

AMENDMENT NO. _____ Calendar No. _____

Purpose: To require the Secretary of Energy to make high-assay low-enriched uranium available for advanced nuclear reactor demonstration projects and accelerate the availability of commercially enriched, deconverted, and fabricated HA-LEU in the United States.

IN THE SENATE OF THE UNITED STATES—117th Cong., 1st Sess.

S. _____

To invest in the energy and outdoor infrastructure of the United States to deploy new and innovative technologies, update existing infrastructure to be reliable and resilient, and secure energy infrastructure against physical and cyber threats, and for other purposes.

Referred to the Committee on _____ and ordered to be printed

Ordered to lie on the table and to be printed

AMENDMENT intended to be proposed by Mr. Barrasso

Viz:

- 1 At the end of subtitle C of title III, add the following:
- 2 **SEC. 32__ . HA-LEU FOR ADVANCED NUCLEAR REACTORS.**
- 3 Section 2001 of the Energy Act of 2020 (42 U.S.C.
- 4 16281) is amended—
- 5 (1) in subsection (a)—
- 6 (A) in paragraph (2)—
- 7 (i) in subparagraph (D)—

1 (I) in clause (v)(III), by adding
2 “or” after the semicolon at the end;
3 (II) by striking clause (vi); and
4 (III) by redesignating clause (vii)
5 as clause (vi); and
6 (ii) in subparagraph (E), by striking
7 “for domestic commercial use” and insert-
8 ing “to meet the needs of commercial, gov-
9 ernment, academic, and international enti-
10 ties”; and
11 (B) by redesignating paragraphs (6) and
12 (7) as paragraphs (8) and (6), respectively, and
13 moving the paragraphs so as to appear in nu-
14 merical order;
15 (2) in subsection (b)(2)—
16 (A) by striking “subsection (a)(1)” each
17 place it appears and inserting “subsection
18 (b)(1)”;
19 (B) in subparagraph (B)(viii), by striking
20 “subsection (a)(2)(F)” and inserting “sub-
21 section (b)(2)(F)”;
22 (C) in subparagraph (D)(vi), by striking
23 “subsection (a)(2)(A)” and inserting “sub-
24 section (b)(2)(A)”;
25 (3) in subsection (c)—

1 (A) by redesignating paragraphs (1)
2 through (5) as subparagraphs (A) through (E),
3 respectively, and indenting appropriately; and

4 (B) in the matter preceding subparagraph
5 (A) (as so redesignated)—

6 (i) by striking “There are” and insert-
7 ing the following:

8 “(7) AUTHORIZATION OF APPROPRIATIONS.—
9 There are”; and

10 (ii) by striking “in this section” and
11 inserting “under this subsection”;

12 (4) in subsection (d)—

13 (A) by redesignating paragraphs (1)
14 through (6) as paragraphs (2), (3), (5), (6),
15 (7), and (8), respectively;

16 (B) by inserting before paragraph (2) (as
17 so redesignated) the following:

18 “(1) ADVANCED NUCLEAR REACTOR.—The
19 term ‘advanced nuclear reactor’ has the meaning
20 given the term in section 951(b) of the Energy Pol-
21 icy Act of 2005 (42 U.S.C. 16271(b)).”; and

22 (C) by inserting after paragraph (3) (as so
23 redesignated) the following:

24 “(4) DEPARTMENT.—The term ‘Department’
25 means the Department of Energy.”;

1 (5) by moving paragraph (7) of subsection (c)
2 (as designated by paragraph (3)(B)(i)) so as to ap-
3 pear after paragraph (6) of subsection (a) (as redesi-
4 gnated by paragraph (1)(B));

5 (6) by striking subsection (c);

6 (7) by redesignating subsections (a), (b), and
7 (d) as subsections (b), (g), and (a), respectively, and
8 moving the subsections so as to appear in alphabet-
9 ical order; and

10 (8) by inserting after subsection (b) (as so re-
11 designated) the following:

12 “(c) HA-LEU FOR ADVANCED NUCLEAR REACTOR
13 DEMONSTRATION PROJECTS.—

14 “(1) ACTIVITIES.—Not later than 30 days after
15 the date of enactment of the Energy Infrastructure
16 Act, the Secretary shall initiate activities to make
17 available HA-LEU, produced from inventories
18 owned by the Department, for use by advanced nu-
19 clear reactors, with priority given to the awards
20 made pursuant to the funding opportunity an-
21 nouncement of the Department numbered DE-
22 FOA-0002271 for Pathway 1, Advanced Reactor
23 Demonstrations, with additional HA-LEU to be
24 made available to members of the consortium estab-
25 lished under subsection (b)(2)(F), as available.

1 “(2) OWNERSHIP.—HA-LEU made available
2 under this subsection—

3 “(A) shall remain the property of, and title
4 shall remain with, the Department; and

5 “(B) shall not be subject to the require-
6 ments of section 3112(d)(2) and 3113 of the
7 USEC Privatization Act (42 U.S.C. 2297h-
8 10(d)(2), 2297h-11).

9 “(3) QUANTITY.—In carrying out activities
10 under this subsection, the Secretary, to the max-
11 imum extent practicable, shall make available—

12 “(A) by September 30, 2024, not less than
13 3 metric tons of HA-LEU; and

14 “(B) by December 31, 2025, not less than
15 an additional 15 metric tons of HA-LEU.

16 “(4) FACTORS FOR CONSIDERATION.—In car-
17 rying out activities under this subsection, the Sec-
18 retary shall take into consideration—

19 “(A) options for providing HA-LEU from
20 a stockpile of uranium owned by the Depart-
21 ment (including the National Nuclear Security
22 Administration), including—

23 “(i) fuel that—

1 “(I) directly meets the needs of
2 the end-users described in paragraph
3 (1); but

4 “(II) has been previously used or
5 fabricated for another purpose;

6 “(ii) fuel that can meet the needs of
7 the end-users described in paragraph (1)
8 after removing radioactive or other con-
9 taminants that resulted from a previous
10 use or fabrication of the fuel for research,
11 development, demonstration, or deployment
12 activities of the Department (including ac-
13 tivities of the National Nuclear Security
14 Administration);

15 “(iii) fuel from a high-enriched ura-
16 nium stockpile, which can be blended with
17 lower assay uranium to become HA-LEU
18 to meet the needs of the end-users de-
19 scribed in paragraph (1); and

20 “(iv) fuel from uranium stockpiles in-
21 tended for other purposes, but for which
22 material could be swapped or replaced in
23 time in such a manner that would not neg-
24 atively impact the missions of the Depart-
25 ment;

1 “(B) options for providing HA–LEU from
2 domestically enriched HA–LEU procured by the
3 Department through a competitive process pur-
4 suant to the HA–LEU Bank established under
5 subsection (d)(3)(C); and

6 “(C) options to replenish, as needed, De-
7 partment stockpiles of uranium made available
8 pursuant to subparagraph (A) with domestically
9 enriched HA–LEU procured by the Department
10 through a competitive process pursuant to the
11 HA–LEU Bank established under subsection
12 (d)(3)(C).

13 “(5) LIMITATION.—The Secretary shall not
14 barter or otherwise sell or transfer uranium in any
15 form in exchange for services relating to—

16 “(A) the final disposition of radioactive
17 waste from uranium that is the subject of a
18 contract for sale, resale, transfer, or lease under
19 this subsection; or

20 “(B) environmental cleanup activities.

21 “(6) APPROPRIATIONS.—In addition to
22 amounts otherwise made available, there is appro-
23 priated to the Secretary to carry out this subsection,
24 out of any amounts in the Treasury not otherwise

1 appropriated, \$200,000,000 for each of fiscal years
2 2022 through 2026.

3 “(7) SUNSET.—The authority of the Secretary
4 to carry out activities under this subsection shall ter-
5minate on the earlier of—

6 “(A) September 30, 2027; and

7 “(B) the date on which the HA-LEU
8 needs of the end-users described in paragraph
9 (1) can be fully met by commercial enrichers in
10 the United States.

11 “(d) COMMERCIAL HA-LEU AVAILABILITY.—

12 “(1) ESTABLISHMENT.—Not later than 180
13 days after the date of enactment of the Energy In-
14 frastructure Act, the Secretary shall establish a pro-
15 gram (referred to in this subsection as the ‘pro-
16 gram’) to accelerate the availability of commercially
17 produced HA-LEU in the United States in accord-
18 ance with this subsection.

19 “(2) PURPOSES.—The purposes of the program
20 are—

21 “(A) to provide for the availability of HA-
22 LEU enriched, deconverted, and fabricated in
23 the United States;

24 “(B) to address nuclear supply chain
25 issues in the United States; and

1 “(C) to support strategic nuclear fuel cycle
2 capabilities in the United States.

3 “(3) CONSIDERATIONS.—In carrying out the
4 program, the Secretary shall consider and, as appro-
5 priate, execute—

6 “(A) options to establish, through a com-
7 petitive process, a commercial HA–LEU pro-
8 duction capability of not less than 20 metric
9 tons of HA–LEU per year by—

10 “(i) December 31, 2026; or

11 “(ii) the earliest operationally feasible
12 date thereafter;

13 “(B) options that provide for an array of
14 HA–LEU—

15 “(i) enrichment levels;

16 “(ii) output levels to meet demand;

17 and

18 “(iii) fuel forms; and

19 “(C) options to establish, through a com-
20 petitive process, a HA–LEU Bank—

21 “(i) to replenish Department stock-
22 piles of material used in carrying out ac-
23 tivities under subsection (c); and

24 “(ii) after replenishing those stock-
25 piles, to make HA–LEU available to mem-

1 bers of the consortium established under
2 subsection (b)(2)(F).

3 “(4) APPROPRIATIONS.—In addition to
4 amounts otherwise made available, there is appro-
5 priated to the Secretary to carry out this subsection,
6 out of any amounts in the Treasury not otherwise
7 appropriated, \$150,000,000 for each of fiscal years
8 2022 through 2031.

9 “(e) COST RECOVERY.—

10 “(1) IN GENERAL.—In carrying out activities
11 under subsections (c) and (d), the Secretary shall
12 ensure that any HA–LEU acquired, provided, or
13 made available under those subsections for members
14 of the consortium established under subsection
15 (b)(2)(F) is subject to cost recovery in accordance
16 with subsection (b)(2)(G).

17 “(2) AVAILABILITY OF CERTAIN FUNDS.—Not-
18 withstanding section 3302 of title 31, United States
19 Code, revenues received from the sale or transfer of
20 fuel feed material and other activities related to
21 making HA–LEU available pursuant to this sec-
22 tion—

23 “(A) shall be available to the Department
24 for carrying out the purposes of this section, to

1 reduce the need for further appropriations for
2 those purposes; and

3 “(B) shall remain available until expended.

4 “(f) EXCLUSION.—In carrying out activities under
5 this section, the Secretary shall not make available, or pro-
6 vide funding for, uranium that is recovered, downblended,
7 converted, or enriched by an entity that—

8 “(1) is owned or controlled by the Government
9 of the Russian Federation or the Government of the
10 People’s Republic of China; or

11 “(2) is organized under the laws of, or other-
12 wise subject to the jurisdiction of, the Russian Fed-
13 eration or the People’s Republic of China.”.