

**Calendar No. 600**

111<sup>TH</sup> CONGRESS  
2<sup>D</sup> SESSION

**S. 2812**

**[Report No. 111–314]**

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

NOVEMBER 20, 2009

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

SEPTEMBER 27, 2010

Reported by Mr. BINGAMAN, with amendments

[Omit the part struck through and insert the part printed in *italic*]

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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,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Nuclear Power 2021  
3 Act”.

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

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

8 “(f) NUCLEAR POWER 2021 INITIATIVE.—

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

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

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

18 “(C) *EARLY SITE PERMIT*.—*The term ‘early*  
19 *site permit’ has the meaning given the term in*  
20 *section 52.1 of title 10, Code of Federal Regula-*  
21 *tions (or a successor regulation).*

22 “~~(C)~~ (D) SMALL MODULAR REACTOR.—The  
23 term ‘small modular reactor’ means a nuclear  
24 reactor—

25 “(i) with a rated capacity of less than  
26 300 electrical megawatts; and

1 “(ii) that can be constructed and op-  
 2 erated in combination with similar reactors  
 3 at a single site.

4 “(2) DUTY OF SECRETARY.—The Secretary  
 5 shall carry out, through cooperative agreements with  
 6 private sector partners—

7 “(A) a program—

8 “(i) to develop a standard design for  
 9 each of 2 small modular reactors, at least  
 10 1 of which has a rated capacity of not  
 11 more than 50 electrical megawatts; and

12 “(ii) to obtain a design certification  
 13 from the Nuclear Regulatory Commission  
 14 for each of the 2 standard designs by Jan-  
 15 uary 1, 2018; ~~and~~

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

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

21 “(ii) obtaining a combined license  
 22 from the Nuclear Regulatory Commission  
 23 for each of the designs by January 1,  
 24 ~~2021~~; *and*

1                   “(C) a program to obtain an early site per-  
 2                   mit for 2 sites for 1 or more small modular reac-  
 3                   tors.

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

7                   “(A) on the basis of an impartial review of  
 8                   the scientific and technical merit of the pro-  
 9                   posals; and

10                  “(B) through the use of competitive proce-  
 11                  dures.

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

16                  “(5) COST-SHARE REQUIREMENTS.—

17                  “(A) DESIGN DEVELOPMENT.—Notwith-  
 18                  standing section 988, the Secretary shall re-  
 19                  quire that not less than 50 percent of the cost  
 20                  of the development of each small modular reac-  
 21                  tor design under paragraph ~~(2)(A)~~(2)(A), and  
 22                  each early site permit under paragraph (2)(C),  
 23                  be provided by a non-Federal source.

24                  “(B) LICENSING DEMONSTRATION.—Not-  
 25                  withstanding section 988, the Secretary shall

1           require that not less than 75 percent of the cost  
2           of the licensing demonstration of each small  
3           modular reactor design under paragraph (2)(B)  
4           be provided by a non-Federal source.

5           “(C) CALCULATION OF AMOUNT.—Non-  
6           Federal contributions under this subsection  
7           shall be calculated in accordance with section  
8           988(d).”.

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