

**AMENDMENT TO**  
**RULES COMMITTEE PRINT 117-54**  
**OFFERED BY MR. LANGEVIN OF RHODE ISLAND**

At the end of subtitle B of title XVI, add the following:

1 **SEC. 16\_\_ . PROGRAM FOR RESEARCH AND DEVELOPMENT**  
2 **OF ADVANCED NAVAL NUCLEAR FUEL SYS-**  
3 **TEM BASED ON LOW-ENRICHED URANIUM.**

4 (a) ESTABLISHMENT.—Not later than 60 days after  
5 the date of the enactment of this Act, the Administrator  
6 for Nuclear Security shall establish a program to assess  
7 the viability of using low-enriched uranium in naval nu-  
8 clear propulsion reactors, including such reactors located  
9 on aircraft carriers and submarines, that meet the require-  
10 ments of the Navy.

11 (b) ACTIVITIES.—In carrying out the program under  
12 subsection (a), the Administrator shall carry out activities  
13 to develop an advanced naval nuclear fuel system based  
14 on low-enriched uranium, including activities relating to—

15 (1) down-blending of high-enriched uranium  
16 into low-enriched uranium;

17 (2) manufacturing of candidate advanced low-  
18 enriched uranium fuels;

1           (3) irradiation tests and post-irradiation exam-  
2           ination of these fuels;

3           (4) modification or procurement of equipment  
4           and infrastructure relating to such activities; and

5           (5) designing naval propulsion reactors that in-  
6           corporate candidate advanced low enriched uranium  
7           fuels.

8           (c) SUBMISSION OF PLAN.—Not later than 120 days  
9           after the date of the enactment of this Act, the Adminis-  
10          trator shall submit to the congressional defense commit-  
11          tees a plan outlining the activities the Administrator will  
12          carry out under the program established under subsection  
13          (a), including the funding requirements associated with  
14          developing a low-enriched uranium fuel.

15          (d) REPORT ON PERFORMANCE IMPACT OF LOW-EN-  
16          RICHED URANIUM REACTOR CORE SIZE.—Not later than  
17          December 15, 2022, the Administrator, in consultation  
18          with the Secretary of the Navy, shall prepare and submit  
19          to the congressional defense committees a report assessing  
20          the feasibility and performance impact of a Virginia-Class  
21          replacement nuclear powered attack submarine that re-  
22          tains the anticipated hull diameter and power plant de-  
23          sign, but leaves sufficient space for a low-enriched ura-  
24          nium-fueled reactor with a life of the ship core, possibly  
25          with an increased module length. The report shall assess

1 the impact on vessel performance of the increased core size  
2 over the range of potential low-enriched uranium fuel  
3 packing densities discussed in the November 2016 JASON  
4 report JSR-16-Task-013, and compare this with the per-  
5 formance impact of recent adjustments of vessel lengths  
6 such as that from the Virginia Payload Module.

7 (e) FUNDING.—

8 (1) INCREASE.—Notwithstanding the amounts  
9 set forth in the funding tables in division D, the  
10 amount authorized to be appropriated by this title  
11 for the National Nuclear Security Administration, as  
12 specified in the corresponding funding table in sec-  
13 tion 4701, for Defense Nuclear Nonproliferation,  
14 Defense Nuclear Nonproliferation R&D is hereby in-  
15 creased by \$20,000,000 for the purpose of LEU Re-  
16 search and Development for Naval Pressurized  
17 Water Reactors.

18 (2) OFFSET.—Notwithstanding the amounts set  
19 forth in the funding tables in division D, the amount  
20 authorized to be appropriated by this title for the  
21 National Nuclear Security Administration, as speci-  
22 fied in the corresponding funding table in section  
23 4701, for Defense Nuclear Nonproliferation is here-  
24 by reduced—

1 (A) by \$10,000,000 for the amount for nu-  
2 clear smuggling detection and deterrence; and

3 (B) by \$10,000,000 for the amount for nu-  
4 clear detonation detection.

