design, Construction, Maintenance and Conversion
Fiscal year 2010: Ship Design, Construction, Maintenance and Conversion

Aggregate dollar value of federal contracts held:

Current fiscal year (2012):	$2,458,362,977
Fiscal year 2011:	$5,119,262,031
Fiscal year 2010:	$2,168,003,855

Federal Grant Information: If you or the entity you represent before the Committee on Armed Services has grants (including subgrants) with the federal government, please provide the following information:

Number of grants (including subgrants) with the federal government:

Current fiscal year (2012):	None
Fiscal year 2011:	None
Fiscal year 2010:	None

Federal agencies with which federal grants are held:

Current fiscal year (2012):	N/A
Fiscal year 2011:	N/A
Fiscal year 2010:	N/A

List of subjects of federal grants(s) (for example, materials research, sociological study, software design, etc.):

Current fiscal year (2012):	N/A
Fiscal year 2011:	N/A
Fiscal year 2010:	N/A

Aggregate dollar value of federal grants held:

Current fiscal year (2012):	N/A
Fiscal year 2011:	N/A
Fiscal year 2010:	N/A

NOT FOR PUBLICATION UNTIL RELEASED BY THE HOUSE
ARMED SERVICES COMMITTEE SUBCOMMITTEE ON
SEAPOWER AND PROJECTION FORCES

STATEMENT OF
MATTHEW J. MULHERIN
PRESIDENT, NEWPORT NEWS SHIPBUILDING AND
CORPORATE VICE PRESIDENT, HUNTINGTON INGALLS INDUSTRIES, INC

BEFORE THE
SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES
OF THE
HOUSE ARMED SERVICES COMMITTEE

ON
OVERSIGHT OF U.S. NAVAL VESSEL ACQUISITION PROGRAMS AND FORCE
STRUCTURE OF THE DEPARTMENT OF THE NAVY IN THE FISCAL YEAR 2013
NATIONAL DEFENSE AUTHORIZATION BUDGET REQUEST

MARCH 29, 2012

NOT FOR PUBLICATION UNTIL RELEASED BY THE HOUSE
ARMED SERVICES COMMITTEE SUBCOMMITTEE ON
SEAPOWER AND PROJECTION FORCES

Chairman Akin, Ranking Member McIntyre, distinguished members of the Seapower and Projection Forces Subcommittee, thank you for inviting me to appear before you today to discuss what we at Huntington Ingalls Industries believe are the issues facing military shipbuilding today and how our nation's healthy but fragile shipbuilding industrial base can be sustained.

Huntington Ingalls Industries owns and operates two major shipbuilding divisions; Newport News Shipbuilding, of which I am the president, and Ingalls Shipbuilding in Pascagoula, MS, where my friend and colleague Irwin Edenzon is the president. Huntington Ingalls Industries also has a significant presence in Fleet support maintenance, commercial energy programs, and specialized work with the Department of Energy.

In July of 2009 and again in March 2010, our CEO, Mike Petters, who at the time was the president of the Northrop Grumman Shipbuilding Sector, was a witness before this committee on Improving Shipbuilding Efficiencies and The Impact on the Industrial Base of the Navy's 30 Year Shipbuilding Plan. During that panel, Mike discussed at some length what is needed for a healthy shipbuilding industry, the inherent inefficiencies introduced in only buying one ship of a class at a time, the risks associated with new technologies, and some suggestions for improvement in the overall process of procurement of naval vessels. With your permission, I will discuss the health of the industry, the cost of ships, and what we believe are obstacles to more affordable ships.

A Healthy but Fragile Shipbuilding Industry

We live in an era where freedom of global commerce on the seas is taken as a given. Certainly, there is minor piracy occurring off the Horn of Africa and a few other isolated areas, but there is no wholesale denial of freedom of maritime commerce anywhere on the globe. I suggest that the reason for that simple fact is the United States Navy. There is no other nation on earth with the comparable capability to continually forward deploy overwhelming naval power. Our country has benefitted from our Navy in ways that are far too numerous to elaborate today. Ninety to 95 percent of all imports and exports go by sea. The surface of the earth is 75 percent water, and approximately 80 percent of the population of the world lives within 100 miles of the sea. We are a maritime nation and the sea is our conduit to the rest of the world. Our Navy is the only force capable of maintaining that conduit.

The nation needs a strong Navy, and the Navy needs capable ships. Navy ships are truly statements of national purpose, and shipbuilding programs are unique in Department of Defense procurement programs. Building ships is unlike building anything else in the defense arsenal. We don't assemble ships, we fabricate and construct them. These are complex naval vessels such as nuclear-powered aircraft carriers, submarines and amphibious assault ships that take years to fabricate, erect, outfit, integrate, test and deliver. We literally start with flat steel plate, pipe, cable and supplier furnished components and, over the course of several years and with the efforts of thousands of extraordinarily talented shipbuilders, we deliver ships to the U.S. Navy unmatched in capability -- ships that will sail the seas and serve our nation's interests for 30 to 50 years. There is an equally talented supply base that provides raw materials, components and sub-systems that are integrated into the ship fabrication process to form these mighty vessels.

Clearly then, it is essential for the nation to maintain a healthy shipbuilding industrial base. The laws of economics are as applicable to shipbuilding as they are to any other industry. As the demand for Navy ships has decreased, so too, has the supply of critical resources essential to building those ships -- achieving an equilibrium that I would submit is adequate if the nation's future as the world's preeminent

maritime power does not require an ability to rapidly surge the construction of modern warships. Unfortunately, it is doubtful that the supplier base could quickly surge to supply the raw material and equipment necessary, and given the unique skills required, the numbers of capable and experienced men and women to rapidly increase production may simply not be available. Newport News Shipbuilding once had close to 30,000 workers; today we employ just over 20,000. Ingalls Shipbuilding also has a much smaller workforce than it did during the peak of naval construction in the 1980s. We are sizing ourselves today to support the Navy's shipbuilding plan, but I would submit that the potential of sequestration has made an assessment of health to some extent speculative. Without being overly speculative, I would characterize today's shipbuilding industrial base as essentially healthy but fragile, requiring action to prevent sequestration and the potentially devastating impact to shipbuilding and its industrial base.

At Huntington Ingalls Industries, we consider a healthy industry to be one that is able to attract the talent, capital and technology necessary to meet its commitments and to maintain and grow the business. This definition goes beyond a simple calculation of infrastructure capabilities. The shipyards in this country compete with all other businesses in the capital and labor markets. To stay healthy in the long run, we must demonstrate the ability to return value on investment and offer an acceptable balance of risk and reward. I believe that we must continue to use creative incentives for capital expenditures critical to both maintaining and improving the efficiency of the shipbuilding industrial base. The Virginia-Class Submarine Program has proven itself to be of immense value in this regard.

We also compete for talent in the marketplace, just as we must compete for capital. To attract the best and the brightest, we as an industry must be able to make a career as a shipbuilder attractive. The skills required are many and varied, and mastery does not occur overnight. We have master craftsmen who are machinists, electricians, welders, pipe-fitters, crane operators, fabricators, and a host of other technical skills. We also employ naval architects, structural engineers, designers, test engineers, and a variety of other professionals. We have about a thousand employees who have worked at our shipyards continuously for over 40 years - Master Shipbuilders who are now mentoring a new generation of shipbuilders. There are also shipbuilders who decide not to make shipbuilding their career, and who bring the skills they have acquired in the shipyard into the local community and to commercial enterprises. A repair technician repairing an industrial process water chiller plant may very well have learned his or her technical skills at one of our shipyards.

But the industrial base that builds the complex warships for America is made up of much more than shipyards. We rely on our suppliers for equipment and raw material necessary for ship construction. In fact, at Huntington Ingalls Industries we have about 4,000 suppliers across all 50 states. In many ways, our suppliers are more vulnerable to the changes in the shipbuilding plan and budget than are the large shipyards. In the budget request for fiscal year 2013, the Navy has reduced the number of ships procured in the next five years by 16. Just as we do, our suppliers rely on the Navy and Coast Guard projections in order to invest in people and infrastructure required to support those plans. When those plans change or acquisition timelines are altered due to budgetary constraints, those businesses are potentially left with bearing the costs of investment without the return earned on contracts that are either awarded at a later point in time or worse, never. We are finding that many in the supply base have decided that it is no longer in their economic best interests to participate in this marketplace. The suppliers have the same business reality that we face - they must attract talent, capital, and technology. As I said earlier, the laws of economics are unforgiving. When suppliers determine that they can no longer rely on future work, or conclude that the regulatory and contractual environment is unavailing of profitable contracts, they must adapt and turn to other opportunities.

The Cost of Ships

As with the health of the shipbuilding industrial base, much as been said and published concerning the rising costs of military ships. The reasons for increasing costs of ship construction are quite complex and overlaid with many variables. Permit me to try and explain some of them.

There are a number of ways to estimate the cost of ships. These range from simple analysis of historical costs and application of learning curves and escalation factors to the use of sophisticated parametric models for concepts yet to be built. All require certain assumptions to be made to include:

- Future economic conditions (such as escalation and cost of capital)
- The ability to attract and retain human resources (such as available skills, wages and fringes, health care costs)
- The availability of commodities and engineered components (diminishing manufacturing sources)
- Potential regulatory changes, technology changes (and the need to incorporate such changes during construction),
- Stability of the acquisition plan (to predict business base and the absorption of fixed overhead costs)

To the extent that these assumptions are realistic and applied in an unbiased manner, an estimate of future ship costs, within the limits of estimating variability, is reasonably practical.

We have found that straightforward cost estimating relationships such as historical dollars per ton of light ship displacement have merit, but as the complexity of vessels increases, reliance on historical trends or a simple dollars-to-weight relationship becomes less meaningful and can lead to significant variance between estimate and outcome. Indeed, as vessels become more complex, factors such as weight are becoming less meaningful than other factors such as feet of cable, microelectronic content, power density, air conditioning capacity, fiber optics and distributed systems.

This complexity is not limited to cost estimating relationships. The insertion of new technologies in modern warships has fundamentally altered the manner in which ships are constructed. Such new technologies are not "plug and play" upgrades to existing systems. Rather, the availability of these technologies and their incorporation into our warships has in many cases fundamentally changed the underlying philosophy of new ship designs. For example, the reduction in overall operating costs through reduction in crew size has been a priority in new ship designs, which drives increased automation of ship systems. Tasks which once required the manual operation of a ship's valve can now be accomplished remotely with the simple activation of a switch, which in turn entails a motor operator, an electrical controller, sensors and cabling. New ship designs incorporate many more miles of cable, both electrical and fiber optic, to monitor ship condition and to operate systems. For example, the amount of cable has increased more than 200 percent between USS ABRAHAM LINCOLN (CVN 72) and GERALD R. FORD (CVN78). This makes today's ships vastly more complex to construct, integrate, test and deliver. To the extent that the estimating and budgeting processes rely upon obsolete cost estimating relationships, unrealistic assumptions of future conditions, and simple historical data, we will significantly underestimate (and by extension, budget for) today's much more complex designs.

I should also mention the "should cost" analysis, as it has become prominent in discussions of rising ship costs, particularly in providing a basis to establish budgets for future ship construction. Under Department of Defense guidelines, "should cost" program estimates are developed by a multi-functional

team of government contracting, contract administration, pricing, audit and engineering representatives. They differ from traditional evaluation methods because they do not assume that a contractor's historical costs reflect efficient and economical operation. The value of a "should cost" estimate is that it may identify areas for improvement in contractor operations that can yield real savings. The difficulty of such analysis is that it may quantify a theoretically possible but realistically improbable outcome – potentially resulting in unrealistic estimates, budgets and ultimately, unachievable contract targets.

A more realistic (and holistic) approach would give consideration to the definable variables and to the "known unknowns," such as:

- The number of ships in the class
- Similarity to other ships of known design and cost
- The planned interval for construction starts
- The construction span time
- The "base design" and any changes thereto
- Incorporation of new, undeveloped or untested technologies
- Technical complexity
- Contracting strategy (e.g., multi-ship or multi-year to leverage economic order quantities)
- Funding profile (i.e., is the profile sufficient for the shipbuilder to optimally plan and execute work)
- Inspection, test and acceptance requirements
- Economic environment
- Availability of manufacturing sources

All these factors contribute to the cost of ships, and while there are no easy answers for reducing costs, realistic budgets, disciplined control of requirements creep, stabilization of the shipbuilding plan and close coordination between the shipbuilders and the customer to ensure efficient and optimized construction are essential prerequisites.

Lead Ship Costs

The cost of a lead ship of a class historically may be 20 percent or more than budget, largely attributable to "unknowns" and unanticipated events that drive cost (or schedule, which translates into cost) as well as resulting from the peculiarities of the acquisition process, where estimates and budgets are established in advance of firm requirements. This is not an indictment of the process. It is, however, recognition that, given the pace of technological change, and the need to assure that technologies are incorporated to address current threats, discontinuities between budgets and actual outcomes may be to some extent unavoidable. This is particularly true when technologies are deployed for the first time. Certainly, the history of cost growth on lead ships of a class, going back for decades, would suggest this to be true.

At our Ingalls shipyard in Mississippi, we build Amphibious Assault Ships, the large helicopter/VSTOL vessels which are the centerpiece of the Navy/Marine Corps Amphibious Ready Group or ARG. Those ships, termed LHAs, have been built on essentially the same hull form since the beginning of the class in 1985. Yet even though the ships may look the same from the outside, they are radically different inside. The ships we are building today are orders of magnitude more complex and more capable than the ships

built even a decade ago. This significant increase in complexity involving increased labor, more engineering, greater detailed planning, and significantly more testing to deliver a ship increases cost.

Program Interruptions and delays

While delaying construction start, changing construction start centers or changing the quantity of vessels may result in decreased funding demands for any given fiscal year, overall costs will increase as a result of suboptimizing execution of the program. For example, construction of aircraft carriers on four year construction start centers will align the supplier base to plan production of a ship-set of equipment and material every four years. Subsequently changing to five or six year centers interrupts the entire supply chain, causes repricing to reflect changes in overhead absorption, disruption, escalation, and planning, and may result in significant inefficiencies. The reduction in build rate of Virginia-class submarines and DDG 51-class destroyers in FY 2014 is another example of program interruptions that have impacts to both the shipbuilder and the industrial base. Every class of ship has a unique timing and sequence of fabrication and construction. The realities of budgeting and funding to an optimal plan may not be achievable, but the effects of stretching or gapping a program are also realities that cannot be ignored in assessing cost growth.

Alternative Procurement Methods

In 2009 and 2010, when Mike Petters testified before this subcommittee, he discussed the inefficiencies inherent in the way the government procures ships. I would like to review those arguments because they are as relevant today, perhaps even more so, as they were then.

Using the "one ship at a time, fully funded" method of acquisition is economically inefficient. Fortunately, in recent years we have seen a greater use of multi-year procurements for submarines and destroyers and, most recently, the block-buy contracts for the Littoral Combat Ships. These types of contracts enable greater economic efficiency by first enabling the shipbuilder to purchase material and equipment in quantity for a number of ships instead of a single ship set; second, by stabilizing the shipyard labor force and enabling the deployment of craftsmen to realize learning curve improvement; and third (and perhaps most importantly) to provide the shipbuilder and industrial base with a stable, relatively long-term business base over which investments in process and infrastructure improvements can be justified.

For example, a shipbuilder who has a multi-year contract for 10 ships might very well invest in substantial improvements such as a new crane or a new cutting machine if the return on investment is calculated over those 10 ships. Such investments would not be justified were the returns to be calculated on a single ship. This is clearly an advantage that the large Asian shipyards, with large order books and backlog, have over our domestic shipbuilding industry. Huntington Ingalls encourages the Congress to make broadest use of multi-year contracts and block buy contracts, as we believe that they result in a lower overall cost to the taxpayer.

At Huntington Ingalls we measure ourselves against four fundamental standards of Safety, Quality, Cost, and Schedule. All are interrelated and all are ingrained in our culture. What we do in the service of our nation is unique, complicated, capital intensive, and very, very difficult. Simply stated, our business is hard stuff, done right.

In closing, I would like to report that American manufacturing is alive and well in shipbuilding. It's alive in our shipyards and in our nearly 4,000 supplier companies across all 50 states. Together, we are building the finest ships the Navy has ever sailed. There are challenges ahead, yet I believe they can be managed with smart procurement policies, a strong focus on our people and their skills, and an investment in technology.

This is the best approach for the industry, for the Navy and for America.

Thank you and I look forward to any questions you may have.

Huntington Ingalls Industries

Executive Biography

Matthew J. Mulherin
Corporate Vice President and President
Newport News Shipbuilding

Matt Mulherin is corporate vice president of Huntington Ingalls Industries (HII) and president of Newport News Shipbuilding in Newport News, Va. Named to this position in 2011, he is responsible for all Newport News Shipbuilding engineering, operations and programs, to include the most complex ships in the world: nuclear-powered aircraft carriers and submarines. Newport News Shipbuilding has approximately $3.5 billion in revenues and nearly 21,000 employees.

Mulherin most recently served as vice president and general manager of site operations at Newport News as part of Northrop Grumman Shipbuilding since 2008. His responsibilities included programs for the company's Newport News operations, where he successfully led the sector's aircraft carrier design and construction programs, carrier refueling and overhaul programs, and the submarine program.

He earned a bachelor's degree in civil engineering from Virginia Tech in 1981 and began his career at Newport News the same year as a nuclear test engineer. Since then, he has held increasingly responsible positions, including nuclear project manager for Los Angeles-class submarines, director of facilities, director of nuclear engineering and refueling, and director of carrier refueling and overhaul construction. He also served as director and vice president for the next generation of aircraft carriers, the Gerald R. Ford class, and vice president of all programs to include shipbuilding and repair, Department of Energy and commercial energy.

Mulherin serves on the board of directors for the Shipbuilders Council of America and on the board of trustees for The Mariners' Museum. He also serves on the distinguished advisory board for the Grado Department of Industrial and Systems Engineering at Virginia Tech and is a committee member of Greater Peninsula NOW.

Huntington Ingalls Industries designs, builds and maintains nuclear and non-nuclear ships for the U.S. Navy and Coast Guard and provides after-market services for military ships around the globe. For more than a century, HII has built more ships in more ship classes than any other U.S. naval shipbuilder. Employing nearly 38,000 in Virginia, Mississippi, Louisiana and California, its primary business divisions are Newport News Shipbuilding and Ingalls Shipbuilding. For more information, please visit www.huntingtoningalls.com.

DISCLOSURE FORM FOR WITNESSES
CONCERNING FEDERAL CONTRACT AND GRANT INFORMATION

INSTRUCTION TO WITNESS: Rule 11, clause 2(g)(5), of the Rules of the U.S. House of Representatives for the 112th Congress requires nongovernmental witnesses appearing before House committees to include in their written statements a curriculum vitae and a disclosure of the amount and source of any federal contracts or grants (including subcontracts and subgrants) received during the current and two previous fiscal years either by the witness or by an entity represented by the witness. This form is intended to assist witnesses appearing before the House Armed Services Committee in complying with the House rule. Please note that a copy of these statements, with appropriate redactions to protect the witness's personal privacy (including home address and phone number) will be made publicly available in electronic form not later than one day after the witness's appearance before the committee.

Witness name: Matthew J. Mulherin

Capacity in which appearing: (check one)

Individual
X Representative

If appearing in a representative capactiy, name of the company, association or other entity being represented:
Huntington Ingalls Industries, Inc.

Federal Contract Information:

*** Number of Federal Contracts:**

Fiscal Year 2012	138
Fiscal Year 2011	167
Fiscal Year 2010	179

Federal Agencies:

Fiscal Year 2012	NAVY, DHS/US COAST GUARD, DOE
Fiscal Year 2011	NAVY, DHS/US COAST GUARD, DOE
Fiscal Year 2010	NAVY, DHS/US COAST GUARD, DOE

List of Subjects of Federal Contracts:

Fiscal Year 2012	Ship design, construction, overhaul and support; DOE site management
Fiscal Year 2011	Ship design, construction, overhaul and support; DOE site management
Fiscal Year 2010	Ship design, construction, overhaul and support; DOE site management

**** Aggregate Dollar Value of Federal Contracts Held:**

Fiscal Year 2012	$16,270,000,000
Fiscal Year 2011	$17,260,000,000
Fiscal Year 2010	$17,110,000,000

* Reflects the number of contract awards and price modifications during the fiscal year. ** Aggregate dollar value (funded and unfunded backlog) of federal contracts held in each fiscal year, as of September 30, 2010 and September 30, 2011 for Fiscal Years 2010 and 2011, respectively, and as of December 31, 2011 for Fiscal Year 2012, rounded to nearest $10 million.

Federal Grant Information: Huntington Ingalls Industries, Inc. does not have any federal grants.

ATTACHMENT 1
FISCAL YEAR 2012 FEDERAL CONTRACT
AWARDS AND MODIFICATIONS

Federal Grant(s) / Contracts	Federal Agency	Dollar Value	Subject of Contract or Grant
N00024-10-G-4305-NU07	SWRMC	-36,808	SSN 767 SPEC SSSD-130-11
N00024-02-C-4004	NAVSEASD	-14,936	Adv. Plan CVN 68, CVN 74, CVN 76 & PIAs
CODX500201-00601AFKWH	BIW	-7,750	MFR TEST INSP LITM FOR DDX
2010-324-04	ATI	-4,503	CNST-VCS SUPPLY CHAIN TECHNOLOGY REVIEW
N00024-08-G-2112-GE01	NAVSEA	355	PROCUREMENT OF 4" GLOBE VALVE FOR PSNSY
N00024-08-G-2112-4T39	NAVSEA	624	PROVIDE HSLA STEEL PLATE TO PSNS
2005-341-21	ATI	900	WORKFORCE DEV PANEL VICE CHAIR
N00024-08-G-2112-GE02	NAVSEA	1,310	PROCUREMENT OF WELD WIRE AND FLUX
2005-341-22	ATI	1,316	INTERNATIONAL SHIPYARD VISITS
2005-341-05	ATI	2,038	Business Process Technologies Chair (NAR)
NGNNBOA-NAVSEA-ENG-K-009	EBC	2,056	Univ Modular Mast Elect Actuation Stdy
NGNN BOA-NAVSEA-ENG-K-002	EBC	2,071	POST BRAVO SEA TRIAL INSPECT. ON SSN775
NGNNBOA-NAVSEA-ENG-K-010	EBC	2,579	Rotary Type Electric Actuation Study
PO 2001361038	JHU	3,000	DATA COMPILATION
2005-341-15	ATI	4,478	ELECTRICAL TECHNOLOGIES PANEL CHAIR
NGNNBOA-NAVSEA-ENG-K-018	EBC	4,509	SEAWOLF CLASS DRAWING REVISIONS
2005-341-24	ATI	4,811	CABLE PULLING CONCEPT DEVELOPMENT PROJEC
NGNN BOA-NAVSEA-ENG-K-005	EBC	6,492	VCS Composites Cost Reduction Efforts
NGNN BOA-NAVSEA-ENG-K-004	EBC	6,495	Ship Control Fly By Wire Process Anlys
PO 7500091915	NGIT	9,480	NNS Support of AFCEA West
2005-341-25	ATI	9,805	TRANSIT SEALANT EVALUATION
NGNN BOA-NAVSEA-ENG-K-003	EBC	10,586	Review of Draft NAVSEA Tech. Publication
2005-341-11	ATI	10,800	NAVSEA Specification Review Team
N00024-06-C-2104	NAVSEA	11,414	ENG & DESIGN SVCS FOR ADV SUB TECH
2005-341-23	ATI	14,125	NSRP PANEL PROJECT TRANSFER TEMPLATES
NGNNBOA-NAVSEA-ENG-K-015	EBC	14,358	REMOVAL OF NTDPS PCU
EB-05-G-4417-LB-190	EBC	17,990	DIVERT SSN784 EAFW PUMPS TO PSNS SSN023
N00024-05-G-4418-4T51	SUPSHIPNN	19,973	XFER FLUSH BLOCKS SSN 722 HYDRO SYS FLSH
N00024-10-G-4305-4T12	SUPSHIPNN	22,330	USS WEST VIRGINIA (SSBN 736)
NGNNBOA-NAVSEA-ENG-K-016	EBC	28,836	CLIN 016 MFR OF FILTER CASING
N00024-10-G-4305-NU10	SWRMC	31,049	SPEC PKG SSSD-024-12 USS BUFFALO SSN 715
PO (ATP)	AMSEC	34,290	STUD WELDING ON THE USS HAMPTON(SSN 767)
N00024-10-G-4305-4T10	SUPSHIPNN	38,068	SSN756 ADVANCE PLANNING AND REPAIRS
NGNNBOA-NAVSEA-ENG-K-017	EBC	42,472	VRLA BATTERY TRIAL INSTALLATION
NGNNBOA-NAVSEA-ENG-K-012	EBC	42,626	Foundry Studies
2010-324-03	ATI	52,453	CNST-DIG RAD TRANS INSPECT WELDS & CAST
N00024-10-G-4305-NU12	SWRMC	57,616	SPEC. PKG SSSD-143-12 & SSSD-145-12
PO 4100311755	LOCKHEED	63,375	MCS110811
N00024-10-G-4305-NU09	SWRMC	66,125	SSSD-005-12 ON THE USS TOPEKA (SSN 754)
2012-451	SCRA	69,988	INSULATED BUS PIPE
N00024-11-G-2121-GE01	FISCWA	95,700	MAMF 6 INNER ASSY FOR PUGET SOUND NVL SY
PO 2472	STTI	99,966	UNIVERSAL DECK TRACK BEAM SYSTEM
NGNNBOA-NAVSEA-ENG-K-013	EBC	102,088	ULMS Range of Design Attributes
NGNNBOA-NAVSEA-ENG-K-006	EBC	104,991	Phase 2 SSI(X)N Concept Dev't Task
PO 4804	PREC FABRI	106,700	CVN78 Barricade Stanchion Castings
BOEING-JR-V22-CONOPS	BOEING	128,198	BOEING V22 CARRIER CONOPS
N00024-11-C-4300	NAVSEA	216,668	EXECUTION OF DCMAV ON USS ALBANY(SSN 753
S0016-B2PCOE-HWNNS	ACIT	267,346	OPTIMIZED EMP PROTECTION METHODS FOR CVN
PO 7500089903	NGINFOSYS	301,050	CANES CONTRACT
EB-09-C-2104	EBC	332,637	VCS Block 3 Construction
NGNNBOA-NAVSEA-ENG-K-001	EBC	341,667	SSBN(X) CONCEPT DEVELOPMENT
N00024-10-G-4305-NU11	SWRMC	414,044	SSSD-134-11 USS ASHEVILLE (SSN758)
0275-SC-20410-0249	PA STATE U	517,810	DOCUMENT HARNESS PERFORMANCE REQUIREMENT
P.O. 3021857	BECHTEL	699,571	A1B PROPULSION PLANT PLANNING YARD-PPPY
N4523A-09-C-0310	NAVSEA	770,000	MISC. NUCLEAR AIRCFAFT CARRIERS YOKOSUKA
00507AIIET	BIW	807,505	DDG-115 Strut Castings
N00178-09-D-1010-0002	NSWC	987,184	MOD SIM ANALYSIS FOR MAGFT SHIP INTEGR
N00024-09-C-2105	NAVSEA	1,721,459	STEAM PLANT MANUAL
2012-435	ATI	2,561,739	ATI: SHIP CABLE MANAGEMENT
N62793-03-G-0001-4T62	SUPSHIPNN	2,757,439	CVN70 SRA/PSA Planning
N00024-11-C-2103	NAVSEA	2,890,341	CONFORM - R&D ADVANCED SUBMARINE TECH
2012-434	ATI	3,363,783	ATI: PRODUCT MODEL DRIVEN WELD MGMT
EB-09-C-2100	EBC	5,247,598	COMMON MISSILE COMPARTMENT
EB-03-C-2101	EBC	5,778,716	Virginia Class Submarine (Second Flight)
N00024-07-C-4404	NAVSEASD	6,670,005	West Coast CVN Maintenance
EB-10-C-2118	EBC	7,808,295	LEAD YARD SERVICES
PO 8140000678-CLM032111	ESSS	9,012,819	Direct Assist to ES
N00024-06-C-2115-EXEC	NAVSEA	9,143,332	CVN70 RCOH-Execution
N00024-12-C-2101	NAVSEA	10,064,282	Standard Navy Valve Yard
N00024-09-C-2107	NAVSEA	19,807,361	CVN71 RCOH Execution
EB-11-C-2109	EBC	21,510,924	OHIO REPLACEMENT PROGRAM - CONFORM
PO 3018909	BETTIS	22,963,750	BETTIS RPPY - Eng & Production Servs
EB-6016179	EBCPOCS	32,913,497	ADVANCED NUCLEAR PLANT STUDIES (ANPS)
N62793-07-C-0001	SUPSHIPNN	108,065,221	CVN65 RLSP

ATTACHMENT 1
FISCAL YEAR 2012 FEDERAL CONTRACT
AWARDS AND MODIFICATIONS

Federal Grant(s) / Contracts	Federal Agency	Dollar Value	Subject of Contract or Grant
N00024-10-C-2102	NAVSEA	127,528,219	688 Planning Yard
N00024-09-C-2116	NAVSEA	134,647,826	CVN 79 Construction Planning
DE-AC09-08SR22470	DOE	1,290,158,000	Mgmt/Operation of Savannah River Nuclear Site
N00024-02-C-2304	NAVSEA	(4,216,000)	DDG51 Multiyear (103/105/107/110)
HSCG23-11-C-2DB043	DHS	(2,389,279)	NSC 4 Const
VARIOUS	NAVSEA	(1,518,769)	FSO MISC WORK ORDERS
ICGS G&A (W957-1001-8801)	DHS	(391,015)	ICGS G&A
N00024-92-C-2204	NAVSEA	(332,375)	LHD7
HSCG23-06-J-2DW601	DHS	(180,459)	Clin 0061BE
N00024-11-C-2307	NAVSEA	(101)	DDG 114
N00024-11-C-2309	NAVSEA	38	DDG 113
N00024-12-C-2400	NAVSEA	241	CMSD
N4523A-09-C-0310	NAVSEA	679	CMSD
N00024-00-C-2217	NAVSEA	1,000	LHD8
N00024-00-C-2217	NAVSEA	3,151	CMSD
N00024-03-C-2311	NAVSEA	5,990	CMSD
N61339-08-C-0045	NAVSEA	8,392	CMSD
HSCG23-07-J-2DW502	DHS	20,000	Clin 0101 AC
N55236-11-D-0003	NAVSEA	45,082	CMSD
N00024-03-R-7086	NAVSEA	145,362	LHD5
N00024-10-C-4407	NAVSEA	163,976	CMSD
N00024-08-C-4410	NAVSEA	218,709	CMSD
N00024-08-C-2300	NAVSEA	416,490	CMSD
LETTER CONTRACT	BAE SYSTEMS NORFOLK S	559,295	AMSEC
N00189-12-P-0062	DELPHINUS ENGINEERING	577,998	AMSEC
N65540-11-D-0021	NOI ENGINEERING COMPA	579,738	AMSEC
N00178-05-D-4395EHP1	ITT INFORMATION SYSTEM	585,067	AMSEC
N00024-11-C-4408	NAVSEA	592,377	CMSD
N00024-07-C-2302	NAVSEA	700,171	DDG FYS 4
N00178-04-D-4091EHP4	NGIS	806,851	AMSEC
N00178-04-D-4091EHP1	SEAPORT E / NG	819,255	AMSEC
N00189-09-D-N001	NORFOLK NAVAL SHIPYAF	862,426	AMSEC
N00189-10-D-0026	Fleet Industrial Supply Cer	869,245	AMSEC
N00024-05-C-2217	NAVSEA	911,511	LPD_LCES
N00024-09-G-2305	NAVSEA	1,107,294	ODG PSA 103
N00024-06-C-2222	NAVSEA	1,241,632	CMSD
N00024-08-C-4416	VIGOR SHIPYARDS	1,660,909	AMSEC
N65540-11-D-0022	Naval Surface Warfare Ce	1,681,243	AMSEC
N00024-07-C-4407	NAVSEA	1,865,399	CMSD
N00024-11-C-4400	NAVSEA	1,902,342	CMSD
N00178-04-D-4048	EPSILON SYS SOLUTIONS I	2,023,012	AMSEC
N00189-04-D-0036	NAVSUP	2,158,834	AMSEC
HSCG23-07-J-2DW246	DHS	2,159,332	NSC 3 Construction
N00039-11-D-0030	Space and Naval Warfare	2,220,796	AMSEC
N00024-06-C-2222	NAVSEA	2,534,360	LPD22_CONST
N00406-11-D-1175	Fleet and Industrial Suppl	2,725,415	AMSEC
N00189-04-D-0049	NAVSEA	3,256,789	AMSEC
GS-23F-0137K	CACI, INC - FEDERAL	3,605,050	AMSEC
N00178-11-D-6433	Naval Surface Warfare Ce	4,076,819	AMSEC
N00178-04-D-4091FY02	Naval Undersea Warfare (	4,091,890	AMSEC
N00024-07-C-4404	NAVSEA	4,421,128	CMSD
N00178-04-D-4079	LOCKHEED MARTIN SHAR	5,346,226	AMSEC
N00024-10-C-2229	NAVSEA	9,000,000	LHA7
N00024-94-C-2800	NAVSEA	9,305,202	DDG78
N40025-08-D-8006	NAVSUP	9,396,162	AMSEC
N65540-09-D-0029	NAVAL SURFACE WARFAR	10,013,215	AMSEC
N00024-06-C-4402	NAVSEA	10,300,393	CMSD
N00024-07-C-4013	NAVSEA	10,569,975	CMSD
N00024-06-C-2306	NAVSEA	12,857,688	CG47/DD 963 PYS
N00024-10-C-2203	NAVSEA	14,919,708	LPD LCES
N40025-07-D-7014	NAVSUP	18,175,561	AMSEC
N00024-05-C-2221	NAVSEA	53,222,995	LHA6
N00024-06-C-2304	NAVSEA	65,108,920	Phase IV Detail Design
Total		**2,102,387,285**	

ATTACHMENT 2
FISCAL YEAR 2011 FEDERAL CONTRACT
AWARDS AND MODIFICATIONS

Federal Grant(s) / Contracts	Federal Agency	Dollar Value	Subject of Contract or Grant
N00024-94-C-2105	NAVSEA	-5,331,219	PLAN/ ACCOMPLISH USS NIMITZ RCOH
N00024-02-C-4004	NAVSEASD	-1,921,655	Adv. Plan CVN 68, CVN 74, CVN 76 & PIAs
PO 00603AGSWR	BIW	-527,538	DDG 1001 STRUT CASTINGS
CDDX500201-00601AFKWH	BIW	-163,008	MFR TEST INSP LLTM FOR DDX
BOA-NMC-NN-070500137	CTC	-117,493	DAMPING MATERIAL
EB-PL00108950	EBC	-45,031	KAPL
S07-1002-0003	EWI	-12,533	ULTRASONIC TESTING AS ALT TO RADIOGRAPHY
2007-501-0004	SCRA	-555	SAIL DECK GRATE AND GABLEWAY FNDTN PLATE
CDDX500201-00601AFIKC	BIW	3,450	NON-RECURRING SDRL ITEMS FOR DDX
2005-341-21	ATI	5,175	WORKFORCE DEV PANEL VICE CHAIR
2005-341-05	ATI	8,563	Business Process Technlogies Chair (NAR)
S07-1002-0002	EWI	9,471	OUT-OF-POSITION TANDEM GMAW FOR SS PH3
N00024-11-G-2121-4T15	SUPSHIPNN	10,183	CVN65 ISNS BACKUP TAPE DRIVE DSA EFFORT
RAYTHEON OSA 04012007	RAYTHEON	10,409	OFFICE SERVS AGREEMENT RAYTHEON VASCIC
N00024-10-G-4305-NU06	SWRMC	15,506	USS TOPEKA (SSN754) PRE-HEATERS
PO C11-116613	CACI	16,994	VIRTUAL INSTRUCTION SYS DSGN (ISD) TRNG
2005-341-06	ATI	20,000	Program Technical Representative
N00024-10-G-4305-NU05	SWRMC	22,578	PREPARE & ACCOMPLISH SPEC PACKAGE SSN767
N00024-05-G-4418-NU13	SWRMC	23,231	PREP & ACC SPEC PKG SSSD-069-10
2005-341-02	ATI	24,100	Master agreement 2005-341 task 2
2005-341-22	ATI	25,100	INTERNATIONAL SHIPYARD VISITS
PO 013655	PSGS	27,929	SUB NON-HULL PENETRATING HYD TMPLT SPPT
PO 014538	PSGS	28,370	INSTALL WIRELESS TEMPALT SSN 761
N00406-10-P-B920	FISC PUGET	30,000	PROVIDE (2) RELAY PANELS
2010-324-02	ATI	33,038	SIWG AND PTR SUPPORT
PO 8200148544 DEF	NGC	38,946	AMDR LTR SUBC DEFINITIZATION
N00024-11-G-2121-4T13	SUPSHIPNN	45,000	EMERGENT REPAIRS ON CVN69
N00406-11-P-2655	FISC PUGET	48,260	HULL CUT FAIRNESS MEASUREMENTS
N00024-05-G-4418-4T52	NAVSEA	57,142	PROV NUC TEST PIPEFITTER-NNSY USS TENN
BOA-NMC-NN-110500018	CTC	57,895	CVN78 WEAP & ELEV DOOR MANUF IMPROVEMENT
N00024-10-G-4305-NU07	SWRMC	67,280	SSN 767 SPEC SSSD-130-11
PO 07627AIFYO	BIW	69,369	DDG 51 CLASS PATTERN REFURBISHMENT
N00024-05-G-4418-4T33	NAVSEA	79,924	SSN 759 USS ASHEVILLE-MODIFY AFT DAU FND
PO 101000135	CTC	82,756	PREVENTION OF COATING DAMAGE HOT WORK
PO 4100093417	LOCKHEED	83,178	SINGLE CELL LAUNCH CVN-78 CLASS CARRIERS
N00024-08-G-2112-4T67	NAVSEA	93,624	EMERGENT REPAIRS ON CVN70
2011-418	ATI	99,801	SERVCS IN SUPPORT OF STAT CONTROL CHARTS
2011-453	ATI	99,955	SHPBD Install. Methods Insul BUS PIPE
N00024-10-G-4305-4T03	SUPSHIPNN	100,718	EMERG. PLANNER TO CSG-7 YOKOSUKA, JAPAN
N00024-05-G-4418-4T46	SUPSHIPNN	101,978	MAGNETIC PARTICLE INSPECTION OF S8G ITEM
N00024-10-G-4305-4T02	NAVSEA	103,461	LABORER SUPPORT-PEARL HARBOR NAVAL SHPYD
EB-05-C-2103	EBC	115,000	VCS - Development & Design Studies
N00024-08-G-2112-4T21	NAVSEA	121,316	NNSY A4W STE TRAINING
BOA-NMC-NN-110200221	CTC	137,366	FCAW ELECTRODE IMPROVED FRACT TOUGHNESS
N00024-05-G-2112-4T04	NAVSEA	182,443	Develop Planning Yard SHIPALT Drawings
N00024-10-G-4305-4T01	NAVSEA	205,000	RADCON TECH SUPPORT TO PSNSY
N50054-10-C-1006	NSSA	258,014	REGULAR OVERHAUL (ROH) DRYDOCK#4 CAISSON
PO 7500089903	NGINFOSYS	350,000	CANES CONTRACT
N66604-10-D-0348-0001	NUWC	362,834	PROV ENG SERVS EVAL & ANYL FAILED FLEET
2010-324-03	ATI	546,013	CNST-DIG RAD TRANS INSPECT WELDS & CAST

ATTACHMENT 2
FISCAL YEAR 2011 FEDERAL CONTRACT
AWARDS AND MODIFICATIONS

Federal Grant(s) / Contracts	Federal Agency	Dollar Value	Subject of Contract or Grant
PO 906 BOEING	BOEING	621,412	TRITON PROGRAM (PHASE I)
2010-324-04	ATI	647,146	CNST-VCS SUPPLY CHAIN TECHNOLOGY REVIEW
BOA-NMC-NN-110400085	CTC	688,232	PHASE II - WEAP CRADLE MANUF COST REDUCT
N00024-08-G-2112-4T72	NAVSEA	702,990	ELEVATED GUARD BUNKER
N00024-08-G-2112-4T15	NAVSEA	805,687	CVN70
N00024-05-G-4418-4T18	NAVSEA	1,001,248	MATERIAL KITTING-VRLA SHIPALT 4355K INS
N62793-03-G-0001-4T50	SUPSHIPNN	2,227,174	CVN 77 PSA & SRA
PO 00603AIFHY	BIW	2,231,628	DDG 1002 HULL 604 SHAFT STRUTS
N62793-03-G-0001-4T62	SUPSHIPNN	2,548,480	CVN70 SRA/PSA Planning
N00024-09-C-2105	NAVSEA	3,316,600	STEAM PLANT MANUAL
N00014-11-G-0066-0001	ONR	4,599,624	ADVANCED CONTROL EFFECTORS PROGRAM
EB-07-C-2107	EBC	5,149,416	FY10 OHIO REPLACEMENT PROGRAM HM&E R&D
N00024-11-C-2103	NAVSEA	5,993,976	CONFORM - R&D ADVANCED SUBMARINE TECH
N00024-05-G-4418-4T58	NAVSEA	7,025,618	PERFORM ADV PLNG DCMAV ON USS ALBANY
EB-10-C-2118	EBC	7,329,214	LEAD YARD SERVICES
EB-09-C-2100	EBC	7,628,763	COMMON MISSILE COMPARTMENT
N00024-07-C-2104	NAVSEA	8,204,809	Standard Navy Valve Yard (FY07 & Later)
PO 8140000678-CLM032111	ESSS	8,535,892	Direct Assist to ES
N00024-05-G-2112-4T45	NAVSEA	10,320,413	CVN65 ADVANCE PLANNING FOR FY08 EDSRA
PO 3018909	BETTIS	11,093,684	BETTIS RPPY - Eng & Production Servs
EB-11-C-2109	EBC	19,777,898	OHIO REPLACEMENT PROGRAM - CONFORM
N00024-11-C-4300	NAVSEA	22,094,133	EXECUTION OF DCMAV ON USS ALBANY(SSN 753
N00178-04-D-4091-FY03	NUWC	23,056,615	Seaport-E
P.O. 3021857	BECHTEL	25,201,717	A1B PROPULSION PLANT PLANNING YARD-PPPY
N00024-07-C-4404	NAVSEASD	26,591,273	West Coast CVN Maintenance
N00024-06-C-2115-EXEC	NAVSEA	26,839,301	CVN70 RCOH-Execution
N00024-98-C-2104	NAVSEA	28,518,777	CVN 77 Design, Planning and Construction
EB-6016179	EBCPOCS	32,913,497	ADVANCED NUCLEAR PLANT STUDIES (ANPS)
N00024-04-D-4409-DO-0004	NAVSEA	36,578,556	USS Toledo (SSN769) DMP
N00024-08-C-2100	NAVSEA	41,417,747	CVN65 EDSRA
N00024-09-C-2107	NAVSEA	85,429,926	CVN71 RCOH Execution
N00024-10-C-2102	NAVSEA	116,285,240	688 Planning Yard
N62793-07-C-0001	SUPSHIPNN	120,136,777	CVN65 RLSP
N00024-10-C-2110	NAVSEA	206,748,092	CVN72 RCOH (N0112)
N00024-09-C-2116	NAVSEA	437,580,822	CVN 79 Construction Planning
N00024-08-C-2110	NAVSEA	734,351,614	CVN78 Construction
DE-AC09-08SR22470	DOE	1,539,937,000	Mgmt/Operation of Savannah River Nuclear Site
N00024-05-C-2221	NAVSEA	(10,499,802)	LHA6
N00024-05-C-2217	NAVSEA	(7,084,667)	LPD_LCES
N00024-00-C-2302	NAVSEA	(354,260)	DDG FYS 3
ICGS G&A (W957-1001-8801)	DHS	(136,056)	ICGS G&A
N00024-04-G-2301	NAVSEA	(13,477)	DDG 87 BOA
N00024-06-C-2306	NAVSEA	29	CMSD
N00024-08-C-4401	NAVSEA	39	CMSD
N00024-10-C-4407	NAVSEA	71	CMSD
N00024-05-C-2221	NAVSEA	870	CMSD
N4523A-09-C-0310	NAVSEA	8,274	CMSD
N00024-08-G-2112	NAVSEA	13,558	CMSD
N55236-11-D-0003	NAVSEA	26,844	CMSD
HSCG23-09-J-2DC302	DHS	32,925	CLIN 0157CC C4ISR Spiral 2 Development

ATTACHMENT 2
FISCAL YEAR 2011 FEDERAL CONTRACT
AWARDS AND MODIFICATIONS

Federal Grant(s) / Contracts	Federal Agency	Dollar Value	Subject of Contract or Grant
N00024-97-C-2202	NAVSEA	64,060	LPD17-20 Const Contract
N00024-03-C-2311	NAVSEA	93,850	CMSD
N00024-08-C-2300	NAVSEA	128,086	CMSD
N00024-07-C-2200	NAVSEA	174,198	CMSD
N00024-05-C-4409	NAVSEA	263,092	CMSD
N00024-92-C-2204	NAVSEA	332,375	LHD7
N00024-06-C-2222	NAVSEA	342,641	CMSD
DTCG23-03-F-2DW182	DHS	392,667	DW DDNSC
N00024-06-C-4415	LM INFORMATION & TECH SVC	530,695	AMSEC
N00189-04-D-0010	URS FEDERAL SERVICES, INC	623,454	AMSEC
VARIOUS	NAVSEA	651,434	FSO MISC WORK ORDERS
N00178-04-D-4089	NDI ENGINEERING COMPANY	662,881	AMSEC
N00024-06-C-4408	BAE SYSTEMS HAWAII SHIPYA	671,833	AMSEC
5381	NAVSEA	736,553	Support II
N00178-04-D-4146	TRI STAR ENGINEERING	753,775	AMSEC
HSCG23-04-J 2DW206	DHS	774,243	DW NSC1
N00039-11-D-0030	Space and Naval Warfare Sys Commar	778,472	AMSEC
HSCG23-09-J-ADE500	DHS	817,174	CLIN 0104 Shared Program Services
N40025-06-D-6007	DELPHINUS ENGINEERING	925,664	AMSEC
N00178-04-D-4048	EPSILON SYS SOLUTIONS INC	972,685	AMSEC
N00178-04-D-4091EHP3	Naval Surface Warfare Center	1,020,582	AMSEC
N00024-00-C-2217	NAVSEA	1,101,001	CMSD
N00189-09-D-N001	NORFOLK NAVAL SHIPYARD	1,175,474	AMSEC
HSCG23-05-J-2DW056	DHS	1,402,168	NSC2 Construction
N00178-04-D-4091EHP1	SEAPORT E / NG	1,414,445	AMSEC
N00024-11-C-4400	NAVSEA	1,435,857	CMSD
N00178-04-D-4080	MANTECH	1,602,594	AMSEC
GS-23F-0058K	Fleet Industrial Supply Center	1,626,604	AMSEC
N00189-11-C-0057	Fleet Industrial Supply Center	1,976,847	AMSEC
N00024-03-C-2311	LOCKHEED MARTIN SHARED SV	1,981,234	AMSEC
N00178-04-D-4091EHP4	NGIS	2,182,543	AMSEC
N00406-11-D-1175	Fleet and Industrial Supply Cent	2,305,029	AMSEC
N00140-06-D-0003	SCIENCE APPLIC INT'L CORP	2,566,110	AMSEC
LETTER CONTRACT	BAE SYSTEMS NORFOLK SHIP	2,743,563	AMSEC
N00178-04-D-4091FY02	Naval Undersea Warfare Center	2,861,900	AMSEC
N63394-04-D-1262	CACI TECHNOLOGY INC.	3,189,518	AMSEC
N00024-02-C-2304	NAVSEA	3,874,388	DDG51 Multiyear (103/105/107/110)
N00189-04-D-0036	NAVSUP	4,776,597	AMSEC
N00178-04-D-4119	SAIC - SEAPORT-E	4,817,998	AMSEC
N00178-08-D-5629	GLOBAL SERVICES CORP	5,036,645	AMSEC
N00024-07-C-4407	NAVSEA	5,752,293	CMSD
N00189-10-D-0026	Fleet Industrial Supply Center	5,785,608	AMSEC
N00406-05-D-5000	Puget Sound Naval Shipya	6,250,595	AMSEC
N00024-00-C-2217	NAVSEA	6,550,222	LHD8
N00178-04-D-4079	LOCKHEED MARTIN SHARED SV	7,200,295	AMSEC
N00024-06-C-4402	NAVSEA	7,764,750	CMSD
N00024-07-C-4404	NAVSEA	7,990,920	CMSD
N00189-04-D-0049	NAVSEA	7,998,458	AMSEC
N00024-09-G-2305	NAVSEA	9,449,400	DDG PSA 103
N65236-07-D-8856	Space and Naval Warfare Sys Commar	9,926,776	AMSEC

ATTACHMENT 2
FISCAL YEAR 2011 FEDERAL CONTRACT
AWARDS AND MODIFICATIONS

Federal Grant(s) / Contracts	Federal Agency	Dollar Value	Subject of Contract or Grant
N00178-04-D-4091EHP2	NAVAL SURFACE WARFARE CTR	10,235,121	AMSEC
N00024-08-C-4410	NAVSEA	11,531,854	CMSD
N00024-04-C-2204	NAVSEA	16,045,758	LPD21
N00024-07-C-4013	NAVSEA	18,339,214	CMSD
N00024-07-C-2302	NAVSEA	21,270,866	DDG FYS 4
N40025-08-D-8006	NAVSUP	27,270,362	AMSEC
N65540-09-D-0029	NAVAL SURFACE WARFARE CTR	34,269,846	AMSEC
HSCG23-07-J-2DW246	DHS	41,452,696	NSC 3 Construction
N00024-10-C-2203	NAVSEA	41,817,529	LPD LCES
N00024-06-C-2306	NAVSEA	54,259,839	CG47/DD 963 PYS
N40025-07-D-7014	NAVSUP	59,389,352	AMSEC
N00024-10-C-2229	NAVSEA	77,042,456	LHA7
N00024-06-C-2304	NAVSEA	91,826,052	Phase IV Detail Design
N00024-11-C-2307	NAVSEA	583,627,000	DDG 114
N00024-11-C-2309	NAVSEA	610,851,000	DDG 113
HSCG23-11-C-2DB043	DHS	1,052,462,775	NSC 4 Const
N00024-06-C-2222	NAVSEA	1,541,937,992	LPD22_CONST
Total		**8,019,907,635**	

ATTACHMENT 3
FISCAL YEAR 2010 FEDERAL CONTRACT
AWARDS AND MODIFICATIONS

Federal Grant(s) / Contracts	Federal Agency	Dollar Value	Subject of Contract or Grant
N00024-02-C-4004	NAVSEASD	-6,243,466	Adv. Plan CVN 68, CVN 74, CVN 76 & PIAs
N00024-08-G-2112-EP01	NAVSEA	-380,764	NAVICP MECHANICSBURG
N00024-02-C-2905-4T05	NAVSEA	-373,730	N00024-02-C-2905-4T05
N00024-02-C-2905-4T07	NAVSEA	-38,249	Planning Yard and Design SSN 688
BOA-NMC-NN-070800394	CTC	-3,682	Steel Casting Optimization
N00024-08-G-2112-4T52	NAVSEA	1,555	SCD'S 1417 & 4652 (CASS ITRS) AIT DRAWIN
N00024-08-G-2112-4T48	NAVSEA	1,967	SCD 4057
EB-05-G-4417-L840	EBC	2,000	DIVERT BATTERY BUS BARS FR SSN777 TO 774
PO 012856	PSGS	2,694	INSTALL WIRELESS TEMPALT
0275-SC-20151-0186	PA STATE U	3,159	FIBER OPTIC MSMT & SHAPE SENSING
N00024-05-G-2112-4T64	NAVSEA	3,944	FMR 216
N00024-08-G-2112-4T08	NAVSEA	4,743	FMR 259
N00024-08-G-2112-4T32	SUPSHIPNN	6,311	SCD 9319 RADIANT MERCURY
2005-341-05	ATI	7,485	Business Process Technlogies Chair (NAR)
N00024-08-G-2112-4T51	NAVSEA	8,100	SCD 2054-COMBAT ASSESS WORKSTATION INSTL
N00024-08-G-2112-4T29	NAVSEA	9,036	SCD 5500
N66604-00-D-142B-0007	NUWC	9,116	Engineering/Technical Svcs to NUWC
2005-341-19	ATI	9,434	CABLE TAG REDUCTION EFFORT
2005-341-15	ATI	10,475	ELECTRICAL TECHNOLOGIES PANEL CHAIR
N00024-08-G-2112-4T45	NAVSEA	15,860	CVN 73 MATERIAL-PROVIDE 3 HSLSA 100 PLTS
N00024-08-G-2112-4T11	NAVSEA	15,960	FMR 262
2005-341-02	ATI	16,284	Master agreement 2005-341 task 2
N00189-09-P-Z183	FISC NOR	16,500	VASCIC RENTAL-USJFCOM EMPIRE CHLNGE 09
N00189-09-P-Z273	FISC NOR	17,600	VASCIC RENTAL TO JOINT FORCES COMMAND
N00024-05-G-4418-4T42	NAVSEA	19,609	PRVD DIMNSNL CNTRL OVRSGHT TO USS TENN
N00024-08-G-2112-4T33	NAVSEA	22,999	FMR 284
N00024-08-G-2112-4T50	NAVSEA	24,649	BULKHEAD PENETRATION ASSEMBLY
EB-07-C-1029	EBC	24,985	SUPPORT OF FULL-SCALE TRIALS PLANNING
2005-341-17	ATI	39,090	OPEN ARCHTCTRE SHIP INTERFACE STD -OASIS
2007-501-0003	SCRA	43,648	REDUCED COST IMPELLER
2005-341-11	ATI	45,725	NAVSEA Specification Review Team
BOA-NMC-100900045	CTC	46,222	SUPPORT OF OPTIMIZATION OF BLASTING OPER
EB-09-C-2101	EBC	47,382	OMNIBUS 7 Eng Services SBSD
N00024-05-G-4418-NU13	SWRMC	50,754	PREP & ACC SPEC PKG SSSD-069-10
N00024-08-G-2112-4T79	NAVSEA	52,000	PROVIDE PSNY BEARING STAVES FOR CVN76
2005-341-18	ATI	78,322	ALT COATINGS SYST ENVIRONMENT RECD PRJCT
RAYTHEON OSA 04012007	RAYTHEON	92,733	OFFICE SERVS AGREEMENT RAYTHEON VASCIC
N00024-05-G-4418-4T21	NAVSEA	95,732	ACCOMPLSH MGNTC PRTCL INSP OF S8G ITEMS
BOA-NMC-100900063	CTC	97,795	LARGE DIAMETER PIPE PROCESS IMPROVEMENTS
N00024-08-G-2112-4T74	NAVSEA	100,000	IDEA PROCESS INTEGRATION
2010-324-01	ATI	139,497	SB WEAPONS HANDLING FND MODEL
EB-96-C-2100-010	EBC	141,238	Virginia Class Ships - Flight 1
BOA-NMC-091200020	CTC	175,820	WEAPONS CRADLE
N00024-05-G-4418-4T59	NAVSEA	190,000	PROVIDE S6G SHIFT TEST ENG (STES) TRAING
2007-501-0004	SCRA	214,567	SAIL DECK GRATE AND GABLEWAY FNDTN PLATE
BOA-NMC-100300221	CTC	221,841	REMOTE WELDING AND PREHEAT CONTROL
N00024-05-G-4418-4T50	SUPSHIPNN	222,389	S9G/S6G STE QUAL TRAINING FOR NNSY
BOA-NMC-100500185	CTC	244,453	SUPPORT OF TEMP PROTECTIVE COATINGS
PO I10475WS09	AMSEC	273,000	SUBSAFE SUPPORT USS PENNSYLVANIA
S07-1002-0003	EWI	301,856	ULTRASONIC TESTING AS ALT TO RADIOGRAPHY
N00178-04-D-4091-FY01	NUWC	374,593	SLIN 130001 LABOR
BOA-NMC-100500016	CTC	445,650	EXOTHERMIC WELDING FOR EMALS
N62793-03-G-0001-4T62	SUPSHIPNN	670,032	CVN70 SRA/PSA Planning
S07-1002-0005	EWI	734,763	CVN78 CTRL OF THIN PLATE DISTORTION PROJ

ATTACHMENT 3
FISCAL YEAR 2010 FEDERAL CONTRACT
AWARDS AND MODIFICATIONS

Federal Grant(s) / Contracts	Federal Agency	Dollar Value	Subject of Contract or Grant
N00024-08-G-2112-4T15	NAVSEA	806,242	CVN70
N00024-05-G-4418-FY05	NUWC	1,279,510	INSTALLATION OF TSMS SHIPALT USS HELENA
N00024-05-G-4418-FY03	NUWC	1,401,633	USS Albuquerque - SSN 706
EB-03-C-2101	EBC	1,430,321	Virginia Class Submarine (Second Flight)
N00024-05-G-2112-4T02	NAVSEA	1,700,446	CVN65 Dev'l Selected Ships Records
N00024-05-G-4418-FY06	NAVSEA	2,015,629	INS TSMS SHIPALT 4473 USS CHICAGO SSN721
N62793-03-G-0001-4T33	SUPSHIPNN	2,313,402	RBP rest. for USS HAMPTON (SSN 767) *NAR
N00024-08-G-2112-4T41	SUPSHIPNN	2,356,234	USS LINCOLN (CVN 72) RCOH Pre-Adv Planni
N00024-05-G-4418-4T58	NAVSEA	2,499,994	PERFORM ADV PLNG DCMAV ON USS ALBANY
PO 00603AGSWR	BIW	2,598,980	DDG 1001 STRUT CASTINGS
EB-07-C-2107	EBC	2,610,000	FY10 OHIO REPLACEMENT PROGRAM HM&E R&D
N00024-09-C-2105	NAVSEA	3,235,865	STEAM PLANT MANUAL
N00024-08-G-2112-4T76	SUPSHIPNN	3,500,000	PROPULSION PLANT SYSTEMS ENGINEERING(PPE
N4523A-09-C-0310	NAVSEA	4,036,906	MISC. NUCLEAR AIRCFAFT CARRIERS YOKOSUKA
EB-10-C-2118	EBC	4,594,947	LEAD YARD SERVICES
N00024-06-C-2104	NAVSEA	4,609,154	ENG & DESIGN SVCS FOR ADV SUB TECH
N62793-03-G-0001-4T56	SUPSHIPNN	4,624,379	CVN70 SRA
N00024-05-G-4418-FY01	NUWC	5,392,697	NUWC - Keyport
EB-09-C-2100	EBC	7,006,628	COMMON MISSILE COMPARTMENT
EB-05-C-2103	EBC	7,278,443	VCS - Development & Design Studies
N00024-07-C-2104	NAVSEA	8,086,180	Standard Navy Valve Yard (FY07 & Later)
EB-PL00108950	EBC	8,590,955	KAPL
N00024-06-C-2115-EXEC	NAVSEA	9,861,997	CVN70 RCOH-Execution
N00024-05-G-2112-4T11	NAVSEA	10,000,057	CVN 65 10/05-12/05 Pier Side FMR 65-147
N00024-05-G-4418-FY04	NUWC	12,415,602	USS Bremerton (SSN 798) TSMS & SWFTS Ins
N62793-03-G-0001-4T50	SUPSHIPNN	20,010,876	CVN 77 PSA & SRA
N00024-98-C-2104	NAVSEA	24,847,445	CVN 77 Design, Planning and Construction
N00024-09-C-2107	NAVSEA	51,188,698	CVN71 RCOH Execution
N00024-07-C-4404	NAVSEASD	51,501,424	West Coast CVN Maintenance
EB-09-C-2104	EBC	66,000,000	VCS Block 3 Construction
N62793-07-C-0001	SUPSHIPNN	68,789,412	CVN65 RLSP
N00024-10-C-2110	NAVSEA	80,886,408	CVN72 RCOH (N0112)
N00178-04-D-4091-FY03	NUWC	91,583,052	Seaport-E
PO 3018909	BETTIS	94,769,154	BETTIS RPPY - Eng & Production Servs
N00024-09-C-2116	NAVSEA	99,276,391	CVN 79 Construction Planning
N00024-10-C-2102	NAVSEA	105,931,503	688 Planning Yard
N00024-08-C-2100	NAVSEA	127,900,536	CVN65 EDSRA
N00024-08-C-2110	NAVSEA	205,889,275	CVN78 Construction
DE-AC09-08SR22470	DOE	1,445,621,000	Mgmt/Operation of Savannah River Nuclear Site
N00024-02-C-2302	NAVSEA	(47,517,302)	DD (X) R & D
N00024-97-C-2202	NAVSEA	(10,762,631)	LPD17-20 Const Contract
N00024-98-C-2307	NAVSEA	(10,022,928)	DDG51 Multiyear (89/91/93/95/97/98/100/Adv Proc)
N00024-00-C-2300	NAVSEA	(2,510,466)	CGDGPYS 2
VARIOUS	NAVSEA	(1,353,477)	FSO MISC WORK ORDERS
N00024-05-C-2311	NAVSEA	(1,320,446)	Phase IV Bridge Contract
N00024-00-C-2217	NAVSEA	(1,260,993)	LHD8
6303	NAVSEA	(523,532)	DD(X) Support Services
5381	NAVSEA	(93,701)	Support II
ICGS G&A (W957-1001-8801)	DHS	(54,306)	ICGS G&A
N00024-92-C-2204	NAVSEA	(37,725)	LHD7
N00024-04-G-2301	NAVSEA	(37,389)	DDG 87 BOA
HSCG23-07-J-2DW420	DHS	(2,658)	PP Parent Craft
N00024-08-C-4401	NAVSEA	82	CMSD
N00024-02-C-2304	NAVSEA	2,618	CMSD

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AWARDS AND MODIFICATIONS

Federal Grant(s) / Contracts	Federal Agency	Dollar Value	Subject of Contract or Grant
N00024-03-R-7086	NAVSEA	10,805	LHDS
HSCG23-04-J 2DW206	DHS	18,014	DW NSC1
HSCG23-09-J-2DE501	DHS	31,164	CLIN 0154AA C4ISR Architecture
N00024-05-C-2221	NAVSEA	55,325	CMSD
HSCG23-05-F-2DW225	DHS	59,023	LRI Proposal Prep
HSCG23-06-J-2DW241	DHS	65,584	Parent Craft Design Studies
N00024-05-D-2300	NAVSEA	114,837	DDG 95 BOA East Coast
N00024-03-C-2311	NAVSEA	348,454	CMSD
N00178-07-D-4078EHP2	MCKEAN DEFENSE GROUP,	528,594	AMSEC
GS-23F-0058K	Fleet Industrial Supply Cent	549,535	AMSEC
N55236-07-D-0001	SW REGIONAL MAINT CTR	561,557	AMSEC
N00178-04-D-4067FY04	INDUS TECH/NUWC KPT	579,668	AMSEC
N00178-04-D-4091	TASC, INC.	635,479	AMSEC
415-08-015	PORT AUTHORITY OF NY & I	649,800	AMSEC
N00178-04-D4048 NW01	EPSILON SYS SOLUTIONS IN	657,630	AMSEC
N00140-06-D-0060	NGTS/CLASSRON	679,248	AMSEC
N00024-08-G-2112	NAVSEA	758,134	CMSD
N63394-10-C-1200	3PHOENIX	831,116	AMSEC
N00024-08-C-2300	NAVSEA	855,738	CMSD
LETTER CONTRACT	BAE SYSTEMS NORFOLK SHI	893,522	AMSEC
NJK3245	GEO SHARP	1,105,611	AMSEC
N40025-06-D-6007	DELPHINUS ENGINEERING	1,117,048	AMSEC
N00024-03-C-2311	LOCKHEED MARTIN SHAREI	1,165,176	AMSEC
N00178-04-D4119/EHQ3	SAIC - SEAPORT-E	1,377,859	AMSEC
DAAB07-03-D-B008	NORTHROP GRUMMAN MS	1,378,830	AMSEC
N65540-01-D-0025	NAVAL SURFACE WARFARE	1,525,836	AMSEC
N00024-07-C-2200	NAVSEA	1,814,683	CMSD
N00178-04-D-4091EHP1	SEAPORT E / NG	1,950,629	AMSEC
N00024-00-C-2217	NAVSEA	1,956,640	CMSD
N63394-04-D-1262	CACI TECHNOLOGY INC.	2,287,200	AMSEC
HSCG23-09-J-ADE500	DHS	2,395,036	CLIN 0104 Shared Program Services
HSCG23-09-J-QW4B42	DHS	2,528,561	USCG Training Engine
N00189-10-D-0026	Fleet Industrial Supply Cent	2,622,502	AMSEC
N00178-04-D-4091FY02	Naval Undersea Warfare Ce	2,719,444	AMSEC
N00178-04-D-4079	LOCKHEED MARTIN SHAREI	2,902,176	AMSEC
N00189-09-D-N001	NORFOLK NAVAL SHIPYARD	2,917,811	AMSEC
N00178-04-D-4080	MANTECH	3,160,699	AMSEC
DAAB07-03-D-B012	GLOBAL SERVICES CORP	3,276,665	AMSEC
HSCG23-07-J-2DW246	DHS	3,485,880	NSC 3 Construction
N00178-04-D-4048	EPSILON SYS SOLUTIONS IN	3,507,668	AMSEC
N00024-05-C-4409	NAVSEA	3,555,044	CMSD
N65540-02-D-0042	NAVAL SURFACE WARFARE	4,246,749	AMSEC
N00024-05-C-2217	NAVSEA	4,456,063	LPD_LCES
N00024-05-C-2221	NAVSEA	4,626,890	LHA6
N00189-02-D-0037	Fleet Industrial Supply Cent	4,677,628	AMSEC
N00024-06-C-4402	NAVSEA	4,729,643	CMSD
N00024-08-C-4410	NAVSEA	4,974,431	CMSD
N00024-07-C-4407	NAVSEA	5,941,287	CMSD
N00178-04-D-4119	SAIC - SEAPORT-E	6,468,410	AMSEC
N00024-09-G-2305	NAVSEA	7,814,945	DDG PSA 103
HSCG23-05-J-2DW056	DHS	8,056,539	NSC2 Construction
N00406-05-D-5000	Puget Sound Naval Shipya	8,247,180	AMSEC
N00189-04-D-0036	NAVSUP	8,395,273	AMSEC
N00189-04-D-0049	NAVSEA	9,662,666	AMSEC

ATTACHMENT 3
FISCAL YEAR 2010 FEDERAL CONTRACT
AWARDS AND MODIFICATIONS

Federal Grant(s) / Contracts	Federal Agency	Dollar Value	Subject of Contract or Grant
N00178-04-D-4091EHP2	NAVAL SURFACE WARFARE	9,719,341	AMSEC
N00024-07-C-4013	NAVSEA	14,964,542	CMSD
N00024-07-C-4404	NAVSEA	15,215,090	CMSD
N65236-07-D-8856	Space and Naval Warfare Sy	17,231,907	AMSEC
N00024-04-C-2204	NAVSEA	19,731,196	LPD21
N40025-08-D-8006	NAVSUP	24,805,877	AMSEC
N65540-09-D-0029	NAVAL SURFACE WARFARE	26,223,272	AMSEC
N00024-10-C-2203	NAVSEA	35,703,913	LPD LCES
N00024-02-C-2304	NAVSEA	43,785,071	DDG51 Multiyear (103/105/107/110)
N40025-07-D-7014	NAVSUP	49,604,013	AMSEC
N00024-07-C-2302	NAVSEA	52,412,986	DDG FYS 4
N00024-06-C-2304	NAVSEA	60,787,072	Phase IV Detail Design
N00024-06-C-2306	NAVSEA	61,834,530	CG47/DD 963 PYS
N00024-11-C-2307	NAVSEA	114,003,000	DDG 114
N00024-11-C-2309	NAVSEA	170,700,000	DDG 113
N00024-10-C-2229	NAVSEA	175,497,896	LHA7
N00024-06-C-2222	NAVSEA	314,234,547	LPD22_CONST
Total		**3,917,686,376**	

WITNESS RESPONSES TO QUESTIONS ASKED DURING THE HEARING

MARCH 29, 2012

RESPONSE TO QUESTION SUBMITTED BY MR. COFFMAN

Admiral BLAKE. Of the 29 amphibious ships, 19 are deployable right now. Of the ten ships that are non-deployable, two are finishing their year-long LSD Mid-Life availabilities, seven are in scheduled maintenance availabilities, and one LPD has been redesignated to an AFSB (I). [See page 26.]

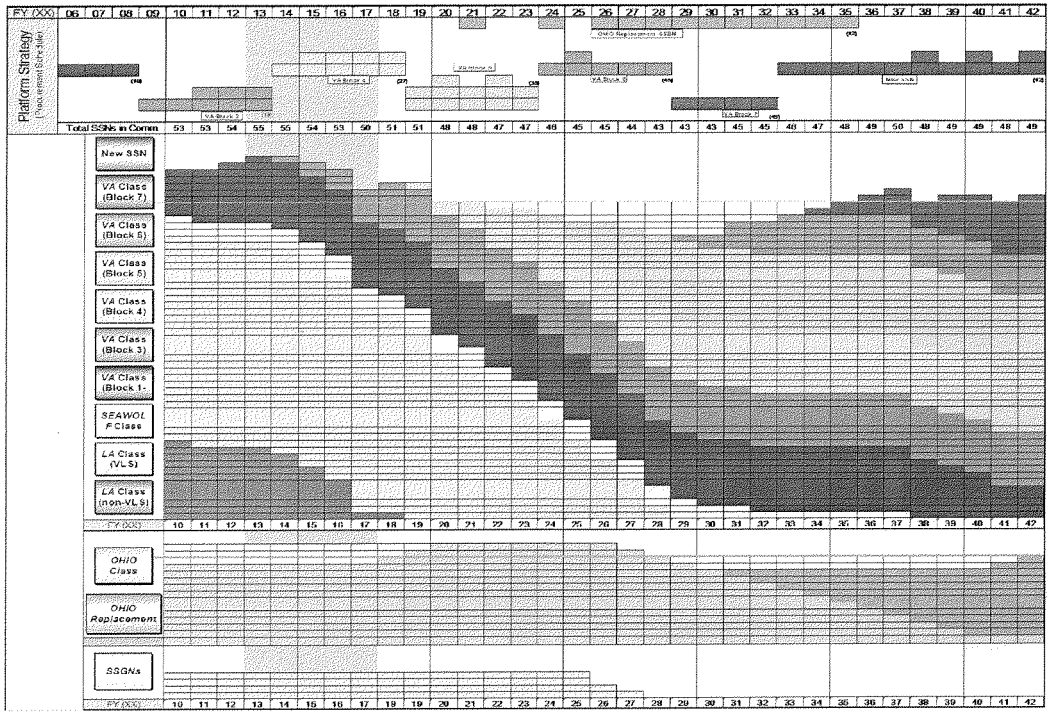
RESPONSE TO QUESTION SUBMITTED BY MR. COURTNEY

Secretary STACKLEY. The Navy briefed Professional Staff Members Mr. Tom MacKenzie and Mr. Phil MacNaughton of the House Armed Services Committee on April 5, 2012, concerning the VIRGINIA Class multiyear procurement, specifically, the nine-boat verses ten-boat, and the challenges the Navy faced with the budget.

The FY 2013 President's Budget Submarine Force Structure is attached on page 114. [See page 7.]

Submarine Force Structure

PB13 Long Range Shipbuilding Strategy



QUESTIONS SUBMITTED BY MEMBERS POST HEARING

MARCH 29, 2012

QUESTIONS SUBMITTED BY MR. LANGEVIN

Mr. LANGEVIN. Could you both please comment on the impact of the potential *Virginia* class boat shift from FY14 to FY18 on the efficiencies that we have gained by shifting to a two-per-year procurement rate?

Ms. NOVAKOVIC. A critical component to achieving the $2B (FY05$) unit cost goal for the *Virginia* class submarine involved increasing the production rate to two ships per year and maintaining that rate. Navy studies completed in the 2005–2006 timeframe concluded the combination of maintaining the two-ships-per-year production rate along with multiyear procurement provided a unit cost reduction to subsequent procurements of about $200M per ship (FY05$). This increased production rate provides increased efficiencies by allowing fixed cost to be spread over a greater volume of work and enables a more stable and efficient drumbeat for manufacturing, assembly and delivery of ships from each builder. Removing the second ship in FY14 and adding it to FY18 interrupts the cadence of the production plan and program learning curve and decreases the efficiencies gained through the greater production volume. Continued stable and predictable two-ships-per-year procurement is the most efficient way to improve production and manufacturing efficiencies at the shipyards and across the industrial base.

Mr. LANGEVIN. What effect might such a move have on both your workforces and your supplier base, particularly lower-tier suppliers? Conversely, could you describe for this subcommittee why such great efficiencies are gained from a steady two-per-year procurement rate?

Ms. NOVAKOVIC. Moving the second FY14 ship to FY18 impacts the workforces at the shipyards and in the industrial base as follows:

—Reduces staffing levels at shipbuilders in Connecticut, Rhode Island and Virginia over the period 2014 to 2018 by 800 to 1,000 jobs. This work would be accomplished later in Block IV (i.e., 2018–2022).

—In a similar fashion, it reduces staffing levels at other major suppliers in Virginia, Ohio, Indiana, New York and Rhode Island by approximately 350 jobs. This work would be accomplished later in the block as well.

—In addition, highly skilled manufacturing jobs from the direct suppliers to the prime contractors, as well as their suppliers (i.e., sub-tier suppliers), and the associated economic impact to local economies where material is bought, will be moved out by 5 years. *Virginia* class submarine material is bought from suppliers in all 50 states, therefore the economic impact is felt across the entire country to varying degrees.

Efficiencies are generated from a steady state two-ships-per-year procurement rate in four key areas:

—Production efficiency
—Cost efficiency
—Supplier efficiency
—Critical skills retention

Production efficiency

A steady state procurement rate of two ships per year continues, in an uninterrupted fashion, the series production plan that has been optimized for efficient production (i.e., shortened cycle time and build plan). Steady production rates provide the steady demand that allows the shipyards and industrial base to better plan and execute the work and to match the work to the required resources (skilled workforce, shipyard facilities and industrial base capacity). The ability to maintain a steady plan avoids costly peaks and valleys associated with the cycles in workload levels. Learning curve efficiencies are also realized as production units are built in a repeatable fashion on subsequent units and budgets and cost targets are more easily understood and flowed down to the shop floor. It is estimated that removing a ship from FY14 will insert a 6-month production gap into the series production plan which will incur a penalty of more than one million labor hours on Block IV submarines due to interrupted learning and lost efficiencies.

Cost efficiency

Continued efficient multiyear procurement of *Virginia* class submarines provides economic order quantity savings and improved material availability that support more efficient production plans and reduced construction spans. Efficiencies are derived though volume and earlier procurement of material avoiding escalation costs that would result from the later procurement of hardware. The volume afforded by the two-ships-per-year production rate allows the shipyard and suppliers to spread fixed costs more efficiently over a larger business base providing further economic benefit. The shipbuilders are able to achieve labor savings due to the ability to execute the build plan as conceived and to drive down labor hours on subsequent units.

Supplier efficiency

The production and cost efficiencies discussed above for the shipyards are also realized by the suppliers for the equipment they directly provide. Continued two-ships-per-year procurement encourages suppliers' sub-tier supply chains and local economies to grow by providing a stable and predictable workload to meet increased production demands. This stability bolsters the supply chain with steady production, to keep suppliers competitive and reduce costs, and provides the supplier base with the confidence it needs to make capital investments in equipment and their workforce.

Critical skill retention

The ability of the United States to efficiently manufacture and deliver nuclear submarines is directly related to our ability to retain the people who possess the experience and unique skills that are exercised only during the submarine building process. In order to retain the current competency, as well as advance the production process, it is imperative that we keep submarine production at a stable and efficient rate. This stability allows the shipbuilders to execute viable workload plans, provide long-term employment opportunities, and preserve the critical skills needed for production. The production break caused by the shifting of the second FY14 ship to FY18 adds risk to the Nation's ability to efficiently and effectively manage the submarine production workforce that possesses these critical skills.

Mr. LANGEVIN. How does the 2-year push of the *Ohio* Replacement program affect your engineering and design workforce?

Ms. NOVAKOVIC. In February 2012, PEO Submarines (PMS397) informed Electric Boat that the start of construction on the lead ship in the *Ohio* Replacement Program would slip 2 years, to FY21. This delay will extend the design effort by 2 years, adding roughly one million labor hours to the overall design effort. The design reschedule will assure that the Missile Compartment effort supports the needs of the United Kingdom, while attempting to maintain concurrency of the design evolution with the rest of the *Ohio* Replacement design effort. This shift poses risk to the resource and infrastructure planning within the industrial base that supports technology and new component development during the design phase. The acquisition cost will also escalate due to the 2-year delay across the 12-ship construction plan. As a result of this stretch in the design effort, Electric Boat employment increases planned in FY13 through FY14 will be delayed. Engineering and Design employment on *Ohio* Replacement will remain essentially constant in FY13 and FY14. While the *Ohio* Replacement represents a significant portion of the engineering and design work across the company, the introduction of new work on *Virginia* class and other projects mitigates the impact of the *Ohio* Replacement program delay such that the overall engineering and design workforce remains stable through FY13 and future years.

Mr. LANGEVIN. Could you both please comment on the impact of the potential *Virginia* class boat shift from FY14 to FY18 on the efficiencies that we have gained by shifting to a two-per-year procurement rate?

Mr. MULHERIN. Maintaining a stable and predictable two-per-year procurement and subsequent production rate is the most efficient way to gain production and manufacturing efficiencies at the shipyards and across the industrial base. Increasing the procurement rate to two ships per year, and maintaining that rate, was a critical component to achieving the two for $4 billion (FY05$) cost goal for the *Virginia* class submarines. Newport News Shipbuilding and Electric Boat began two-per-year production in FY11, with the volume of work peaking in 2015. This rate provides efficiencies in both workforce and facilities utilization for both companies and allows fixed costs to be spread over a greater volume of work. Repetitive work teams can move from one module or unit to the next ship's module/unit on 6-month intervals verses 12 months at the one-per-year rate. This allows for continuous learning and improved skill retention during the manufacturing, outfitting and delivery phases of construction. Shifting the second ship from FY14 to FY18 will re-

duce these efficiencies, increase non-value-added costs such as escalation, and significantly increase overall program cost by as much as $600 million based on joint NNS/EB estimates. The shift of the FY14–2 boat to FY18 will also result in a submarine workforce reduction. This reduction follows significant investment we have already made in our workforce as we ramp up to the two-per-year production rate, and will require us to rehire, retrain and reinvest in a new workforce as production returns to the two-per-year rate.

Mr. LANGEVIN. What effect might such a move have on both your workforces and your supplier base, particularly lower-tier suppliers? Conversely, could you describe for this subcommittee why such great efficiencies are gained from a steady two-per-year procurement rate?

Mr. MULHERIN. A break in the *Virginia* class submarine series production plan results in an estimated loss of 800–1,000 jobs at the shipyards and 350 jobs at our prime suppliers during FY14 through FY18. This immediately follows the completion of the manning ramp-up to support earlier two-per-year construction. At NNS, an average of 500 submarine construction jobs will move from FY14 through FY18 to FY19 through FY23, creating a workforce gap that will be difficult to recover in certain critical skills. An estimated average of 350 prime contractor jobs that supply equipment for the Government (VA, OH, IN, NY, RI) will also move from FY14 through FY18 to FY19 through FY23. Although an exact number cannot be determined, based on previous industrial base studies, the impact to all *Virginia* class suppliers is expected to be at least within the same order of magnitude as the impact to the shipyards, with the potential to be even 3 to 5 times higher given that material is bought from thousands of suppliers in 46 states. Reconstitution following job losses at the shipyards and supplier companies will be problematic, adding risk and cost associated with rehiring and retraining personnel.

Two-per-year production provides benefits in efficiencies and economies of scale, including opportunities to lock-in lower material costs for multiple ships. It also provides opportunities to move work teams from one module or ship to the next on 6-month intervals verses 12 months at the one-per-year rate. A steady two-per-year procurement rate provides gains in production and cost efficiency for the shipbuilders and suppliers (both Contractor Furnished Equipment and Government Furnished Equipment) as well as improved retention of critically-skilled workers. The following provides a brief description of the efficiencies associated with steady two-per-year procurement.

Production efficiency

A steady state procurement rate of two-per-year, in an uninterrupted fashion, supports the series production plan in place today, which has been optimized for efficient production (i.e., shortened cycle time and build plan). The ability to maintain a steady plan avoids costly peaks and valleys associated with the cycles in workload levels. Learning curve efficiencies are also realized as production units are built in a repeatable fashion on subsequent units.

Cost efficiency

Continued multiyear procurement of *Virginia* class submarines provides economic order quantity savings and improved material availability. Both of which support more efficient production plans and reduced construction spans. Efficiencies are derived through volume and earlier procurement of material, avoiding escalation costs that would result from the later procurement of hardware. The volume afforded by the two-per-year production rate allows the shipyard and suppliers to spread fixed costs more efficiently over a larger business base providing further economic benefit.

Supplier efficiency

The production and cost efficiencies discussed above for the shipyards are also realized by the suppliers for the equipment they directly provide. Continued two-per-year procurement encourages our suppliers' sub-tier supply chains to grow by providing a stable and predictable workload to meet increased production demands. This stability bolsters the supply chain with steady production to keep suppliers competitive and reduce costs. It also provides the supplier base with the confidence it needs to make capital investments in equipment and in their workforce.

Critical skill retention

The ability of the United States to manufacture and deliver nuclear submarines is directly related to the shipbuilders' ability to retain a few thousand people who possess the experience and unique skills that are exercised only during the submarine building process. In order to retain the current competency, as well as advance the production process, it is imperative that we keep submarine production at a stable and efficient rate. This stability allows the shipbuilders to execute viable workload plans, provide long-term employment opportunities, and preserve the crit-

ical skills needed for production. The production break caused by shifting the FY14–2 ship adds risk to the Nation's ability to efficiently and effectively manage the submarine production workforce who possesses these critical skills.

Mr. LANGEVIN. How does the 2-year push of the *Ohio* Replacement program affect your engineering and design workforce?

Mr. MULHERIN. Current projections are that our existing *Ohio* Replacement Program (ORP) engineering and design workforce is expected to remain essentially flat through FY13, as opposed to a slight increase in demand during this period. However, the ORP subcontracted effort represents less than 10 percent of the overall design and engineering workforce at our shipyard. From a volume perspective, we do not expect any adverse effect to our engineering and design workforce as a result of the two-year shift. From a critical skills perspective, the shift does place additional pressure on retention of a number of critical engineering and design capabilities that will require mitigating actions to avoid.

QUESTIONS SUBMITTED BY MR. WITTMAN

Mr. WITTMAN. Mr. Stackley, I would like to focus on the near-term planning period of the Long-Range Naval Vessel Construction Plan and the Naval Battle Force Inventory. In the next 5 years we are decommissioning 22 *Oliver Hazard Perry* class frigates, essentially ending that class's active service to the Navy. During this same time period the Navy is procuring 16 LCS. My question is how many LCS will be delivered to the Navy and be fully mission capable and deployable between FY13–FY17?

Secretary STACKLEY. The Navy will take delivery of 17 Littoral Combat Ships (LCS) and 21 Mission Packages by the end of Fiscal Year (FY) 2017. The Navy currently has two LCS available for Fleet tasking. USS FREEDOM (LCS 1) is scheduled to deploy for a second time in 2013, this time to Singapore, and USS INDEPENDENCE (LCS 2) is currently sailing to her homeport of San Diego, Calif. FORT WORTH (LCS 3) will deliver to the Navy in June 2012. CORONADO (LCS 4) will deliver to the Navy in FY 2013. The ships of the block buy contracts will begin to deliver in FY 2014 starting with MILWAUKEE (LCS 5) and JACKSON (LCS 6). Deliveries then ramp up with DETROIT (LCS 7), MONTGOMERY (LCS 8), and LITTLE ROCK (LCS 9) in FY 2015 and GABRIELLE GIFFORDS (LCS 10), SIOUX CITY (LCS 11), OMAHA (LCS 12) and LCS 13 in FY 2016. LCS 14, LCS 15, LCS 16 and LCS 17 are scheduled to deliver in FY 2017. Currently, the Navy plans for each ship to undergo approximately 12 months of post delivery tests and trials.

The LCS Mission Package program is on track to deliver a mix of Mine Countermeasures (MCM), Surface Warfare (SUW) and Anti-Submarine Warfare (ASW) Mission Packages to support the Fleet's warfighting missions for the Littoral Combat Ship. LCS employment will be in response to the global demand signals of the combatant commanders to support timely joint force access to critical littoral regions. LCS will be configured with the mission package required by the operational commander. LCS also has inherent characteristics and capabilities to enable missions such as Maritime Law Enforcement operations, Maritime Anti-Terrorism/Force Protection, Search and Rescue, and Freedom of Navigation (FON) operations. The table below shows the cumulative number of LCS and Mission Packages that are planned to deliver to the Navy by the end of FY 2017.

Mr. WITTMAN. Mr. Stackley and VADM Blake, in reviewing the Long Range Plan for Construction for Naval Vessels for FY2013, it seems to me that we continue to push hard decisions outside the Future Years Defense Program (FYDP).

a. Within this FYDP, from 2013 to 2017, we are planning to construct 41 ships, 16 of which (39%) are the relatively inexpensive LCS small combatants. Additionally, the LCS cost from shipbuilding budget does not even include the LCS Mission Modules, which are required for these ships to be viable warships.

b. In the following 5 years, 2018 to 2022, we are building 52 ships, 15 of which (29%) are LCSs. Additionally, the 52 ships include a first in class *Ohio* Replacement, a total of 12 *Virginia* class SSNs vice the 9 *Virginia* class SSNs within the current FYDP, and some large deck amphibs. Obviously, these will be relatively expensive ships to construct; especially relative to the LCS.

c. From 2013 to 2017, we buy 11 fewer warships than from 2018 to 2022; and we also buy a higher percentage of less expensive ships in the FYDP than the next 5 years.

d. I understand this makes the math look better, but is this right for the National Security of this country, is this right for the Navy, is this right for the Industrial Base? Is it realistic to believe that we will have the required funding from 2018 to 2022 to support this dramatic ramp-up in shipbuilding?

Secretary STACKLEY. The Department of the Navy shipbuilding plans are based on three central principles: (1) maintain required battle force capability to meet the national defense strategy; (2) balance needs against expected resources; and (3) maintain an adequate shipbuilding industrial base.

After accounting for the funding limits of the 2011 Budget Control Act (BCA) and the specific resourcing decisions made in the recently completed strategic review, and considering the full range of supporting capabilities, capacities, and enablers found in the combined Navy-Marine Corps Team, going forward the 21st Century Battle Force will have about 300 warships. This battle force is fully capable of meeting the strategic guidance found in Sustaining U.S. Global Leadership: Priorities for 21st Century Defense, and as importantly, the construction plan that builds it sustains the national shipbuilding design and industrial base. The Navy's Long Range Plan for Construction of Naval Vessels carefully balances construction of all classes of ships including small surface combatants such as Littoral Combat Ships.

The FY2013 President's Budget and the Future Years Defense Plan fully funds the construction of naval vessels in the plan through FY2017. Beyond the FYDP, however, the need to recapitalize our Fleet Ballistic Missile Submarine force will put pressure on the Navy's overall shipbuilding plan. Annual spending on Navy shipbuilding must increase during this 10-year period, before returning to historical averages in the last decade.

To procure the needed ships during the middle decade, yearly shipbuilding expenditures will need to average about $19.5B/year. This is greater than $4B more per year than in the first decade, and nearly $3B more per year than the steady-state, 30-year average requirement of $16.8B/year. The Department is taking strong measures to try to reduce projected yearly shipbuilding costs during this period, such as trying to reduce the recurring and non-recurring costs for OHIO Replacement and other ship programs.

If the DON is unable to sustain average annual shipbuilding budgets of $19.5B during the second decade, plans to recapitalize the Nation's secure second-strike nuclear deterrent and the Navy's conventional battle force will have to be re-examined. The overall size of the battle force will drop below the levels needed to meet all naval presence and warfighting requirements.

The Department recognizes that its 30-year shipbuilding plan represents a significant demand on fiscal resources, and is committed to maintaining stability in planned requirements, funding and shipbuilding profiles in order to tightly control the demands on these precious resources.

Mr. WITTMAN. Mr. Stackley, the industrial base has routinely and consistently stressed the importance to maintain a steady ship construction rate vice ebbs and flows in construction to help to drive down unit costs. The current plan does not appear to stress this consistently. Does this plan, in an effort to make the FYDP look good, actually open up taxpayers to paying more in the long run for the same number of ships?

a. A specific example of this is the shifting of one *Virginia* class submarine from FY 2014 to FY 2018. This move effectively increases the total cost to the American taxpayer for 10 Block IV *Virginia* class submarines by approximately $600 million. Why would we pay an additional $600 million dollars to have the same number of submarines delivered?

Secretary STACKLEY. The Navy recognizes that shifting one ship from FY2014 to FY2018 is not the most cost efficient way of procuring the 9 Block IV VIRGINIA class submarines; however, this is one of many difficult choices that the Navy had to make in developing the PB13 budget in order to reduce spending in FY2013 and FY2014 in compliance with the Budget Control Act. However, with an eye on providing much-needed stability to the shipbuilding industrial base, the Navy has maintained the total number of submarines planned for the Block IV multi-year (nine) and plans to leverage advance procurement and economic order quantity buys to mitigate the impact of this shift.

Mr. WITTMAN. Mr. Stackley and VADM Blake, in 1983 and 1988 the U.S. Navy entered into block buys for *Nimitz* class carriers, buying 2 in '83 and 2 in '88. Understanding that some of CVN 79 has already been paid for, are there benefits to the taxpayer to enter into a partial block buy for CVN 79 and CVN 80? It is my understanding that some experts estimate this could save the Navy and the taxpayer close to $500 million? That is a decent amount of money to put towards an SSN, DDG, Amphib, or LCS.

Secretary STACKLEY. The Department recognizes that building the required force structure depends on controlling shipbuilding costs. In the case of aircraft carriers, the Navy is focused on stabilizing the lead ship (CVN 78), getting cost under control and completing the ship as close to schedule at the lowest cost possible. The Navy

is experiencing cost growth in the design, material procurement, and production associated with CVN 78.

CVN 78 is a very different ship from the Nimitz-class and the Navy cannot expect to build the CVN 78 the way it built the CVN 68 and get to an affordable ship construction plan. The Navy is working closely with the shipbuilder to incorporate lessons learned from CVN 78 construction which will result in a more affordable build plan for CVN 79.

It is too late to implement a complete block buy on CVN 79 and CVN 80, as some of CVN 79, particularly its propulsion plant, has already been purchased. Pending results of the ongoing Navy-Industry 'optimal build plan' review, the Navy would have an option to implement a partial block buy for CVN 79 and CVN 80 to the extent substantial savings are generated.

Mr. WITTMAN. Mr. Stackley, do we know the estimated per-unit cost of the DDG–51 Flight III? I understand from the plan that there will be 33 of these ships and they will replace the capabilities and mission set of the CG–47 cruisers and improve integrated air and missile defense for the battle forces. Do we know the estimated cost of the Air and Missile Defense Radar (AMDR) and how much the integration on to a DDG–51 hull will cost? What efficiencies from DDG–51 Flight IIA will be utilized to streamline this construction? Do you see this developing in to a completely new class of ship?

Secretary STACKLEY. The unit cost for DDG 51 FLT III ships as submitted in PB13 is approximately $2,151M (TY$). This represents the first three FLT III ships (one ship in FY 2016 and two ships in FY 2017) and includes installation/integration of AMDR onto the DDG 51 hull, associated ship changes, and non-recurring design costs. This estimate will continue to be refined as the AMDR technology matures and the AMDR down select occurs. AMDR is currently in a competitive Technology Demonstration phase. A draft Engineering Manufacturing Development Request for Proposal was recently released for industry comment. The Navy's estimate for the AMDR is included in the total ship price presented above. Releasing the estimate for the radar alone at this time would adversely impact the ongoing competition. The estimate for all 33 ships has not yet been finalized.

The Navy intends to compete the FY 2013 through FY 2017 DDG 51 MYP using Profit Related to Offer, similar to previous DDG 51 competitions. As with previous DDG 51 MYPs, these contracts will be fixed price incentive contracts. The shipbuilders will compete to the stable DDG 51 Flight IIA baseline (nominal configuration of the DDG 113–116 restart ships) for all nine ships planned for procurement between FYs 2013–2017. In addition, the Navy will use MYP authority to contract for the Vertical Launch Systems, AEGIS Weapon Systems, and Commercial Broadband Satellite Systems to support these ships.

Independent of the MYP contract action, the Navy's Air and Missile Defense Radar (AMDR) program is in development to address gaps in Ballistic Missile Defense. Currently, this S-band radar program has demonstrated prototype technology in a relevant environment. As noted above, the Navy's current plan calls for the final three ships of the DDG 51 MYP to be modified via an Engineering Change Proposal (ECP) to the Flight III configuration which incorporates the AMDR–S band radar in place of SPY–1D(V). This ECP approach provides the Navy the ability to field a critical advancement in Ballistic Missile Defense, the AMDR–S radar, at the earliest opportunity, while preserving the increased savings that a 5 year DDG 51 MYP provides to the Navy's shipbuilding program. But the proposed MYP contracting strategy provides the flexibility to continue to procure Flight IIA DDGs if the technology critical to Flight III does not mature on schedule. It should be noted that the Navy has successfully used ECPs to enhance DDG 51's during previous MYPs. Examples of technology incorporated during MYPs via ECPs include: SPY–1D(V); NULKA; CIWS Block 1B; Cooperative Engagement Capability (CEC); and enhanced 3000kW (vice 2500kW) Gas Turbine Generators.

Mr. WITTMAN. Mr. Stackley, per this plan it seems that the Navy is being realistic in understanding that we have some pretty expensive ships being procured, especially once we get in to FY18–FY32. My question is with 33 DDG Flt IIIs planned, 24 SSNs that cost around $2.6B a copy, 12 SSBNs that will cost $5–6B a copy, and multiple amphibious ships in the "out-years." I would argue that it is safe to say that we need to see a robust SCN account that should hover around $20B a year sooner, rather than later. The luxury we have here is that it is highly unlikely that any of us in this room will be authorizing, appropriating, or executing this plan in 2032. My argument is why wait, there is nothing like building ships for a fleet that needs them to ignite the industrial base and the creative spirit of our engineers and shipbuilders.

Secretary STACKLEY. The FY2013–FY2017 Future Years Defense Program (FYDP) reflects the budgetary constraints associated with the 2011 Budget Control Act

(BCA). The Plan's long-range projections focus first on battle force inventory requirements, and then outline the resources necessary to build to and maintain those requirements. Your assessment of the SCN investment required to support the long-range shipbuilding plan is exactly correct.

Over the next 30 years, the DON plans to procure a total of 268 ships of all types, for an average of about nine ships per year. However, executing even this relatively modest build plan within expected future resource limitations will present a stiff planning and resource challenge.

The Department recognizes that its 30-year shipbuilding plan represents an enormous demand on national resources. Our ability to maintain stability in planned requirements, funding and shipbuilding profiles is critical in order to control the demands on these resources. The Department will work closely with Congress and the shipbuilding and combat systems industries with each successive year of implementation as we move forward with the plan and proceed from projected funding to programmed funding.

With specific regards to increasing the funding 'sooner, rather than later', two principles are in action; (i) we must preserve wholeness of the current force, i.e., we need to first fully fund our readiness accounts to ensure the force 'in being' readiness is not diminished as a result of the reduced topline, and (ii) we must drive affordability into our programs to the extent possible within our SCN budget to ensure we are acquiring these new construction ships at the best possible price to the taxpayer. To this end, our efforts to procure an additional DDG 51 and an additional VIRGINIA SSN within the requested multi-year procurements are solid examples reflecting the right balance between requirements, budget, affordability, and the industrial base.

We will continue to work with Congress and industry to pursue these and further initiatives to address the Navy's critical shipbuilding needs.

Mr. WITTMAN. Mr. Stackley, is it no longer the goal of the U.S. Navy to attain a 313-ship Navy?

Secretary STACKLEY. After accounting for the funding limits of the 2011 Budget Control Act (BCA) and the specific resourcing decisions made in the recently completed strategic review, and considering the full range of supporting capabilities, capacities, and enablers found in the combined Navy-Marine Corps Team, the Department of the Navy's most current shipbuilding plan assumes the 21st Century Battle Force will have about 300 warships.

This battle force is fully capable of meeting the strategic guidance found in Sustaining U.S. Global Leadership: Priorities for 21st Century Defense, and as importantly, the construction plan that builds it sustains the national shipbuilding design and industrial base.

This projection will be informed by the completion of a formal Force Structure Assessment (FSA) and the ongoing Department of Defense review of its operational plans for potential regional contingencies.

Mr. WITTMAN. VADM Blake, *Arleigh Burke* class destroyers will start decommissioning in the mid-late 2020s. In the plan it states that Flight IIA DDG 51s (starting with DDG 79) service lives will be extended to 40 years in an effort to reduce the impact of the DDG 51 retirement schedule on overall LSC force structure. We have a documented history of retiring surface combatants early.

- In the last 14 years we have seen an entire destroyer class, 31 ships, decommissioned in the *Spruance* class.
- Their average service life was 23.5 years (per the Naval Vessel Register website http://www.nvr.navy.mil/nvrships/S_TYPE.HTM).
- The *Spruance*, DD 963 served the longest at 29.5 years.
- We decommissioned 7 of these ships prior to their 20 years of service point.
- In the last 8 years we have already decommissioned 5 CG–47 class ships well before their end of service life instead of upgrading them and modernizing them.
- Of the prior DDG class ships, the *Farragut* class had an average service of roughly 30 years, with the USS *Mahan* (DDG 42) serving the longest at 32.8 years.
- The USS *Arleigh Burke* (DDG 51) is now almost 21 years old.
- The USS *Oscar Austin* (DDG 79) the first of the Flt IIA DDGs is now 12 years old and per this plan she will serve until 2040?

Admiral, you are a career surface warfare officer, you have served on multiple large surface combatants. My question is when you factor in operation and maintenance shortfalls and the fact that over the last 10 years we have punted on numerous routine maintenance issues. Coupled with the fact these ships are the workhorses of the surface fleet and they have conducted cyclic deployments since 9/11,

along with the fact that these ships will be on a rotation to deploy for 7 months and be home for 14 months; can we logically assume that 32 Flight IIA DDGs will be serving for 40 years?

Admiral BLAKE. The 30-year shipbuilding plan is based on several key assumptions including: All battle force ships—particularly Large Surface Combatants—will serve to the end of their planned or extended service lives. The total FY 2013 President's Budget request for Ship Maintenance fully funds the FY2013 ship maintenance requirement for our remaining ships and submarines to reach their expected service life. On average, ships and submarines are reaching their expected service life, and the Navy is working to reverse the negative trend in Surface Ship readiness by investing in mid-life availabilities to work off the identified surface ship maintenance backlog.

The Navy has implemented a DDG Modernization Program to upgrade each ship's systems and extend service life to 40 years. The Navy will closely monitor the material condition of these ships during the various maintenance and modernization periods as they progress through their service lives to enable them to reach a 40 year ESL. The Navy will also utilize spiral upgrades to existing ships to maximize ship operational availability, enable learning curve efficiencies, and perform continuous and emergent maintenance. Lessons learned from the other ship classes have already been incorporated into ship design, such as using all-steel construction vice aluminum. The Navy will endeavor to operate every ship procured to the very end of its expected service life.

All of these measures will help maintain the size of the battle force inventory during the heavy ship retirement period expected in the 2020s and 2030s. However, even after all of these measures are taken, executing even the relatively modest build plan within expected future resource limitations will present a significant planning and resource challenge.

Mr. WITTMAN. Mr. Stackley and VADM Blake, in 1983 and 1988 the U.S. Navy entered into block buys for *Nimitz* class carriers, buying 2 in '83 and 2 in '88. Understanding that some of CVN 79 has already been paid for, are there benefits to the taxpayer to enter into a partial block buy for CVN 79 and CVN 80? It is my understanding that some experts estimate this could save the Navy and the taxpayer close to $500 million? That is a decent amount of money to put towards an SSN, DDG, Amphib, or LCS.

Admiral BLAKE. The Department recognizes that building the required force structure depends on controlling shipbuilding costs. In the case of aircraft carriers, the Navy is focused on stabilizing the lead ship (CVN 78), getting cost under control and completing the ship as close to schedule at the lowest cost possible. The Navy is experiencing cost growth in the design, material procurement, and production associated with CVN 78.

CVN 78 is a very different ship from the Nimitz-class and the Navy cannot expect to build the CVN 78 the way it built the CVN 68 and get to an affordable ship construction plan. The Navy is working closely with the shipbuilder to incorporate lessons learned from CVN 78 construction which will result in a more affordable build plan for CVN 79.

It is too late to implement a complete block buy on CVN 79 and CVN 80, as some of CVN 79, particularly its propulsion plant, has already been purchased. Pending results of the ongoing Navy-Industry 'optimal build plan' review, the Navy would have an option to implement a partial block buy for CVN 79 and CVN 80 to the extent substantial savings are generated.

Mr. WITTMAN. Admiral Blake, over the FYDP we are decommissioning five amphibious ships, and I am including the reclassified USS *Ponce*, because for all intents and purposes, that is still an L-class ship. We are procuring 1 amphibious ship in the FYDP and only 3 between FY18–FY22. What is the service life plan for LSD 41 and LSD 49 class? I have been told the ballpark figure per-unit cost of the LPD–17 is $2B . . . What do you expect LSD(X) to cost and when do you see this ship being delivered? Is there a plan in place to utilize the hull design of the LPD to make this a more efficient and affordable design and procurement process?

Admiral BLAKE. The estimated service life (ESL) for the LSD 41/49 class is 40 years.

The cost of the LSD 41/49 replacement will be informed during the Analysis of Alternatives (AoA) phase that will complete in late fiscal year 2013. Cost will be an important consideration in the construction of this ship class. The Navy plans for the lead ship delivery in FY 2026, in time to support the end of service life decommissioning of LSD 42.

Use of the LPD 17 design will be studied as part of the AoA.

Mr. WITTMAN. Admiral Blake, you're one of the most experienced surface warfare officers in the Navy, if not the most experienced. You have served and commanded

at every level at sea . . . In your 37 years of service have you ever seen more capable and combat ready surface combatants that we have in the fleet today? Some up here like to argue that we have the smallest Navy since WWI. In reality we now have highly trained, all-volunteer crews that operate the most technologically advanced ships in the world . . . multi-mission capable platforms that can operate in a variety of environments. Can we get your professional opinion on this? You served and sailed through the Cold War, the 600-ship Navy plan, the Gulf War, and the combat operations since 9/11. You have seen every threat out there for the past 37 years. Based on the threat and the risks at sea and our desire to project power and answer the call to execute the core missions of the Navy, is this the fleet that we want, the fleet that we need, or the fleet we can afford? What risks are we assuming by not having a larger fleet that multiplies capabilities that we have now? Is this the most capable fleet we could have at this point in time?

Admiral BLAKE. The Navy would need in excess of 500 ships to meet all validated Combatant Commander (COCOM) requirements. Although the near-term force structure does not fulfill all those demands, it is sufficient to meet warfighting needs—including Major Combat Operations and execution of COCOM's Theater Campaign Plans—while still meeting high-priority presence and partnership requirements, with some level of acceptable risk. Today's battle force numbers 282 warships of all types. After accounting for the funding limits of the 2011 Budget Control Act (BCA) and the specific resourcing decisions made in the recently completed strategic review, and considering the full range of supporting capabilities, capacities, and enablers found in the combined Navy-Marine Corps Team, going forward the 21st Century Battle Force will have about 300 warships.

This battle force is fully capable of meeting the strategic guidance found in Sustaining U.S. Global Leadership: Priorities for 21st Century Defense, and as importantly, the construction plan that builds it sustains the national shipbuilding design and industrial base.

Since every naval force or platform should be able to draw from the combined capabilities, capacities, and enablers found in the wider Navy-Marine Corps Team, counting platforms and forces gives only a partial picture of the aggregate combat power of the combined Team. Indeed, a more thoroughly inter-connected Navy and Marine Corps allows a smaller naval force to achieve greater awareness in all operating domains—space, air, sea, undersea, land, and cyberspace—and to effectively and efficiently execute integrated, coordinated actions even when the force is conducting widely distributed naval maneuver within and across theaters, or when in disaggregated, geographically fixed sea, air, and land control missions.

The current shipbuilding program builds and maintains a battle force inventory of approximately 300 ships, which will be refined with the completion of an ongoing Force Structure Assessment. This battle force is part of a broader Navy-Marine Corps Team that is built and ready for war, and operated forward to preserve the peace. The battle force represents an integrated and balanced fleet with the necessary capabilities and capacities to meet anticipated future demands for forward presence, deterrence, and war-fighting missions.

The major risk beyond the Fiscal Year Defense Plan (FYDP) is the need to recapitalize our Fleet Ballistic Missile Submarine force which will cause noteworthy risks to the Navy's overall shipbuilding plan. If the DON is unable to sustain average annual shipbuilding budgets of $19.5B over the course of the mid-term planning period, plans to recapitalize the Nation's secure second-strike nuclear deterrent and the Navy's conventional battle force will have to be dramatically changed, and the overall size of the battle force could drop below the levels needed to meet all naval presence and warfighting requirements.

Mr. WITTMAN. General Mills, how does decommissioning 5 L-class ships over the FYDP while only procuring 1 affect the USMC's ability to man, train, and equip the 2 MEB requirement?

General MILLS. One Marine Expeditionary Brigade (MEB) assault echelon requires 17 operationally available amphibious warships. In working with the Navy to balance operational risk with fiscal challenges we have agreed to a minimum of 15 ships to support a MEB/Amphibious Task Force. Combatant commanders require a minimum of two MEBs to meet Operation Plan requirements. Amphibious warships, along with the requisite number of ship-to-shore connectors, represent an operational capability with the minimum number of vessels required to provide the Nation with a flexible, persistent, sea-based, power projection capability that is capable of full spectrum amphibious operations in an anti access area denial environment. Fiscal constraints have reduced operational availability below 30 ships, requiring the assumption of additional risk, not only in terms of capacity and operational capabilities, but also the speed with which we can respond. More impor-

tantly, it is becoming more common for forces to deploy without the benefit of training as a complete Amphibious Ready Group with a Marine Expeditionary Unit. As of May 2012, there were 28 ships in the Navy's amphibious fleet, with three scheduled for decommissioning in FY14 and one ship decommissioning in FY15. Four new ships are under construction in the yards and scheduled for delivery between FY14 and 15. Within the coming FYDP, the inventory will decline in FY14 before rising to an average of 31.9 amphibious warships over the next 30 years. The key to meeting amphibious operational requirements with acceptable risk is maintaining a fleet which provides 30 operationally available warships.

An amphibious warship inventory that does not maintain 30 operationally available ships adversely affects our ability to conduct day-to-day deployments, meet necessary training standards and surge forward in response to crises with a balanced combat capability. Shortfalls in amphibious lift remain a concern as we work with the Chief of Naval Operations and his staff to mitigate risk in meeting the amphibious lift requirement. We are aggressively reviewing our amphibious concepts, doctrine, and plans; and recently stood up the Ellis Group, which is partnered with the Navy to develop innovative solutions to overcome these challenges and look for new methods to operate given amphibious ship shortfalls.