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## 2020s Will Be Challenging Period For DoD Bill Payers, Kendall Says

*By Pat Host*

NATIONAL HARBOR, Md.--The 2020s will be a challenging time period for the Defense Department as it grapples with how to pay for numerous high-priority weapons endeavors with bills that arrive at roughly the same time.

“When we get to the (2020s), a lot of things have to be paid for at the same time,” Under Secretary of Defense for Acquisition, Technology and Logistics (AT&L) Frank Kendall told reporters following a presentation at the 2014 Air and Space Conference hosted by the Air Force Association. “That is a significant problem for us.”

DoD is about to embark on high-priority, and high-cost, programs like nuclear weapons modernization and the new Long Range Strike Bomber (LRSB) in addition to programs already in development like the F-35 and the new KC-46 aerial refueling tanker. According to the Air Force’s fiscal year 2015 budget request, the service anticipates needing \$166.4 billion beyond FY ‘19 to complete its portion of the F-35 program and acquire its final tally of 1,763 conventional F-35A variants.

The Air Force also anticipates needing nearly \$25 billion beyond FY ‘19 to complete the KC-46 program. In addition to these programs of record, the Air Force could embark on a next-generation rocket engine program which would also likely cost billions of dollars. DoD wants to eventually get away from relying on the Russian-made RD-180 for national security launches.

DoD spokesman Cmdr. William Urban said Wednesday while the relative size of the currently projected “bow wave” of big-ticket weapon program spending in the 2020s is roughly similar to those in previous years, several factors make it more concerning. This, Urban said, includes the operations-investment balance, congressional rejection of important cost-saving initiatives like compensation reform and base closures and the downside risk of fiscal uncertainty.

Urban said the projected funding for the first five years after this year’s future years defense plan (FYDP) for 2021-2025 is on par with the projected funding for first five years after FYDPs in the past 10-20 years, relative to the sizes of their respective budgets.

“We have had a bow wave as long as we have been analyzing the post-FYDP timeframe, and we expect to continue to have one as long as we are moving forward,” Urban said in an email. ■

## Boeing, SpaceX Win NASA Commercial Crew Contracts

*By Pat Host*

Boeing [BA] and Space Exploration Technologies Corp. (SpaceX) in September won a pair of contracts from NASA totaling \$6.8 billion for Commercial Crew (CCP), the civil space agency’s highly-anticipated effort to taxi astronauts to and from the International Space Station (ISS) by 2017.

Boeing was awarded \$4.2 billion and SpaceX \$2.6 billion, a NASA official said Tuesday during a briefing. Sierra Nevada Corp. (SNC) and Jeff Bezos-backed Blue Origin lost out on Commercial Crew, which is provide an alternative to relying on Russia for traveling back and forth to ISS. SNC had proposed its Dream Chaser space vehicle that looked like the Space Shuttle. Blue Origin offered its biconic-shaped “Space Vehicle,” according to a 2012 statement.

Astronauts will fly on Boeing’s CST-100 and SpaceX’s Dragon Verson 2 space capsule, NASA said on Twitter. NASA’s con-

tracts include at least one crewed flight test per company to verify the integrated rocket and spacecraft system can launch, maneuver in orbit and dock to ISS.

Once the test program has been successfully completed and the systems achieve NASA certification, the contractors also complete at least two, and as many as six, crewed missions to ISS. Boeing and SpaceX will be paid based on performance of milestones, a NASA official said during an announcement Tuesday.

SNC spokeswoman Michelle Erlach said September 9 in a statement the company plans to have a debrief session with NASA soon. When debriefing concludes, Erlach said, SNC will elaborate further on its future options regarding the contract decision and the Dream Chaser program.

Blue Origin declined to comment. SpaceX did not respond to a request for comment by press time.

Boeing said it will build three CST-100s at its Kennedy Space Center, Fla., facility. The spacecraft will undergo a pad abort test in 2016 and an uncrewed flight in early 2017, leading up to the first crewed flight to ISS in mid-2017, according to a statement. Boeing said it was the only Commercial Crew competitor to pass a critical design review (CDR) as well as complete all CCP milestones on time and budget. ■

### **Air Force Buys 3 More Global Hawks, 2 Multi-INT Retrofit Kits in \$354M Contract**

*By Megan Eckstein*

The Air Force awarded Northrop Grumman [NOC] a \$354 million contract to expand its RQ-4 Global Hawk unmanned aircraft system fleet to 37 aircraft and to bring additional multi-intelligence capability.

The contract includes three aircraft equipped with the multi-INT sensors, which include imaging and electronic signals sensors capable of collecting multiple types of intelligence from high altitudes for up to 32 hours, according to a company news release. Northrop Grumman will also deliver retrofit kits to add the Airborne Signals Intelligence Payload (ASIP) sensors to two Global Hawks already in the fleet, providing them the same multi-INT capability as the new aircraft.

The three new Global Hawks are scheduled for delivery in 2017, and the retrofit kits in late 2016 and 2017.

“Northrop Grumman is proud that the RQ-4 Global Hawk has become an indispensable ISR resource for the Air Force. These new systems will provide further opportunities to keep our warfighters safe,” Mick Jagers, Global Hawk program manager, said in the company news release. “Even as Global Hawk flight hours increase each year, we are striving to reduce the overall operating cost of the system for the Air Force. The Air Force’s commitment to putting more Global Hawks in the air and our dedication to meeting affordability agreements for production and sustainment ensure that this vital asset will remain sustainable and viable for many years.” ■

### **Navy’s New Radar Program Undergoes Preliminary Design Review**

*By Mike McCarthy*

The Navy’s new ship-based Air and Missile Defense Radar (AMDR) recently completed system preliminary design review (PDR).

The Navy said the PDR took place on Aug. 28 with prime contractor Raytheon [RTN], which bested rivals Lockheed Martin [LMT] and Northrop Grumman [NOC] for the contract last year. AMDR will replace the AN/SPY-1 radar currently active on destroyers and cruisers and will link up with the Aegis Combat System—built by Lockheed Martin.

“We continue to execute the AMDR program as if our sailors need this capability today—because they do,” Capt. Doug Small, AMDR’s program manager, said. “This milestone was a significant achievement for the Navy and Industry team and demonstrates that system design effort remains on track...”

AMDR is the main feature of the Navy’s planned flight III ArleighBurke-class (DDG-51) destroyers. The first of the flight III ships is scheduled to go under contract in 2016.

The Navy and Raytheon completed a preliminary design review of the hardware portion of AMDR earlier this year. The hardware design review focuses on the size and how it fits on operations on the ship, while the system review focuses on software. The critical design review (CDR) phases begin later this year, with the hardware CDR set for December and system CDR

planned for April, said Tad Dickenson, Raytheon's program director for AMDR.

The technology risk assessment has been done and any issues were addressed during the earlier technology demonstration phase, and throughout the design review process over the last few months, some minor modifications were made to make the system more production ready.

"We know we fit on the ship. We now about size, weight and power," Dickenson said. "We have positive margins. We are working with the combat system integration group and Lockheed Martin for the combat system interface."

"As long as the budgets and Congress stay aligned between flight III and the combat system engineering agent money (for Aegis), and AMDR, the ship should go out on time," Dickenson said. ■

## **Declining Global Military Budgets Diminish DSCA's Foreign Military Sales Forecast**

*By Pat Host*

The Defense Security Cooperation Agency (DSCA) is projecting that total sales beyond fiscal year 2013 could be as much as \$30 billion or as little as \$5 billion due to declining global military budgets and competition for products and services.

DSCA Director Navy Vice Adm. Joseph Rixey presented a briefing slide September 18 showing total sales, which include Foreign Military Sales (FMS) and United States capacity building programs like the Section 1206 train and equip program, totaled between roughly \$30 billion to \$40 billion between fiscal years 2008 and 2011, including over \$31 billion in sales as of Oct. 31. According to Rixey's slide, total sales spiked to about \$70 billion in FY '12, which he attributed to F-15 sales to Saudi Arabia. Rixey attributed the projected decline in total sales to strained defense budgets worldwide and competition as European countries and other nations have foreign goods and services that are "quite capable." Rixey said if the Defense Department wants to avoid the downtick in total sales DSCA is predicting, it needs to embrace flexibility like hybrid approaches.

An example Rixey gave of a hybrid approach was the sale of Boeing's [BA] P-8A Poseidon maritime patrol aircraft to India, called the P-8I. Rixey said the aircraft was procured via Direct Commercial Sales (DCS) from Boeing, but to complete the execution of the sale, DoD needed to bring in "five FMS cases" to support. Rixey said getting the cases signed and through both the governments of India and the United States in a timely manner to support the contract with Boeing and the deliverables associated with it was "a lot of work."

DSCA did not respond to requests for comment by press time September 18.

"Being part of this new norm, we're going to rise to the occasion to support because we need to if we're going to compete for market share," Rixey said at the Center for Strategic and International Studies (CSIS) think tank in downtown Washington. The P-8I is a variant for India of the long-range, anti-submarine warfare, anti-surface warfare, intelligence, surveillance and reconnaissance aircraft Boeing is developing for the Navy. Boeing said the Indian navy was the first international customer for the P-8 with a contract signed on Jan. 1, 2009 to deliver eight aircraft.

Boeing said it would deliver the first P-8I within 48 months of contract signing and the remaining seven by 2015. Boeing delivered the first P-8I in May 2013 (Defense Daily; June 27, 2013). Boeing said in a statement it delivered its fifth P-8I to India on Sept. 9. Company spokesman Charles Ramey said Thursday Boeing plans for one more delivery this year and the final two in 2015. Ramey said there are options for four additional planes, which the company hopes to have on contract next year.

In essence, the major difference between FMS and DCS are how much procurement involvement an international customer desires to assume and how much it wants to delegate to DoD. As a very broad generalization, the traditional FMS process can be characterized as an international purchaser employing DoD to conduct a defense procurement on its behalf and entrusting the Pentagon to make decisions and act on its behalf.

A few major differences between FMS and DCS are that Foreign Military Sales are government-to-government transactions, more stringent and slower to develop than DCS. Some weapon systems like man-portable air defense missiles (MANPADS), certain cryptographic equipment, precise positioning service and airborne early warning and control systems (AWACS) are only available via FMS.

In DCS, the foreign customer directly interfaces with the contractor on all elements of the contract without DoD being an intermediary. Under traditional DCS, the U.S. government essentially has no direct involvement in the procurement process except for the export license. ■

## Obama Asks Congress for \$500 Million to Train Moderate Syrian Rebels; CR Vote Delayed Pending Details

*By Megan Eckstein*

Congress is mulling how to proceed after President Barack Obama asked for congressional authority to train and equip moderate Syrian rebel forces in Saudi Arabia—with a \$500 million price tag—to address the threat coming from the Islamic State of Iraq and Syria (ISIS).

The Obama administration had already requested the \$500 million as part of its fiscal year 2015 Overseas Contingency Operations budget. But with Congress unprepared to pass all its 12 spending bills before the Oct. 1 start of the fiscal year, lawmakers will instead pass a continuing resolution to extend FY '14 spending levels through Dec. 11. Because there is no congressional authority for training foreign fighters in a third-party foreign country in the FY '14 bill, the CR would not allow this new mission either.

Rep. Buck McKeon (R-Calif.), chairman of the House Armed Services Committee, said during a speech in September at the American Enterprise Institute that the president believes he has authority to continue air strikes in Iraq and begin them in Syria but needs specific congressional approval of his train-and-equip plan.

“We were going to pass a continuing resolution today to fund the government for the rest of the year, and [Obama] called the chairman of the appropriations committee Tuesday afternoon as he was getting ready to submit the bill we were going to vote on today and asked him if he would put in there authority to go into Saudi Arabia because they’ve offered to give us bases, or places, that we could use for training Free Syrians to go back and then fight,” McKeon said. “So that kind of was a last-minute request and has caused us to not vote today.”

Senate Majority Leader Harry Reid (D-Nev.) agreed that Obama’s proposal to deal with ISIS “requires immediate congressional action to grant the administration authority to equip and train Syrian rebels under Title X to fight ISIS.” Reid, speaking to reporters September 11, expressed support for Obama’s plan and said he expects both the Title X authority and the CR to pass easily with bipartisan support, either in a single vote or separately. As of September 11, it was unclear whether House leadership would pursue one or two votes, but Reid said he would go along with whatever Speaker of the House John Boehner (R-Ohio) chose.

In the same press briefing, Sen. Dick Durbin (D-Ill.), the Senate majority whip and the Senate Appropriations defense subcommittee chairman, said that the Obama administration had not made any additional specific funding requests beyond the \$500 million to support the Title X authority.

“I just think it’s too soon to be speculating on the cost of this other than the Title X aspect of it,” he said of the cost of going after ISIS.

During McKeon’s speech, he outlined his own proposal for tackling the ISIS threat, which included the elements of Obama’s plan but also called for special operations forces to go into Sunni-held areas of Iraq to reconnect to the population and help turn them against ISIS, a Sunni extremist group.

“Any U.S.-led coalition must engage with the Sunnis and make them understand that this is not a sectarian fight against them,” McKeon said. “We have to get into those Sunni villages with Special Operations Forces to rebuild relationships. Because if the moderate Sunnis slip through our fingers, they’re gone—and with them, our chances for success. We have to reconnect the intelligence links and security forces’ capabilities that were lost when we left Iraq. Iraqi Shia, Sunni, and Kurds all will be needed to maintain post-war security and stability. That process has to start now.”

He also proposed going beyond the president’s notion of leading a coalition of Saudi Arabia, Jordan, the United Arab Emirates and other local Muslim countries, and suggested that heavy U.S. military support would be needed to ensure the success of coalition partners’ troops on the ground.

“We’re not talking about sending in divisions [of American troops] that are going to do another Iraqi Freedom,” McKeon said. “What we’re talking about is using the local forces that are Iraqis, Syrians, helping them rise to the capabilities that they have. But there are shortcomings that they have that we can fill—we can do the logistics, we can do the communications, we can provide the air support, and there’s nobody that can plan and carry out missions like we can.”

He acknowledged his plan was more hawkish than the president’s but told reporters afterward that “I would err on the side of more rather than less because [a smaller initial response] generally means longer, more expensive in terms of blood and treasure. So I’d rather go full force and hit them as hard as we could as fast as we could.” ■

## DHS Reviewing Southern Border Security Strategy

*By Calvin Biesecker*

The Department of Homeland Security is undertaking a comprehensive review of its southern border security strategy at the direction of Homeland Security Secretary Jeh Johnson, Francis Taylor, under secretary of Homeland Security for Intelligence and Analysis said on September 10.

The concept for the strategy was just approved by Johnson and it will contain an intelligence annex, Taylor told the Senate Homeland Security and Governmental Affairs Committee. The strategy is just beginning to get the “meat on the bones,” he said, adding that it will address the risks to the southern border and to better focus efforts on security gaps that are identified.

Taylor mentioned the southern border strategy in response to a question by Sen. Tom Coburn (R-Okla.), the ranking member on the committee, who said that based on DHS documents there are 700 miles of unsecure southern border.

In a prepared statement provided by Taylor and Suzanne Spaulding, under secretary of Homeland Security for the National Protection and Programs Directorate, the DHS official stated that one of Johnson’s earliest “initiatives was directing development of a Southern Border and Approaches Campaign Planning effort” that will establish a strategic framework for boosting security at the southern border.

“The plan will contain specific outcomes and quantifiable targets for border security and will address improved information sharing, continued enhancement and integration of sensors, and unified command and control structures as appropriate,” Taylor and Spaulding stated. “The overall planning effort will also include a subset of campaign plans focused on addressing challenges within specific geographic areas, all with the goal of enhancing our border security.”

They also said that Taylor’s office is helping to make sure that “threat information drives efficient use of border resources.”

The Senate panel’s hearing also included witnesses from the FBI and the National Counterterrorism Center (NCTC) and examined terrorism, cyber security and evolving threats to the homeland. Committee Chairman Tom Carper (D-Del.) said in his opening remarks that the nation is more secure “in many ways” than it was on 9/11 while Coburn disagreed, saying “I don’t think we’re any safer today. I think the threat to our country is just as great as it was pre-9/11 based on what’s happening in the world, the absolute lack of control of our border, especially our southern border, and the corruption on both sides in terms of law enforcement on the border.”

The most immediate threat to the homeland is from homegrown violent extremists, Nicholas Rasmussen, the deputy director of the NCTC, told the panel. As for foreign terrorist organizations, Al Qaeda in the Arabian Peninsula is the most likely to carry out transnational attacks while the Islamic State in the Levant (ISIL), which is controlling territory in parts of Iraq and Syria, poses the biggest threat to the United States and its interests inside Iraq. He said ISIL’s ability to carry out large-scale, sophisticated attacks beyond its power base “diminishes.” ISIL still poses a threat outside the region, he added. ■

## New DHS S&T Chief Plans To Expand Apex Programs

*By Calvin Biesecker*

The new head of the Department of Homeland Security’s research and development branch said that he plans to expand the use of high-priority, high value programs that are aimed at meeting unique mission needs of the department’s components, although he also plans to expand the duration of these Apex programs currently defined as being rapidly paced.

Reginald Brothers, under secretary of Homeland Security for Science and Technology (S&T), told a House panel in his prepared remarks on September 9 that the Apex programs will continue to be “cross-cutting, multi-disciplinary efforts intended to solve problems of strategic operational importance, but the projects are being scaled to apply to a wider portion of the portfolio and will operate on longer five-year timelines.”

There will also be more money put toward the Apex programs and the milestones for them will be clear, Brothers said at a House Homeland Security hearing of the Security Technologies and Research and Technology Subcommittees.

“The new Apexes will include some current projects rolled up with expanded or new ones,” he said. “With high-profile programs, concrete deliverables, precise milestones and timelines, and significant increases in dollar and workforce investment, we

believe that the new, scaled Apex efforts will bring substantial gains for our operational partners involved with screening, cyber security, flood resilience, bio-detection, and emergency response.”

In the biological detection area, Brothers said that a replacement effort for the Generation 3 BioWatch program, which was canceled earlier this year due to numerous cost overruns and schedule delays, will have an Apex program. Brothers said he is looking at shifting the detection effort from signature-based to anomaly-based, which is similar to the way threat detection is done in the cyber security space. The project is in the process of being defined, he added.

Brothers said that S&T’s technology foraging efforts, which has been going on for several years and involves understanding what already exists in the private and public sectors, is factoring into an Apex program for first responders. The first responder of the future Apex program is looking at how to use “current and emerging technology in wearables and ruggedize it and then apply it to the first responder mission sets,” he said.

S&T currently has two ongoing Apex projects, the Air Entry and Exit Re-Engineering effort with Customs and Border Protection, to improve confirmation that non-U.S. citizens have departed the United States from an airport through the use of biometrics and the Border Enforcement Analytics Program with Immigration and Customs Enforcement’s Homeland Security Investigations Directorate that uses data analytics to create investigative leads for the unit.

Brothers has been the chief of the S&T branch for four months and is in the process of creating a new strategy for his directorate.

Part of this strategy includes “a more focused, strategic relationship with our partners and will address the need for a jointly calibrated investment risk profile,” he said. This means making sure there are programs with higher technical risk that also have a high payoff, Brothers said.

“As such, I plan a portfolio that spans quick success projects integrating off-the-shelf technologies to potentially disruptive technologies that, out of necessity, will be high risk,” Brothers said. This also means that high risk programs have to fail quickly if they have a problem, which in turn means that S&T needs to have metrics in place to know if a program is failing, he said.

The strategy document will look out five to 10 years and is expected to be completed later this year.

Brothers’ team has already drafted a set of long-term visionary goals and has been inviting feedback on them from stakeholders throughout the larger homeland security community. He said about 1,500 people have provided comment on the goals, which have 30-year horizon points.

The draft goals are:

- Screening at Speed: Matching the Pace of Life, which entails being able to conduct non-invasive screening of people, baggage and cargo with minimal impact on traveler speeds and the pace of commerce;
- A Trusted Cyber Future: Protecting Privacy, Commerce, and Community, which means that users have to trust the networks they use and that security must work automatically in the background;
- Enable the Decision Maker: Providing Actionable Information Ahead of Incident Speed, which is essentially improving situational awareness; and
- Responder of the Future: Protected, Connected, and Fully Aware, meaning that first responders will have “comprehensive physical protection, interoperable, networked tools,” better threat detection technologies, and improved situational awareness.
- These goals provide a “North Star” for DHS and its stakeholders of “where we want to go in the next 20 to 30 years,” Brothers said.

David Maurer, director of Homeland Security and Justice Issues at the Government Accountability Office, told the joint panel that the S&T Directorate continues to make positive progress in working with the department’s operating components and in tracking R&D investments. He also said the directorate’s creation of a definition of R&D this summer was a good step.

Still, Maurer said more work needs to be done by S&T to better coordinate with department components and to track the progress of its deliverables to various agencies. He also said that S&T’s workforce remains near the bottom of federal rankings in terms of motivation and morale. ■