

112TH CONGRESS  
1ST SESSION

# S. 512

To amend the Energy Policy Act of 2005 to require the Secretary of Energy to carry out programs to develop and demonstrate 2 small modular nuclear reactor designs, and for other purposes.

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## IN THE SENATE OF THE UNITED STATES

MARCH 8, 2011

Mr. BINGAMAN (for himself, Ms. MURKOWSKI, Mr. UDALL of Colorado, Mr. PRYOR, and Ms. LANDRIEU) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

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## A BILL

To amend the Energy Policy Act of 2005 to require the Secretary of Energy to carry out programs to develop and demonstrate 2 small modular nuclear reactor designs, 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 “Nuclear Power 2021  
5 Act”.

1 **SEC. 2. NUCLEAR POWER 2021 INITIATIVE.**

2 Section 952 of the Energy Policy Act of 2005 (42  
3 U.S.C. 16272) is amended by adding at the end the fol-  
4 lowing:

5 “(f) NUCLEAR POWER 2021 INITIATIVE.—

6 “(1) DEFINITIONS.—In this subsection:

7 “(A) COMBINED LICENSE.—The term  
8 ‘combined license’ has the meaning given the  
9 term in section 52.1 of title 10, Code of Federal  
10 Regulations (or a successor regulation).

11 “(B) DESIGN CERTIFICATION.—The term  
12 ‘design certification’ has the meaning given the  
13 term in section 52.1 of title 10, Code of Federal  
14 Regulations (or a successor regulation).

15 “(C) SMALL MODULAR REACTOR.—The  
16 term ‘small modular reactor’ means a nuclear  
17 reactor—

18 “(i) with a rated capacity of less than  
19 300 electrical megawatts; and

20 “(ii) that can be constructed and op-  
21 erated in combination with similar reactors  
22 at a single site.

23 “(2) DUTY OF SECRETARY.—The Secretary  
24 shall carry out, through cooperative agreements with  
25 private sector partners—

26 “(A) a program—

1 “(i) to develop a standard design for  
2 each of 2 small modular reactors, at least  
3 1 of which has a rated capacity of not  
4 more than 50 electrical megawatts; and

5 “(ii) to obtain a design certification  
6 from the Nuclear Regulatory Commission  
7 for each of the 2 standard designs by Jan-  
8 uary 1, 2018; and

9 “(B) a program to demonstrate the licens-  
10 ing of small modular reactors by—

11 “(i) developing applications for a com-  
12 bined license for each of the designs cer-  
13 tified pursuant to subparagraph (A); and

14 “(ii) obtaining a combined license  
15 from the Nuclear Regulatory Commission  
16 for each of the designs by January 1,  
17 2021.

18 “(3) MERIT REVIEW OF PROPOSALS.—The Sec-  
19 retary shall select proposals for cooperative agree-  
20 ments under this subsection—

21 “(A) on the basis of an impartial review of  
22 the scientific and technical merit of the pro-  
23 posals; and

24 “(B) through the use of competitive proce-  
25 dures.

1           “(4) TECHNICAL CONSIDERATIONS.—In evalu-  
2           ating proposals, the Secretary shall take into ac-  
3           count the efficiency, cost, safety, and proliferation  
4           resistance of competing reactor designs.

5           “(5) COST-SHARE REQUIREMENTS.—

6           “(A) DESIGN DEVELOPMENT.—Notwith-  
7           standing section 988, the Secretary shall re-  
8           quire that not less than 50 percent of the cost  
9           of the development of each small modular reac-  
10          tor design under paragraph (2)(A) be provided  
11          by a non-Federal source.

12          “(B) LICENSING DEMONSTRATION.—Not-  
13          withstanding section 988, the Secretary shall  
14          require that not less than 75 percent of the cost  
15          of the licensing demonstration of each small  
16          modular reactor design under paragraph (2)(B)  
17          be provided by a non-Federal source.

18          “(C) CALCULATION OF AMOUNT.—Non-  
19          Federal contributions under this subsection  
20          shall be calculated in accordance with section  
21          988(d).”.

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