

117TH CONGRESS  
2D SESSION

# H. R. 8723

To amend the Energy Act of 2020 to require the Secretary of Energy to establish a program to accelerate the availability of commercially produced high-assay, low-enriched uranium in the United States and to make high-assay, low-enriched uranium produced from Department of Energy inventories available for use in advanced nuclear reactors, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

AUGUST 16, 2022

Mrs. LURIA (for herself and Mr. DONALDS) introduced the following bill; which was referred to the Committee on Science, Space, and Technology, and in addition to the Committee on Energy and Commerce, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

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## A BILL

To amend the Energy Act of 2020 to require the Secretary of Energy to establish a program to accelerate the availability of commercially produced high-assay, low-enriched uranium in the United States and to make high-assay, low-enriched uranium produced from Department of Energy inventories available for use in advanced nuclear reactors, and for other purposes.

1       *Be it enacted by the Senate and House of Representa-*  
2       *tives of the United States of America in Congress assembled,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Fueling Our Nuclear  
3 Future Act of 2022”.

4 **SEC. 2. SENSE OF CONGRESS.**

5 It is the sense of Congress that—

6 (1) the Department of Energy (referred to in  
7 this section as the “Department”) should prioritize  
8 activities to establish a domestic high-assay, low-en-  
9 riched uranium (referred to in this section as  
10 “HALEU”) enrichment capability, consistent with  
11 subsection (c) of section 2001 of the Energy Act of  
12 2020 (42 U.S.C. 16281);

13 (2) domestic HALEU enrichment will not be  
14 commercially available at the scale needed in time to  
15 meet the needs of advanced nuclear reactor dem-  
16 onstration projects; and

17 (3) the Department needs to make available  
18 HALEU, produced from inventories owned by the  
19 Department, for use by advanced nuclear reactors  
20 consistent with subsection (d) of section 2001 of the  
21 Energy Act of 2020 (42 U.S.C. 16281), until such  
22 time as commercial HALEU enrichment capability  
23 exists consistent with that subsection.

24 **SEC. 3. HALEU FOR ADVANCED NUCLEAR REACTORS.**

25 Section 2001 of the Energy Act of 2020 (42 U.S.C.  
26 16281) is amended—

1 (1) in subsection (a)—

2 (A) in paragraph (2)—

3 (i) in subparagraph (E), by striking  
4 “for domestic commercial use” and insert-  
5 ing “to meet the needs of commercial, gov-  
6 ernment, academic, and international enti-  
7 ties”; and

8 (ii) in subparagraph (I), by inserting  
9 “nuclear” after “advanced”;

10 (B) in paragraph (5), in the paragraph  
11 heading, by striking “HA–LEU” and inserting  
12 “HALEU”; and

13 (C) by redesignating paragraphs (6) and  
14 (7) as paragraphs (8) and (6), respectively, and  
15 moving the paragraphs so as to appear in nu-  
16 merical order;

17 (2) in subsection (b)(2)—

18 (A) in the paragraph heading, by striking  
19 “HA–LEU” and inserting “HALEU”;

20 (B) by striking “subsection (a)(1)” each  
21 place it appears and inserting “subsection  
22 (b)(1)”;

23 (C) in subparagraph (B)(viii), by striking  
24 “subsection (a)(2)(F)” and inserting “sub-  
25 section (b)(2)(F)”;

1 (D) in subparagraph (D)(vi), by striking  
 2 “subsection (a)(2)(A)” and inserting “sub-  
 3 section (b)(2)(A)”;

4 (3) in subsection (c)—

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

8 (B) in the matter preceding subparagraph  
 9 (A) (as so redesignated)—

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

12 (ii) by striking “There are” and in-  
 13 serting the following:

14 “(7) AUTHORIZATION OF APPROPRIATIONS.—  
 15 There are”;

16 (4) in subsection (d)—

17 (A) in paragraph (4)—

18 (i) in the paragraph heading, by strik-  
 19 ing “HIGH-ASSAY LOW-ENRICHED” and in-  
 20 serting “HIGH-ASSAY, LOW-ENRICHED”;  
 21 and

22 (ii) by striking “high-assay low-en-  
 23 riched” and inserting “high-assay, low-en-  
 24 riched”;

1 (B) by redesignating paragraphs (1)  
2 through (6) as paragraphs (3), (4), (6), (7),  
3 (8), and (9), respectively;

4 (C) by inserting before paragraph (3) (as  
5 so redesignated) the following:

6 “(1) ADVANCED NUCLEAR REACTOR.—The  
7 term ‘advanced nuclear reactor’ has the meaning  
8 given the term in section 951(b) of the Energy Pol-  
9 icy Act of 2005 (42 U.S.C. 16271(b)).

10 “(2) ADVANCED NUCLEAR REACTOR END-  
11 USER.—The term ‘advanced nuclear reactor end-  
12 user’ means an entity seeking or receiving HALEU  
13 under subsection (d)(1) for use by an advanced nu-  
14 clear reactor, including—

15 “(A) the recipient of an award made pur-  
16 suant to the funding opportunity announcement  
17 of the Department numbered DE-FOA-  
18 0002271 for Pathway 1, Advanced Reactor  
19 Demonstrations; and

20 “(B) a member of the consortium estab-  
21 lished under subsection (b)(2)(F).”;

22 (D) by inserting after paragraph (4) (as so  
23 redesignated) the following:

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

1 (E) by striking paragraph (6) (as so reded-  
2 igned) and inserting the following:

3 “(6) HALEU.—The term ‘HALEU’ means  
4 high-assay, low-enriched uranium.”;

5 (5) by striking “HA–LEU” each place it ap-  
6 pears and inserting “HALEU”;

7 (6) by moving paragraph (7) of subsection (c)  
8 (as designated by paragraph (3)(B)(ii)) so as to ap-  
9 pear after paragraph (6) of subsection (a) (as reded-  
10 igned by paragraph (1)(C));

11 (7) by striking subsection (c);

12 (8) by redesignating subsections (a), (b), and  
13 (d) as subsections (b), (g), and (a), respectively, and  
14 moving the subsections so as to appear in alphabet-  
15 ical order;

16 (9) by inserting after subsection (b) (as so reded-  
17 igned) the following:

18 “(c) COMMERCIAL HALEU AVAILABILITY.—

19 “(1) ESTABLISHMENT.—Not later than 30 days  
20 after the date of enactment of the Fueling Our Nu-  
21 clear Future Act of 2022, the Secretary, acting  
22 through the Assistant Secretary for Nuclear Energy,  
23 shall establish a program (referred to in this sub-  
24 section as the ‘program’) to accelerate the avail-

1 ability of commercially produced HALEU in the  
2 United States in accordance with this subsection.

3 “(2) PURPOSES.—The purposes of the program  
4 are—

5 “(A) to provide for the availability of  
6 HALEU produced, chemically converted, en-  
7 riched, chemically deconverted, and suitable for  
8 fabrication into final fuel form in the United  
9 States;

10 “(B) to address nuclear fuel supply chain  
11 gaps and deficiencies in the United States; and

12 “(C) to support strategic nuclear fuel sup-  
13 ply chain capabilities in the United States.

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

17 “(A) options to establish, through a com-  
18 petitive process, a domestic commercial  
19 HALEU production capability of not less than  
20 20 metric tons of HALEU per year, with initial  
21 availability by—

22 “(i) December 31, 2027; or

23 “(ii) the earliest operationally feasible  
24 date thereafter;

1 “(B) options that provide for an array of  
2 HALEU—

3 “(i) enrichment levels;

4 “(ii) output levels to meet demand;

5 and

6 “(iii) fuel forms; and

7 “(C) options to establish, through a com-  
8 petitive process, a HALEU Bank—

9 “(i) to replenish, as necessary, De-  
10 partment stockpiles of uranium used in  
11 carrying out activities under subsection  
12 (d);

13 “(ii) to continue supplying HALEU to  
14 meet the needs of the recipients of an  
15 award made pursuant to the funding op-  
16 portunity announcement of the Depart-  
17 ment numbered DE-FOA-0002271 for  
18 Pathway 1, Advanced Reactor Demonstra-  
19 tions; and

20 “(iii) to make HALEU available to  
21 members of the consortium established  
22 under subsection (b)(2)(F), after address-  
23 ing the needs described in clauses (i) and  
24 (ii).



1           “(4) AUTHORIZATION OF APPROPRIATIONS.—In  
2           addition to amounts otherwise made available (other  
3           than amounts made available under section 4(b) of  
4           the Fueling Our Nuclear Future Act of 2022), there  
5           is authorized to be appropriated to the Secretary to  
6           carry out this subsection \$150,000,000 for each of  
7           fiscal years 2023 through 2032.

8           “(d) HALEU FOR ADVANCED NUCLEAR REACTOR  
9           DEMONSTRATION PROJECTS.—

10           “(1) ACTIVITIES.—On enactment of the Fuel-  
11           ing Our Nuclear Future Act of 2022, the Secretary  
12           shall immediately accelerate and, as necessary, ini-  
13           tiate activities to make available HALEU, produced  
14           from inventories owned by the Department, for use  
15           by advanced nuclear reactors, with priority given to  
16           the awards made pursuant to the funding oppor-  
17           tunity announcement of the Department numbered  
18           DE-FOA-0002271 for Pathway 1, Advanced Reac-  
19           tor Demonstrations, with additional HALEU to be  
20           made available to members of the consortium estab-  
21           lished under subsection (b)(2)(F), as available.

22           “(2) OWNERSHIP.—HALEU made available  
23           under this subsection shall—

24                   “(A) remain the property of, and title shall  
25                   remain with, the Department; and

1 “(B) not be subject to the requirements of  
2 section 3113 of the USEC Privatization Act  
3 (42 U.S.C. 2297h–11).

4 “(3) QUANTITY.—In carrying out activities  
5 under this subsection, the Secretary shall make  
6 available—

7 “(A) by September 30, 2024, not less than  
8 3 metric tons of HALEU;

9 “(B) by December 31, 2025, not less than  
10 an additional 8 metric tons of HALEU; and

11 “(C) by June 30, 2026, not less than an  
12 additional 10 metric tons of HALEU.

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

16 “(A) options for providing HALEU from a  
17 stockpile of uranium owned by the Department  
18 (including the National Nuclear Security Ad-  
19 ministration), including—

20 “(i) fuel that—

21 “(I) directly meets the needs of  
22 advanced nuclear reactor end-users;  
23 but

24 “(II) has been previously used or  
25 fabricated for another purpose;

1 “(ii) fuel that can meet the needs of  
2 advanced nuclear reactor end-users after  
3 removing radioactive or other contami-  
4 nants that resulted from a previous use or  
5 fabrication of the fuel for research, devel-  
6 opment, demonstration, or deployment ac-  
7 tivities of the Department (including ac-  
8 tivities of the National Nuclear Security  
9 Administration);

10 “(iii) fuel from a high-enriched ura-  
11 nium stockpile, which can be blended with  
12 lower assay uranium to become HALEU to  
13 meet the needs of advanced nuclear reactor  
14 end-users; and

15 “(iv) fuel from uranium stockpiles in-  
16 tended for other purposes, but for which  
17 uranium could be swapped or replaced in  
18 time in such a manner that would not neg-  
19 atively impact the missions of the Depart-  
20 ment;

21 “(B) options for providing HALEU from  
22 domestically enriched HALEU procured by the  
23 Department through a competitive process pur-  
24 suant to the HALEU Bank established under  
25 subsection (c)(3)(C); and

“(C) options to replenish, as needed, Department stockpiles of uranium made available pursuant to subparagraph (A) with domestically enriched HALEU procured by the Department through a competitive process pursuant to the HALEU Bank established under subsection (c)(3)(C).

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

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

“(B) environmental cleanup activities.

“(6) AUTHORIZATION OF APPROPRIATIONS.—In addition to amounts otherwise made available (other than amounts made available under section 4(b) of the Fueling Our Nuclear Future Act of 2022), there is authorized to be appropriated to the Secretary to carry out this subsection \$200,000,000 for each of fiscal years 2023 through 2027.

“(7) SUNSET.—The authority of the Secretary to carry out activities under this subsection shall terminate on the date on which the HALEU needs of

1 advanced nuclear reactor end-users can be fully met  
2 by commercial HALEU suppliers in the United  
3 States, as mutually agreed to by the Secretary and  
4 advanced nuclear reactor end-users.

5 “(e) COST RECOVERY.—

6 “(1) IN GENERAL.—In carrying out activities  
7 under subsections (c) and (d), the Secretary shall  
8 ensure that any HALEU acquired, provided, or  
9 made available under those subsections for advanced  
10 nuclear reactor end-users is subject to cost recovery  
11 in accordance with subsection (b)(2)(G).

12 “(2) AVAILABILITY OF CERTAIN FUNDS.—Not-  
13 withstanding section 3302 of title 31, United States  
14 Code, revenues received from the sale or transfer of  
15 fuel feed material and other activities related to  
16 making HALEU available pursuant to this section—

17 “(A) shall be available to the Department  
18 for carrying out the purposes of this section, to  
19 reduce the need for further appropriations for  
20 those purposes; and

21 “(B) shall remain available until expended.

22 “(f) EXCLUSION.—In carrying out activities under  
23 this section, the Secretary shall not make available, or pro-  
24 vide funding for, uranium that is recovered, downblended,

1 produced, chemically converted, enriched, chemically  
2 deconverted, or fabricated by an entity that—

3 “(1) is owned or controlled by the Government  
4 of the Russian Federation or the Government of the  
5 People’s Republic of China; or

6 “(2) is organized under the laws of, or other-  
7 wise subject to the jurisdiction of, the Russian Fed-  
8 eration or the People’s Republic of China.”; and

9 (10) by adding at the end the following:

10 “(h) BRIEFING.—Not later than 90 days after the  
11 date of enactment of the Fueling Our Nuclear Future Act  
12 of 2022, the Secretary shall provide a briefing to the Com-  
13 mittee on Energy and Natural Resources of the Senate  
14 and the Committee on Energy and Commerce of the  
15 House of Representatives that—

16 “(1) summarizes the reports required by sub-  
17 section (g);

18 “(2) summarizes the planning of the Depart-  
19 ment for the storage and disposal of waste products  
20 resulting from the production and use of HALEU;  
21 and

22 “(3) summarizes the ability of uranium sup-  
23 pliers to provide uranium for advanced nuclear reac-  
24 tor fuel, including—

1 “(A) uranium that has been produced  
 2 prior to the date of enactment of the Fueling  
 3 Our Nuclear Future Act of 2022;

4 “(B) the sufficiency of existing uranium  
 5 production to meet the needs described in this  
 6 section;

7 “(C) an assessment of the countries from  
 8 which the United States currently imports ura-  
 9 nium, including the form and annual quantity;

10 “(D) the impact of increased reliance on  
 11 domestic uranium production, conversion, and  
 12 enrichment to sustain the continued operation  
 13 of existing nuclear reactors; and

14 “(E) the need for increased domestic ura-  
 15 nium production to meet the needs described  
 16 this section.”.

17 **SEC. 4. TRANSFER OF FUNDS FROM THE UNITED STATES**  
 18 **ENRICHMENT CORPORATION FUND.**

19 (a) DEFINITIONS.—In this section:

20 (1) FUND.—The term “Fund” means the  
 21 United States Enrichment Corporation Fund estab-  
 22 lished by section 1308 of the Atomic Energy Act of  
 23 1954 (68 Stat. 921, chapter 1073; 106 Stat. 2929)  
 24 (repealed by section 3116(a)(1) of the Omnibus Con-

1 consolidated Rescissions and Appropriations Act of  
2 1996 (Public Law 104–134; 110 Stat. 1321–349)).

3 (2) SECRETARY.—The term “Secretary” means  
4 the Secretary of Energy.

5 (b) AUTHORIZATION OF TRANSFER OF AMOUNTS.—

6 (1) IN GENERAL.—All amounts in the Fund as  
7 of the date of enactment of this Act are authorized  
8 to be transferred and merged with the amounts au-  
9 thorized to be appropriated to the Secretary to carry  
10 out subsections (c) and (d) of section 2001 of the  
11 Energy Act of 2020 (42 U.S.C. 16281).

12 (2) ALLOCATION.—Of the amounts authorized  
13 to be transferred under paragraph (1)—

14 (A) 50 percent is authorized to be appro-  
15 priated to carry out subsection (c) of that sec-  
16 tion; and

17 (B) 50 percent is authorized to be appro-  
18 priated to carry out subsection (d) of that sec-  
19 tion.

20 (3) APPLICATION.—Any amounts made avail-  
21 able to the Secretary under subparagraph (A) or (B)  
22 of paragraph (2)—

23 (A) shall be considered to be part of the  
24 amounts authorized to be appropriated to the  
25 Secretary under subsection (c)(4) or (d)(6), re-



1           spectively, of section 2001 of the Energy Act of  
2           2020 (42 U.S.C. 16281); and

3           (B) shall remain available until expended.

4           (c) TERMINATION OF FUND.—The Fund shall termi-  
5   nate on completion of the transfer under subsection (b)(1).

○