Ship Clips - October 24, 2011

A compilation of articles concerning the Shipbuilding Industry

From the Congressional Shipbuilding Caucus

Submarine Force Is Preparing For A Changing Landscape

MCLEAN, Va. - Vice Adm. John M. Richardson, commander of the submarine force, said he is struggling to come up with a name for the new era of undersea warfare, but "post-Cold War" just doesn't do it.

He and other leaders of the submarine force say they are entering the next generation of warfare, marked by fewer resources, the proliferation of long-range, precise weapons and battles in cyberspace.

They will have fewer submarines at their disposal as the aging Los Angeles-class submarines retire more quickly than they are replaced in the fleet. The budget is shrinking as the entire federal government looks to cut spending.

At the same time, more nations and groups will have access to long-range weapons because the technology is getting cheaper, Richardson said, and they will increasingly use cyberspace to try to harm U.S. interests. What China can do today with its weapons, Richardson said, "Hamas will be able to do in the very near future." This fall the submarine force will exercise its war plan in a maneuver they are calling "Agile Dagger," to prepare in case all of the submarines need to get to sea quickly. And Richardson said the submarine force is "starting to man the ship to fight in the cyber domain."

More than 300 submariners changed their jobs to serve as information systems technicians, a new position on subs for experts in information assurance and networks. Submarines will be needed for the fight in the cyber domain, and to make sure the military can get to places where adversaries try to deny access to surface ships and aircraft, Richardson said. "It's only going to get more complex," Richardson said last week at the Naval Submarine League's 29th Annual Symposium. "I don't see a simplification of the security environment on the horizon."

Ballistic-Missile Sub Needed

Three U.S. submarines launched more than 100 Tomahawks into Libya in March to take out the war-torn nation's air defenses as part of Operation Odyssey Dawn. The conflict came to a head Thursday with the death of Moammar Gadhafi. Rear Adm. Barry L. Bruner, director of the Undersea Warfare Division, wonders what would have happened if the scenario had unfolded elsewhere, if the submarines were off the coast of a nation that had the latest missiles and top-notch submarines. What if submarines were the only forces that could get close enough to strike? he asked. "There is no doubt we would do well," he said at the symposium, held Wednesday and Thursday at the Hilton McLean Hotel, Tysons Corner, outside of Washington, D.C. "The question is, how are we going to do in the future? That's my dilemma." The strategy in this new era, Bruner said, has to be "all about priorities."

At the top of the list is the program to build a new ballistic-missile submarine, Bruner said. Keeping the production rate for Virginia-class submarines at two per year is next, followed by developing a module to add more missile tubes to Virginia-class submarines and developing payloads, he added. Bruner stressed that this was a strategy- "that doesn't mean we're going to be able to do it all." Leaders in Congress and the Defense Department have said that everything will be scrutinized as they look to reduce the mounting national debt.

The program to replace the 14 current Ohio-class ballistic-missile submarines is a target because of its price: $5.6 billion in fiscal 2010 dollars for each submarine after the first ship, a figure the Navy is trying to pare down to $4.9 billion each.

But there has also been talk about reducing the production rate for Virginia-class submarines back to one submarine annually. The Navy's Virginia-class program manager, Michael E. Jabaley, said he's always concerned that current events and fiscal pressures will hurt the program, and two per year is the best way to build these submarines.
Richardson said he plans to use a "very tight narrative about what the undersea forces can do" to make the case that the nation "gets a tremendous return" on its investment in the submarine force.

The decision makers need to know the submarine force's story, said retired Rear Adm. John B. Padgett III, national president of the Naval Submarine League. "The submarine force has a strong story to tell, and it's incumbent on the submarine force to get that strong story out in the public so that those who are in the position to make decisions, whether they're voters or congressional representatives, will have the facts in place," said Padgett, who lives in Old Lyme. "If you do an assessment - what do you

get for the money you invest - submarines come out on top," Padgett said. "Whether they come out on top enough to be able to get all the things we need, that's the question."

More Deployments A Goal

Electric Boat's design for the new ballistic-missile submarine is the first new submarine design in 20 years. The Navy plans to buy the lead ship in 2019 and construction is expected to take seven years. Richardson said that it is still early, but the submarines will "most likely" be built under an arrangement between Electric Boat and Newport News Shipbuilding in Virginia, the two shipyards that construct the Virginia class. And the Navy now wants to buy 45 to 50 Virginia-class submarines instead of 30, Jabaley, who has been selected for promotion to rear admiral, announced at the symposium.

Extending the class gives the Navy and EB flexibility to change the design and introduce new technology efficiently because there will be more submarines on which to recoup the upfront costs, Jabaley said. EB is also working on a concept for a module with missile tubes that could be added to the Virginia submarines to boost firepower, known as the Virginia Payload Module. Bruner said the module is not a program, but he is trying to make it one. Future Virginia-class submarines will not only look different with these innovations, but they could also spend more time at sea.

Jabaley said the goal for the next group, or block, of the class, is to reduce the number of major maintenance periods during the life of the submarine from four to three so they will be able to deploy 15 times instead of 14. Some of the current submarines may also deploy for longer periods to compensate for fewer submarines in the fleet, Richardson said, but this would be done judiciously, on a case-by-case basis, in response to emergent demands. There is no plan to extend deployments beyond the traditional six months force-wide, he added.

There will be ongoing fiscal troubles and emerging threats, Bruner said, but the submarine force has technology that it hasn't had in the past and the newest submariners have talents and traits previous generations didn't. The next generation of warfare is here, along with the "generation of warriors who man those ships.

"And they're awfully darn good," Bruner said. "The question is," he added, "how do you tap all that talent, all the technology, and how do you fund it in a fiscally constrained environment to get us where we want to go strategically?" The submarine force, Rear Adm. David C. Johnson said, has the "strategic advantage in

the undersea realm." "And,"
he said, "we do not intend to give it up."

(NEW LONDON DAY 23 OCT 11) ... Jennifer McDermott

Shipyard Apprentices Graduate Into Careers

KITTERY, Maine - In
a special apprentice graduation at the Portsmouth Naval Shipyard on Friday, 200
men and women became journeyed tradesmen, adding to the skilled force that
helps keep the nation's submarines operational.
The graduates are part of two apprenticeship programs at the shipyard:
the Trades Apprenticeship and the Worker Skills Progression program.

Seventeen
different trades were represented by the graduates, including shipwrights,
painters, electricians, metals inspectors, marine machinery mechanics, welders,
riggers and shipfitters. The men and women span a wide age range. Apprentice
Program Administrator Mary Little said the average age of the class is 30. Capt. Bryant Fuller, commander of the
Portsmouth Naval Shipyard, called the graduates the future of the shipyard. "The work we do here is technically
challenging," Fuller said. "It is important it be done to exacting
standards, as we work on a complex weapons system. The classes involve a lot of
academic knowledge as well as on the job training skills. The consequences of
not doing our job right is significant."

Fuller said much of
the shipyard leadership is approaching retirement age, and the work will fall
to these new skilled workers, the leaders of tomorrow.

One
of those graduates is Juan S. Rijo. A resident of South Berwick, Maine, he said
he retired from a Naval career but wanted to keep serving his country. "In the Navy, I worked at shipyards and
enjoyed it," Rijo said. "I liked taking things apart and putting them
back together better. So, I applied to come here."

Shari Johnson is a
Kittery resident who grew up in the Seacoast. She graduated as a marine
electrician.

"I was working in a family business, and I wanted something for myself," Johnson said. "While growing up, I knew the shipyard was the cream of the area. I wanted to apply as a welder. They offered me marine electrician. Now, I think it is a better fit. They knew what they were doing."

Keynote speaker Early Donnell retired from the shipyard after more than 38 years. Thirty years ago, he sat in the same seat, graduating from the apprenticeship program. "I represent you in 40 years," Donnell said.

Speaking of the Base Realignment and Closure list of 2005, in which the yard was barely spared, Donnell urged the graduates to strive for perfection. "As long as there are yards delivering ships as fast as you can, there is that risk of closure," he said. "You are the ones who will make sure no one comes close to us because closing would be a national tragedy. Every day, other yards watch. Every day, Congress watches. This is a competition, and you are the future of this shipyard."

(PORTSMOUTH (NH) HERALD 22 OCT 11) ... Karen Dandurant

U.S. Navy Presses Case For New SSBN Class

The Ohio Replacement Program (ORP) to build a new class of SSBN ballistic missile submarines for the U.S. Navy will likely be the most expensive new shipbuilding effort over the coming decades - more than $80 billion into the 2030s. Although some have argued the program should be funded outside the Navy's shipbuilding budget, it is currently included in the service's annual funding for ship construction, where many fear it could threaten other programs.

But the need for the strategic deterrent mission is so great, said one top officer, that the program should proceed. "I think if it hurts our budget [to some extent], that will be a price well have to pay," said Vice Adm. Bill Burke, deputy chief of naval operations for fleet readiness and logistics.

"The SSBN is fundamental to our basic defense posture. It is that upon which all else is based. One of the reasons we don't have big fights today is because we have that strategic deterrent," Burke told a Naval Submarine League audience in Virginia on Oct. 20. "The nation needs the strategic deterrent more than it needs other things."

Burke, a submariner himself, acknowledged the cost controversy. "There are still people who truly believe we're going to wreck the shipbuilding plan with the ORP. I'm not one of them," he told the audience.

Burke was asked after his address whether the Navy is seeking a separate funding line for the new subs.

"I don't think we're actively pursuing that, although we would welcome that. There are others talking about it. There are folks [in Congress] on the Hill talking about that. There's a potential for that to come out of the strategic review [now being conducted by the Pentagon]. I don't have any insight into that, but it could," he said.

The relentless demand for submarines was another topic discussed at the two-day symposium, where presenters often pointed to a shrinking fast-attack force to meet ever-growing requirements. Although 53 boats are in service today, fleet plans show the force dropping into the 40s by 2020, with a low of 39 submarines forecast for 2030.

One way to meet the demand would be to increase submarine deployments beyond the current six-month standard. "We do not have a holistic plan on the shelf to increase all submarine deployment lengths," Vice Adm. John Richardson, commander of submarine forces, told a reporter Oct. 20. Deployments longer than six months are done case by case, he said, and while he is not planning to routinely extend deployments, he acknowledged that the situation could change. "Yes, it's always a possibility," Richardson said. "It just comes down to the math of the problem pretty quickly. If you're going to have the same levels of forward deployment, the same levels of presence forward, you've got just a couple of choices,

"One, you can increase the deployment length, so you get more deployment for the same preparation period Or you can deploy your forces forward and reduce the transit time, [giving] more time on station. I think that all of those choices are on the table as we work to resolve this tension." If changes are made, Richardson said, "we can't do it in a self-destructive way. So our maintenance plans, our people, all of those stresses have to be managed in a way that will sustain the long-term life of the Navy."

Big Torpedo Exercise

Details of a recent large-scale torpedo exercise, or TORPEX, also were discussed at the symposium.

Thirty torpedoes were fired in early September off the Virginia coast, said Rear Adm. David Johnson, program executive officer for submarines. Heavyweight Mark 48 torpedoes were fired by the submarine Alexandria, while lightweight Mark 54s were launched by the destroyer James E. Williams, SH-60B helicopters from Anti-Submarine Helicopter Light Squadron (ESL) 42, and MH-60R helicopters from Helicopter Maritime Strike Squadron (HSM) 74.

"It was the largest TORPEX done in recent history," Johnson told the audience. Most of the torpedoes, fitted with practice rounds rather than live warheads, were set to miss the underwater target, although six were set to hit all the torpedoes were recovered following the exercise. The target was a new "spacial acoustic target" called the Steel SSK, Capt. Torn Monroe, director of test and evaluation for the undersea weapons office at Naval Sea Systems Command, said during an interview Oct 21.

The Navy developed reusable target - SSK is a service designation for a non-nuclear hunter-killer submarine - was designed to mimic the characteristics of an electric submarine, Monroe said. Details are classified, but the "low-cost" target is "capable of taking a hit from an exercise torpedo," he added.

It was the first use of a Steel SSK, four of which are being built for fleet training use and torpedo testing.

Submarines fire about 600 Mark 48 torpedoes a year in practice, Monroe said, while surface ships and helicopters launch about 175 lightweight weapons. Tests are done for training purposes, production testing and research and development, he said, with many tests combining those

functions.

Production by Raytheon of the heavy
Advanced Capability (ADCAP) Mark 48 torpedo ended in 1996, although software
and capability upgrades continue routinely.
"We only build kits right now," Johnson said, with upgrades
including new guidance controls, better cabling, or preamplifiers. A decision
is to be made on whether to restart the production program. "Requirements say we do," Johnson
said.

(DEFENSE NEWS 24 OCT 11) ... Christopher P. Cavas

Marinette Marine's Second Littoral
Combat Ship Is Faster Than First Boat

LCS 3 will become the USS Fort Worth

MARINETTE - The second littoral combat ship built at
Marinette Marine Corp. in Marinette is showing slightly faster speeds in sea
trials on the bay of Green Bay and Lake Michigan. LCS 3, the future USS Fort Worth, is nearing
completion and is expected to be delivered to the U.S. Navy next year.

Rough weather on the water earlier
in the week held up testing, Rear Adm. James Murdoch said Thursday during a
discussion with media members in Washington, D.C. Testing was expected to
resume Friday or today. "With that
longer underwater hull, the ship is a little more efficient, and just operating
on the diesel engine alone, she's about a knot faster ... than USS Freedom,"
he said. "And we're probably one to two knots faster on the gas turbine
(engines) alone than Freedom was."

LCS 3's underwater hull structure
has been lengthened compared with the USS Freedom, increasing fuel capacity by
10 percent and enhancing performance. Murdoch
is the first program executive officer for the Littoral Combat Ship Program and
is in charge of keeping the program on track and getting the ships and mission
equipment into the fleet.

The littoral combat ships built at Marinette Marine have a top speed listed as "40+ knots," or in excess of 46.1 mph. Most of the ship's systems can be tested in the Great Lakes, but some of the radar system and identification systems cannot. Those systems need to be tested 100 nautical miles offshore under Federal Aviation Administration mandates. "Everything I can test and demonstrate in the Great Lakes, I will," said Murdoch, who said he hopes to deliver LCS 3 on cost and possibly slightly ahead of schedule next year. "Then we really get into the serial production of (LCS) 5 and 6 and the following ships." With potential budget cuts looming, Murdoch said success in an austere fiscal environment boils down to a few factors.

"You have to get the shipbuilders to build the ships to the quality and the cost that they got under contract to do," he said. "That, first and foremost, is what we are setting out to do." The 10 ships built by the Lockheed Martin-led team are being constructed at Marinette Marine Corp. in Marinette. A competing design of the littoral combat ship from Austal USA is being built in Alabama. Lockheed Martin and Marinette Marine delivered the first-in-class USS Freedom in 2008.

"I think we did a very good job addressing problems that we saw emerge during construction of the first two ships, and we made appropriate changes to (LCS) 3 and 4," he said. "I'm very confident the design is good."

Both littoral combat ship designs have been the center of some congressional scrutiny. The Austal vessel suffered corrosion issues last summer, and the USS Freedom had a six-inch crack appear in the hull in late winter. Issues on both vessels have been corrected, Navy officials said in the summer, noting "technical issues" aren't out of the norm on first-in-class ships.

Murdoch said the Navy has made changes with water jet propulsion systems with both vessel types to mitigate corrosion. It also is looking at potential improvements to the stern ramp door seals on USS Freedom and improved visibility on the bridge of that vessel and follow-on ships. Work is also ongoing on other design changes and mission packages.
"I don't think the cracking issues or corrosion pose any risk to the acquisition strategy ... we answered both those concerns promptly and have good measures in place to addresses both those areas," Murdoch said.
"I'm sure there will be refinements to (the designs) that we'll make to them elsewhere throughout these ships."
The Navy has said it would like to acquire 55 littoral combat ships.

(GREEN BAY PRESS GAZETTE 22
OCT 11) ... Nathan Phelps

Naval Contract Opens Doors, Jobs In Northeastern
Wisconsin

$3.6B deal will see shipbuilding through 2015 in Marinette,
Menominee, Mich. areas

MENOMINEE, MICH. - Just off 10th Street in Menominee, Mich.,
North Motorsports is on the verge of opening a business focused on selling
Bombardier Recreational Products ranging from all terrain vehicles and
snowmobiles to three-wheeled motorcycles.

The decision to expand from the
existing line of Honda products sold in a nicely appointed retail store a few
blocks up the road has been reinforced in part by the award of a U.S. Navy
contract to Marinette Marine Corp. late last year. Marinette Marine will build
as many as 10 littoral combat ships at the northern Wisconsin shipyard just
across the river from Menominee.

"You can see the effects of
it, slowly," said Eric Bellisle, one of the owners of North Motorsports,
3229 10th St. "It helped our decision to go ahead and expand the product
line. We're now going to have products like snowmobiles, which we didn't have before,
... filling some of the holes we had in our product lineup."

The award of the Navy contract last year is expected to
create new jobs and have a ripple effect through the community - both in terms
of area companies providing products and services to Marinette Marine and the
general economy.

The Navy contract - valued at $3.6
billion when it was awarded to the Lockheed Martin team in December - could see
Marinette Marine building ships through fiscal year 2015, when the program will
be looked at again. The Navy has indicated it could purchase as many as 55 of
the ships. The prime contractor of the
ships built in Marinette is Lockheed Martin.
Austal USA is building 10 ships of another competing design in Alabama.

Marinette Marine is expected to double its work force to more than 2,000 employees in the next 18 to 24 months as LCS production picks up. The shipyard has also undergone tens of millions of dollars in physical improvements in the last two years, and regional educators are catering to the expected demand of workers for the shipbuilding industry, as well as other industries in the area requiring specialized technical skills.

Beyond Ships

Northeast Wisconsin Technical College is expected to open its North Coast Marine Manufacturing Training Center in early 2012 in Marinette. The goal of the facility is to train workers for the shipbuilding industry. The college recently introduced two new degrees focused on the marine sector. Jerry Murphy, executive director of New North Inc., an 18-county regional economic development organization for Northeastern Wisconsin, said that while much of the focus in Marinette and Menominee is on shipbuilding, there are a number of manufacturers in the area expanding operations and doing well.

"If you look at the shipyard alone, you're missing some of the story," he said. "The shipyard is going to end up being the big economic player in their stable, but they have some nice diversity - Tyco Ansul, Karl Schmidt Unisia, and Waupaca (foundry) are doing well. ... They're not all in one marketplace." At the Marinette and Menominee Area Chamber of Commerce, Executive Director and CEO Mary Johns said the organization has noted an increase in people requesting information about the community from other parts of the country or from people who are new to the community.

"Our industrial businesses are very optimistic and reporting various forms of expansion, whether that's plant expansion or additional jobs," she said. "For an industrial standpoint, we're seeing an upward trajectory."

The business community in the cities divided by the state line and the Menominee River are aware things are going well for a number of manufacturers in the community.

"As long as consumer confidence follows the trends of the manufacturing here, it should be real good," Bellisle said about the area's retail landscape. "It's getting better. It's not where it was ... I think we need some time with these companies doing well. They need to sustain it for a while for retail customers to feel comfortable spending again."

He said a good number of Marinette Marine employees are among North Motorsports' customers. It has also sold generators and other equipment directly to the shipyard. "Marinette Marine is one of many players," he said. "Is it going to be become the major player? Definitely." Bellisle expects to open the new location before the end of the month.

Community Influx

The award of the LCS contract - as well as the expansion of other business in the area - has left a tangible mark on the housing market in Marinette and Menominee.

"There are a lot of families coming in, and they are either renting or buying. We've done several transactions ... with management and engineers" at Marinette Marine, said Karen Kloida, owner and broker at Broadway Real Estate in Menominee, Mich. Home sales and rental units are moving in the market, with rental properties becoming a hot commodity, she said.

"There are enough homes on the market. In our (multiple listing service) system, we have over 800 listings in Menominee and Marinette counties, but there's going to be a shortage of nice rentals," Kloida said. "People that are coming in and can't buy are going to be challenged to find a nice home to rent if they want a three-bedroom home and don't want the apartment-type living. That's where we're going to be at a lack.

"We get calls every day from people looking for rentals. They eventually find something, but it's difficult for them," she said.

That may mean some people will have to look at living in surrounding communities, like Crivitz. Regardless, the award of the LCS contract has been a boon to the local economy. "You couldn't ask for better timing to get us out of a recession, put our best foot forward and be positive that things are going to start selling and people can get back to work," Kloida said. "There are people coming in from all over, not just Marinette Marine, but several other businesses."

Murphy said he's aware of a Madison housing developer who is evaluating the marketplace between Menominee and

Oconto. On Thursday, the Wisconsin Housing and Economic Development Authority said an Oconto agency, NEWCAP Inc., has been awarded low income housing tax credits worth up to $700,000 to bolster quality work force housing for families in Marinette. In exchange for the credits, developers agree to reserve a portion of their housing units for lower- and moderate-income households for at least 15 years, the release stated.

Making Plans

Unemployment in Menominee County was at 8.2 percent in August, down from 9.6 percent in August 2010, according to figures from the state of Michigan. Numbers for September will be released Thursday.

Michigan's overall unemployment rate was 11.2 percent in August and 11.1 percent in September, according to figures released Wednesday.

Marinette County's unemployment rate was 9 percent in August, down from 9.8 percent in August 2010, according to the Wisconsin Department of Workforce Development. Wisconsin's preliminary seasonally adjusted rate was 7.9 percent in August, down from 8 percent in 2010. While some businesses have seen a more immediate impact of the businesses, others still sense consumer caution tied to the wider national economy.

"I haven't seen a major impact, yet," said Tom Lemery, a sales associate at Buy-Rite, 2302 Cahill Road in Marinette, a business that specializes in interior items for homes from flooring to cabinets. "We get the traffic, but they're just not buying. It's like they're making plans down the road. It's like they're all waiting to see what's going to happen." Kloida said she sees signs things are happening in the Menominee and Marinette market.

"Phones are ringing, showings are happening and ... houses that have been sitting for six or nine months, all of a sudden you're getting two offers on the same property," she said. "That's happened more often than not in the last month to two months, and that's kind of nice."

(GREEN BAY PRESS GAZETTE 23 OCT 11) ... Nathan Phelps

Aiming For A Leaner, Meaner Military

Pentagon leaders are hoping a mandate to cut at least $350 billion from the defense budget over the next 10 years won't disrupt plans for a more agile, efficient and modern force that still can reach across the globe to deliver a crushing blow when needed. That's what they hope. The only thing for sure is that the military will be smaller when the budget-cutters get done.

Today's military is both battle-hardened and worn out from 10 years of constant warfare. Pentagon planners must find ways to keep troops with hard-won combat experience from leaving as the frantic pace of deployments to Iraq and Afghanistan winds down. At the same time, aging and worn-out equipment needs to be replaced using advancements in technology - all while saving up to $50 million a year from current spending.

"Our challenge is taking a force that has been involved in a decade of war and ensuring that as we build the military for the future, we are able to defend this country for the next decade at a time of fiscal austerity. We need to build a force that can confront a growing array of threats in the 21st century," Defense Secretary Leon Panetta told the House Armed Services Committee on Oct. 13. He warned that while the U.S. experienced a "peace dividend" when past wars concluded, threats are still growing today, and cutting too deep will create a "hollow force" unable to adequately protect national security.

The major question driving the decision making on cuts is: What does the nation want its military to do?

In an Oct. 11 policy address at the Woodrow Wilson Center, Panetta laid out his vision for the future - a nimble, tech-savvy military capable of swooping in to confront terrorists globally while maintaining a powerful force that can deter the nuclear ambitions of Iran and North Korea and counter a rising China in the western Pacific. While saying he did not want the military to shrink from its global reach, Panetta suggested to the House Armed Services panel that cuts might force pullbacks in some areas, most notably Africa and Latin America.

Observers are eagerly awaiting the results of a strategic review that will guide decisions on where to reduce Pentagon spending. In the

meantime, just about everyone else in Washington is offering their own ideas, with many suggesting that the current U.S. defense strategy - and possibly also some highly sought-after new weapons - won't survive the planned cuts.

Some common suggestions include a smaller Army, fewer aircraft carriers for the Navy, cuts to strategic nuclear arms, including Air Force bombers and intercontinental ballistic missiles, and a Marine Corps with fewer amphibious and aviation capabilities. Also on many analysts' chopping blocks are weapons systems, including the most expensive defense program in history - the Joint Strike Fighter. The ambitious plan to replace most Air Force, Navy and Marine Corps tactical aircraft with more than 2,400 F-35 fighters in three variants has an estimated $1 trillion cost over a planned 50-year lifespan - an eye-popping figure that attracts budget-cutters.

Appearing beside Panetta on Oct. 13, Joint Chiefs of Staff Chairman Gen. Martin Dempsey questioned whether the U.S. can afford building three different models of the fighter, saying pointedly that "three variants create some fiscal challenges for us."

Underscoring the tough choices defense must make is the fact that over the past 10 years, the military has been spending more without getting more. That's mostly because of rising personnel, operating and technology costs, though waste, fraud and inefficiency also play a role.

The biggest budget battle of all is likely to be over pay and benefits for members of each service, especially health care and retirement. These have been major drivers of increasing costs for the Pentagon over the past 10 years, but are also very sensitive political issues - health care costs alone have increased 85 percent in that period, according to a study by the Center for Strategic and Budgetary Assessments. Panetta and Dempsey have made clear that, while changes to military pay and benefits are on the table, they will not affect current service members.

"We've made a promise to people who are on duty that we are going to provide a certain level of retirement," Panetta told the House Armed Services panel. "Those people have been deployed time and time again. They've put their lives on the line on the battlefield. And we're not going to pull the rug out from under them. We're going to stand by the promise that was made to them." Here's a breakdown of the budget picture for each service:

Army

Chief of Staff Gen. Raymond Odierno said earlier this month that the number of Army troops in the service likely will shrink below the 520,000 limit set before the mandatory budget cuts, noting that this would put at risk the ability to fight two regional wars at the same time - a long-standing Pentagon policy goal.

The Army also is likely to have to put off or cancel modernization plans, including the purchase of a new ground combat vehicle. While defending the need for a strong ground force at the Association of the United States Army annual meeting on Oct. 12, Panetta noted that "it is unlikely that we will be refighting Desert Storm in the future."

Army officials have indicated they'd rather have a smaller, better-equipped force than a larger one with outdated equipment or not enough training and maintenance funds. "Ultimately ,it's about us projecting combat power in the future, so we want to retain as much of that as we can," Odierno said.

Navy

The Navy would be a key element of any strategy to counter China's rising power. But the service is about 30 ships short of the goal of 313 set by Secretary Ray Mabus as the minimum necessary to meet current operational needs. In addition, a multimillion-dollar shortfall in maintenance funds has left one in five of existing vessels unfit for combat.

"The stress on the force is real, and it has been relentless," Adm. Jonathan Greenert, the current chief of naval operations, said in July. Given those concerns, the Navy could be a big beneficiary of any shift in funds from another service: Panetta signaled earlier this month that the results of the Pentagon's budget review would not honor the "golden ratio" of proportional spending.

The Navy also seeks to protect its carrier force from critics who say the giant nuclear-powered warships are obsolete and vulnerable to new weapons such as Chinese anti-ship missiles specifically designed to sink them. In a post on the Navy's official blog, Rear Adm. Craig Faller, who commands the carrier strike group centered on the USS John C. Stennis, noted that his force "is a visible and powerful symbol of U.S. commitment and resolve" capable of operating far from U.S. shores untethered by the need to negotiate basing rights with other countries.

Marine Corps

Commandant Gen. James Amos earlier this year ordered Marine leaders to do their own strategic review and come up with a vision for the Corps as the nation's "expeditionary force in readiness," offering ammunition against suggestions that its amphibious mission is obsolete or that its forward-deployed forces can be cut.

"When the dust settles ... there's going to need to be a recognition that America's Marines are going to need to be forward-deployed," Amos told POLITICO in an interview, saying an amphibious capability is a crucial element to the success of that mission.

"If you're going to try to impose your will on somebody at some day in the future, it's going to be more than just parachuting in and then occupying a small piece of ground for three days when your supplies run out. You've got to sustain yourself, you've got to be able to project that power, and we bring that," he said.

One of Amos's top priorities is protecting the Marines' two signature aircraft programs - the V-22 Osprey tilt-rotor transport and the F-35B version of the Joint Strike Fighter, which is capable of short takeoffs and vertical landings. Both programs have had developmental problems that have made them prime budget-cutting targets. Amos - the first aviator to lead the Corps - has taken a direct interest in working through those issues.

"Think of all the enormous capabilities it would bring to be able to operate off an austere site," Amos said of the F-35B. "It fits us."

Air Force

The main concern for Air Force officials is finding money to modernize the nation's air fleet without shrinking it too far. The Air Force success with using unmanned drones to locate and hit terrorist targets without putting pilots in harm's way is an indication of the service's future direction, but officials are also faced with replacing aging equipment for more traditional engagements.

"We face a multiyear effort to recapitalize our aging tanker, fighter, bomber and missile forces; to continue modernizing critical satellite constellations; to meet dynamic requirements in the cyber domain; and replace other aging airframes, such as training, vertical

lift, and presidential support aircraft," Air Force Secretary Michael Donley said last month at the Air Force Association's annual meeting.

"These recapitalization and modernization programs are essential to core Air Force capabilities. Their requirements are largely understood; we know when we need them; and in many cases, we have settled on an acquisition strategy. The question confronting us is financing." Donley drew a line against critics who say manned strategic bombers and land-based intercontinental ballistic missiles are a legacy of the nation's military past. "We must maintain the nuclear triad," he emphasized.

(POLITICO 23 OCT 11) ...
Charles Hoskinson