Concerned Scientists

FACT SHEET

The New Nuclear-Armed Cruise Missile

Unneeded and Destabilizing

The Obama administration is developing a new nuclear-armed cruise missile, the Long-Range Standoff Weapon, or LRSO. The new missile, designed to be launched from aircraft, will replace the current nuclear-armed air-launched cruise missile (ALCM), which is scheduled to be retired in 2030. It will have enhanced capabilities that make it more "usable" for nuclear "warfighting." Unfortunately, these enhanced capabilities undermine U.S. security overall. Moreover, given the suite of other nuclear weapon systems the United States already deploys or is planning to build, a nuclear-armed cruise missile is redundant. The United States should cancel the LRSO and retire the existing ALCM in the near term.

Production Plans

The Air Force plans to procure 1,000 of these new cruise missiles, although not all will be armed with a nuclear warhead (Reif 2015). The United States currently has 528 nuclear-armed ALCMs: 200 deployed and 328 in storage. While some of the new cruise missiles will be reserved for spares and testing, the Air Force has declined to explain why it is buying 1,000. Production of the first new cruise missile is slated to begin in 2026.

The new cruise missile will carry a refurbished version of the W80 warhead used on the current ALCM. The warhead, to be called the W80-4, is entering a life extension program now and will begin production in 2025. It is not publicly known how many will be produced.

Unwarranted Costs

The National Nuclear Security Administration (the agency responsible for developing, producing and maintaining U.S. nuclear weapons) estimates the total cost for the W80 warhead life extension program will be \$7 billion to \$9.5 billion in thenyear dollars. There is no official price tag for the cruise missile, but the nonpartisan Center for Strategic and Budgetary Assessments estimates it will cost \$14.7 billion in then-year dollars. This would bring the total cost for the new weapon system to roughly \$22-25 billion, although—given the history of

frequent cost overruns in defense programs—the final price tag will likely be considerably higher.

In addition, the new cruise missile is only one component of a plan to replace the entire U.S. nuclear arsenal, with rebuilt warheads and new nuclear-armed submarines, land-based missiles, and long-range bombers—at a total cost of as much as \$1 trillion over the next 30 years. Over the same period of time, the military wants to produce a host of new conventional weapons systems, including new fighter aircraft, new ships, and new tanker aircraft. As a result, during a constrained fiscal environment, the United States must make wise strategic choices. Yet the LRSO adds nothing to nuclear deterrence.

Enhanced Capabilities for Nuclear "Warfighting"

The new cruise missile is expected to be significantly more capable than the existing ALCM. It will likely be harder to detect, have a longer range, fly faster (potentially including supersonic capability), and be more accurate than the ALCM.

The new cruise missile will also be deployed on advanced penetrating bombers, the B-2 and the planned Long Range Strike Bomber (LRS-B), which are stealthy and designed to infiltrate enemy air defenses, as well as the B-52. In contrast, the ALCM is only carried by the B-52, which flies relatively slowly and is easily spotted by radar. As a result, the new cruise



A B-52 bomber drops a nuclear-armed cruise missile. Photo: US Air Force

missile and bomber could offer U.S. military planners the ability to attack an array of targets without being detected first.

Proponents of the new cruise missile highlight what amount to its improved "war-fighting" capabilities. For example, in a 2014 letter to the Senate Appropriations Committee, DoD official Frank Kendall wrote, "Beyond deterrence, an LRSO-armed bomber force provides the President with uniquely flexible options in an extreme crisis, particularly the ability to signal intent and control escalation..."

Such "options" are highly destabilizing and therefore counter to U.S. security interests. As former secretary of defense Bill Perry and former Obama Pentagon official Andy Weber wrote in an October 2015 Washington Post op-ed, such a rationale "is Cold War thinking, and it is dangerous. Such 'tactical' use of nuclear weapons would be a grave mistake" (Perry, Weber 2015).

Calling on President Obama to cancel the new cruise missile, the two also argued that "[b]ecause they can be launched without warning and come in both nuclear and conventional variants, cruise missiles are a uniquely destabilizing type of weapon." A December 2015 letter to President Obama from eight senators echoed those concerns, urging him to cancel the LRSO and noting that "this new cruise missile appears to be designed specifically for improved nuclear war-fighting capabilities. That is a dangerous direction for our nuclear deterrent . . ." (Markey 2015).

Nuclear Cruise Missile Not Needed

The U.S. is currently developing a new penetrating bomber (the LRS-B) and extending the life of the B61 nuclear bomb, making a nuclear cruise missile redundant. Even if the new bomber is unable to penetrate air defenses in the future, the United States also deploys nuclear warheads on highly accurate long-range ballistic missiles. Taken together, these weapons create an overwhelming nuclear deterrent.

In addition, the United States has conventionally armed cruise missiles such as the Joint Air-to-Surface Standoff Missile (JASSM-ER) and long-range sea-launched Tomahawk that can perform many of the war-fighting tasks that are assigned to the new cruise missile, without escalating to nuclear weapons.

Contrary to President Obama's Policies

As a result of its enhanced capabilities, the new cruise missile is not consistent with President Obama's 2010 declaration that the United States "will not pursue new military missions or new capabilities for nuclear weapons." Pursuing this weapon also appears contrary to Obama's goal of reducing "the role of nuclear weapons in our national security strategy," as he declared in his 2009 Prague speech.

Former secretary of defense Bill Perry and Andy Weber argue that the United States should pursue a global ban on all nuclear-armed cruise missiles. While cancelling the new cruise missile would enhance U.S. security in any event, a global ban on such weapons would make an even greater contribution to international security, significantly reducing the current and future threat to the United States.

References

Reif, K. 2015. Overkill: The case against a new nuclear air-launched cruise missile. *Arms Control Today*. October 19. Online at: https://www.armscontrol.org/Issue-Briefs/2015-10-19/Overkill-The-Case-Against-a-New-Nuclear-Air-Launched-Cruise-Missile

Perry, W. and Weber, A. 2015. Mr. president, kill the new cruise missile. *Washington Post*. October 15. Online at: https://www.washingtonpost.com/opinions/mr-president-kill-the-new-cruise-missile/2015/10/15/e3e2807c-6ecd-11e5-9bfe-e59f5e244f92_story.html

Markey, E. et al. 2015. Letter to president Obama. December 15. Online at: http://www.markey.senate.gov/imo/media/doc/2015-12-15-Letter-New-Nuclear-Missile.pdf

Concerned Scientists

FIND THIS DOCUMENT ONLINE: www.ucsusa.org/lrso

The Union of Concerned Scientists puts rigorous, independent science to work to solve our planet's most pressing problems. Joining with citizens across the country, we combine technical analysis and effective advocacy to create innovative, practical solutions for a healthy, safe, and sustainable future.

NATIONAL HEADQUARTERS

Two Brattle Square Cambridge, MA 02138-3780 Phone: (617) 547-5552 Fax: (617) 864-9405

WASHINGTON, DC, OFFICE

1825 K St. NW, Suite 800 Washington, DC 20006-1232 Phone: (202) 223-6133 Fax: (202) 223-6162

WEST COAST OFFICE

2397 Shattuck Ave., Suite 203 Berkeley, CA 94704-1567 Phone: (510) 843-1872 Fax: (510) 843-3785

MIDWEST OFFICE

One N. LaSalle St., Suite 1904 Chicago, IL 60602-4064 Phone: (312) 578-1750 Fax: (312) 578-1751