

**HEARING TO RECEIVE TESTIMONY ON NAVY
SHIPBUILDING PROGRAMS IN REVIEW OF
THE DEFENSE AUTHORIZATION REQUEST
FOR FISCAL YEAR 2013 AND THE FUTURE
YEARS DEFENSE PROGRAM**

THURSDAY, APRIL 19, 2012

U.S. SENATE,
SUBCOMMITTEE ON SEAPOWER,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:30 a.m. in room SR-232A, Russell Senate Office Building, Senator Jack Reed (chairman of the subcommittee) presiding.

Committee members present: Senators Reed, Sessions, and Wicker.

Majority staff member present: Creighton Greene, professional staff member.

Minority staff members present: Bryan D. Parker, minority investigative counsel; and Christopher J. Paul, professional staff member.

Staff assistant Present: Brian F. Sebold.

Committee members' assistants present: Carolyn Chuhta, assistant to Senator Reed; Gordon Peterson, assistant to Senator Webb; Lenwood Landrum, assistant to Senator Sessions; and Joseph Lai, assistant to Senator Wicker.

OPENING STATEMENT OF SENATOR JACK REED, CHAIRMAN

Senator REED. Let me call the hearing to order, and I want to welcome and thank our witnesses who have joined us this morning. We're honored to have the Honorable Sean Stackley, who's Assistant Secretary of the Navy for Research, Development, and Asia Pacific; Vice Admiral Kevin M. McCoy, Commander, Naval Sea Systems Command—thank you, sir—Vice Admiral John T. Blake, U.S. Navy, who is the Deputy Chief of Naval Operations, Integration of Capabilities and Resources, the N8; and Vice Admiral William R. Burke, Deputy Chief of Naval Operations, Warfare Systems—thank you, Admiral Burke—and Lieutenant General Richard P. Mills of the U.S. Marine Corps, the Deputy Commandant for Combat Development and Integration, and Commanding General, Marine Corps Combat Development Command. Thank you, sir. Gentlemen, thank you.

We're obviously grateful not only for your appearance today, but for your extraordinary service to the Nation and to the extraor-

dinarily courageous and professional men and women of the Navy and the Marine Corps that you have the privilege to lead, and we thank you and we hope you thank them, too, on our behalf.

The Navy continues to be faced with a number of critical issues as it tries to balance its modernization and procurement needs against the cost of current operations. The shipbuilding budget remains at a level where it will be difficult at best to field the Navy we want, and indeed even the Navy that we need.

With that in mind, we need to ensure that we are getting good value for every shipbuilding dollar that we spend. We were very pleased to see the Department's original decision to budget for two *Virginia*-class submarines per year, but are troubled by the new shipbuilding plan that would delay one of the two fiscal year 2014 boats until fiscal 2018. We know that the Navy and contractor team are able to drive down costs under the two boats per year plan. We will need to hear more about why the Navy made this change and what options may exist for reinstating the two boats per year plan.

We support the Navy's continuing efforts to drive costs out of the *Ohio* replacement SSBN program. SSBNs will remain a vital leg of the nuclear triad for the foreseeable future. Establishing and achieving cost reduction goals in the *Virginia*-class and *Ohio* replacement programs will yield significant stability to our Nation's submarine industrial base and provide the Navy with a modern, capable submarine fleet for many years to come.

Last month the subcommittee held a private briefing on issues surrounding the *Ohio* replacement program. But we should get on the record that the Navy continues to try to reduce costs on this program to make it more affordable and potentially less disruptive to the rest of the shipbuilding account.

Also last month, the full committee heard testimony from Secretary Frank Kendall, who agreed that, even with Navy cost reduction efforts of the program, DOD may need to step in and help the Navy pay for this critical program, the SSBN program particularly. We will want to hear from our witnesses about the cost reduction efforts and how DOD might step in to help pay for this program. And I think you understand, I have a certain affection and regard for submarines.

The subcommittee met last year and focused primarily on other programs that were experiencing quality control issues or other production issues. It is never a pleasant situation where major programs are having such problems. In receiving last year's testimony from the Navy, it seemed to me that the Navy was making good faith efforts to improve the situation through changes in staffing, training, and organization.

We're eager to hear from Secretary Stackley and Vice Admiral McCoy this morning on the progress they have made on these initiatives since last year.

In our country's fiscal year environment, it's very unlikely it will have as much money to spend as the 30-year shipbuilding plan assumes. Fundamentally, that is why this hearing is so important. We need to focus on managing these important programs in ways that are efficient and effective in delivering the capability the country needs from its Navy. We need to improve quality and efficiency

in all of our shipbuilding programs, not only because of the direct savings, but also because we need to demonstrate to the taxpayer that we are using defense dollars wisely.

We look forward to hearing your testimony this morning on these and other issues facing the Department of the Navy.

With that, let me recognize Senator Wicker.

Thank you.

[The information referred to follows:]

[SUBCOMMITTEE INSERT]

STATEMENT OF SENATOR ROGER F. WICKER

Senator WICKER. Thank you, Mr. Chairman. I know you have an affection for submarines, but you also have an affection for defending the country in general, as a whole; and I think in that regard we're very well served by this panel today, very distinguished panel, five men with very difficult tasks and responsible jobs. I appreciate them being here at this important hearing.

Vice Admiral Burke is here I believe for the first time before this panel. Last month the CNO assigned Admiral Burke to the new position of Deputy Chief of Naval Operations for Warfare Systems, responsible for integration of manpower, training, sustainment, modernization, and procurement of ships, submarines, and air programs. We look forward to seeing him again before this subcommittee.

Let me take a moment to mention that this is a particularly momentous year in our history. It marks the bicentennial of the War of 1812 and the writing of our national anthem, the Star Spangled Banner. Notably, the War of 1812 was the first declared war in our Nation's history. The Battle of Lake Erie, which is depicted in William Henry Powell's beautiful and profound painting in the east stairwell of the Senate, was fought during this conflict and is one of the Navy's greatest victories.

Today our sailors and marines continue to exemplify the benchmarks of leadership, seamanship, and heroism set by their predecessors 200 years ago.

I also want to recognize the outstanding efforts of the Navy's expeditionary sailors in places like my State of Mississippi. Our Seabees from the Naval Construction Battalion Gulfport have facilitated the fastest combat theater expansion in Central Command's history. In the past year, approximately 2,400 of our Gulfport-based Seabees from two naval construction regiments and nine naval mobile construction battalions deployed to Afghanistan and Kuwait, Okinawa, Guam, Europe, and Africa. Their hard work and dedication reflects the very finest traditions of the Navy.

Mr. Chairman, the Navy's 30-year shipbuilding plan that was submitted to Congress last month projects that for the first time the fleet would remain below 310 ships during the entire 30-year period. The plan also foresees critical shortfalls in cruiser, destroyer, and amphibious ships.

I believe these proposed cuts to our naval capabilities without a plan to compensate for them will place our strategic interests in the Asia Pacific region and Arabian Sea at greater risk. I'd like to hear from our witnesses on what I consider five key issues that our subcommittee will review this year:

First, viability of the industrial base. The viability of the 30-year shipbuilding plan is essential to the strength of our shipbuilding industrial base. The strength of the skills capabilities and capacities inherent to new construction, shipyards, and weapons system developers reinforce the Navy's dominant maritime position. I'd like to hear from our witnesses how they carefully weighed the effects on the shipbuilding industrial base when they balanced resources and requirements in drafting the shipbuilding plan.

Second, balance of the force. I remain concerned about the amount of funding needed for ship construction going forward. With more than half the construction and development cost dollars allocated to build nuclear submarines, submarine construction costs could crowd out funding needed to build large surface ships and to modernize the fleet. I hope our witnesses can tell us what they're doing to reduce the cost of building these submarines and give us their views on the impact of submarine construction costs on surface shipbuilding, including amphibious ships and destroyers.

Third, I'm interested in learning the views of our witnesses on ways we can ensure the Navy's shipbuilding plan meets the demand for amphibious ships from our combatant commanders. This demand has increased more than 80 percent over the last 5 years. I'm particularly pleased that the Navy and Huntington Ingalls signed a memorandum of agreement last month for LHA-7, the second *America*-class amphibious assault ship to be built in my home State of Mississippi.

As we begin to pivot toward the Asia Pacific region, the Navy and Marine Corps will serve as the linchpin of American force projection abroad. Amphibious ships such as LHA-7 will help enable our troops to meet any challenges that our country may face in the future.

Fourth, multi-year procurement authority. This subcommittee will carefully consider in the coming weeks the Navy's two shipbuilding multi-year procurement requests included in its budget submission: authority for the *Virginia*-class submarines and the DDG-51 *Arleigh Burke*-class destroyers. I know members of our subcommittee will be interested to learn how these multi-year proposals will offer the best value to the warfighter and the American taxpayer.

Finally, sequestration. The Navy faces significant budget challenges ahead. The Budget Control Act passed by Congress and signed by the President last August requires sequestration to be implemented across all the departments, including the Department of Defense. Sequestration is not a hypothetical. It is the law of the land unless changed. On January 3, 2013, a mere 257 days from today, sequestration will happen unless legislation is passed to undo it.

Mr. Chairman, our national defense is solely a Federal responsibility. Defense spending is also a two-fer that supports our national security and our high tech manufacturing workforce. As such, I hope our witnesses today will elaborate on their assessment of the impact that sequestration will have on our sailors, marines, and our industrial base.

With that in mind, I look forward to the testimony of all these fine witnesses. Thank you, sir.

[The information referred to follows:]

[SUBCOMMITTEE INSERT]

Senator REED. Thank you, Senator Wicker.

Senator Sessions, do you have any comments?

Senator SESSIONS. Well, thank you, Mr. Chairman, for your leadership. I value that so much. You've been a real asset to the Senate. Senator Wicker, thank you for those good comments.

I would just join—I'm concerned about the sequester. Senator Reed, you know, he is exactly correct. That is in law. We need to be taking some real action to fix it so we don't end up at the last minute.

So thank all of you for your testimony and I look forward to participating.

Senator REED. Thank you very much.

I want to commend my colleagues, too, for their great service in support in a very collaborative and cooperative basis on so many different issues. So thank you, gentlemen.

Secretary Stackley, I presume you will go first; is that correct? Or do you have another preference?

STATEMENT OF HON. SEAN J. STACKLEY, ASSISTANT SECRETARY OF THE NAVY (RESEARCH, DEVELOPMENT, AND ACQUISITION), ACCOMPANIED BY: VADM KEVIN M. McCOY, USN, COMMANDER, NAVAL SEA SYSTEMS COMMAND; VADM JOHN T. BLAKE, USN, DEPUTY CHIEF OF NAVAL OPERATIONS, INTEGRATION OF CAPABILITIES AND RESOURCES (N8); VADM WILLIAM R. BURKE, USN, DEPUTY CHIEF OF NAVAL OPERATIONS, WARFARE SYSTEMS (N9); AND LT. GEN. RICHARD P. MILLS, USMC, DEPUTY COMMANDANT FOR COMBAT DEVELOPMENT AND INTEGRATION/COMMANDING GENERAL, MARINE CORPS COMBAT DEVELOPMENT COMMAND

Mr. STACKLEY. Yes, sir, I'm going to propose that we have a single statement for the Navy and Marine Corps.

Senator REED. That is welcome. Thank you very much. Secretary Stackley.

Mr. STACKLEY. Yes, sir. Thank you, Mr. Chairman, Senator Wicker, Senator Sessions, for the opportunity to appear before you today to discuss Navy shipbuilding. As always, thank you for your leadership on the many issues that fall under Congress' broad responsibility to provide and maintain our Navy and, perhaps most importantly, for your steadfast commitment to our sailors and marines around the world.

With the permission if the committee, subcommittee, I have a brief opening statement and would propose to submit a more formal statement for the record.

Senator REED. Without objection.

Mr. STACKLEY. Thank you.

Today we are about a force of 282 ships, about half of which on any given day are under way, performing missions around the globe, supporting operations in Afghanistan, providing maritime security along the vital sea lanes, missile defense in the Mediterranean and the Sea of Japan, intelligence, surveillance, and recon-

naissance where needed, as needed, global presence at sea and with an embarked marine force, readiness to move ashore.

They're conducting anti-piracy patrols, global partnership stations humanitarian assistance, and they are quietly, reliably on patrol and providing strategic deterrence. And all the while they're training for the next deployment, the next operation.

In support of the defense strategic guidance, we're building toward about a force of 300 warships, ships that will provide the capability and the capacity to maintain our maritime superiority today and for the foreseeable future.

We have reshaped our shipbuilding plan over a year ago to reflect the priorities of the new defense strategy and the reality of fact-of-life top-line reductions consistent with the Budget Control Act. This year's shipbuilding plan strikes a balance between capacity, capability, affordability, and the industrial base.

We have important work to do in order to close out-year gaps or risks identified by the long-range shipbuilding plan. In doing so, we need to drive the equation to deliver the full capability and capacity that 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, an LPD-17 amphibious ship, and a TAKE dry cargo-ammunition ship have joined the fleet. The submarine *Mississippi*, the littoral combat ship *Fort Worth*, and joint high-speed vessel *Spearhead* will deliver this spring. Another half a dozen ships have been christened, keels have been laid for the lead ship of the DDG-1000-class, the mobile landing platform class, and the next littoral combat ship, *Virginia*, and TAKE. And construction has begun on another 11 warships.

In total, since December 2010 we've awarded contracts to procure 38 ships, including options, most competitively awarded, all fixed price contracts, and we're on track to increase that number to 40 this spring with the anticipated awards of the next amphibious assault ship, LHA-7, and the eleventh and final ship of the LPD-17 class. These contracts provide an important degree of certainty to our industrial base in an otherwise uncertain period in defense spending.

We recognize, however, that it is not possible to simply buy our way to recapitalizing our force. We must focus relentlessly on improving affordability in our shipbuilding programs.

This year's 2013 budget request includes funding for 10 ships, including the first year of full funding for the second ship of the *Gerald R. Ford*-class, CVN-79, maintaining aircraft carrier construction starts on 5-year intervals. CVN-79 is required to deliver in 2022, which aligns with the end of service life for *Nimitz*, the ship CVN-79 will functionally replace to maintain an 11-aircraft carrier force structure. This provides schedule flexibility, which is important for this ship for it enables the Navy and the shipbuilder to develop and implement a more affordable build strategy that incorporates the findings and recommendations emerging from lessons learned in the design and construction of the lead ship CVN-78.

We continue with *Virginia*-class fast attack submarine procurement at two boats in fiscal year 2013 and are requesting authoriza-

tion of a nine-boat multi-year procurement commencing in fiscal year 2014. The *Virginia* program reliably delivers critical undersea capacity affordably and on time, in large part due to multi-year savings resulting from economic order quantity opportunities, improved workforce planning, and workload sequencing, optimized construction scheduling, increased opportunities for facilities investment, and reduced support and engineering workload.

Within this request, however, top-line constraints have forced the Navy to defer a planned second boat from fiscal year 2014 to fiscal year 2018.

We're requesting funding for two Flight 2A DDG-51 *Arleigh Burke*-class destroyers in 2013 in conjunction with the multi-year request for nine ships, projected to save \$1.5 billion. This strong-performing, stable program provides much-needed ballistic missile defense capability and capacity to the fleet.

Key to meeting the growing ballistic missile threat is our air and missile defense radar program, which will greatly improve the sensitivity and long-range detection and engagement of increasingly complex threats. In the course of the AMDR competitive development, we've witnessed impressive progress, while assessments of technology maturity steadily improve and estimates for cost steadily decline.

We are continuing to execute the dual-award strategy for littoral combat ship. In 2013 we're requesting funds for 4 ships and a total of 16 ships across the future years defense program. Program affordability continues to improve as we ramp up production. Notably, the fixed price options for the tenth ships of these block buys are about half the cost of their respective lead ships. Likewise, the ships' mission packages are moving smartly forward in developmental testing in support of initial operational capability milestones.

With five LPD-17-class ships in various stages of construction and the lead ship of the *America* class preparing to float off this summer, our shipbuilding program continues to build towards the amphibious lift capability required for the assault echelon of two marine expeditionary brigades in support of joint forcible entry operations. Quality continues to improve with each ship delivered on the Gulf Coast and we are likewise working closely with the shipbuilder to improve cost and schedule on these critical programs.

While today we are finalizing contract details for LHA-7, we are requesting funding in 2013 to begin design for the fiscal year 2017 assault ship, LHA-8. Although we have shifted our plans to procure the replacement for the LHD-41-class amphibious ships beyond the future years defense program, we are pressing on with the LSDX analysis of alternatives this year in advance of preliminary design.

We're continuing to increase our logistics lift capability with the tenth joint high speed vessel and the first of three mobile landing platforms, or MLPs, currently under contract. As well, to meet Central Command's requirement for an afloat forward staging base, the Navy has requested funding to modify the third MLP and advance procurement toward a fourth fiscal year 2014 MLP for this mission. This highly versatile four-ship MLP class will then sup-

port the two maritime repositioning squadrons as well as the AFSB mission.

In view of fiscal constraints, we are shifting procurement for the lead ship of the *Ohio* replacement program to 2021. This two-year shift defers \$8.5 billion of cost beyond the next decade—beyond this decade, while providing opportunity to reduce developmental risk by increasing the new ballistic missile submarine's level of design completion and maturity. Equally important, we'll need to employ this time to further our efforts to drive down costs in every stage of development, engineering, construction, operations, and support on this program.

However, the delay will result in a temporary reduction to 10 available SSBNs in the 2030s. With no major SSBN overhauls planned during this period, the risk associated with meeting at-sea present requirements is assessed to be moderate, but manageable.

The strength of our shipbuilding plan is closely coupled with the strength of our shipbuilding industrial base. Over the past several years, the Navy has placed a priority in increasing shipbuilding rates and providing stability for the shipbuilding industrial base, which 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.

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 continue to be closely weighed.

One of the greatest challenges to our future shipbuilding program and therefore elements of our industrial base is the rapidly increasing cost of our ship programs. To this end, in addition to the emphasis on stability, 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 costs 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.

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. In view of increasing pressure on our top line, it's equally paramount that we, Navy and industry, continue to improve the affordability within our programs in order to build the Navy needed by the future force.

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

[The prepared statement of Mr. Stackley follows:]

Senator REED. Thank you very much, Mr. Secretary, for an excellent statement.

Mr. STACKLEY. Thank you.

Senator REED. Let me go back to the issues in terms of submarines. As you indicated, we had reached, I think, some significant economies, producing the ships under budget, on time, two per year. Now we're in a situation where we're going to skip a year. That will have implications on the ability to maintain these efficiencies in the shipyards and it also will cause some disruption, which usually ends up in paying more ultimately than paying less.

I know you had to make some very difficult decisions, but I wonder if there is a way to restore a second boat to fiscal 2014 or to mitigate the effects of the delay. And can you describe sort of in more detail, if you feel it necessary, the reasons for the delay and what could be done to fix this issue, and is legislative authority necessary?

Mr. STACKLEY. Yes, sir. Let me start with the—let me just punctuate your assessment of the value of two per year and the efforts that were taken to get to that rate of production and our intent and desire to be able to sustain it. First in terms of force structure requirements, our requirements for attack submarines is laid out fairly well in the 30-year shipbuilding report and states squarely that 48 boats, 48 attack boats, is what the Nation needs in order to meet our requirements near term, long term.

Today we have greater than 48 boats in the force. But, however, in order to sustain 48 boats you have to, if you do the math, assuming a service life of about 33 years, you need to be building at a rate of 1 to 2 per year sustained. We've endured a long period of submarine construction when in fact we were building at one and in certain cases zero submarines. So while today we have a force greater than 48 boats, when you look ahead to the late 2020s and 2030s our force structure will dip down as a result of that past low rate of submarine construction.

So two per year, not only is it beneficial from an industrial base perspective, but it's critical from a force structure perspective that we sustain two per year in the near term as best as possible to minimize that longer term force structure gap.

Now, why are we staring at a one-boat year in 2014? This is simply the, I'll call it, the hard line that came with the new top line. In the Navy's budget submit, and frankly with OSD throughout the budget process, everything—I will state that everything that could be done within the top line was done to hold onto that second boat in 2014. But in the end, in the end, we had to compromise on that second boat in order to balance, and in doing so we moved it from 2014 to 2018, kept it within the multi-year, which mitigates some of the impact. But it was perhaps one of the harder decisions that the Navy had to deal with.

Now, let me address the next part of your question, which is what are our alternatives at this point. When we were faced with making that move, first as it was important to keep it in the multi-year because we want to at least work with industry to level load to the extent possible that dip in 2014—but we also simply looked at the, I'll call it, the funding. In order to fully fund a second boat in 2014, it would require, first, advanced procurement in 2013, plus the balance of full funding required in 2014.

That total is north of \$700 million. It's approximately \$777 million in 2013 that would be required, as well as a balance of greater

than \$1.2 billion in 2014. We couldn't get there within our top line. We couldn't get there.

Now, when it comes to executing at shipbuilding, the reality is that, while we fully fund ships, our outlay rate is drawn out over a longer period of time. So for a particular program such as aircraft carriers and large-deck amphibs, where there's such a significant spike in the budget in the full funding year, the Navy, working with OSD, OMB, and the Congress, have adopted an incremental funding approach that smoothes out that spike, because what we need to do is ensure that our outlays and obligation rates are covered by the funding in any particular year. If we go to that alternative funding mechanism, then it smoothes out the spike.

We are—in many respects, we're looking at a similar circumstance here with *Virginia*. That additional boat in 2014 created a spike for us in the budget and, absent the ability to other than fully fund the boat, we had to push it to the right. So we have looked at what it would take to restore the boat within the top line, and a couple of things happened.

First, when you add the boat, in addition to addressing the requirement, when you add the boat you generate savings associated with additional economic order quantity material, savings associated with sustained learning curve performance, as opposed to a potential negative learning curve performance, savings associated with improved planning.

Every step along the process you generate savings by having that second boat in 2014. If you then look at the total *Virginia* program and you look at the bottom line for the total *Virginia* program and you assess, without tripping over full funding versus incremental funding discussions, assess at the bottom line what is the net cost impact of adding a second boat in 2014, it's near neutral, near neutral.

In other words, the net savings associated with pulling the boat to the left, effectively adding the boat by pulling it to the left, outweigh the up-front costs associated with that. The trouble is that in the budget framework requiring full funding we don't have that top line to do that.

So the long-term savings associated with the second boat balance out the up-front investment required by the second boat, but within the constraints of our budget we were unable to get there.

Senator REED. You might be able to help us help you get there through appropriate legislative language. Is that feasible? My final question.

Mr. STACKLEY. Sir, let me propose that what we owe you is the math that underpins that.

Senator REED. Right.

Mr. STACKLEY. Then we could work with your staffs to address the total picture and leave that for your action.

Senator REED. That is very fair.

I have many additional questions, but let me recognize Senator Wicker so everyone gets a chance to engage, and then Senator Sessions, and then I'll pick up with the second round.

Senator WICKER. Well, to pick up on some of the questions I mentioned in my opening statement, the Navy's long-term 30-year shipbuilding plan, which indicates we'll build ships at a min-

imum—at minimum sustaining rates—and I realize there are funding constraints that we all have to work with. But I'm particularly concerned about the proposed construction of new ships that will lead to job reductions, that we're going to have to make up for later on.

I think all five of you agree and all three of us up here agree, it's irresponsible to think that we can lay off skilled workers, engineers for example, and expect them to be available when future contracts are awarded. This is the peaks and valleys that we've talked about. I know the Navy's concerned about employment valleys.

Admiral McCoy, I may just let you go first on this, and I'm sure Secretary Stackley will want to follow up. Is the number of ships currently planned enough to keep the Navy's six major shipyards in business? And if we don't keep them in business, what does that do to competition going forward in the medium term and long term? Does it make us rely long-term on more sole source contracts because we don't have enough yards competing? And what are you gentlemen doing to think of every possible option for avoiding these employment valleys that we can't recover from in a decade when we need those jobs again?

Admiral MCCOY. Senator, thank you for the question. I think if you look out over certainly the next five years, I think the answer to your question is yes, there's workload out there in each one of our big six shipyards—well, except for the actions that Huntington Ingalls is taking relative to their Avondale yard, so big five shipyards. There is that work.

There are peaks and valleys that we do have to manage. I will say that three of our yards—Electric Boat, NASCO, and Huntington Ingalls-Newport News—are also in the repair business, and we work very, very closely with those three yards to level load the repair business along with the spikes and valleys in the new construction business. One, for example, is Electric Boat. We are closely coupled on the nuclear submarine repair business with the naval shipyards. Today, for example, on any given day we may have from 200 to 300 Electric Boat employees anywhere around the country in one of our four naval shipyards helping us with peaks and valleys, so that we minimize overtime in naval shipyards and things like that.

So we are constantly looking across the industrial base at those peaks and valleys to see where, between post-shakedown availability work, where it makes sense repair work, those kinds of things, Senator.

Senator WICKER. Let me interject, and I know you haven't given a complete answer yet. Is the repair work at all a possibility for Pascagoula? Is that something you've discussed at all?

Mr. STACKLEY. May I?

Senator WICKER. Please.

Mr. STACKLEY. Yes, sir. Well, first, sir, when it comes to repair work, there is a home porting policy that we're not going to ship a ship out of its home port for limited repair availabilities. What that means is for Huntington-Ingalls Industries on the Gulf Coast, they would only be—they would only have the opportunity to compete for major repair availabilities that are bid coast-wide. Those

are limited in number. But when we bid coast-wide it is an open competition.

So it's up to in this case HII to choose to bid. Now, the back end of that is would they be competitive in the bid? In other words, if you have a ship construction yard that's competing against a repair yard and you look at the total associated with the competitiveness, the rate structure, the overhead costs that you carry with a shipbuilder, they have to assess whether or not they're competitive to determine whether they will compete for those bids.

Senator WICKER. So it's not a conversation you've really had with Ingalls in Pascagoula?

Mr. STACKLEY. It's—actually, we have talked with regards to major modernization for combatants, and particularly the Aegis modernization program when it was in its formulation stage, whether or not the building yards would have the opportunity to bid. There have been alternatives that we looked at and continue to look at. But today those availabilities are captured within the six-month time frame of a home port—within the home port policy, and so it's been beyond their reach.

Senator WICKER. Admiral McCoy, I did cut you off in mid-statement. So I want to give you an opportunity to complete your thought.

Admiral MCCOY. That was basically what I had to say. So to sum up, I'd say, yes, over the next five years we see enough work for the yards. There will be peaks and valleys and we are working with them all the time to see what legitimate other work we have that can help them through that period, where they can be competitive as well.

Senator WICKER. Okay. Well, let me ask—let me ask you this, Secretary Stackley. Secretary Napolitano was testifying March 8 before the Appropriations Committee and she was asked by Senator Murkowski about the Coast Guard's future shipbuilding plans. Now, let me just read her response, and I quote verbatim. The Secretary said this:

"In light of what the Department of Defense is doing with respect to its budget reductions under the Budget Control Act, we are coordinating with naval operations, looking at what the Navy is doing with its assets, then really correlating on what 7 and 8"—meaning National Security Cutters 7 and 8—"would do should they be built. So we think that, given where we are with the budget and the fiscal environment, before moving on numbers 7 and 8 we want to make sure we're coordinating with the Navy."

The 30-year shipbuilding plan does not mention Coast Guard cutters. Can you explain what coordination there is and what Secretary Napolitano could have been talking about? Is there coordination between the services and DOD, DHS on ensuring that shipbuilding—that the shipbuilding rate is meeting our commanders' requirements?

Mr. STACKLEY. Yes, sir. There's going to be a two-part answer to this. I'm going to answer the first part and ask Admiral Blake to answer the second part. The two parts have to deal with, first I'll call it a memorandum of agreement between the Navy and the Coast Guard when it comes to, I'll call it, force responsibilities, that I'll ask Admiral Blake to address.

The other part of the coordination side is on the procurement side, and there's a very healthy dialogue in place between the Navy and the Coast Guard regarding the national security cutter, as well as the other elements of the Coast Guard recapitalization program.

So we have detailed discussions in terms of how we the Navy can help the Coast Guard in its procurement efforts while separately, at the CNO and Commandant level, there's the larger discussion taking place regarding how the Navy and the Coast Guard operate together, not just in terms of missions and capabilities, but service to service.

Senator BLAKE. Sir, the Navy and the Coast Guard, and the Navy and all the services, have—we have a series of meetings, we call them warfighter talks, in which we discuss areas in which we can find commonality. One of the challenges we have is the different requirements that each of the services have. Where we can find commonality among requirements, then we proceed down that path.

For example, if you look at Coast Guard ships, Coast Guard ships have many of the same systems that we have on Navy ships. But where we have a tendency to, if you will, diverge as we're heading down that path is because of the differing requirements that each of the services comes to the table. But for both efficiency and effectiveness, we attempt to find as many common areas as possible and then go down those paths.

Senator REED. Thank you, Senator Wicker.

Senator SESSIONS.

Senator STACKLEY. Thank you.

Secretary Stackley, the Secretary of the Navy and the CNO testified before our full Armed Services Committee and the Secretary of the Navy has met with me, describing the improvements made with the LCS, littoral combat ship, in its cost and schedule. Recent press articles describe problems with the LCS, including Defense News on April 5th and the New York Times.

What is your assessment? It seems to me these articles are basing their concerns on older data. Maybe we're not getting the word out about the progress that I understand is occurring there. The LCS is such a critical part of the Navy's future. It has fewer sailors, higher speeds, less fuel cost, and remarkable capabilities.

So I guess I would ask you, if you would, tell us where you think we are in that system?

Mr. STACKLEY. Yes, sir. And again, I'll look to share this response with Admiral Blake. But let me start with the platform. The history of the startup of this program is well known. I'm not going to replot that turf there. However, as I mentioned in my opening remarks, we have the first follow ships, one near complete. The LCS-3 up north is completing her builder's trials, getting ready for acceptance trial, to be delivered this spring.

Near textbook. It's going extremely well in terms of schedule, in terms of being on target, in terms of quality of construction. That's the result of not just plowing in the lessons learned from the lead ship, but the significant investment that was made by that shipyard to support this construction program.

Separate and very similar on the Gulf Coast. Austal, which is 9 to 12 months removed from the construction up north, simply by

the sequencing of the contracts. Again, plowing the lessons learned, investing in the facilities, accomplishing the training that needs to be accomplished for the workforce, cleaning up the design. And we're seeing the same rate of improvement on the Gulf Coast.

So both construction efforts north and south are quickly capturing lessons learned from the lead ship, making the investments necessary, and on the production ramp that we need to see to support the 55-ship program. That's the construction side. So we see stability, we see steady improvement, we see good cost returns on the front end of this dual block buy strategy.

Now we have to be talking about mission packages. The mission package development efforts, we have today three-plus mission packages in development: mine countermeasures, anti-surface warfare, and anti-submarine warfare. As well we have a search and seize, a small module that we've put to work. These are developing—they're conducting development testing to support their initial operational capability milestones in 2014 through 2016 time frame.

This spring, for example, we conducted the first shipboard demonstration of the mine countermeasure mission package on board the *Independence*, working down at the Navy's Warfare Center in Panama City. The first time we brought all the elements that make up the first increment of the MCM package to the ship, operated with sailors. We learned some things, but we also demonstrated the ability to conduct these mission scenarios using the unmanned and remote operated vehicles that make up a large part of the LCS mission package.

So the development and testing for the mission packages, in that case MCM, separately the anti-surface warfare mission package, testing, and in fact we'll be outfitting the LCS-1 with the first increment of the anti-surface warfare mission package when it deploys next year to Singapore, and then development of the ASW mission package, all moving forward.

So that effort lags the construction time frame by deliberation so that the ships and mission packages are all IOC-ing in the middle of this decade.

The third important piece is fleet introduction. So we have one lead ship on the West Coast, LCS-1, and LCS-2, right now making its way to her home port in San Diego. So we're on the front end of fleet introduction at the same time. As with any new ship class, we learn a lot. We also train up a sailor force that becomes proficient in this ship class.

So we're on the front end of this program. I don't spend too much time studying the reports that come from the press other than to be aware of what information is out there and try to correct any misperceptions. But she's going well. We're learning a lot. We look forward to deploying LCS-1 next year, and we've got a lot of work that we have to do to make sure that when she deploys she is well supported and succeeds in all the mission areas that we assign to her.

Senator SESSIONS. You don't see any cost or technical problems of great concern to you at this point?

Mr. STACKLEY. I think cost under control. I think I've addressed that fairly well.

Senator SESSIONS. You indicated—I thought I heard you say the tenth ship would perhaps be half the cost of the first ship?

Mr. STACKLEY. Inside of our block buys, each tenth ship—in other words, for each shipbuilder, when you look at the fixed price option—that’s a 2015 ship. When you look at a fixed price option for those ten ships, they’re at about half of the lead ship’s price. Now, this is you have to take escalation out and put them all in the same base year dollars. But it’s a very impressive learning curve that these shipyards have committed to inside of those fixed price contracts, and that they’ve put the investment behind to ensure that they hit the numbers.

Senator SESSIONS. And the Navy hasn’t changed its view of the important role it would play in the future fleet?

Mr. STACKLEY. No, sir, and I think I should allow Admiral Blake to address that.

Senator SESSIONS. Admiral Blake.

Admiral BLAKE. Yes, sir. I would tell you the LCSs are replacing three classes of ships. They’re replacing the PCs, they’re replacing the MCMs, the minesweepers, and they’re replacing the FFGs. It’s because of the—I think that alone just gives you an idea of how critical these are to the future of the Navy. We’re being able to replace three classes of ships with a single class because of the fact that we are going to modularity.

I’ll just anchor for a second on the *Avenger* class, the minesweeps. They’ll be starting to come out of service in fiscal year 2019. When those ships start coming out, we’ll be bringing the LCSs on line. One of the big or key transformations in there is that we’re going to be able to get the man out of the minefield. In the current technology, we have to put the man in the minefield in order to be able to clear it. When we go to the LCS with its modularity, we will be able to take the man out of the minefield. We’ll be able to use unmanned vehicles. We’ll be able to use helicopters, which we currently use, but we’ll be able to get that individual out of there. So we’ll be able to keep our sailors out of harm’s way, or out of harm’s way as opposed to where they currently are, which is in the field.

You can look at each of the modules that are coming on line, whether it’s the surface one or the ASW module, and I think you would see that these are absolutely critical, that we have to fill in for these as those assets come out of the fleet.

Senator SESSIONS. How old are these, the current minesweeper fleet?

Admiral BLAKE. I’d have to take that one, sir. I’d have to get you the age. But they’re coming to the end of their expected service lives, starting with the ones in 2019. But I’d have to get you the exact age on all of them.

Senator SESSIONS. I was on one a number of years ago. It was pretty old.

Admiral BLAKE. Yes, sir. Yes, sir, they are.

Senator SESSIONS. That was a number of years ago.

Admiral MCCOY. Senator, may I jump in on your question about technical concerns?

Senator SESSIONS. Yes.

Admiral MCCOY. One of the things about LCS was the first two ships in fact are research and development platforms. They were bought with R&D funds. Normally we have a fairly—on a new ship design, a fairly robust R&D program ahead of the ship. These were our R&D platforms. In fact, we went, if you look at LCS-1, we went from concept of the ship to deployment in 7 years, which is a record for the U.S. Navy.

On every single one of our new classes, even ones that we put R&D money in upfront, we learn technical issues on the first of the class, that we feed back into the subsequent ships. And we've learned on LCS as well. But if we take LCS-1, it did a Fourth Fleet deployment, then took it out to RIMPAC, took it out to Hawaii, rode it very hard for 25 days out there, most of the time at very high speed, brought it back.

We've had some technical issues, but nothing that would tell us that the platform itself is fundamentally unsound or will not be a very well performing ship in service. And every time we find something, we fold it back into the construction line, sir.

Senator SESSIONS. Well, thank you.

Mr. Chairman, thank you. We are concerned about the size of the fleet and that budget-driven fact is a problem and I think, as you answered, Mr. Stackley, and our chairman here mentioned, sometimes we just have to find the money, Senator Reed, because it costs so much to delay, put off the construction. It has so many ramifications not to stay in track at an efficient level of production. Maybe we'll have to—so we value, Mr. Stackley, your judgment and insight, and I hope you will keep us posted.

Thank you.

Senator REED. Thank you very much, Senator Sessions.

We'll begin a second round. If necessary, we'll do a third round. These are all very good questions.

I think we're focusing on some critical issues in the shipbuilding program. Last year we had a very, very good hearing. Admiral McCoy attended, Captain Galinis from the Gulf Coast was there. Mr. Secretary, you were there also, and others. And at that hearing we recognized that there were some serious problems with quality and cost, but that you were seriously engaged, Admiral McCoy and your colleagues, in dealing with the cost issues and dealing with the quality issues, too.

So could you give us an update—and this reflects a lot of my colleagues' comments, too—of the measurable progress we've made going forward in these shipyards and assurances that we've now reached a point where costs are under control and quality is acceptable?

Admiral MCCOY. Yes, sir. Let me start with quality, because if you don't get quality right you're cost isn't going to be right. We've worked very, very hard with both the shipbuilder on the Gulf Coast as well as my Supervisor of Shipbuilding Office. Since 2007 or so, I've increased the staff of my team down there by about 20 percent. One of the things we've done over the last three years very, very hard down there is get the supervisor of shipbuilding as well as the shipbuilder focused on fundamental, everyday deckplate compliance.

We look at four key areas: piping, electrical, structural, and coatings, areas where we had the problems with the LPD-17 class, for example. In addition, we took the lessons learned from the fleet introduction of the LPD-17 class and we made a significant number of design changes and we folded those back into the line, and some of those we still have to put, backfit onto our ships, principally in the area of how do we keep blue oil clean and making smart system design changes there.

Since those efforts, we delivered LPD-22, USS *San Diego*, soon to be USS *San Diego*, be commissioned in about a month. It was delivered in December. That ship went through the most rigorous acceptance trials we've had to date. In fact, we added what I call an endurance trial just to—it was actually a third trial after the builder's trial and acceptance trial, and then an endurance trial, where we ran the ship's main propulsion diesels as well as the ship service electrical diesel generators, ran them very hard for a period of time, and then we came back in port, we rolled out bearings, did inspections, and in fact verified the oil was clean, no scoring, that kind of thing.

San Diego just made the transit from the Gulf Coast, reached its port of San Diego about two weeks ago. So very successful. In fact, the remarks from NSRV in terms of the number of deficiencies in their report was the best ever LPD-17 class.

On top of that, in the last two years I've brought an outside audit team in three times—they're going back in this fall—of outside experts, not only to audit the shipbuilder, but also the supervisor of shipbuilding.

So I think I am satisfied that on any given day fundamental compliance is happening back down at the yard. Now, we look at those metrics every week with the—I've got my folks intently focused on out and doing inspections, as well as the yard, and we compare those notes, and I'm satisfied at this point, and we're now in a sustainment mode to make sure we don't lose ground.

I think cost is one area where we still have work to do. The cost of compliance of quality in the yard is still high and the yard is working on that. We are working with the shipbuilder on moving more work to the left in the build cycle, more outfitting, to get the cost down. We're working with them on the material builds in terms of better pricing and that kind of stuff.

So we still have a ways to go with costs and along with that schedule. But I'm satisfied right now that quality is where it needs to be. We just need to drive the cost of obtaining that quality, continue to drive that down, sir.

Senator REED. Thank you. And this further question, Secretary Stackley, is who shares those costs? I mean, this is part of the contractual arrangements going forward, but also these were bid, there was the presumption that they could deliver quality with the costs that they stated. Those costs are still challenging. So how are we not only reducing costs in the present time, but as we go forward, with our contractual arrangements making sure that we don't absorb costs that should be properly done by the contractor?

Mr. STACKLEY. Yes, sir. Generally speaking, each shipbuilding contract has its own terms and conditions and cost structure. So who pays or what the share is for those costs, it's a contract by con-

tract discussion. However, as I mentioned in my opening remarks, the ships that we have, the 38 ships that we've put under contract since December of 2010, are all fixed price ships. Some of those are firm fixed price, in which case all of the costs of rework or any cost growth is on the shipbuilder's side of the ledger.

Most of those are a fixed price-incentive contract, which means that there is a share line associated with cost growth, and in almost every case it's a 50-50 share line, which states that, regardless of the cause of the cost growth, if the shipbuilder's costs increase we share those costs 50-50 up to a point of total assumption, in which case the shipbuilder then—it converts basically to a firm fixed price contract at that point in time.

We believe that's the right cost structure and it's proven very effective over time, over our shipbuilding history, to control costs.

So the several steps to this are: Before going into the contract, make sure your requirements, your design, your specs are all nailed down, so there's not unnecessary churn that's driving cost growth; and then make sure of processes and procedures, the build plan, that contribute to controlling quality are in place; and then—and then in the event of additional cost growth, it does appear on a 50-50 share line up to the ceiling.

In the case of the ships that were just—that Admiral McCoy discussed on the Gulf Coast, in fact those ships are at ceiling, in which case the cost growth was the burden of the shipbuilders beyond the ceiling.

Senator REED. Thank you.

Let me turn quickly now to the *Ohio* replacement. As we mentioned, Secretary Kendall was here and he conceptually agreed that, because of the role of the *Ohio*-class replacement in the strategic triad, that this is not strictly a Navy program; this is a DOD program, a national program; and that he seemed to be open to efforts to provide support for the Navy.

It goes back to the question that Senator Wicker posed, too. At some point you could have one class of ships that are necessary, but crowd out other necessary ships without this type of DOD support.

So are you actively working with the Department of Defense to develop support, financial support, for the *Ohio*-class replacement?

Mr. STACKLEY. Sir, the answer is—I'm going to say the answer is yes. Now, you have to recognize that actively working with the Department of Defense on a procurement program that's eight years away, it's hard to nail something down today that when you get out there it will still be in effect.

So for today we're talking about planning. So inside of the 30-year shipbuilding plan that we submitted as a report to Congress, we lay out today's force structure, the procurement plan over the next 30 years, and what it would cost to support that procurement plan. In fact, OSD has provided for planning purposes some head room in the years of the *Ohio* replacement construction program to give the Navy the ability to better accommodate it. That's not full head room. That's simply if you look at the average shipbuilding investment between now and the start of the *Ohio* replacement program and then you look at the period of the *Ohio* replacement

program, there's about a \$2 billion per year hedge that's been allowed for the Navy for planning purposes.

So today, in the long-term planning phases we provide some room for—"we" being the Navy, working with OSD, provide some room for planning purposes. But we have to relentlessly hammer on this issue between now and when that becomes real money inside the FYDP, or what we'll be looking at is a shipbuilding plan that's not executable.

Senator REED. Admiral Blake, please.

Admiral BLAKE. Sir, when we put the 30-year plan together, one of the good news items that comes out of that is the fact that we highlight issues like the fact that when you're in that second period of 5-year defense plans from the 2019 period out, that you are—we highlighted the fact that the SCN plan at that point will go up over \$4 billion. It will go from a \$15.1 billion average, which we're currently in in this FYDP and the next, it'll go up in excess of \$19 billion.

So what we end up doing is, as we point that out to DOD, they recognize, as you saw in the plan, that there is a significant challenge for the Navy because that is such a steep curve as we're trying to balance across the entire portfolio, and that there will have to be something done in order to be able to keep a balanced program.

Senator REED. Thank you very much.

We've been joined by Senator Blumenthal. We recognize Senator Blumenthal for his questions and then Senator Wicker, and I have other questions and I'll finish up. Senator Blumenthal.

Senator BLUMENTHAL. Thank you. Thank you, Mr. Chairman, and thank you all for your great work in the Department of Defense on behalf of our Nation and the men and women under your command.

I want to follow up on the questions that have been asked about the *Ohio* class, in particular whether the 2-year delay will achieve substantial research and development progress that will in the long run save money as well as advance the superiority of the weapons system. Is that your view?

Mr. STACKLEY. Yes, sir. And if I could simply outline what is being done inside the two-year delay. First, as we look at this we have critical path activities that need to support the start of construction for the *Ohio* replacement program. So when we lay out the time frame between now and the 2021 procurement, we keep the critical path activities on track.

In total, between now and that start we have increased R&D investments. The R&D budget between now and 2021 is more than a billion dollars above what it would have been for a 2019 start. So there is, I'll call it, R&D wholeness that will contribute to continued development, critical path activities, greater design maturity, and overall risk retirement going into the start of construction of the *Ohio* replacement program.

There's also a parallel program with the United Kingdom. They're replacing the Vanguard, their strategic deterrent submarine, at about the same time frame. So we have an effort, referred to as the Common Missile Compartment, which is common to both the United States and the United Kingdom's submarine

programs. That is staying on track to the United Kingdom's schedule.

So what that means is that is slightly ahead of the U.S. submarine program now. That means that that entire effort and the risk associated with it will be reduced, the risk will be reduced for the U.S., by virtue of the fact that we'll be staying on the U.K.'s schedule. So there's direct improvement to risk management associated with the Common Missile Compartment. There's direct improvement to retiring risk in developments through the total of additional R&D investment during the time frame.

What's absolutely critical, absolutely critical, is that we manage the money and the time wisely, so that when we get to the start of construction for the *Ohio* replacement program we are at a higher level of design completion, a higher level of technology maturity, and we've taken advantage of this time and opportunity to find those ways to reduce cost in the program.

Senator BLUMENTHAL. My understanding is then that this two-year delay continues our schedule to be in sync with the British; is that correct?

Mr. STACKLEY. The two-year delay—as a result of the two-year delay, the successor, the U.K.'s successor program, is ahead of the U.S. *Ohio* replacement program. The parts of the respective programs that are common, which is the common missile compartment, which it's a section of the ship that includes the strategic weapons system, that is staying on schedule to support the U.K.'s successor program.

Senator BLUMENTHAL. Going to the *Virginia*-class submarine, I have followed a number of the questions and your answers in response to Senator Reed's inquiries about it. Number one, I just want to second that I hope that perhaps this subcommittee and the full committee and the Congress can work with the Navy in seeking to restore that funding for the boat that was pushed to 2018 because of the savings that I guess you have mentioned, the potential savings that you have mentioned in connection with building that second submarine in 2014.

If there is a way to avoid the budget spike in cost that right now has caused the delay, if there is some accounting or legislative language that could be devised, I'm very eager to join with Senator Reed on working on that.

Mr. STACKLEY. If I can just state it as squarely as I can, today you are working on the 2013 budget. The options before you include adding money to the Navy's budget to support the advance procurement of a second 2014 budget, and the total there is north of \$700 million. If you do that, that leaves the Department about a \$1.2 billion bill in 2014, which is the same problem that we confronted in building the POM 2013, that we don't have the head room for that \$1.2 billion.

So that would be a significant reduction in the bill for the Department of the Navy, but it does still leave us with a problem in 2014 that we'd have to address in the POM.

The other alternative, frankly, is incremental funding, which is not in accordance with policy. Policy would dictate that we fully fund the second boat—we fully fund each boat in the multi-year procurement. And I'm simply going to state that these are extraor-

dinary times. This is an extraordinarily important program and this is a fleeting opportunity. If we don't capture that second boat in 2014, the opportunity cannot be recovered in terms of force structure, in terms of savings potential, in terms of the industrial base.

So under these extraordinary times, it is perhaps appropriate that the Department and the Congress look at whether or not this is the right time to provide an exception to full funding. It has its drawbacks, going to an incremental funding approach. We explore it and we would welcome a discussion with the Hill in that regard.

Senator BLUMENTHAL. Well, I would welcome a discussion as well. And I very much appreciate your putting it so squarely and, I might say, eloquently, and I think that the burden is on us to recognize that we are in extraordinary times. We face extraordinary challenges, but also extraordinary opportunities to make sure that we meet our obligations, take advantage of the opportunities to secure our undersea warfare capability at the least possible cost in the long term.

So I welcome your responses to Senator Reed and just now to myself, and I hope to follow up with you.

Mr. STACKLEY. Sir, the only thing I think it's important to add is, the Navy's willingness to have this discussion is underpinned by the strong performance on the *Virginia* program. Otherwise we wouldn't even consider it. So it's the strong performance on the *Virginia* program. It's the fact that we, the Navy, Department of Defense, and we look for Congress to follow, are willing to make the long-term commitment associated with multi-year procurement, that that offsets, I believe, concerns associated with incremental funding during that period.

Senator BLUMENTHAL. I think you've just stated a very critical factor in this discussion, which is that the performance under this program ahead of schedule, under budget, consistently and reliably, I think, is another extraordinary circumstance that has to be part of this discussion to justify incremental funding. So I welcome your responses.

Thank you.

Senator REED. Thank you, Senator Blumenthal.

Senator Wicker.

Senator WICKER. Thank you.

Admiral Burke and General Mills: From an operational perspective, the Navy budget calls for decreases in large amphibious ships, among other categories. In my opening statement, I mentioned the requests from combatant commanders for amphibious ships has increased over 80 percent in the last five years, a very dramatic number. What is the reason for that and what will be the impact if these requests are not met?

Admiral BURKE. Senator, thanks for the question. You're right, the COCOM demand signal has gone up significantly, to the point where if we were to meet all their requirements it would take a Navy of greater than 500 ships. So I certainly am not here to begrudge the COCOM demand signal because they have challenges that they're trying to deal with. But we can't meet all their demands.

So there is a process in the Pentagon, run by the Joint Staff, called the global force management process, by which they take in the COCOM requirements and adjudicate that along with the forces we have to come to a reasonable allocation of force. So that's a process we're dealing with today. We've been using that process for a number of years and I would expect we will continue to use that process in the future to bridge the gap between supply and demand.

General MILLS. Senator, if I could just add to that, I would say the increased demand really is testimony to the flexibility, the versatility, the value of our forward-deployed amphibious forces, what it gives to those COCOMs out there who use those forces, I think, across a large range of mission sets. So I think it's a testimony to how valuable the forces are to our people out there who are doing the job.

You know, as we look at the inventory of ships, I think we look at it in three ways. We certainly look at it in the ships it takes to maintain that forward presence on a day to day basis, and provides those tools to the COCOMs for their engagement, for their crisis response, etcetera. We look at it for the ability to give training opportunities for our home-stationed forces who need to train with those amphibious ships in order to build both our skill sets and our interoperability with the Navy. And of course, we have been I think relatively clear in our requirement in the event of a major crisis that we need 30 operationally available, ready amphibious ships at the point of action, and that we have worked with the Navy closely as they developed their shipbuilding plan over the next 30 years to take a look at those requirements and plan to meet them.

Senator WICKER. General, when we drop below 30 to 29 what's that going to do to your capability?

General MILLS. Again, each time we have dropped the number of our requirement I think it's been an acceptance by us of additional risk at each step along the road. I think that we worked very closely again with the Navy so they understand what the requirement is and that they do their best to meet them.

I think in the long range we're poised well to meet those requirements. In the short range, there is risk. There is risk associated.

Senator WICKER. Can you help us understand that risk? Can you be a little more specific?

General MILLS. I think the risk comes in in the event of a major crisis it would be incumbent upon the commander who is moving forward to work, to decide what he could or could not bring along because he didn't have the capability to load it on board the ships. He'd have to seek mitigation through other processes, either other transportation venues or he would have to simply take that risk that he initially on the beach would have less than what he had initially anticipated.

Senator WICKER. Okay. And then finally, let me—I alluded to sequestration, Secretary Stackley, so I'm going to let you comment on that. Has OMB provided the Navy with specific guidance on sequestration? Will you be required to submit a revised plan that takes sequestration into account? And have you initiated contingency planning for sequestration?

Mr. STACKLEY. Yes, sir. I'm going to share this response again with Admiral Blake. But let me describe that the first guidance has not come down regarding sequestration at this point in time. Today we're literally in the middle of our build for POM 2014, so we're going through establishing the fiscal years 2014 through 2018 baseline, which clearly starts with POM 2013 and makes adjustments and changes associated with the top line and associated with the total program.

So we're moving forward with POM 2014 build, in accordance with a schedule that supports submitting the budget to the Hill next February. And we'll complete those deliberations inside the Department of the Navy this summer.

At that time, we expect OMB, working with Congress, to make a determination regarding sequestration planning. I can state that, and it's been stated before by the Secretary of Defense and the Secretary of the Navy, that if we have to adjust our top lines to reflect another half trillion dollar, potentially half trillion dollar reduction to defense, the defense budget over the ensuing decade, we're looking at an entirely different force, an entirely different force.

The first half trillion dollars that we reflected in the 5 years of POM 2013 and then the five years beyond, that caused a lot of significant change to our program, much of which we've just discussed here this morning. The notion of doubling that amount of reduction cuts deeply.

Senator WICKER. That takes the minimal risk that General Mills alluded to and just completely blows that up by an order of magnitude at least.

Mr. STACKLEY. Well, you cannot take the force and the operations that we have in place today and are conducting today and try to imagine continuing that with another half a trillion dollar reduction to our defense program over the next ten years. It's a significant shift and we have not at this point in time put contingencies in place, although we are always looking at opportunities to be able to reduce our programs' cost, and we are also looking at potential builds that will be coming down the path, but nothing to the size of what sequestration would impose.

Senator WICKER. And you're going to share that answer with Admiral Blake, I believe.

Mr. STACKLEY. Yes, sir.

Admiral BLAKE. Yes, sir. Just to echo what Mr. Stackley has said, sir, we have not begun any form of formalized looks at the sequestration process. That said, it is always in the back of our minds.

Senator WICKER. I'll bet it is.

Admiral BLAKE. Yes, sir.

But as also Mr. Stackley said, what we are currently doing right now is we are working on our POM 2014 proposal as we go forward in the fiscal year. I would tell you that if in fact sequestration were put in place you would have a radically different force for the U.S. Navy. It would be extremely different than what you currently see today.

When we were putting the current budget together and we were coming up with the half a trillion dollar cut in the program, we were looking at a couple of fundamentals. We were looking at capa-

bility versus capacity. We said do we want to have this capability and if so at what capacity. Then we went to the issue of wholeness versus hollowness. We wanted to ensure that the force was whole, as opposed to keeping additional force structure that would lead us to a hollow force.

So if you take what we have already done and then you compound it with sequestration, the task ahead of us would be extremely difficult and, as I said, you would not end up with the force that you currently have today in any way, shape, or form.

Senator WICKER. Well, thank you.

Admiral Burke, go ahead, please.

Admiral BURKE. Can I jump in on that? Just to put the potential cut from sequestration in context, it's about the size of the annual shipbuilding budget potentially, the full amount. It's about—almost the same amount as our aviation procurement budget, and it's about twice the size of our annual—the sum of our maintenance and aviation maintenance budgets. So it is significant.

I think were it to come to pass, I believe we'd have to re-look at our strategy as well.

Admiral BLAKE. Yes, sir. If I can just add to that, we essentially have five pots of money. You've got your manpower piece, you've got your infrastructure piece, you've got your R&D piece, you have your ops and maintenance piece, and you have your procurement piece. On the Navy's side of the equation, procurement is our largest account.

So when you put something in place, as Admiral Burke was just saying, to the extent that sequestration would do, you can look at those accounts and you would see that it's either in your O and M account, your ops and maintenance account, or it's in your procurement account. The only other place, the only other big account we have, is our manpower account. Infrastructure and R&D are relatively small compared to those three. And manpower is a must-pay bill. We have to pay the people. So that takes that one off the table.

So then you end up going to the two accounts. It's either your ops and maintenance account or it's your procurement account to cover something like that.

Senator WICKER. Well, thank you very much.

Let me just observe, Mr. Chairman and Senator Blumenthal, I voted for the legislation that puts sequestration in place. I think, like most of the people who voted yes, I voted for it believing in my heart that we would have the leadership in this city both in the administration and in the Congress to come to grips with where the real spending is, to come to grips with the fact that we need a different taxation policy that provides for greater growth, but also that we've got 60 percent of the budget plus that's off limits every year. We don't look at it every year in the appropriations process. It's on automatic pilot.

And I believed that we would be able to come to grips with that. To date we've not. We've either not had the leadership or the will in this city to come to grips with those issues. And while sitting here in this room it's unthinkable that we would get to actually this brinkmanship of sequestration, I don't know if it's any more

or less unbelievable than it was last year when I actually voted for it, Mr. Chairman.

So I'm not—I'm not absolutely convinced that we won't face this. I certainly hope we don't. I think it would be the disaster that you gentlemen have described. But it is indeed disappointing that our inability to come to grips with the part of our budget that makes up the majority of taxpayer spending is seemingly still off limits and we haven't been able to address that. I hope we can.

Thank you, Mr. Chairman.

Senator REED. Thank you, Senator Wicker.

Let me continue with some issues regarding the proposed retirement of the Aegis cruisers. So Admiral Burke and Admiral Blake and Mr. Secretary, as I understand it seven cruisers are going to be retired, and they have a direct impact on our anti-missile capabilities. In fact, there's some suggestion that it might—these retirements might reduce our ability to meet the Navy's objectives in terms of missile defense platforms and missile capabilities.

So has our missile defense-capable ships requirement changed, allowing us to reduce the number of ships that we have? If not, what are we doing to mitigate? And then I'll have a follow-on question. Admiral Burke, are you ready—Blake, rather?

Admiral BURKE. Sir, as you've heard today in many of our other decisions, the cruiser decommissioning proposal was a very difficult choice, and we find ourselves balancing procurement and readiness and people accounts to achieve the global force management and avoid the hollow force that Admiral Blake talked about.

No, our missile defense requirement has not abated. It continues. The demand continues to grow. But these were not missile defense ships. These were—these were not ballistic missile defense ships. These were carrier and strike group defense ships, that would have required significant resources. The numbers are roughly just short of \$2 billion to do the maintenance and repairs to get them up to speed. Some of those ships were built with some aluminum that has suffered from significant cracking problems and it's been quite a challenge for us. There's also some maintenance backlog that would need to be addressed there to make them viable for the long run.

In addition, there's the annual operations and maintenance dollars that one would have to pay to keep them viable, and that's another just over a billion dollars. Then the helicopters, the communications upgrades, and the people is another a little more than a billion dollars.

So overall across the FYDP we're talking about 4 plus, \$4.1 billion. And then to meet the potential BMD requirements we'd have to put ballistic missile defense on those ships as well, which is more than another billion dollars. So we're talking about a lot of money to keep those ships in the fleet.

So part of the reason we make the decision to do that is because they are not ballistic missile defense ships yet. But I think we've over the last couple of years, we have finally found our way on taking care of our surface ships. So we need to make sure that we continue down that track and take care of the young ships so they don't get in the condition that these older ships have gotten into, where they have a backlog of maintenance.

The reason I fully support this decision is because if you want to maintain the largest, most sustainable, and most capable fleet you can have, you need to do all of the maintenance and modernization. So we have a bunch of ships and we're unable to take care of them all properly, and so we can either choose to continue to do that or we can go down a more righteous path and judicious path in my view, which is to take care of—is to maintain the fleet as well as we possibly can, and we'll end up with a better, larger fleet as a result.

Senator REED. Just to clarify that, the short run sort of operational loss is the protection of the carrier battle groups by these Aegis submarines from missile attack, either land-based missile attack or any missile attack; is that correct?

Admiral BURKE. Yes. We have 22 cruisers today. We have 11 carriers, 10 carriers at the moment, 11 carriers in the future. We typically will deploy each carrier strike group with one of these cruisers. So it will not have a direct impact on the carrier strike group, sir.

Senator REED. Then the other issue here, too, is there was at least a very theoretical perhaps consideration of moving these platforms onto ballistic missile defense capabilities. That's now essentially off the table, and it raises the question of—and this is perhaps at the Secretary level—has there been discussion about, within DOD, of moving resources from land-based systems into more sea-based systems, where you would get more bang from your buck effectively?

That's I'm sure an object of debate within the building, but has that discussion taken place?

Mr. STACKLEY. I would say constantly, sir. There's no single solution or single element when it comes to missile defense. So from the Navy's perspective, first we look at force structure. We need to defend the battle group. But at the larger national level, there is constant discussion about what contributions could be made by the sea-based element of missile defense.

There's some tension there in terms of what does that mean regarding the dedication of platforms to that mission, what does that mean to the overall force structure, and how does that affect things? But today we're moving forward with the Phased Adaptive Approach with Europe, and in fact the land-based piece of that effort is taking Aegis ashore.

Senator REED. Yes.

Mr. STACKLEY. So we're putting the capability on land, because it has proven effect. And the early increments associated with sea-based is bringing Aegis destroyers to the Mediterranean, where they provide a capability for that region. But then to address the impact on force structure, what that means is a part of the solution is forward deploying Aegis destroyers, so that the number of ships that are affected is limited.

So there's constant discussion. There are capabilities that have come forward through the Aegis program that have proven extremely effective in the missile defense arena. Throughout those discussions, we have to look at our priorities, the suitability of the capabilities for the respective missions, and then, as Admiral Burke described, managing the total force.

Admiral BLAKE. Sir.

Senator REED. Go ahead, sir.

Admiral BLAKE. If I could just expand on or expound on what Admiral Burke was talking about, when we were putting the budget together one of the fundamentals we had was the issue of hollowness versus wholeness. I don't think anybody in the Department was pleased, if you will, when we came forward and said that we were going to have to take both amphibious ships and cruisers out of service earlier than their expected service lives.

But I would tell you that if someone were to put—to direct that those ships be put back in, my real concern would be, all right, I still have a bill to pay and I am probably very likely going to have to put something else on the table which will be considered equally egregious. So it was not an easy decision on our part, but we, as I said, we were driven by the fundamental approach that we wanted to ensure at the end of the day our force was whole and that we were not heading down a hollow path.

Admiral MCCOY. Senator, just to complete that thought, both Admiral Blake and Admiral Burke talked about the difficult decision. But for the first time we have fully funded in fiscal year 2013, fully funded maintenance, and particularly surface maintenance, which has always been short. So with OCO funding we have fully funded in our budget surface maintenance, and that goes to that wholeness discussion.

Senator REED. With OCO funding, which is transitory at best.

Admiral MCCOY. About 20 percent of our maintenance budget right now is reliant on OCO, yes, sir.

Senator REED. Okay. Just for the record, Admiral Burke, Admiral Blake or Burke, the 313-ship target total, is that still under the Secretary's guidance, is that still the requirement for the Navy?

Admiral BLAKE. What we're doing right now, sir, is, based on the new strategy which we have received, we are in the process of doing a force structure assessment, and then we will then brief that to DOD and we will ascertain the requirement for the right size of the fleet.

Senator REED. So it's a work in progress?

Admiral BLAKE. Yes, sir. That is going on even as we speak.

Senator REED. A final question, then I'll recognize Senator Blumenthal.

We talked about the commitment of both the Navy and contractors to get ships out, "down the way" I guess is the term, on time, under budget, etcetera. One of the things that complicates that is sometimes the Navy changes the plan midway through. There are some examples. I'm told that the Mobile Landing Platform program just signed a contract for a third vessel, now intends to build a ship in an Afloat Forward Staging Base configuration, which is new. The Navy wants to sign a multi-year for the DDG-51 destroyer, but plans to shift to a new configuration, new radar, etcetera.

To what extent are those changes adding costs and to what extent can we avoid those kind of changes so that we can mitigate costs?

Mr. STACKLEY. Yes, sir. Let me first—I'm going to pound the table on stability. That has got to be one of the cornerstones to our program going forward, and that's requirements, design, build

plan, etcetera. So throughout our process we do everything we can to maintain stability.

In terms of the Mobile Landing Platform, we also have to deal with the real world. When new requirements emerge, you have to address the requirements and you have to look at how can we best meet that in terms of cost and schedule so that the warfighter is getting what he needs when he needs, within the fiscal constraints that we've got.

Specifically regarding the Mobile Landing Platform and the modification associated with the Afloat Forward Staging Base, we've done a preliminary review in terms of what the impact would be to the MLP technical baseline and the impact is measured in terms of small impact to the base ship, small, single digit percent to the base ship. Effectively, what we're doing is we're adding to it, as opposed to redesigning the interior.

The AFSB brings an aviation capability for vertical, basically vertical lift, as opposed to the baseline MLP, which is more of a horizontal lift. So the designs that we're looking at are all, all, very much cost conscious, to minimize the impact to the base ship, but deliver the core capability that's been requested by Fifth Fleet.

So we see that as a very controlled and measured approach to bring the capability without downstream trying to backfit it or holding up the program and introducing cost and delay otherwise. We'd be happy to share the details with the staff to get a full understanding of what that impact is, what those details are, as they mature.

The other discussion on DDG-51, the fiscal year 2013 multi-year that we've requested is for a Flight 2A baseline multi-year. So we're looking at nine Flight 2A ships in the multi-year. But what we need to do is introduce the capability that I described in my opening remarks regarding the air and missile defense radar. So in parallel with that multi-year, we're completing the development of the AMDR, targeting 2016 DDG-51 ships. We are not making that a part of the contract baseline, but at the point of maturity when we've completed not just the technology development phase, but the engineering and manufacturing development phase, and we have a firm handle on the details associated with the impacts of AMDR to that ship, then we'll have a decision point downstream in advance of the 2016 ship that tells us, and we share that with Congress, that the technology is mature, that we understand the impacts, we've got the design complete sufficient to support introduction in the 2016 ships, we understand the costs.

We will be competing this engineering change proposal between the two builders as a fixed price competition to incorporate the cost, so that stability, cost control, and introduction of this key capability that we need can all come together. I believe it's very measured. We are not jumping the gun here. We're not slamming that into the multi-year at the front end. It is a downstream decision, but we believe it's important enough to get that capability introduced to the fleet that we want to do it smartly, but timely as well.

Senator REED. Thank you.

Admiral BLAKE. Sir, just to give you a little more background on the Afloat Forward Staging Base, we are filling an urgent COCOM

demand signal. In the near term, we are going to take the PONCE, which was originally going to be decommissioned in March, this past March, and we are now going to do some minor modifications on her, and then we will push that ship out to meet the COCOM demand. That's the near term.

Then the far-term solution is to do the modifications, as Mr. Stackley described, to the MLP in order to be able to meet that COCOM demand signal for the Afloat Forward Staging Base.

Senator REED. Thank you.

General Mills, I'll see you next Thursday, right? So I'll have a chance to just quiz you in depth. I don't know if you have a quick comment or you want to—

General MILLS. Sir, I look forward to next Thursday.

Senator REED. So do I, sir. Thank you. I wasn't ignoring you, sir. Senator Blumenthal.

Senator BLUMENTHAL. Thank you, Mr. Chairman.

I have a question that is a little bit different, I think, than most that have been asked so far, although I missed some at the beginning part of your testimony. I'm very interested in renewable energy, particularly use of fuel cells. I think the Navy really has been leading the way I this effort, and I want to thank you for what you've been doing.

But I wonder whether you could comment on whether the extraordinary times that we face, to use a euphemism, Secretary Stackley, for these extraordinary constraints and challenges, are in any way inhibiting the drive toward using more renewable energy in the shipbuilding program, whether it is viewed as a means of cutting costs in the long run, as I believe it should be viewed? If you could comment generally on that?

Mr. STACKLEY. Yes, sir, and I'll probably share this with Admiral McCoy. But as you're well aware, I'll call it alternative energy has been a top priority for the Secretary of the Navy, and we have been investing across the board, and not just ships—ships, deployed forces, our installations and sites—to reduce our energy demands, one, so that we're driving up efficiency. So step one is reduce your energy demands.

A very simple example is the development that's going on right now for a hybrid electric drive for our surface combatants. So we're looking at employing technologies that are already at sea on other ships and introducing that onto our larger ship class, the DDG-51s, to try to reduce their fuel bill, to get greater legs for those ships.

And we see an opportunity there to drive our fuel costs down by simply 5 percent on each of our destroyers, which when you add it up is a fairly significant savings. So we're working that technology. We're going to do a demonstration here in the next year with one ship in service, with a long-term goal of backfit and forward fit that type of technology. That's one simple example.

Separately, I think you're well aware of the efforts that the Navy has been working on the research and development for alternative fuels. So that's biofuels. We're looking at all of our prime movers, gas turbines predominantly, to ensure that they are certified for operating with biofuels. There's been much discussion regarding the economics of that. The economics are probably a long-term

issue. But side by side with the economics is, I will call it, the operational imperative of trying to reduce our reliance on fossil fuels from offshore.

You specifically asked about fuel cells. Fuel cell technology has been under development for decades. In fact, some other navies are employing fuel cell technology for their non-nuclear submarines. It is a good alternative energy source for non-nuclear submarines. For the U.S. Navy, that would not meet our mission requirements. So I would call that the large-scale application of fuel cell technology doesn't in that case meet our mission requirements.

But commercial and military, fuel cell is a very promising technology. We're not going to drive that equation in terms of its development, but we are going to look to leverage it.

Admiral MCCOY. Senator, I'll just chime in. Most of the attention in this area has been on the alternative fuels. On the ship side, for example, we've already sailed one of our test gas turbine ships off the coast of California and we don't see any issue with being able to use that fuel. We're going to continue to expand that, including with the Rim of the Pacific exercise this summer.

But an area that really hasn't gotten a lot of air time is really what I call dozens of initiatives that we've fast-tracked out there to reduce the amount of fuel, as Mr. Stackley was saying. These are everything from the hybrid motor that Mr. Stackley talked about to simple things like hull coatings.

The good news about the things I'm going to talk about real quickly here is we're not on the leading edge of technology. We're adapting what's already in industry that can be smartly used in Navy ships. So slippery hull coatings that Maersk lines and other folks are using, we've got them on a number of ships, testing those. Coatings on our propellers give us—and we're talking about—I really think we're talking about really hundreds, if not by the time we're done, initiatives that might get us very small, 1 percent, whatever, a half a percent, but when you think about the number of steaming hours that we have.

LED lighting, we're putting those on our ships and looking for the effect of those. Smart voyage management systems that plot the course for the weather to minimize the drag on the ship. A hybrid motor, but also efficient motors, compressors and pumps, and we're putting those on our ships and measuring the effect of those.

So we have a very active program that we're funding, that's getting this stuff out to sea, taking what makes sense, what has a good payback, and going ahead and further deploying it.

Admiral BLAKE. Sir, if I can just add, just from a fiscal perspective, for every dollar that a barrel of oil goes up we end up spending approximately an additional \$31 million on the Navy side of the equation in order to get that fuel out there. So we have to do something. As you look at—as we're currently executing the 2012 budget and you see the daily fluctuations in the fuel prices, so we're having to come to grips with that. So every time you see that price of a barrel go up a dollar, we've got to come up with an additional \$31 million in order to cover it.

Admiral BURKE. Senator, you've heard a lot about what we're doing afloat. We're doing some of the very similar situations in the air, looking at coatings, engine development, flight profiles, using—

getting adjustments to air corridors to allow us to fly through those to save fuel.

But also on the shore side, there's a lot of effort going into that. We are—as Admiral McCoy said, we are not on the leading edge of technology there. But the implementation there has wide-ranging impact. For example, we are just beginning to meter all the buildings, and particularly housing is on the leading end of this, base housing. So we meter those houses and evaluate how much energy they use relative to other very similar houses, and then charge them, charge the occupants, if they go over the average, or refund their money if they save money.

Now, the holy grail on this on the shore side is to be able to do this in all our bases, and we are well into installing those monitoring devices, metering, such that we can do that.

General MILLS. Sir, I would offer up from the Marine side several things. First, on the individual bases already in theater, being used by troops downrange, are battery saving and renewables there, along the lines of batteries, green blankets, solar panels, those types of things—very, very successful, to include troops that are in heavy combat.

On the shore side, to mirror the Admiral's comments, for example, up at Bridgeport, California, which is our Mountain Warfare Training Command, we are soon to be energy neutral because of what we're producing through solar and geothermal, and in fact in the very near future we'll actually be able to sell some of that electricity to the local power grid because we'll be producing more than what we in fact need.

Our warfighting lab down at Quantico is exploring a multitude of projects that we can push out to the fleet quickly to, again, lighten up the individual marine's load and also to save fuel. Fuel efficiency is a major factor in all of our analysis of alternatives as we look at new vehicles and new equipment to put on line.

So it's a multi-fronted, I think, effort to really get some fuel savings in order to save those O&M dollars.

Senator BLUMENTHAL. Thank you very much. Thank you for those very impressive answers.

Thank you, Mr. Chairman.

Senator REED. Thank you, Senator Blumenthal.

Gentlemen, thank you for your excellent testimony, for your service to the Navy and the Nation.

We will keep the record open for one week. Some of my colleagues might have statements they want to submit or questions they might direct to you. Please promptly respond to the questions.

With no further ado, I will adjourn.

[Whereupon, at 11:20 a.m., the subcommittee adjourned.]