

AMENDMENT NO. _____ Calendar No. _____

Purpose: To improve the bill.

IN THE SENATE OF THE UNITED STATES—115th Cong., 2d Sess.

S. 1457

To amend the Energy Policy Act of 2005 to direct the Secretary of Energy to carry out demonstration projects relating to advanced nuclear reactor technologies to support domestic energy needs.

Referred to the Committee on _____ and
ordered to be printed

Ordered to lie on the table and to be printed

AMENDMENT intended to be proposed by _____

Viz:

1 Beginning on page 2, strike line 9 and all that follows
2 through page 4, line 5 and insert the following:

3 “(1) ADVANCED NUCLEAR REACTOR.—The
4 term ‘advanced nuclear reactor’ means a nuclear fis-
5 sion or fusion reactor, including a prototype plant
6 (as defined in sections 50.2 and 52.1 of title 10,
7 Code of Federal Regulations (or successor regula-
8 tions)), with significant improvements compared to
9 the most recent generation of fission reactors, in-
10 cluding improvements such as—

11 “(A) additional inherent safety features;

1 “(B) a significantly lower levelized cost of
2 electricity;

3 “(C) lower waste yields;

4 “(D) improved fuel performance;

5 “(E) increased tolerance to loss of fuel
6 cooling;

7 “(F) enhanced reliability;

8 “(G) increased proliferation resistance;

9 “(H) increased thermal efficiency;

10 “(I) reduced consumption of cooling water;

11 “(J) the ability to integrate into electric
12 applications and nonelectric applications;

13 “(K) modular sizes to allow for deployment
14 that corresponds with the demand for elec-
15 tricity; or

16 “(L) operational flexibility to respond to
17 changes in demand for electricity and to com-
18 plement integration with intermittent renewable
19 energy.

20 “(2) DEMONSTRATION PROJECT.—The term
21 ‘demonstration project’ means an advanced nuclear
22 reactor operated—

23 “(A) as part of the power generation facili-
24 ties of an electric utility system; or

1 “(B) in any other manner for the purpose
2 of demonstrating the suitability for commercial
3 application of the advanced nuclear reactor.

4 “(b) PURPOSE.—The purpose of this section is to di-
5 rect the Secretary, as soon as practicable after the date
6 of enactment of this section, to advance the research and
7 development of domestic advanced, affordable, and clean
8 nuclear energy by—

9 “(1) demonstrating different advanced nuclear
10 reactor technologies that could be used by the pri-
11 vate sector to produce—

12 “(A) emission-free power at a levelized cost
13 of electricity of \$60 per mWh or less;