

118TH CONGRESS  
1ST SESSION

# H. R. 5244

To amend the Atomic Energy Act of 1954 to include fusion energy machines,  
and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

AUGUST 18, 2023

Mrs. TRAHAN (for herself, Mr. BEYER, Mr. FLEISCHMANN, and Mr. OBERNOLTE) introduced the following bill; which was referred to the Committee on Energy and Commerce

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## A BILL

To amend the Atomic Energy Act of 1954 to include fusion  
energy machines, 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 “Fusion Energy Act”.

5 **SEC. 2. FUSION ENERGY MACHINES.**

6 (a) USE OF BYPRODUCT MATERIAL FRAMEWORK.—  
7 Section 11 of the Atomic Energy Act of 1954 (42 U.S.C.  
8 2014) is amended—

9 (1) in subsection e.—

1 (A) in paragraph (3)(B)(ii), by striking  
2 “research activity; and” and inserting “research  
3 activity;”;

4 (B) in paragraph (4)(B), by striking the  
5 period at the end and inserting “; and”; and

6 (C) by adding at the end the following  
7 paragraph:

8 “(5) any material that is made radioactive di-  
9 rectly or indirectly by use of a fusion energy ma-  
10 chine.”; and

11 (2) by adding at the end the following:

12 “kk. FUSION ENERGY MACHINE.—The term ‘fusion  
13 energy machine’ means a particle accelerator that is capa-  
14 ble of—

15 “(1) transforming atomic nuclei, through fusion  
16 processes, into other elements; and

17 “(2) directly capturing and using the resultant  
18 products, including particles, heat, and other electro-  
19 magnetic radiation, for a commercial or industrial  
20 purpose.”.

21 (b) TECHNOLOGY-INCLUSIVE REGULATORY FRAME-  
22 WORK.—

23 (1) IN GENERAL.—Section 103(a) of the Nu-  
24 clear Energy Innovation and Modernization Act (42  
25 U.S.C. 2133 note) is amended—

1 (A) in paragraph (4)—

2 (i) by striking “a technology-inclu-  
3 sive” and inserting the following:

4 “(A) a technology-inclusive”;

5 (ii) by striking “license applications.”

6 and inserting “license applications; and”;

7 and

8 (iii) by adding at the end the fol-  
9 lowing:

10 “(B) a technology-inclusive, regulatory  
11 framework for optional use by fusion energy  
12 machine applicants for new license applica-  
13 tions.”; and

14 (B) in paragraph (5)(B)(ii), by inserting  
15 “and fusion energy machine license applica-  
16 tions” after “commercial advanced nuclear re-  
17 actor license applications”.

18 (2) DEFINITIONS.—Section 3 of the Nuclear  
19 Energy Innovation and Modernization Act (42  
20 U.S.C. 2215 note) is amended by adding at the end  
21 the following:

22 “(16) FUSION ENERGY MACHINE.—The term  
23 ‘fusion energy machine’ has the meaning given such  
24 term in subsection kk. of section 11 of the Atomic  
25 Energy Act of 1954.”.

1 (c) REPORT.—Not later than 1 year after the date  
2 of enactment of this Act, the Nuclear Regulatory Commis-  
3 sion shall submit to Congress a report on—

4 (1) the results of a study, conducted in con-  
5 sultation with Agreement States (as defined in sec-  
6 tion 3(3) of the Nuclear Energy Innovation and  
7 Modernization Act (42 U.S.C. 2215 note (3)) and  
8 the private fusion sector, on risk- and performance-  
9 based, design-specific licensing frameworks for mass-  
10 manufactured fusion energy machines (as defined in  
11 subsection kk. of section 11 of the Atomic Energy  
12 Act of 1954, as added by this section), that includes  
13 evaluation of the Federal Aviation Administration’s  
14 design, manufacturing, and operations certification  
15 process for aircraft as a potential model for mass-  
16 manufactured fusion energy machine regulations;  
17 and

18 (2) the estimated timeline for the Commission  
19 to issue consolidated guidance or regulations for li-  
20 censing mass-manufactured fusion energy machines,  
21 taking into account the results of such study and the  
22 anticipated need for such guidance or regulations.

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