

107TH CONGRESS
1ST SESSION

S. 1166

To establish the Next Generation Lighting Initiative at the Department of Energy, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JULY 11, 2001

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

A BILL

To establish the Next Generation Lighting Initiative at the Department of Energy, 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 “Next Generation Lighting
5 Initiative Act”.

6 **SEC. 2. FINDING.**

7 Congress finds that it is in the economic and energy
8 security interests of the United States to encourage the
9 development of white light emitting diodes by providing
10 financial assistance to firms, or a consortium of firms, and

1 supporting research organizations in the lighting develop-
2 ment sectors.

3 **SEC. 3. DEFINITIONS.**

4 In this Act:

5 (1) CONSORTIUM.—The term “consortium”
6 means the Next Generation Lighting Initiative Con-
7 sortium established under section 5(b).

8 (2) INORGANIC WHITE LIGHT EMITTING
9 DIODE.—The term “inorganic white light emitting
10 diode” means a semiconducting package that pro-
11 duces white light using externally applied voltage.

12 (3) LIGHTING INITIATIVE.—The term “Light-
13 ing Initiative” means the Next Generation Lighting
14 Initiative established by section 4(a).

15 (4) ORGANIC WHITE LIGHT EMITTING DIODE.—
16 The term “organic white light emitting diode”
17 means an organic semiconducting compound that
18 produces white light using externally applied voltage.

19 (5) PLANNING BOARD.—The term “planning
20 board” means the Next Generation Lighting Initia-
21 tive Planning Board established under section 5(a).

22 (6) RESEARCH ORGANIZATION.—The term “re-
23 search organization” means an organization that
24 performs or promotes research, development, and

1 demonstration activities with respect to white light
2 emitting diodes.

3 (7) SECRETARY.—The term “Secretary” means
4 the Secretary of Energy, acting through the Assist-
5 ant Secretary of Energy for Energy Efficiency and
6 Renewable Energy.

7 (8) WHITE LIGHT EMITTING DIODE.—The term
8 “white light emitting diode” means—

9 (A) an inorganic white light emitting
10 diode; and

11 (B) an organic white light emitting diode.

12 **SEC. 4. NEXT GENERATION LIGHTING INITIATIVE.**

13 (a) ESTABLISHMENT.—There is established in the
14 Department of Energy a lighting initiative to be known
15 as the “Next Generation Lighting Initiative” to research,
16 develop, and conduct demonstration activities on white
17 light emitting diodes.

18 (b) OBJECTIVES.—

19 (1) IN GENERAL.—The objectives of the Light-
20 ing Initiative shall be to develop, by 2011, white
21 light emitting diodes that, compared to incandescent
22 and fluorescent lighting technologies, are—

23 (A) longer lasting;

24 (B) more energy-efficient; and

25 (C) cost-competitive.

1 (2) INORGANIC WHITE LIGHT EMITTING
2 DIODE.—The objective of the Lighting Initiative
3 with respect to inorganic white light emitting diodes
4 shall be to develop an inorganic white light emitting
5 diode that has an efficiency of 160 lumens per watt
6 and a 10-year lifetime.

7 (3) ORGANIC WHITE LIGHT EMITTING DIODE.—
8 The objective of the Lighting Initiative with respect
9 to organic white light emitting diodes shall be to de-
10 velop an organic white light emitting diode with an
11 efficiency of 100 lumens per watt with a 5-year life-
12 time that—

13 (A) illuminates over a full color spectrum;

14 (B) covers large areas over flexible sur-
15 faces; and

16 (C) does not contain harmful pollutants
17 typical of fluorescent lamps such as mercury.

18 **SEC. 5. ADMINISTRATION.**

19 (a) PLANNING BOARD.—

20 (1) IN GENERAL.—The Secretary shall establish
21 a planning board, to be known as the “Next Genera-
22 tion Lighting Initiative Planning Board”, to assist
23 the Secretary in developing and implementing the
24 Lighting Initiative.

1 (2) COMPOSITION.—The planning board shall
2 be composed of—

3 (A) 4 members from universities, national
4 laboratories, and other individuals with exper-
5 tise in white lighting, to be appointed by the
6 Secretary; and

7 (B) 3 members nominated by the consor-
8 tium and appointed by the Secretary.

9 (3) STUDY.—

10 (A) IN GENERAL.—Not later than 180
11 days after the date of enactment of this Act,
12 the planning board shall complete a study on
13 strategies for the development and implementa-
14 tion of white light emitting diodes.

15 (B) REQUIREMENTS.—The study shall—

16 (i) develop a comprehensive strategy
17 to implement, through the Lighting Initia-
18 tive, the use of white light emitting diodes
19 to increase energy efficiency and enhance
20 United States competitiveness; and

21 (ii) identify the research and develop-
22 ment, manufacturing, deployment, and
23 marketing barriers that must be overcome
24 to achieve a goal of a 25 percent market
25 penetration by white light emitting diode

1 technologies into the incandescent and flu-
2 orescent lighting markets by the year
3 2012.

4 (C) IMPLEMENTATION.—As soon as prac-
5 ticable after the study is submitted to the Sec-
6 retary, the Secretary shall implement the Light-
7 ing Initiative in accordance with the rec-
8 ommendations of the planning board.

9 (b) CONSORTIUM.—

10 (1) IN GENERAL.—The Secretary shall solicit
11 the establishment of a consortium, to be known as
12 the “Next Generation Lighting Initiative Consor-
13 tium”, to initiate and manage basic and manufac-
14 turing related research contracts on white light emit-
15 ting diodes for the Lighting Initiative.

16 (2) COMPOSITION.—The consortium may be
17 composed of firms, national laboratories, and other
18 entities so that the consortium is representative of
19 the United States solid state lighting industry as a
20 whole.

21 (3) FUNDING.—The consortium shall be funded
22 by—

23 (A) membership fees; and

24 (B) grants provided under section 6.

1 **SEC. 6. GRANT PROGRAM.**

2 (a) IN GENERAL.—The Secretary shall make grants
3 to firms, the consortium, and research organizations to
4 conduct research, development, and demonstration
5 projects related to white light emitting diode technologies.

6 (b) REQUIREMENTS.—To be eligible to receive a
7 grant under this section, a consortium shall—

8 (1) enter into a consortium participation agree-
9 ment that—

10 (A) is agreed to by all members; and

11 (B) describes the responsibilities of partici-
12 pants, membership fees, and the scope of re-
13 search activities; and

14 (2) develop a Lighting Initiative annual pro-
15 gram plan.

16 (c) ANNUAL REVIEW.—

17 (1) IN GENERAL.—An annual independent re-
18 view of firms, the consortium, and research organi-
19 zations receiving a grant under this section shall be
20 conducted by—

21 (A) a committee appointed by the Sec-
22 retary under the Federal Advisory Committee
23 Act (5 U.S.C. App.); or

24 (B) a committee appointed by the National
25 Academy of Sciences.

1 (2) REQUIREMENTS.—Using clearly defined
2 standards established by the Secretary, the review
3 shall assess technology advances and commercial ap-
4 plicability of—

5 (A) the activities of the firms, consortium,
6 or research organizations during each fiscal
7 year of the grant program; and

8 (B) the goals of the firms, consortium, or
9 research organizations for the next fiscal year
10 in the annual program plan developed under
11 subsection (b)(2).

12 (d) ALLOCATION AND COST SHARING.—

13 (1) IN GENERAL.—The amount of funds made
14 available for any fiscal year to provide grants under
15 this section shall be allocated in accordance with
16 paragraphs (2) and (3).

17 (2) RESEARCH PROJECTS.—Funding for basic
18 and manufacturing research projects shall be allo-
19 cated to the consortium.

20 (3) DEVELOPMENT, DEPLOYMENT, AND DEM-
21 ONSTRATION PROJECTS.—Funding for development,
22 deployment, and demonstration projects shall be al-
23 located to members of the consortium.

1 (4) COST SHARING.—Non-federal cost sharing
2 shall be in accordance with section 3002 of the En-
3 ergy Policy Act of 1992 (42 U.S.C. 13542).

4 (e) TECHNICAL AND FINANCIAL ASSISTANCE.—The
5 national laboratories and other pertinent Federal agencies
6 shall cooperate with and provide technical and financial
7 assistance to firms, the consortium, and research organi-
8 zations conducting research, development, and demonstra-
9 tion projects carried out under this section.

10 (f) AUDITS.—

11 (1) IN GENERAL.—The Secretary shall retain
12 an independent, commercial auditor to determine the
13 extent to which funds made available under this Act
14 have been expended in a manner that is consistent
15 with the objectives under section 4(b) and the an-
16 nual operating plan of the consortium developed
17 under subsection (b)(2).

18 (2) REPORTS.—The auditor shall submit to
19 Congress, the Secretary, and the Comptroller Gen-
20 eral of the United States an annual report con-
21 taining the results of the audit.

22 (g) APPLICABLE LAW.—The Lighting Initiative shall
23 not be subject to the Federal Acquisition Regulation.

1 **SEC. 7. PROTECTION OF INFORMATION.**

2 Information obtained by the Federal Government on
3 a confidential basis under this Act shall be considered to
4 constitute trade secrets and commercial or financial infor-
5 mation obtained from a person and privileged or confiden-
6 tial under section 552(b)(4) of title 5, United States Code.

7 **SEC. 8. INTELLECTUAL PROPERTY.**

8 Members of the consortium shall have royalty-free
9 nonexclusive rights to use intellectual property derived
10 from consortium research conducted under this Act.

11 **SEC. 9. AUTHORIZATION OF APPROPRIATIONS.**

12 (a) IN GENERAL.—There are authorized to be appro-
13 priated to carry out this Act—

14 (1) \$30,000,000 for fiscal year 2002; and

15 (2) \$50,000,000 for each of fiscal years 2003
16 through 2011.

17 (b) AVAILABILITY.—Amounts made available under
18 this section shall remain available until expended.

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