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THE UNDER SECRETARY OF DEFENSE
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WASHINGTON, DC 20301-3010

ACQUISITION,
TECHNOLOGY,
AND LOGISTICS

MAR - 7 2016

The Honorable John McCain
Chairman
Committee on Armed Services
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

Section 1657 of the National Defense Authorization Act for Fiscal Year 2016, Public Law 114-92, requires a report on the number of Long-Range Standoff (LRSO) weapons. The enclosed report provides the rationale for LRSO cruise missile procurement quantities, how the quantities align with the nuclear employment strategy of the United States, and an estimate of LRSO investment costs as compared with nuclear Triad and defense spending. I appreciate the committee's continued support of LRSO as we work together to field a critical capability for preserving the Nation's nuclear deterrent. An identical letter has been sent to the other congressional defense committees.

Sincerely,

Frank Kendall

Enclosure:
As stated

cc:
The Honorable Jack Reed
Ranking Member

Report to Congress on the Number of Long-Range Standoff Weapons as Specified by Section 1657 of the National Defense Authorization Act for Fiscal Year 2016

Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics

March 2016

The estimated cost of this report for the Department of Defense is approximately $3,050 for the 2016 Fiscal Year. This includes $10 in expenses and $3,040 in DoD labor.

Cost estimate generated on February 3, 2016.
RefID: 2-E4B7FAA

1. Introduction

This report is provided to the congressional defense committees as required by section 1657 of the National Defense Authorization Act for Fiscal Year 2016 (Public Law 114-92):

Not later than 120 days after the date of the enactment of this Act, the Secretary of Defense shall submit to the congressional defense committees a report on the justification of the number of planned nuclear-armed cruise missiles, known as the long-range standoff weapon, of the United States. The report shall include—

(1) the rationale for procuring such planned number of cruise missiles;

(2) how such planned number of cruise missiles aligns with the nuclear employment strategy of the United States;

(3) an estimate of the annual and total cost for research, development, test, and evaluation and procurement for such planned number of cruise missiles; and

(4) an estimate of the proportional annual cost of such cruise missiles as compared to the annual cost of the nuclear triad and annual defense spending.

2. Alignment of Cruise Missiles with U.S. Nuclear Employment Strategy

"Sustaining U.S. Global Leadership: Priorities for 21st Century Defense," signed by the President in January 2012, reaffirmed the need for U.S. forces to project power and hold at risk any target at any location on the globe, to include anti-access and area denial environments. The 2010 Nuclear Posture Review and 2014 Nuclear Enterprise Review committed to maintaining a viable standoff nuclear deterrent for the air leg of the nuclear Triad and noted sustainment challenges for the AGM-86B Air-Launched Cruise Missile (ALCM), a system initially fielded in the 1980s.

Heavy bomber aircraft, armed with long-range nuclear cruise missiles, provide critical standoff and multi-axis attack capabilities. Airborne platforms with Long-Range Standoff (LRSO) weapons are key to U.S. nuclear employment strategy in that they provide: credible and flexible options across the full range of threat scenarios, the ability to respond rapidly to technical challenges in other legs of the Triad, a visible signal of U.S. resolve to dissuade and deter potential adversaries, and assurance to our allies and partners as part of extended deterrence. Additionally, cruise missiles provide added leverage to the U.S. nuclear deterrent under the New Strategic Arms Reduction Treaty. The accounting rules for nuclear weapons carried on aircraft are such that the aircraft only counts as one weapon, even if the aircraft carries multiple cruise missiles.

3. Planned Number of Cruise Missiles

The Air Force plans to procure approximately 1,000 LRSO cruise missile bodies. In alignment with U.S. nuclear employment strategy, the LRSO quantity will support U.S. Strategic Command nuclear mission requirements, provide necessary spares to meet operational

availability requirements, and supply sufficient non-nuclear missile bodies to demonstrate weapon system confidence levels through ongoing ground and flight testing. The cruise missile bodies expended as part of non-nuclear testing will provide critical reliability data for maintaining LRSO as a credible nuclear deterrent during its lifecycle.

As a result of the requirements listed above, the number of cruise missile bodies being procured significantly exceeds the number of nuclear warheads being produced. The number of nuclear-armed LRSO cruise missiles (i.e., mated to a nuclear warhead) is expected to be equivalent to the current ALCM nuclear force.

4. LRSO Estimated Annual and Total Investment Costs

According to the President's Budget submission for FY 2016, the LRSO annual investment costs for research, development, test, and evaluation (RDT&E) are as follows:

Table 1–LRSO Annual Investment Costs (then-year dollars in millions)

LRSO Investment Funding	FY16 ($M)	FY17 ($M)	FY18 ($M)	FY19 ($M)	FY20 ($M)	FY16-20 Total ($M)[1,3]
RDT&E	36.64	133.74	420.17	650.45	543.05	1,784.05

LRSO annual investment costs beyond the 5-year (FY 2016-2020) Future Year Defense Program (FYDP) are pending.

Total investment costs for LRSO are preliminary, and the independent cost estimate is not complete. An early draft estimate for LRSO total investment costs (development and procurement) provided to Congress in FY 2015 was $8.3 billion. LRSO procurement is expected to occur beyond the FY 2016-2020 FYDP, and refined cost estimates and a formalized acquisition strategy to support the planned Milestone A decision in FY 2016 are under development.

5. Estimated Proportional Costs of LRSO, Nuclear Triad, and Defense Spending

Because the LRSO annual budget represents a small portion of the nuclear Triad and overall Defense budgets, total FYDP costs were compared rather than annual costs. The estimated funding of the nuclear Triad across the FYDP, to include the nuclear command and control system, is listed in the table below:

Table 2–Nuclear Triad Budget (then-year dollars in billions)

Estimated Triad Budget	FY16-20 Total ($B)[1,2]
Triad Total	94

The FY 2016 President's Budget submission for the total FY 2016-2020 Department of Defense budget is provided in the table below:

Table 3–Total Department of Defense Budget (then-year dollars in billions)

Estimated Defense Budget	FY16-20 Total ($B)[1,3]
DoD Total	2,930

[1]At the time this report was written, the FY17 Department of Defense budget and FY17 Section 1043 report were still under development and Milestone A for LRSO had not yet occurred. Also, this report is responding to language in the FY 2016 National Defense Authorization Act. As a result, cost numbers from the FY 2016 President's Budget Request were used for this report.

[2]Source: Report to Congress – "Fiscal Year 2016 Report on the Plan for the Nuclear Weapons Stockpile, Nuclear Weapons Complex, Nuclear Weapons Delivery Systems, and Nuclear Weapons Command and Control System Specified in Section 1043 of the National Defense Authorization Act for Fiscal Year 2012."

[3]The LRSO FY 2016-2020 FYDP budget only includes RDT&E costs; LRSO costs do not include procurement, operations and maintenance, construction, etc., costs that are included in overall DoD budget costs. Items included in the costs of the nuclear Triad are explained in the FY 2016 Section 1043 report cited above.

Comparing Table 2 with Table 3, the nuclear Triad budget represents approximately 3 percent of total defense spending for the FY 2016-2020 period.

Comparing Tables 1, 2, and 3, the LRSO cruise missile budget represents approximately 2 percent of the nuclear Triad budget and 0.06 percent of the overall Defense budget for the FY 2016-2020 timeframe.

6. Summary

The nuclear Triad remains our most important and effective capability for deterring nuclear attacks against the United States, our allies, and partners. It prevents adversaries from escalating their way out of failed conventional aggression and provides an effective means of response should deterrence fail. Each Triad leg complements the other, providing an array of significant attributes to maintain strategic stability for peer and near-peer nuclear-armed adversaries. The decades-long deferment of Triad investments now requires immediate and sustained attention along with resources to support our nuclear deterrent systems. The goal of the LRSO program is to provide nuclear-armed cruise missiles that are survivable, reliable, credible, and cost-effective to replace the aging ALCM force and ensure continued viability of the Triad's air leg. We thank the committees for their support in ensuring the success of LRSO and helping the United States field this vital capability for defense of the Nation.