

U.S. Budget for FY24 and Advocacy for Nuclear Threat Reduction: The Nuclear Sea-Launched Cruise Missile

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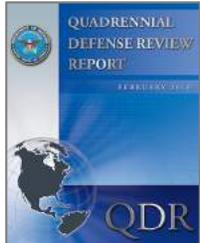
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Briefing to Physicists Coalition for Nuclear Threat Reduction
Arms Control Association

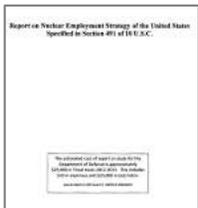
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US Non-Strategic Weapons History

Vast inventory of non-strategic nuclear weapons were eliminated. Navy surface fleet and attack subs have been denuclearized. Army and Marine Corps have been denuclearized. Missions fell away or were replaced with conventional weapons



To reinforce U.S. commitments to our allies and partners, we will consult closely with them on **new, tailored, regional deterrence architectures** that combine our forward presence, relevant conventional capabilities (including missile defenses), and **continued commitment to extend our nuclear deterrent**. These regional architectures and new capabilities, as detailed in the Ballistic Missile Defense Review and the forthcoming Nuclear Posture Review, **make possible a reduced role for nuclear weapons in our national security strategy.**



Reducing the Role of Nuclear Weapons:

DoD is directed to conduct deliberate planning for non-nuclear strike options to **assess what objectives and effects could be achieved through integrated non-nuclear strike options, and to propose possible means to make these objectives and effects achievable.** Although they are not a substitute for nuclear weapons, **planning for non-nuclear strike options is a central part of reducing the role of nuclear weapons.**

Despite flirting with new tactical nuclear weapons, the 2018 NPR and other defense planning continue this trend



- SLBM
 - ICBM
 - ALCM
 - SRAM
 - Bombs
 - ASROC
 - SUBROC
 - SRBM
 - MRBM
 - IRBM
 - SAM
 - SLCM
 - GLCM
 - Artillery
 - Torpedo
 - Bazooka
 - Mine
- } SLBM
ICBM
ALCM
Bombs

Nuclear Tomahawk SLCM (TLAM-N)

Nuclear version of Tomahawk SLCM was fielded in 1984, first on attack submarines and subsequently on surface ships

Initial plan was 758 missiles for 198 ships and submarines

Eventually only 325 missiles for 86 vessels

Range of 2,500 km with W80-0 warhead (5-150 kt yield)

Offloaded from fleet in 1992 (never returned to sea)

Surface fleet denuclearized in 1994 but reload capacity for subs

By early-2000s, only 260 left for only a dozen subs

Retired by 2010 NPR; all W80-0 warheads dismantled by 2012

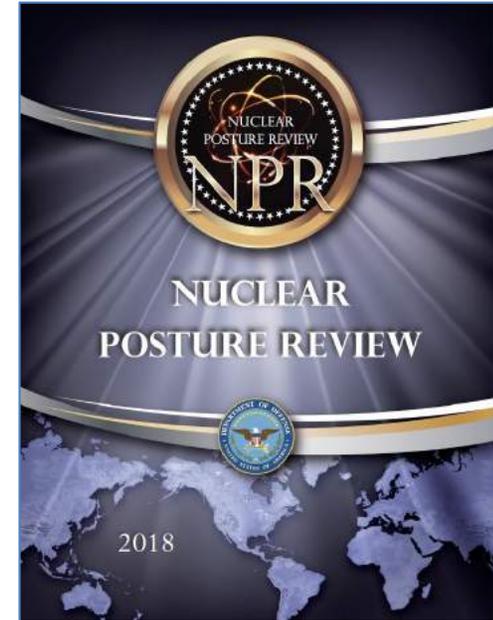


SLCM-N Debate

Trump NPR recommended adding two nuclear “supplements” to the arsenal to “provide a diverse set of characteristics enhancing our ability to tailor deterrence and assurance; expand the range of credible U.S. options for responding to nuclear or non-nuclear strategic attack; and, enhance deterrence by signaling to potential adversaries that their limited nuclear escalation offers no exploitable advantage.”

Poor justifications:

- No evidence current capabilities can’t do that
- US arsenals already includes low-yield (~1,000 warheads)
- US already has prompt option to penetrate defenses
- No evidence adversaries believe US would be self-deterred by yield
- Russia began INF violation when US had SLCM in arsenal
- SSC-8 (9M279) does not give Russia military advantage in Europe
- Russia has had non-strategic advantage for three decades
- Signals US return to tactical nuclear thinking; mimics Russian thinking
- Undermines justification and credibility of DCA posture



SLCM-N: “provide a needed non-strategic regional presence, an assured response capability...an arms control compliant response to Russia’s non-compliance with the Intermediate-range Nuclear Forces Treaty, its non-strategic nuclear arsenal, and its other destabilizing behaviors.”

SLCM-N Debate

The Biden administration's NPR canceled SLCM-N program because of the W76-2, doubt about leverage over Russia, and expected costs

Yet STRATCOM command Adm Richards continued publicly to advocate for SLCM-N with old (flawed) and new mission claims:

Deter low-threshold nuclear use

That US only has “disproportionate, unuseable response options”

Ability to respond “without visible generation”

Provide “persistent, survivable, regional capability”

In addition, we are cancelling the nuclear-armed Sea-Launched Cruise Missile (SLCM-N) program. The 2018 NPR introduced SLCM-N and the W76-2 to supplement the existing nuclear program of record in order to strengthen deterrence of limited nuclear use in a regional conflict. We reassessed the rationale for these capabilities and concluded that the W76-2 currently provides an important means to deter limited nuclear use. Its deterrence value will be re-evaluated as the F-35A and LRSO are fielded, and in light of the security environment and plausible deterrence scenarios we could face in the future. We concluded SLCM-N was no longer necessary given the deterrence contribution of the W76-2, uncertainty regarding whether SLCM-N on its own would provide leverage to negotiate arms control limits on Russia's NSNW, and the estimated cost of SLCM-N in light of other nuclear modernization programs and defense priorities.

2022 Nuclear Posture Review

Admiral RICHARD. (U) Yes. Throughout the Nuclear Posture Review process, I recommended continued pursuit of the SLCM-N.

(U) As I discussed, the risk of not doing so may not adequately deter an adversary from limited nuclear use. The SLCM-N would enhance deterrence by denying adversaries any mistaken confidence that limited nuclear employment could prove advantageous in regional aggression against the United States, its Allies, and partners. That is, the SLCM-N is designed to ensure that an opponent does not believe there is a threshold below which they could employ nuclear weapons, ultimately leaving the United States only with disproportionate, unusable response options.

(U) Russia's invasion of Ukraine and China's nuclear trajectory convinces me a deterrence and assurance gap exists. To address this gap, a low-yield, non-ballistic capability to deter and respond without visible generation is necessary to provide a persistent, survivable, regional capability to deter adversaries, assure Allies, provide flexible options, as well as complement existing capabilities. Such a capability with these attributes should be re-examined in the near future.

Adm Charles Richard, STRATCOM Commander, written response to Congressional questions after 1 March 2022 hearing on strategic forces posture

SLCM-N Features

Missile: possibly modified version of next-generation land-attack missile or potentially modified Tomahawk or JASSM

Warhead: W80-4 alteration (possibly 5-150 kt yield, but with more options)

Platform: Virginia-class attack submarine



SLCM-N Challenges

Production schedule and cost

Submarine mission competition

Violation of 1992 Presidential Nuclear Initiative where US promised not to produce new nuclear SLCMs

Post visits and diplomatic irritant



Photo: Gollr, Minister of Foreign Affairs Þórdís Kolbrún Reykfjörð Gylfadóttir.

Iceland Authorises US Submarines in Coastal Waters

Gréta Sigríður Einarsdóttir April 18, 2023 Politics, x News

US Navy nuclear-powered submarines will be allowed to stop close to Iceland and the first one is expected soon. Iceland's Minister of Foreign Affairs has specifically stated to the US authorities that these submarines cannot carry nuclear weapons in Iceland's territorial waters.

According to Minister of Foreign Affairs Þórdís Kolbrún Reykfjörð Gylfadóttir, this decision is in line with Icelandic authorities' policy to support increased surveillance by NATO states, increasing the security of marine infrastructure such as marine telecommunications cables in the ocean around Iceland. The frequency of the visits will be assessed according to need. The authorisation for submarines is not restricted to a specific period and there will likely be a few visits per year. Each time a submarine approaches, it must request permission. Þórdís Kolbrún told [Vísir](#) that the decision was not only made to increase telecommunication security but also to fulfil obligations to NATO and defence in the North Atlantic.

The first submarine is expected soon. It will be allowed to restock supplies and bring on new crew members a few kilometres off the coast of Iceland but will not dock as Iceland doesn't have the harbour infrastructure to support submarines. Þórdís states that the submarines will stop outside the Reykjanes peninsula.

Both the Prime Minister and the Foreign Minister stress that foreign military vessels' arrival in Iceland is conditional on the respective country's knowing and respecting Iceland's National Security Policy which states that Iceland and Icelandic waters will not host nuclear weapons. This position has been reiterated in the Foreign Minister's note to US authorities. Submarines authorised to stop in Icelandic waters will not carry nuclear weapons nor will they be fitted for such weapons. When asked if Icelandic authorities had any guarantee US authorities would comply with Iceland's demands, Þórdís Kolbrún replies that it is a matter of trust. "We base this on our solid communication with US authorities. These kinds of submarines don't carry nuclear weapons. We have issued clear declarations and a clear policy and we've gotten confirmation that the Americans will honour it. Norway has a similar policy and their cooperation has been without issue for decades," Þórdís stated.