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(Original Signature of Member)

118TH CONGRESS
2D SESSION

H. R. _____

To require an evaluation of the nuclear supply chain of the United States to further reduce regulatory barriers and associated costs for nuclear supply chain manufacturers, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

Mr. DONALDS introduced the following bill; which was referred to the Committee on _____

A BILL

To require an evaluation of the nuclear supply chain of the United States to further reduce regulatory barriers and associated costs for nuclear supply chain manufacturers, 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,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Atomic Supply Chain
5 Solutions Act”.

6 **SEC. 2. FINDINGS.**

7 Congress finds the following:

1 (1) The United States remains an esteemed
2 global leader in the area of nuclear safety.

3 (2) The strength of the nuclear supply chain of
4 the United States is directly tied to the growth of
5 the nuclear energy sector.

6 **SEC. 3. NUCLEAR SUPPLY CHAIN EVALUATION.**

7 (a) IN GENERAL.—Not later than 270 days after the
8 date of enactment of this Act, the Secretary of Energy
9 shall develop and submit to the appropriate congressional
10 committees an evaluation of the nuclear supply chain of
11 the United States.

12 (b) CONTENTS.—

13 (1) BUILDING UP AT THE RIGHT TIME.—The
14 evaluation developed and submitted under subsection
15 (a) shall include a general description of—

16 (A) past efforts within the nuclear supply
17 chain of the United States to meet increased
18 demand;

19 (B) the importance of proactively bol-
20 stering the nuclear supply chain of the United
21 States in order to meet future demand for nu-
22 clear energy; and

23 (C) lessons learned from the construction
24 of Vogtle 3 and 4 in Georgia, including an anal-
25 ysis of how the nuclear supply chain of the

1 United States operated during such construc-
2 tion and any improvements that could be made
3 to assist with future nuclear construction
4 projects, including workforce and supply chain
5 considerations.

6 (2) COMPONENT REGULATORY CHALLENGES.—

7 The evaluation developed and submitted under sub-
8 section (a) shall include—

9 (A) an analysis of whether the requirement
10 for an N-stamp is appropriate and necessary,
11 as determined through the use of probabilistic
12 methodology or other similar methods, for cer-
13 tain nuclear components and materials (selected
14 by the Secretary of Energy) that currently re-
15 quire an N-stamp;

16 (B) a general analysis of the costs associ-
17 ated with regulatory requirements relating to—

18 (i) safety-related nuclear components
19 and materials that receive appropriate
20 ASME certification;

21 (ii) safety-related nuclear components
22 and materials that do not receive appro-
23 priate ASME certification but instead re-
24 ceive acceptance by the Nuclear Regulatory

1 Commission through commercial grade
2 dedication; and

3 (iii) nonsafety-related nuclear compo-
4 nents and materials that do not have to
5 obtain a relevant quality assurance require-
6 ment;

7 (C) identification of potential ways to
8 streamline the acquisition and maintenance of
9 N-stamps and other similar certifications for
10 entities that already have obtained such N-
11 stamps or other similar certifications; and

12 (D) an analysis of N-stamps being effec-
13 tive for a total of a period of 3 years, whether
14 such period could be increased, and what im-
15 pact such an increase would have on safety and
16 the cost associated with obtaining an N-stamp.

17 (3) ADVANCED MANUFACTURING AND INNOVA-
18 TIVE TECHNOLOGIES.—

19 (A) IN GENERAL.—The evaluation devel-
20 oped and submitted under subsection (a) may
21 include an analysis of potential uses and bene-
22 fits that advanced manufacturing and innova-
23 tive technologies, such as 3D printing, advanced
24 modeling and simulation, augmented reality
25 training, artificial intelligence, robotics, and

1 drones, can provide to the nuclear supply chain
2 of the United States, if the Secretary deter-
3 mines such analysis to be pertinent.

4 (B) INCLUSIONS.—The analysis under sub-
5 paragraph (A) may include a general descrip-
6 tion of—

7 (i) the current status of innovative
8 technologies described in such subpara-
9 graph with respect to the use of such tech-
10 nologies within the nuclear supply chain of
11 the United States;

12 (ii) potential uses for such tech-
13 nologies within the nuclear supply chain of
14 the United States, including use for—

15 (I) reducing cybersecurity
16 vulnerabilities;

17 (II) maximizing the efficiency
18 and effectiveness of transporting nu-
19 clear components and materials;

20 (III) examining the technology
21 readiness of individual components,
22 including structural and thermal anal-
23 ysis;

24 (IV) predicting maintenance
25 schedules and subsequent costs;

1 (V) training nuclear supply chain
2 workforce participants;

3 (VI) identifying counterfeit nu-
4 clear components and materials; and

5 (VII) any other use that may be
6 relevant;

7 (iii) economic considerations associ-
8 ated with such technologies; and

9 (iv) potential challenges associated
10 with such technologies, including potential
11 regulatory challenges with respect to the
12 use of such technologies within the nuclear
13 supply chain of the United States.

14 (4) ALLIED COOPERATION.—The evaluation de-
15 veloped and submitted under subsection (a) shall in-
16 clude a general description of—

17 (A) the relationship between the United
18 States and Canada with respect to nuclear com-
19 ponents and materials, including recommenda-
20 tions on bolstering nuclear-related collaboration
21 with Canada to extend North American civil
22 nuclear energy leadership around the world;
23 and

24 (B) whether certain nuclear components
25 and materials that are manufactured in the

1 United States, as selected by the Secretary of
2 Energy, are cost competitive with similar nu-
3 clear components and materials that are manu-
4 factured internationally.

5 (5) **ADVANCED NUCLEAR DEMAND.**—The eval-
6 uation developed and submitted under subsection (a)
7 shall include a description of how advanced nuclear
8 technology, including the anticipated increased de-
9 mand for advanced nuclear technology, will impact
10 the existing nuclear supply chain of the United
11 States, and recommendations for increasing the re-
12 siliency of the nuclear supply chain of the United
13 States to prepare for such increased demand.

14 **SEC. 4. STATEMENT OF POLICY ON HALEU.**

15 It is the policy of the United States to prioritize es-
16 tablishing a robust, diversified domestic high-assay, low
17 enriched uranium (HALEU) market that will ultimately
18 strengthen the energy independence and national security
19 of the United States while reducing procurement and na-
20 tional security risks associated with HALEU, especially
21 with the anticipated increased demand for advanced nu-
22 clear technology.

23 **SEC. 5. DEFINITIONS.**

24 In this Act:

1 (1) APPROPRIATE CONGRESSIONAL COMMIT-
2 TEES.—The term “appropriate congressional com-
3 mittees” means—

4 (A) the Committee on Energy and Com-
5 merce of the House of Representatives; and

6 (B) the Committee on Environment and
7 Public Works and the Committee on Energy
8 and Natural Resources of the Senate.

9 (2) ARTIFICIAL INTELLIGENCE.—The term “ar-
10 tificial intelligence” has the meaning given such
11 term in section 5002 of the National Artificial Intel-
12 ligence Initiative Act of 2020 (15 U.S.C. 9401).

13 (3) ASME.—The term “ASME” means the
14 American Society for Mechanical Engineers.

15 (4) N-STAMP.—The term “N-stamp” means
16 the ASME Nuclear Certification.

17 (5) NUCLEAR COMPONENTS AND MATERIALS.—
18 The term “nuclear components and materials” in-
19 cludes—

20 (A) reactor pressure vessels;

21 (B) thermocouples;

22 (C) heat exchangers;

23 (D) pumps;

24 (E) sensors;

25 (F) piping;

- 1 (G) castings;
- 2 (H) structural steel;
- 3 (I) concrete;
- 4 (J) cabling;
- 5 (K) nuclear grade graphite;
- 6 (L) helium;
- 7 (M) sodium;
- 8 (N) molten salts;
- 9 (O) beryllium; and
- 10 (P) any other component or material deter-
- 11 mined appropriate by the Secretary of Energy.