

108TH CONGRESS  
1ST SESSION

# S. 167

To direct the Secretary of Energy to carry out a Next Generation Lighting Initiative.

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IN THE SENATE OF THE UNITED STATES

JANUARY 15, 2003

Mr. BINGAMAN (for himself and Mr. DEWINE) 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 direct the Secretary of Energy to carry out a Next Generation Lighting Initiative.

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. NEXT GENERATION LIGHTING INITIATIVE.**

4 (a) DEFINITIONS.—In this section:

5 (1) CONSORTIUM.—The term “consortium”  
6 means the consortium selected by the Secretary  
7 under subsection (d)(1).

8 (2) INITIATIVE.—The term “Initiative” means  
9 the Next Generation Lighting Initiative carried out  
10 under subsection (b).

1           (3) SECRETARY.—The term “Secretary” means  
2           the Secretary of Energy.

3           (b) GENERAL AUTHORITY.—The Secretary shall  
4           carry out a program, to be known as the “Next Generation  
5           Lighting Initiative”, to support research, development,  
6           demonstration, and commercial application activities re-  
7           lated to advanced solid-state lighting technologies based  
8           on white light emitting diodes.

9           (c) OBJECTIVES.—The objectives of the Initiative  
10          shall be—

11           (1) to develop, by 2012, advanced solid-state  
12          lighting technologies based on white light emitting  
13          diodes that, compared to incandescent and fluores-  
14          cent lighting technologies, are—

15                   (A) longer lasting;

16                   (B) more energy-efficient; and

17                   (C) cost-competitive;

18           (2) to develop an inorganic white light emitting  
19          diode that has an efficiency of 160 lumens per watt  
20          and a 10-year lifetime; and

21           (3) to develop an organic white light emitting  
22          diode with an efficiency of 100 lumens per watt with  
23          a 5-year lifetime that—

24                   (A) illuminates over a full color spectrum;

1 (B) covers large areas over flexible sur-  
2 faces; and

3 (C) does not contain harmful pollutants  
4 (such as mercury) that are typical of fluores-  
5 cent lamps.

6 (d) FUNDAMENTAL RESEARCH.—

7 (1) CONSORTIUM.—The Secretary shall carry  
8 out the fundamental research activities of the Initia-  
9 tive through a private consortium (which may in-  
10 clude private firms, trade associations and institu-  
11 tions of higher education), which the Secretary shall  
12 select through a competitive process.

13 (2) SUBMISSION OF INFORMATION.—Each pro-  
14 posed consortium shall submit to the Secretary such  
15 information as the Secretary may require, including  
16 a program plan agreed to by all participants of the  
17 consortium.

18 (3) JOINT VENTURE.—The consortium shall be  
19 structured as a joint venture among the participants  
20 of the consortium.

21 (4) GOVERNING COUNCIL.—The Secretary shall  
22 serve on the governing council of the consortium.

23 (5) ELIGIBILITY.—To be eligible for a grant  
24 under paragraph (6), an applicant shall be broadly

1 representative of United States solid-state lighting  
2 research, development, and manufacturing expertise.

3 (6) GRANTS.—

4 (A) IN GENERAL.—The Secretary shall  
5 award grants for fundamental research to the  
6 consortium, which the consortium may disburse  
7 to researchers, including researchers that are  
8 not participants in the consortium.

9 (B) SUBMISSION.—To receive a grant, the  
10 consortium shall submit to the Secretary a de-  
11 scription of the proposed research and a list of  
12 the persons that will receive funding.

13 (C) COST-SHARING.—Grants shall be  
14 matched by the consortium in accordance with  
15 subsection (h).

16 (7) NATIONAL LABORATORIES.—National Lab-  
17 oratories may participate in the research under this  
18 section and receive funds from the consortium.

19 (8) INTELLECTUAL PROPERTY.—Participants in  
20 the consortium and the Federal Government shall  
21 have royalty-free nonexclusive rights to use intellec-  
22 tual property derived from research funded under  
23 this subsection.

24 (e) DEVELOPMENT, DEMONSTRATION, AND COMMERCIAL APPLICATION.—  
25

1           (1) IN GENERAL.—The Secretary shall carry  
2 out the development, demonstration, and commercial  
3 application activities of the Initiative through awards  
4 to private firms, trade associations, and institutions  
5 of higher education.

6           (2) PREFERENCE.—In selecting awardees, the  
7 Secretary shall give preference to members of the  
8 consortium.

9           (f) PLANS AND ASSESSMENTS.—

10           (1) IN GENERAL.—The consortium shall formu-  
11 late an annual operating plan which shall include re-  
12 search priorities, technical milestones, and plans for  
13 technology transfer, and which shall be subject to  
14 approval by the Secretary.

15           (2) REVIEW.—

16           (A) IN GENERAL.—The Secretary shall  
17 enter into an arrangement with the National  
18 Academy of Sciences to conduct periodic re-  
19 views of the Initiative.

20           (B) DUTIES.—The Academy shall review  
21 the research priorities, technical milestones, and  
22 plans for technology transfer established under  
23 paragraph (1) and evaluate the progress toward  
24 achieving them.

1 (C) CONSIDERATION OF RESULTS.—The  
2 Secretary shall consider the results of the re-  
3 views in evaluating the plans submitted under  
4 paragraph (1).

5 (g) AUDIT.—

6 (1) IN GENERAL.—The Secretary shall retain  
7 an independent, commercial auditor to perform an  
8 audit of the consortium to determine the extent to  
9 which the funds authorized by this section have been  
10 expended in a manner consistent with this section.

11 (2) REPORT.—

12 (A) TO THE SECRETARY.—The auditor  
13 shall annually submit to the Secretary a report  
14 describing the results of the audit under para-  
15 graph (1).

16 (B) TO CONGRESS.—The Secretary shall  
17 transmit to Congress a copy of each report sub-  
18 mitted under subparagraph (A), including a  
19 plan to remedy any deficiencies noted in the re-  
20 port.

21 (h) COST SHARING.—

22 (1) RESEARCH AND DEVELOPMENT.—

23 (A) IN GENERAL.—For research and devel-  
24 opment programs carried out under this sec-  
25 tion, the Secretary shall require a commitment

1 from non-Federal sources of at least 20 percent  
2 of the cost of the project.

3 (B) REDUCTION OR WAIVER.—The Sec-  
4 retary may reduce or waive the non-Federal re-  
5 quirement under this subsection if the Sec-  
6 retary determines that the research and devel-  
7 opment is of a basic or fundamental nature.

8 (2) DEMONSTRATION AND COMMERCIAL APPLI-  
9 CATION.—

10 (A) IN GENERAL.—The Secretary shall re-  
11 quire at least 50 percent of the costs directly  
12 and specifically related to any demonstration or  
13 commercial application project under this sec-  
14 tion to be provided from non-Federal sources.

15 (B) REDUCTION.—The Secretary may re-  
16 duce the non-Federal requirement under this  
17 subsection if the Secretary determines that the  
18 reduction is necessary and appropriate consid-  
19 ering the technological risks involved in the  
20 project and is necessary to meet the objectives  
21 of this title.

22 (3) CALCULATION OF AMOUNT.—In calculating  
23 the amount of the non-Federal commitment under  
24 paragraph (1) or (2), the Secretary may include per-  
25 sonnel, services, equipment, and other resources.

1       (i) AUTHORIZATION OF APPROPRIATIONS.—There  
2 are authorized to be appropriated to carry out this sec-  
3 tion—

4           (1) \$10,000,000 for fiscal year 2004; and

5           (2) \$50,000,000 for each of fiscal years 2005  
6 through 2013.

7       (j) TERMINATION OF INITIATIVE.—The Secretary  
8 shall terminate the Initiative not later than September 30,  
9 2013.

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