

THE DEFENSE MONITOR



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Dodging the Formal Acquisition Process

BY DAN GRAZIER

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When Army leaders decided they needed an upgraded version of the Abrams tank, they wanted to get it without enduring what they consider to be a cumbersome formal acquisition process. Any program of this scale would ordinarily be classified as a Major Defense Acquisition Program (MDAP) and be subject to the oversight reviews and regulations that status entails.¹

To avoid this, Army leaders claimed that a major modernization effort to a weapon central to their very identity was a mere design tweak, and managed the project through the far less rigorous Engineering Change Proposal process.² This is a problem. The MDAP process may be cumbersome, but its intended purpose is to ensure the Pentagon properly evaluates its needs and then enters into programs that will properly meet them. It is

also meant to exert the kind of pressure necessary to keep costs under control. While the system is indisputably flawed (the F-35 is an MDAP), the services should not be permitted to simply ignore the laws. Doing so will almost certainly result in weapons of dubious combat value and more cost overruns.

In performing such a maneuver to avoid the toughest of the acquisitions process, the Army is hardly alone. All of the services are increasingly resorting to similar schemes for other high-profile programs. The danger to the taxpayers, to say nothing of the men

¹ "Major Defense Acquisition Program (MDAP)," AcqNotes Website.

² "Engineering Change Proposal (ECP)," AcqNotes Website. (Hereinafter ECP AcqNotes)

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and women who will have to take these systems into combat one day, is that these complex and expensive weapon systems aren't subjected the kind of outside scrutiny necessary to ensure the services are purchasing suitable and effective equipment.

Acquisition Reform

Hardly a year goes by without some effort to modernize the Pentagon's weapons buying process. Senator John McCain (R-AZ) succeeded in pushing into law a provision to split the Pentagon's office of Acquisition, Technology & Logistics into at least two offices.³ The long-time chairman of the Senate Armed Services Committee believes this will allow the separate undersecretaries to focus more on their particular offices.⁴ The new office of Research and Engineering will focus on innovation while the Acquisition and Sustainment office will deal with basic business functions associated with buying and maintaining new weapons. And House Armed Services Committee Chairman Mac Thornberry (R-TX) has introduced legislation for the past three years that is meant to streamline the process. The latest version would allow the services to purchase more items through commercial marketplaces. Previous similar efforts, such as when the Pentagon attempted to change the definition of commercial items to avoid the competitive bidding process, proved problematic⁵ His earlier efforts were geared towards improving program business models and reducing the

process's reports and paperwork.⁶ Congress also effectively outsourced acquisition reform to the defense industry when it created the "Section 809 Panel" as part of the FY 2016 National Defense Authorization Act to make recommendations to streamline the way the Pentagon buys weapons.⁷ This panel is comprised of several members with deep ties to the defense industry and is the subject of a concerted lobbying effort by the contracting community.⁸

The effectiveness of such efforts is not yet clear, but that might not matter. The usual result of most such efforts is an even more sluggish process—it is a rare problem that can't be made worse with the addition of more bureaucracy.

Why the Military-Industrial-Congressional Complex Wants to Avoid the MDAP Process

From the perspective of the Pentagon, the defense contractors, and their allies on Capitol Hill, there are advantages in procuring weapon systems through means other than the formal acquisition process. The acquisition process is so complicated and involved that the Department of Defense created the Defense Acquisition University in 1991 to educate personnel on navigating various aspects of the process.⁹ A full explanation of the process would fill volumes, but even the basics provide a glimpse into the complexity of the process.

A Major Defense Acquisition Program goes through three separate phases. At the end of each phase, a

- 3 Aaron Mehta, "This is the Pentagon's new acquisition structure," *Defense News*, August 2, 2017.
- 4 Sean D. Carberry, "DOD pushing ahead with AT&L split," *FCW*, May 03, 2017.
- 5 Scott H. Amey, "Congress Locks Pentagon into Commercial Item Ripoffs," Project On Government Oversight, December 23, 2015.
- 6 Katie Boyd, "Reforming the Flawed DOD Acquisitions System," Speaker Paul Ryan's Website, March 31, 2015.
- 7 "Section 809" Website.
- 8 Hawk Carlisle, "NDIA Moves Forward as an Enterprise in 2018," *National Defense*, January 2, 2018.
- 9 Defense Acquisition University Homepage.

program goes through a review process to determine whether it has met the criteria to move on to the next phase. These transitions are called “milestones.”

A project begins when the services identify a new military need, or what is known as a capability. This is done through the Joint Capabilities Integration and Development System. This process figures out whether a new weapon system is actually needed to fill the perceived capability gap or if a change in tactics or some other non-material solution can get the job done. This work is reviewed by the Joint Requirements Oversight Council. If they determine a new weapon system is needed, then it goes through the Material Solution Analysis Phase.¹⁰

A program has to achieve 40 milestone requirements just to pass Milestone A into the second major phase of a program, the Technology Maturation & Risk Reduction Phase.¹¹ These 40 requirements include conducting an Analysis of Alternatives, which is a comparison of other weapons that could potentially fill the same need; an Independent Cost Estimate, which helps decision-makers decide if the weapon is something they can afford to pursue (or what tradeoffs should be made if it’s not); and developing a Test and Evaluation Master Plan, which is essential to establish clear testing benchmarks to evaluate how the new weapon system performs in combat.¹² While plenty of redundancy exists within the process, it is meant to protect the interests of both the warfighters and taxpayers. The

Government Accountability Office has noted the importance of following through with these steps as part of a knowledge-based process. If the services don’t do so, they create situations where programs “carry technology, design, and production risks into subsequent phases of the acquisition process that could result in cost growth or schedule delays.”¹³

Ideally, multiple contractors will build prototypes that will then be tested as part of a competition to see which design performs the intended mission better. The most successful programs begin this way, with the Lightweight Fighter Program (F-16) and the A-X Program (A-10) being the most notable examples.¹⁴

The awarding of a contract for the winning design marks Milestone B, and the program passes into the Engineering & Manufacturing Development Phase. The prime and subcontractors then finalize the development of the system and begin manufacturing enough production-representative goods to complete the Initial Operational Test & Evaluation process.¹⁵

The successful completion of the realistic combat and live-fire testing phase marks Milestone C, and the program proceeds to full-scale production and deployment to the troops.

Throughout this process, there are numerous review and decision points. This includes a review by the Defense Acquisition Board, which is made up of the Vice Chairman of the Joint Chiefs of Staff, Secretaries of the Military Departments, four under-

secretaries of defense, the Director of Operational Test & Evaluation, and others.¹⁶

At least, that’s how things are supposed to work.

CASE STUDY: THE ARMY’S NEW TANK

The Army commissioned General Dynamics to design an upgraded version of the M1A2 Abrams tank in 2015, designating the project as an Engineering Change Proposal rather than as a Major Defense Acquisition Program. The first of what is expected to be 1,500 upgraded versions of the Army’s Abrams tanks rolled off the assembly line at the Lima, Ohio, factory on October 4, 2017.¹⁷ The choice of contractors for the project was hardly a surprise as the Abrams tank is a General Dynamics product. That is not to suggest that another contractor could not perform the work. Other contractors like BAE Systems also build armored vehicles and their



“... we will be spending \$22 million to upgrade a \$6 million vehicle.”

10 “Material Solution Analysis (MSA) Phase,” AcqNotes Website.

11 “Milestone Requirements Matrix,” AcqNotes Website.

12 “Analysis of Alternatives (AoA),” “Independent Cost Estimate,” “Test and Evaluation Master Plan (TEMP),” AcqNotes Website.

13 “Defense Acquisitions: Assessments of Selected Weapon Programs,” Government Accountability Office, March 2012.

14 “Lightweight Fighter (LWF),” “A-X Attack Fighter,” GlobalSecurity.org.

15 “Initial Operational Test and Evaluation (IOT&E),” AcqNotes Website.

16 “Defense Acquisition Board (DAB),” AcqNotes Website.

17 Ashley Givens, “Army rolls out latest version of iconic Abrams Main Battle Tank,” US Army Website, October 9, 2017.

component systems. By designating the project as an engineering change, however, the Army didn't have to open it to a competitive bidding process as "most ECPs occur in a sole source environment."¹⁸

To the casual observer, the Army's newest tank looks very much like the existing tanks. The M1A2 SEPv3 is still essentially an Abrams tank on the outside. However, the vehicle is quite different on the inside.¹⁹ It sports a new suite of communications gear called the Joint Tactical Radio System, which is supposed to fully integrate the vehicle into the Army's command and control network. To provide the necessary electricity to power all of the new electronics and conserve fuel in situations where the crew does not need to run the gas-turbine engine, an improved generator has been added inside the hull.

The tank uses the same M256 smooth-bore cannon as the existing M1A1 tanks, but the breach in this variant has been modified to use the Ammunition DataLink to be compatible with the advanced multi-

reducing the logistical burden of the armored forces, which is always a great concern.

In response to the threat posed by IEDs, the new tank includes a Counter Remote Controlled Improvised Explosive Device electronic warfare package. Should all of that fail, or when enemy fighters use simpler low-tech command-wired IEDs (which they will), the tank also boasts additional armor protection.

These are not insignificant changes. They add significantly to an already extremely heavy tank. As someone who spent ten years operating in tanks, I can tell you this is a critical problem. The Abrams tank is already too heavy for most of the world's bridges. This restricts the number of avenues a unit can take to reach an objective, making it much easier for the enemy to predict the unit's movements. It also increases the logistics burden because a heavier tank requires more fuel.

Sources within the Army say the new variant is too heavy for the Army's fleet of Heavy Equipment

"The Abrams tank is already too heavy for most of the world's bridges. This restricts the number of avenues a unit can take to reach an objective, making it much easier for the enemy to predict the unit's movements."

purpose round.²⁰ This allows the tank's gunner to send a signal to the round right before it is fired, setting its detonation mode to one of three different settings. It can detonate on impact, detonate on a delay for obstacle reduction, or airburst. This single round replaces four existing rounds,

Transport vehicles. The Army relies on these vehicles to transport the tanks across long distances to conserve fuel and to reduce wear and tear on the tanks.

They also do not come cheaply. The 2018 National Defense Authorization Act provides \$650 million to

upgrade 29 M1A2s to the new configuration.²¹ We will be spending \$22 million to upgrade a \$6 million vehicle.

What makes this particularly curious is that at the same time the Army is dodging the MDAP process with the tank upgrade program, the Hercules tank recovery vehicle upgrade program is going through the MDAP process.²² The wrecker will receive greater scrutiny than the weapon it is meant to recover.

CASE STUDY: F-35 FOLLOW-ON MODERNIZATION

The F-35 program is being managed through the regular MDAP process, but officials are now working furiously behind the scenes to prevent the next phase of it from following the required path. No one is quite sure what the latest incarnation of the F-35 will be able to do when the program completes the development and testing process, but that isn't stopping officials from seeking funds for upgrades to the aircraft. They are continuing to develop a list of needed capabilities for the newer version, called Block 4.

The Pentagon estimates the cost for the initial phase of the modernization program—the research, development, test, and evaluation (RDT&E) phase—to exceed \$3.9 billion through 2022. The Government Accountability Office correctly points out that this "would exceed the statutory and regulatory thresholds for what constitutes a major defense acquisitions program (MDAP), and would make it more expensive than

18 ECP AcqNotes.

19 Jared Keller, "The Army Is About To Receive Its First Souped-Up New M1A2 Abrams Battle Tank," *Task & Purpose*, September 22, 2017.

20 "M1A2 Abrams SEP V3 main battle tank technical data sheet specifications," Army Recognition.com, October 17, 2015.

21 National Defense Authorization Act for Fiscal Year 2018.

22 Undersecretary of Defense for Acquisition and Sustainment, "Major Defense Acquisition Programs 2017."



many of the other MDAPs already in DOD's portfolio."²³

The F-35 Joint Program Office has strenuously resisted efforts to create a separate MDAP for the Block 4 modernization citing time and money concerns.²⁴ The Joint Program Office wants to run the modernization program as part of the original contract from 2001. By dodging the MDAP process for this effort, the program would avoid many of the processes meant to ensure proper Congressional oversight. The program would not, for example, have to go through a Milestone B review, which would establish an acquisition program cost baseline and require regular reports to Congress about the program's cost and performance progress.

Such a move also means the program would not be subject to the

provisions of the Nunn-McCurdy amendment that establishes unit cost growth thresholds,²⁵ which require the Pentagon to notify Congress if the program's unit cost grows by 25 percent, and calls for the program's cancellation if the cost grows by more than 50 percent. Unfortunately, such cancellation does not happen very often because the law includes a waiver provision that allows the Secretary of Defense to certify that the program is critical to national security and should be continued. Only one program, the Armed Reconnaissance Helicopter, has been cancelled as a direct result of a Nunn-McCurdy breach.²⁶

CASE STUDY: THE B-21 RAIDER

The biggest-ticket item currently

attempting to dodge public scrutiny is the Air Force's newest bomber, the B-21 Raider.²⁷ This program is being managed by the Air Force's Rapid Capabilities Office, a secretive group that is conveniently not subject to many of the regulations Congress imposes upon most acquisition programs.

According to the Rapid Capabilities Office website, this organization has a key advantage the regular acquisition office does not:

...waivers to and deviations from any encumbering practices, procedures, policies, directives or regulations may be granted in order to ensure the timely accomplishment of the mission within applicable statutory guidance.²⁸

23 "F-35 Joint Strike Fighter: DOD's Proposed Follow-on Modernization Acquisition Strategy Reflects an Incremental Approach Although Plans Are Not Yet Finalized," Government Accountability Office, August 8, 2017.

24 Lara Seligman, "Bogdan, GAO at Odds Over F-35 Upgrade Program," *Defense News*, March 24, 2016.

25 Moshe Schwartz, *The Nunn-McCurdy Act: Background, Analysis, and Issues for Congress*, Congressional Research Service, May 12, 2016.

26 "Trends in Nunn-McCurdy Cost Breaches for Major Defense Acquisition Programs," Government Accountability Office, March 9, 2011.

27 Lara Seligman, "Does Congress Have Enough Oversight of the B-21?" *Defense News*, April 18, 2016.

28 Air Force Rapid Capabilities Office Fact Sheet.

The Air Force has been extremely cagey about releasing cost information about the new bomber. During the bid process, service leaders announced a \$550 million per aircraft target cost.²⁹ So far, Air Force leaders have refused to publicly release the value of the B-21's development contract with Northrop Grumman. The stated reason for the secrecy about cost is that a potential adversary could derive information about the aircraft's size, weight, and range. Apparently no one will be able to determine any of that information from the artist's rendering of the new bomber, or from the list of subcontractors Air Force officials publicly announced.³⁰

Conclusion

The MDAP process is complex and often fails to produce weapons that do what they are expected to do or come anywhere close to meeting

the original cost expectations.³¹ The process is long over-due for a comprehensive streamlining effort. But even though the process is deeply flawed, the protections it includes were put there to protect the interests of the troops and the taxpayers. Just because the services find the process inconvenient doesn't justify their efforts to dodge the oversight mechanisms provided by federal law.

Unless Congress arrests this disturbing trend, the Services are likely to continue to use these schemes to bypass the rules and regulations put in place to protect both the troops and the taxpayers. The people's interests are served only when everyone involved in the process of buy-

ing new weapons have the correct information at the beginning. As Tom Christie, former Director, Operational Test and Evaluation wrote:

Upfront realistic cost estimates and technical risk assessments, developed by independent organizations outside the chain of command for major programs, should inform Defense Acquisition Executives. The requirement for those assessments to be independent, not performed by organizations already controlled by the existing self-interested sections of the bureaucracy...is essential.³²

"...the services are likely to continue to use these schemes to bypass the rules and regulations put in place to protect both the troops and the taxpayers."



It is understandable that the services want to speed up the process of fielding new weapon systems. But, while there are many flaws in the current acquisition system, it is not the root of the problem and subverting or avoiding that process is not the answer. Service leaders and their partners (and far too often future colleagues) in the defense industry keep pursuing unrealistic programs, and Congress keeps voting for them. Dodging the current acquisition regulations will not fix that problem, but it will make it easier for all involved to hide the bad results from the people paying for them. Unfortunately, it won't hide the problems from those who will suffer the consequences if a weapon fails in combat. ■

29 Jeremiah Gertler, *Air Force B-21 Long Range Strike Bomber*, Congressional Research Service, April 14, 2016.

30 Dan Grazier, "Business as Usual Building a New Bomber," Straus Military Reform Project, March 17, 2016.

31 Moshe Schwartz, *Defense Acquisitions: How DOD Acquires Weapon Systems and Recent Efforts to Reform the Process*, Congressional Research Service, January 2, 2013.

32 Winslow Wheeler, "Refusing to Misunderstand the Defense Acquisition Problem," Straus Military Reform Project, October 7, 2014.



BY MARK THOMPSON

How appropriate that the Pentagon rolled out its latest Nuclear Posture Review on Groundhog Day (after all, it could have been April 1st). The latest U.S. atomic blueprint reads like the classic Bill Murray movie, where he lives the same day over and over again. Only this time it's Dr. Strangelove—and it's not a movie.

For the most part, the U.S. military has been successful at managing thousands of on-alert nuclear weapons. Now, like a petulant bully in the schoolyard, President Trump wants to toss more into the air for them to handle, even as the command-and-control network that keeps them all humming and primed for the end of the world grows increasingly creaky and unreliable.

This is not a recipe for success. It's buying the biggest gun you can afford and skimping on the safety.

But like it or not, that's where we find ourselves. And whether through snafu or sabotage (smart bets are on the former), U.S. luck regarding its nuclear weapons can't last forever.

More Nukes = More Chances for Mistakes

Just how long can America's atomic luck last?

In all the commentary on Trump's embrace of atomic arms, I'm taken aback that no one seems to have asked when they're going to stumble into the same nightmare as that hapless state employee who sent thousands of Hawaiians running for their lives January 13 when he flashed word that a ballistic missile was bearing down on their island paradise. Or during the Super Bowl February 4 when your screen went black for nearly 30 seconds. Or when that Amtrak train ended up on the wrong track the same day—or when a second fell apart two days later at 125 miles an hour on its high-speed run from Washington, DC, to Boston. Or, on the same day, when the flubbed alert via mobile phones that a tsunami was approaching the east coast of the United States.

All were mistakes—one of them, unfortunately, deadly—caused by human error of one form or another.

That will never happen with U.S. nuclear weapons, advocates say. Yet their confidence carries a whiff of the hubris we all shared before 9/11. Until that day, no one in the U.S. government with authority to prevent it saw those terror attacks coming.

That attitude instantly changed following the attacks that killed nearly 3,000: "How could we have been so stupid?"

The Pentagon wants a nuclear toolbox filled with all kinds of less-explosive "tactical" atomic weapons. The Defense Department, for a change, is actually seeking less bang for the buck. It wants new cruise and ballistic missiles, and bombs for the F-35, to create a force field of nuclear deterrence around the nation. Think of it as nuclear nuance. The policy is intended to put potential foes on notice that Washington could retaliate with atomic finesse.

Defense Secretary Jim Mattis says a tinier bomb—roughly the size of the weapon that vaporized Hiroshima—is needed for leverage against nations like North Korea. "That nation could assume that if they used, in a conventional fight, a small-yield [nuclear] bomb, we would not respond with a very large-yield bomb," he said.¹ "Our response to this is to make a small-yield [nuclear] bomb and say: 'Don't miscalculate.'"

This is the fantasyland of nuclear-war planning. "The weapons are real, and their destructive power is cata-

1 Adam K. Raymond, "Mattis: The U.S. Needs a Smaller Nuke to Prevent Nuclear War," *New York Magazine*, February 7, 2018.

clysmic,” nuclear author Fred Kaplan wrote at Slate.² “But the countless attempts to harness this destruction into an elaborate war-fighting strategy are excursions into metaphysics, not the hard-boiled realism that its purveyors like to believe.”

U.S. nuclear command and control infrastructure generally dates back to the Reagan era, and need modernizing if we’re going to keep them. But to do this across the board blows a chance to craft a nuclear force more in tune with the 21st Century. While today’s nuclear arsenal is down an impressive 85 percent since its Cold War peak, the U.S. retains nearly 7,000 of them, many on hair-trigger alert. Even with 2,800 of them in retired status, that’s enough to destroy the world as we know it several times over.

The nuclear triad is a Cold War leftover ill-suited for the varied threats the U.S. faces today. Former defense secretary William Perry has declared it is past time to junk the Air Force’s ICBM leg of the triad, and he’s hardly alone.³ “In the Wild West, rarely did cowboys carry three guns,” defense analyst Harlan Ullman noted in a letter to *The Washington Post*. “Two were usually enough.”⁴

Even Mattis wondered about its wisdom before he joined the Trump Administration last year. “Is it time to reduce the triad to a diad, removing the land-based missiles?” the retired four-star Marine wondered aloud to the Senate Armed Services Committee in 2015.⁵

But in the latest Nuclear Posture Review, Mattis embraces that three-

legged stool of nuclear deterrence. It “provides diversity and flexibility,” it says, without actually spelling out why three is the right number. Why not four (even more flexible!) or two (less Gumby-like, but still able to hold the world at risk)?

More critical is the infrastructure that warns of an impending nuclear attack on the United States and lets the United States fire back. “While once state-of-the-art, the [nuclear command, control and communication] system is now subject to challenges from both aging system components and new, growing 21st century threats,” the nuclear review says.

The Congressional Budget Office estimated in October that rewiring the communication and detection links of the nation’s nuclear forces will cost \$184 billion between now and 2046. But that omits many required, as-of-yet unpriced, upgrades. “Plans to do so are generally not yet well defined,” the CBO said in its dryly understated prose.⁶ “Additional modernization programs, if included, would increase those costs.”

This is the seam in the U.S. nuclear infrastructure, if history is any guide, most likely to split apart.

Perry had known false alarms from his time as an analyst before he was Secretary of Defense. “I was awoken at 3 o’clock in the morning by a phone call from the watch officer at NORAD telling me that his computers were showing 200 ICBMs on the way from the Soviet Union to the United States,” he told me in 2015. “Now that really gets your attention, especially when you’re liv-

ing at ground zero,” he said of the 1979 scare. “It was, of course, a false alarm.”

False alarms travel both ways. In 1983, a Soviet watch officer saw his computers light up with warnings that five U.S. ICBMs had been launched toward his country. For five minutes, Moscow’s air-defense forces wondered if American missiles were incoming. Lieutenant Colonel Stanislav Petrov finally concluded it was a false alarm. “When people start a war,” he’d say years later, “they don’t start it with only five missiles.”⁷ It turned out that the Soviets’ early warning system had apparently mistaken light from the sun—the solar system’s ultimate nuclear weapon—bouncing off clouds as missile launches.

It seems that in this post-Cold War world, we are entering a chapter where the horror of a nuclear attack is more likely to begin by mistake than by rational (!) decision. “A fateful error—rather than intentional aggression—is the most likely catalyst to nuclear catastrophe,” atomic veterans Ernest Moniz (President Obama’s energy secretary from 2013 to 2017) and Sam Nunn (Democratic Senator from Georgia from 1972 to 1997) warned February 1.8 “Do we really believe we can prevent a nuclear catastrophe indefinitely in a world with nine states with nuclear weapons and significant suspicion and hostility in many of their mutual relationships?”

Good question. Too bad the United States doesn’t have a better answer. ■

2 Fred Kaplan, “Mattis Goes Nuclear,” *Slate*, February 7, 2018.

3 William Perry, “Why It’s Safe to Scrap America’s ICBMs,” *The New York Times*, September 30, 2016.

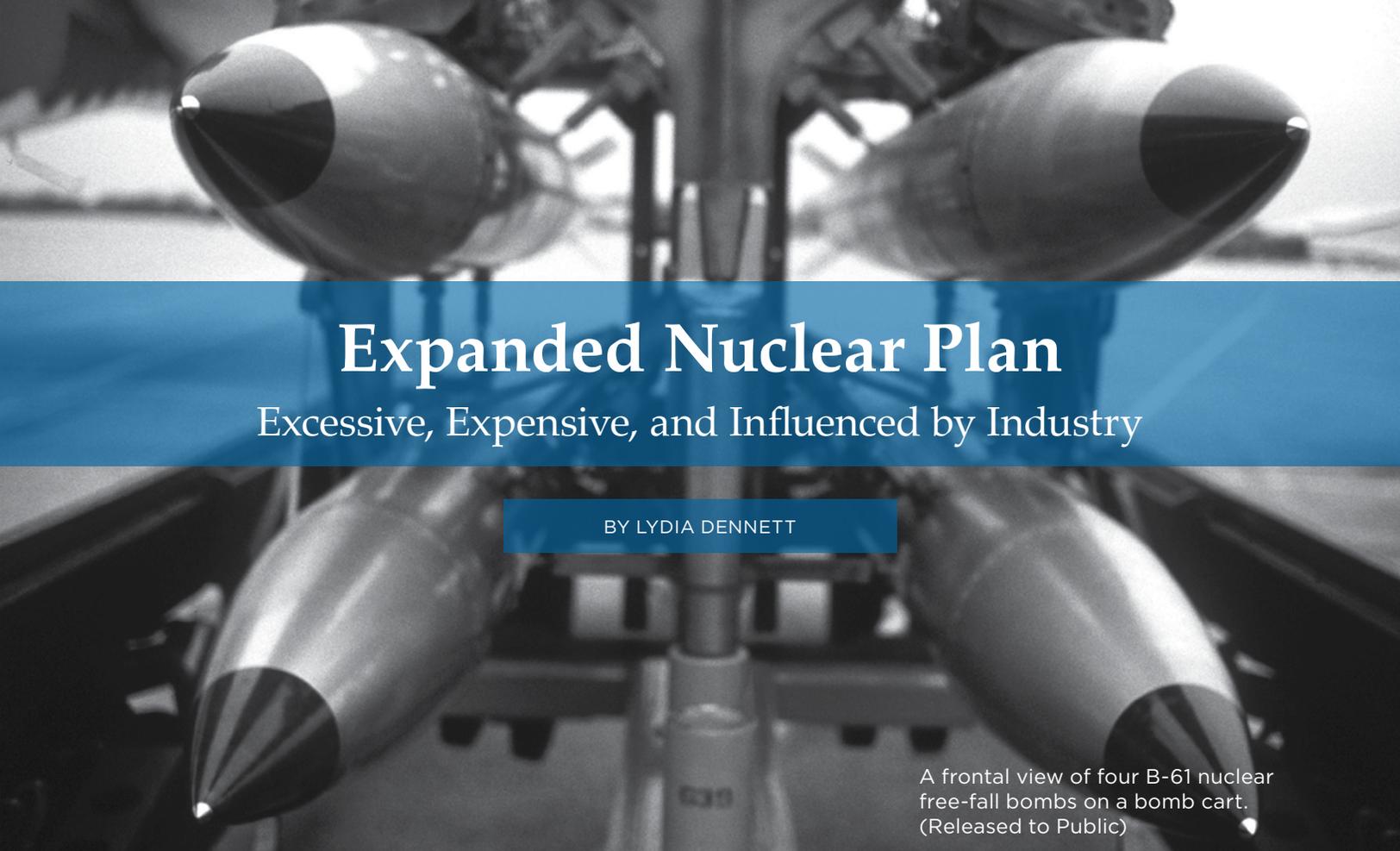
4 Harlan Ullman, “It’s time to reassess the nuclear triad,” *The Washington Post*, February 9, 2018.

5 Richard Sisk, “Mattis’ About-Face: He Now Supports ICBMs as Part of Nuclear Triad,” *Military.com*, February 7, 2018.

6 Congressional Budget Office, *Approaches for Managing the Costs of U.S. Nuclear Forces 2017 to 2046*, October 2017, p. 20.

7 Sewell Chan, “Stanislav Petrov, Soviet Officer Who Helped Avert Nuclear War, Is Dead at 77,” *The New York Times*, September 18, 2017.

8 Ernest Moniz and Sam Nunn, “Three Steps to Avert an Accidental Nuclear War,” *Bloomberg View*, February 1, 2018.



Expanded Nuclear Plan

Excessive, Expensive, and Influenced by Industry

BY LYDIA DENNETT

A frontal view of four B-61 nuclear free-fall bombs on a bomb cart. (Released to Public)

The following piece was first published in February 2018. It has been excerpted and updated. The original can be found at <http://www.pogo.org/straus/issues/nuclear-security/2018/leaked-report-calls-for-expanded-nuclear-modernization-plan.html>

The Trump Administration's Defense Department will continue and expand the nuclear modernization plan begun under President Obama, according to the Administration's 2018 Nuclear Posture Review.¹ A look under the hood of the new proposals reveal an extraordinarily excessive and expensive effort, the justifications for which seem to be heavily drawn from reports funded by companies with a vested financial interest in an expansive plan.

The underlying message of this Review is generally the same as that of the 2010 Nuclear Posture Review

under President Obama: the United States is committed to a robust stockpile of nuclear weapons that will deter potential adversaries and assure allies. But there is a marked difference in approach in President Trump's Review, and some of the language and one significant change track recommendations made in two recent reports created by organizations with ties to entities that could stand to financially gain from the implementation of their recommendations.

In 2015 the Center for Strategic and International Studies released a report, called *Project Atom*, that advocated for an expanded nuclear arse-

nal, including a new "suite of low-yield, special-effects warheads."² The Center's national security program area, which houses the Project on Nuclear Issues, receives funding from several big-name defense contractors—including the Lockheed Martin Corporation, Bechtel Corporation, and the Northrop Grumman Corporation—that would all be working on multi-billion dollar modernization projects, as well as from the U.S. government.³

In 2017, the National Institute for Public Policy published *A New Nuclear Review for a New Age*, which echoed the Center's recommendations for expanding the arsenal with the development of a new low-yield nuclear weapon to ensure a flexible

1 Office of the Secretary of Defense, *Nuclear Posture Review*, February 2018.

2 Clark Murdock, Samuel J. Brannen, Thomas Karako, and Angela Weaver, *Project Atom: A Competitive Strategies Approach to Defining U.S. Nuclear Strategy and Posture for 2025-2050*, Center for Strategic and International Studies, May 2015, p. 22.

3 Center for Strategic and International Studies, "Government Donors"; Center for Strategic and International Studies, "Corporation and Trade Association Donors."

and reliable nuclear force.⁴

“In the contemporary, highly-dynamic threat environment, however, flexible and adaptable deterrence strategies will likely be necessary to succeed against the myriad of known and plausible threats confronting the United States,” the report states.

One of the contributing authors to the Institute’s report is a director at Lawrence Livermore Laboratory, and one of the senior reviewers was a former director of the Lab. Lawrence Livermore Laboratory is one of three national labs managed by the National Nuclear Security Administration, the part of the Energy Department that is responsible for the nuclear weapons stockpile.

“A look under the hood of the new proposals reveal an extraordinarily excessive and expensive effort, the justifications for which seem to be heavily drawn from reports funded by companies with a vested financial interest in an expansive plan.”

The new nuclear plan would mean increased work, and therefore funding, for the Lab, thus giving at least the appearance of a conflict of interest in the analysis and recommendations. Other reviewers and authors include former and current Defense Department executives.

President Trump’s Nuclear Posture Review uses a narrative and language to justify the development of a new warhead similar to that found in these reports. The Review repeatedly states that the nuclear force must be flexible and adaptable, stating that a new warhead is required to achieve that goal.

“Expanding flexible U.S. nuclear

options now, to include low-yield options, is important for the preservation of credible deterrence against regional aggression,” the Review states.

The Congressional Budget Office has estimated that the modernization plan begun under the Obama Administration will cost a total of \$1.2 trillion over the next 30 years.⁵ The lion’s share of that cost, \$890 billion, will be for new and updated delivery systems, including fleets of new submarines and bombers to carry nuclear warheads, which will be developed by the Defense Department. The remaining \$352 billion will be allocated to the NNSA’s laboratories for warhead manufacturing and infrastructure upgrades. The 2018

Nuclear Posture Review does not specify how much the development of new low-yield warheads will add to the cost or how the new development will affect current projects and schedules. Neither does the Review address the fact that there are over 1,000 low-yield nuclear weapons already in the stockpile—each equivalent to the bombs that destroyed Hiroshima and Nagasaki.⁶

The Review also fails to address the fact that one of the warheads in the arsenal, the B61, has already begun a costly life extension program that will give it a “dial-a-yield” capability. It will be deliverable by either short-range fighter planes or long-

range bombers and will have four different, selectable yields⁷—meaning that it could be used as a low-yield weapon. The life extension program for this one bomb could exceed the Pentagon’s estimated cost of \$10 billion and will additionally include a \$1.3 billion tail kit that will improve the bomb’s accuracy.⁸ These upgrades will make it one of the most lethal, and adaptable, nuclear weapons ever created and raises questions about why an additional specifically low-yield weapon would be required.

Most experts agree: the United States must have a safe, secure, and strong nuclear arsenal for national defense, and there’s no question that parts of that arsenal and the nuclear complex itself must be updated. But there is a great deal of debate surrounding how much of the nuclear modernization plan is actually necessary, even without the latest Review’s call for new warhead development.

When recommendations are made to spend billions of taxpayer dollars in the name of national security, it’s important to look at exactly what may have helped shape those recommendations. In the case of both *Project Atom* and *A New Nuclear Review for a New Age* the research and writing of the reports were supported by entities with a lot to gain from an expansive modernization plan, which is exactly what both reports recommended. Similarly, the Nuclear Posture Review is a document produced by the Defense Department, which would also see an increase in funding and work from an expanded plan. But it remains unclear exactly how necessary, and ultimately how costly, this plan will be. ■

4 Keith B. Payne and John S. Foster, Jr., et al., *A New Nuclear Review for a New Age*, National Institute for Public Policy, April 2017.

5 Congressional Budget Office, *Approaches for Managing the Costs of U.S. Nuclear Forces, 2017 to 2046*, October 2017, p 15.

6 Hans M. Kristensen, Federation of American Scientists, “The Flawed Push For New Nuclear Weapons Capabilities,” June 29, 2018.

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TOTAL NATIONAL SECURITY SPENDING FY 2019 (FY 2019 \$)

The following was first published in February 2018. It has been updated. The original can be found at <http://www.pogo.org/straus/issues/defense-budget/2018/americas-national-security-budget-nearing-1-trillion.html>

National Security Program	FY 2019 as Requested	Comments
DoD Base Security Budget (Discretionary)	617.1 billion	The “base” budget purportedly contains all routine, peacetime expenses; however, DoD and Congress have loaded tens of billions of dollars in such “base” spending into the Overseas Contingency Operations fund for declared wartime expenses. Pentagon Comptroller David Norquist said budget materials were published before the Bipartisan Budget Act of 2018, and that base spending would be \$20 billion higher. See below.
DoD Base Budget (Mandatory)	9 billion	DoD often does not count this “mandatory” spending in its budget presentations to the public; however, being for military retirement and other DoD-only spending, it is as much a part of the DoD budget as military pay and acquisition.
DoD Base Budget Total	626.1 billion	
Overseas Contingency Operations (OCO)	69 billion	While budget materials initially proposed \$89 billion for OCO, this number was revised to \$69 billion to reflect the Bipartisan Budget Act of 2018.
DoD Subtotal	695.1 billion	
DOE/Nuclear	23.1 billion	For nuclear weapons activities.
“Defense-Related Activities”	8.9 billion	
National Defense Total	726.8 billion	This is the OMB budget function “National Defense” (also known as “050”) which is sometimes confused as Pentagon-only spending.
Military Retirement Costs Not Scored to DoD	5.5 billion	This category shows funds paid by the Treasury for military retirement programs, minus interest and contributions from the DoD military personnel budget, the data for which are in functions 600, 900, and 950. As DoD-unique spending, they should be displayed as part of the DoD budget, but they are not by either DoD or OMB.
DoD Retiree Health Care Fund Costs	-6.1 billion	These are net costs to the Treasury for this DoD health care program, the data for which are in functions 550, 900, and 950. As DoD-unique spending, they should be displayed as part of the DoD budget, but they are not either by DoD or OMB.
Veterans Affairs (Total)	193.2 billion	
International Affairs (Total)	41.8 billion	
Homeland Security (Total)	51 billion	
Shares of Interest on the Debt	123.5 billion	Total On-Budget Federal Authorities is \$4.6 trillion in fiscal year 2019. Total gross interest paid (outlays) on Treasury debt is \$559 billion in fiscal year 2019. The calculable shares of defense-related spending relative to the federal totals is 22.1 percent.
National Defense (Total)	1,135.7 billion	

Sources: Office of Management and Budget, “Table 26-1 Net Budget Authority by Function, Category, and Program”; Office of Management and Budget, “Table 27-1 Federal Budget by Agency and Account”; Office of Management and Budget, “Addendum to the President’s FY 2019 Budget to Account for the Bipartisan Budget Act of 2018”; and Department of Defense, “Department of Defense News Briefing on the President’s Fiscal Year 2019 Defense Budget,” February 12, 2018.

Pentagon Waived Requirement to Repay Taxpayers \$16 Billion to Advance Foreign Military Sales

BY MANDY SMITHBERGER

The following piece was first published in February 2018. It has been excerpted and updated. The original can be found at <http://www.pogo.org/straus/issues/defense-budget/2018/audit-finds-pentagon-waived-requirement-to-repay-taxpayers-16-billion.html>

Under the law, when a foreign government buys U.S. weapon systems through the Department of Defense those governments are required to reimburse the Department for research, development, and other one-time costs for those systems. A recent audit by the Government Accountability Office (GAO) found the Department has waived \$16 billion it could have recovered for taxpayers on \$250 billion sold under the Foreign Military Sales program from 2012 to 2017.¹

Foreign governments can request a waiver from repaying these costs, which the Department can grant for factors like interoperability or to avoid the loss of a sale. Defense contractors argued the requirement that foreign governments repay the U.S. taxpayers raises the price of our weapon systems, making it more difficult to complete a sale. When the Department waives these repayments, that usually gives a competitive edge that defense contractors benefit from enormously. The

contractors invest very little of their own money in research and development—those costs are generally paid by the taxpayers as part of the original acquisition process. The contractors are then able to sell the weapons, developed at taxpayer expense to foreign governments at a significant profit and only a minimal corporate investment. Allowing foreign governments to skate on the legally required repayments is little more than welfare for defense contractors, and this audit makes a compelling case for why Congress should close this loophole.

Under the Arms Export Control Act, the Defense Security Cooperation Agency (DSCA)—the Pentagon’s “point person” for all foreign military sales—evaluates waivers. Bill Hartung, the Director of the Arms and Security Project at the Center for International Policy, has found the office has perverse financial incentives to prioritize sales over what’s best for taxpayers or U.S. national security. “In a typical sale, the US government is involved every

step of the way. The Pentagon often does assessments of an allied nation’s armed forces in order to tell them what they ‘need’—and of course what they always need is billions of dollars in new US-supplied equipment,” he wrote. “The bureaucracy that helps make all of this happen, the Defense Security Cooperation Agency, is funded from a 3.5 percent surcharge on the deals it negotiates. This gives it all the more incentive to sell, sell, sell.”²

Given DSCA’s incentives to promote foreign military sales, it’s unsurprising it approved 810 of the 813 waivers it reviewed from 2012 to 2017—an approval rate of 99 percent. When it came to waivers for loss of sale, the GAO found “none included any additional information on competing offers or spending limits” as evidence that the sale would be lost if the payment wasn’t waived.³ As Hartung notes, the Obama Administration brokered more weapons sales than any other administration since World War II.

For most of the duration of the

1 Government Accountability Office, *Foreign Military Sales: DOD Should Take Additional Steps to Streamline Process for Assessing Potential Recovery of Certain Acquisition Costs*, January 31, 2018.

2 William D. Hartung, “The Obama Administration Has Brokered More Weapons Sales Than Any Other Administration Since World War II,” *The Nation*, July 26, 2016.

3 Government Accountability Office, *Foreign Military Sales: DOD Should Take Additional Steps to Streamline Process for Assessing Potential Recovery of Certain Acquisition Costs*, January 31, 2018, pp. 11, 19.



Vice Admiral Joseph Rixey (pictured), formerly in charge of evaluating waivers for foreign governments on repayments for U.S. weapons sales, now works at Lockheed Martin.

GAO's audit, the head of DSCA was Vice Admiral Joseph Rixey. Before he left that position, *The Intercept* reported he was the guest of honor at a reception co-hosted by the Senate Aerospace Caucus and the Aerospace Industries Association, the latter representing contractors like Lockheed Martin, Boeing, Northrop Grumman, and Raytheon. "Thank you admiral for all that you do...in helping us to sell our products," Lockheed Martin CEO Marilyn Hewson said at the event.⁴ Perhaps unsurprisingly, shortly after his retirement Rixey joined Lockheed Martin as Vice President for International Program Support for Lockheed Government Affairs.⁵

The Trump Administration may be on track to increasing foreign mil-

itary sales even more. The Security Assistance Monitor found that foreign military sales in the first year of the Trump Administration slightly surpassed sales in the last year of the Obama Administration. Waivers cost taxpayers approximately \$1.3 billion in 2016 and \$6 billion in 2017.⁶

Without a change in policy, taxpayers may lose out on funds owed to them for increased foreign military sales. In January, Reuters reported plans to increase the role of diplomats and military attaches to promote U.S. weapons sales.⁷ As part of that effort, the State Department sent Ambassador Tina Kaidanow, Principal Deputy Assistant Secretary of State for Political-Military Affairs and the top diplomat for overseeing

arms sales, to the Singapore Airshow to promote U.S. weapons, including the F-35 Joint Strike Fighter.⁸

Congress shares plenty of blame for betraying taxpayers, as well, by continually revising the Arms Export Control Act to further subsidize weapon sales. For instance, the law didn't always allow loss-of-sale waivers from the requirement to recoup research and development costs. But in 1996—at the urging of the Aerospace Industries Association—the law was changed to allow such waivers if not recouping those costs could result in the loss of a sale.⁹ The Project On Government Oversight fought the change and other efforts to get rid of recoupment payments, calling it "corporate welfare at its worse."¹⁰ The GAO found that change alone resulted in substantial losses for taxpayers: 338 loss-of-sale waivers totaling almost \$9.2 billion were given under that authority between 2012 and 2017.

In POGO's 2017 Baker's Dozen of recommendations to Congress we noted that more must be done to make the Pentagon financially accountable.¹¹ Reimbursing taxpayers must be part of the equation. Taxpayers invest a lot of money in the research and development of weapon systems—the Pentagon's most recent budget request asks for \$92.4 billion for research, development, test, and evaluation—and they deserve a fair return on their investment.¹² It's time to revise the Arms Export Control Act to get rid of this multi-billion crony-capitalism loophole. ■

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5 Gregory Hellman, "Putin visits Syria, announces partial withdrawal," *Politico*, December 11, 2017.

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7 Mike Stone and Matt Spetalnick, "Exclusive: Trump to call on Pentagon, diplomats to play bigger arms sale role – sources," Reuters, January 8, 2018.

8 Annabell Liang, "US pitches arms sales at Asia's biggest air show," Associated Press, February 7, 2018.

9 Aerospace Industries Association, *1992 Annual Report*, p. 23.

10 Project On Government Oversight, *Corporate Welfare for Arms Merchants: U.S. Subsidies Benefit Our Adversaries – Not Ourselves*, 1996, p. 5.

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12 Joe Gould and Tara Copp, "Pentagon unveils \$686 billion military budget for FY19," *Defense News*, February 12, 2018.



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