

## Number confusion, price dizziness; What's included, anyway?; Compete the teams; Begging for a budget ....

### STICKER SHOCK AND AWE

The Air Force is forging ahead with its new Ground Based Strategic Deterrent—the replacement for the Minuteman III—even though there's a staggering disagreement within the Pentagon over what the program will actually cost. The price dispute is so profound USAF may have to find \$22 billion from other sources to fund GBSD.

The Air Force took the project to Pentagon acquisition, technology, and logistics chief Frank Kendall's Defense Acquisition Board in August to get his green light for Milestone A, the Technology Maturation and Risk Reduction, or TMRR, phase. The Air Force went in with its own estimate of what the program would cost—about \$62.3 billion for 642 missiles—but other agencies had sharply different views of what would and wouldn't be covered by that estimate.

According to Pentagon officials, the Office of the Secretary of Defense's Cost Assessment and Program Evaluation, or CAPE, shop came up with a figure of \$85 billion for research and development, procurement, and military construction. That's a discrepancy of more than a third from USAF's estimate, and other defense agencies also had different numbers.

Usually, a lack of consensus on a program's cost is a showstopper, but Kendall opted to let USAF go ahead with gathering information from contractors and nail down a price later.

Air Force Secretary Deborah Lee James, during a State of the Air Force press conference at the Pentagon in August, said the GBSD “is not on hold.” At the DAB meeting, “something we learned ... is that the magnitude of this type of ICBM work” is not well-understood, she said. “We have not collectively done it for more than 40 years.” There is a “level of complexity that has to be worked through,” and the Air Force is collaborating with other Pentagon agencies “to ensure that we all have a common understanding of the assumptions that we have to put down on paper in order to properly cost out” a budget for the new missile.

In an Acquisition Decision Memorandum about the meeting, Kendall agreed, writing that the uncertainty about costs is due to the fact that “historical data” on what such a program will cost is “limited,” and “there has been a long gap” since the last time strategic missiles were built, making cost methodology problematic.

The Air Force's Nuclear Weapons Center at Kirtland AFB, N.M., sent out its request for information on July 29 to get industry's ideas on how to design, develop, and base the new weapon; responses were due back Oct. 12. Boeing, Lockheed Martin, and Northrop Grumman have expressed interest in the project.

Kendall gave USAF until March 2018 to build a cost consensus within the Pentagon. By then, he wrote, technical risk will have been reduced and USAF should have a solid handle on the GBSD's ultimate tab. In the meantime, he let the CAPE's



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*The replacement for a Minuteman III is still over the horizon.*

\$85 billion then-year estimate stand. It broke out R&D as costing \$22.6 billion, procurement at \$61.5 billion, and military construction at \$0.7 billion.

Accepting the CAPE's figure throws an enormous monkey wrench into USAF's carefully timed plans to modernize not just the ICBM fleet but nearly a dozen other major elements of its combat forces, since it will have to budget to the new number. The service has for several years crafted 10- and 20-year investment programs to ensure that there are no surprises beyond the FYDP, or future years defense program, and that projects it simply can't afford don't even get started. Potentially at risk from USAF's early ICBM estimate are the F-35 fighter, KC-46 tanker, B-21 bomber, a replacement for the JSTARS radar airplane, the T-X trainer, a new strategic cruise missile, a penetrating combat aircraft (PCA) to complement the F-22 and F-35, an F-22 and F-35 upgrade program, a new Combat Rescue Helicopter, and more.

There's little argument that the Minuteman III, built in the 1970s, is in need of replacement. The Air Force believes that structurally and technologically, the system's ability to perform is rapidly eroding. The credibility of the 40-year-old missile is at risk.

The GBSD program also includes a new command and control system for the nuclear deterrent, to replace the existing system, which was built in the 1960s.

Kendall approved the Air Force's request to develop the new ICBM and acquire 642 of them. Of that number, 400 would be deployed and the remainder used for periodic live testing to demonstrate that the deterrent force actually works. He also directed the Air Force to budget \$1.25 billion a year for GBSD operations in the period from initial capability—around 2030—through 2040. The GBSD is expected to serve until 2075.

### ACCESSORIES SOLD SEPARATELY

A big part of the USAF/CAPE cost discrepancy apparently lies in calculating the involvement of the DOD enterprise

that designs nuclear warheads and tests them, versus the separate process of hiring contractors to design and develop a missile to carry a specific payload.

James has on many occasions voiced a hope that the Pentagon would create a separate account for funding the nuclear deterrent force, noting that it is so expensive it could push out of the budget projects the Air Force deems “existential.” Though that wish has at least once been publicly rebuffed by Defense Secretary Ashton B. Carter, James has continued to air the possibility, saying it is still being “looked at.” She has argued that the Navy secured a separate funding line for replacing its ballistic missile-carrying Ohio-class submarines and Trident missiles, and that the Air Force should get similar treatment so as not to endanger its carefully planned modernization program for conventional systems.

One Air Force official pointed out that the CAPE invariably has a “more pessimistic” view of costs than do the services, but allowed, “At the end of the day, ... they are often right” about the ultimate price tag. A notable exception has been the F-35 fighter, on which CAPE estimates have declined significantly for several years, lagging lower cost estimates offered by the F-35 program office.

USAF has decided against a mobile basing system to increase the GBSD's survivability. Former Chief of Staff Gen. Mark A. Welsh III said that in the first meetings on how to proceed with the program, mobility was a consideration, but it was resolved that the ICBM fleet could serve its purpose without moving it around to keep adversary targeteers guessing how much of the force they could knock out with a first strike.

In the 1980s, the Air Force looked at a wide range of mobility schemes for what became the Peacekeeper missile, since retired. This included rail, large trucks, and even C-5 Galaxy aircraft. The Air Force will base the GBSD in existing silos, which will be upgraded, along with their command and control apparatus.

USAF plans to evaluate industry proposals, neck down to two competing industry teams by the end of 2017, and award the GBSD contract in 2019, with an in-service date of “the late 2020s.”

The Minuteman III will have to retire around 2030, because its service life can't be extended after that, USAF has said.

The Air Force is pursuing the GBSD at the same time the Navy is overhauling its own element of the strategic triad, the ballistic missile submarine fleet. Both the Ohio-class submarines and the Trident missiles they carry need an upgrade first, then a replacement.

Under a joint service memorandum of understanding signed between Navy acquisition chief Sean J. Stackley and then-Air Force acquisition chief William A. LaPlante in 2015, the two services will seek to save money by adapting into their new missiles some common elements, such as guidance systems and rocket motors, although the systems will not be common in the whole.

In addition to the GBSD, the Air Force is gearing up to replace the existing bomber leg of the triad with new B-21 bomber and replace the AGM-86 Air Launched Cruise Missile with a weapon known as the Long-Range Standoff (LRSO) missile. The LRSO is highly classified, and all the Air Force will say is that the Defense Acquisition Board reviewed the status of the project in May. Service officials have swung back and forth on describing the missile, some saying it could be

a hypersonic weapon and others saying it will merely be a fast and highly stealthy munition.

Though both figures are classified, Pentagon officials have suggested that an estimate of \$60 billion for the B-21 and \$30 billion for the LRSO are not unrealistic. Combined with the CAPE's figure of \$85 billion for the GBSD, the total cost to replace USAF's legs of the nuclear deterrent over the next 20 years (not including operations) comes out to about \$175 billion. Add in the \$122 billion cost (not including development) of replacing the Ohio-class boats and their Trident missiles, and the strategic modernization bill comes out to nearly \$300 billion.

## CAN YOU CR WAY CLEAR?

In what has become an annual ritual, Secretary of the Air Force Deborah Lee James pleaded with Congress in August to pass a defense budget, detailing the harm that would come from yet another continuing resolution. The pain would come in the form of \$1.3 billion less to spend, she said.

Speaking at one of the quarterly State of the Air Force press briefings she's conducted with the sitting Chief of Staff in recent years—this time with the new Chief, Gen. David L. Goldfein—James explained that a CR would sharply affect “more than 60 Air Force acquisition new starts and upgrades” in the service's plan. A CR holds the spending levels of the last-passed defense authorization bill in place until a new one is signed into law. By definition, it rules out spending on new-start programs.

Projects that would be on hold because of a CR include upgrades to the B-2 and B-52 bombers, the MQ-9 Reaper remotely piloted aircraft, and C-130 Hercules, James said. The B-2 is getting new stealth and navigation systems; the B-52s a new “digital backbone,” providing capability to carry new and more varied munitions and in more configurations, such as internal and external loads simultaneously. The MQ-9 fleet is being upgraded with longer wings and external fuel tanks to extend its range, while the C-130s are long overdue for avionics modernization.

Production of the Joint Direct Attack Munition, one of USAF's preferred weapons in the fight against ISIS, would be “limited to the [Fiscal Year] '16 quantity, which we feel is unacceptable, particularly in light of current operations against Daesh and other extremists around the world,” James said.

The KC-46 tanker, having just gotten the go-ahead for production, would be held to 12 aircraft instead of the 15 called for in the USAF budget, slowing its fielding, James warned. Even at 15 a year, the planned 179-aircraft KC-46 fleet wouldn't deliver until 2028—and still wouldn't replace all the KC-135Rs that by then will be 80 years old.

A CR would “slow everything down” for developing the B-21 bomber USAF wants to field in the 2020s, James noted. The situation would “risk a long-term deterrent capability” for the nation.

Numerous military construction projects, including those involved in bedding down the F-35 fighter at new locations, new dormitories for airmen, and “important missile maintenance facilities” would be halted by a CR, James stated.

“We know the congressional staff is working hard, even while their members are back at home this summer,” James said, but failure to pass a budget would cause “many, many perturbations in our system.”