

110TH CONGRESS  
1ST SESSION

# S. 489

To improve efficiency in the Federal Government through the use of green buildings, and for other purposes.

---

## IN THE SENATE OF THE UNITED STATES

FEBRUARY 5, 2007

Mr. WARNER introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

---

## A BILL

To improve efficiency in the Federal Government through the use of green buildings, 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; TABLE OF CONTENTS.**

4 (a) SHORT TITLE.—This Act may be cited as the  
5 “Green Buildings Act of 2007”.

6 (b) TABLE OF CONTENTS.—The table of contents of  
7 this Act is as follows:

Sec. 1. Short title; table of contents.  
Sec. 2. Definitions.

### TITLE I—OFFICE OF GREEN BUILDINGS

Sec. 101. Oversight.  
Sec. 102. Office of Green Buildings.

- Sec. 103. Green Building Advisory Committee.
- Sec. 104. Public outreach.
- Sec. 105. Research and development.
- Sec. 106. Budget and life-cycle costing and contracting.
- Sec. 107. Authorization of appropriations.

## TITLE II—HEALTHY HIGH-PERFORMANCE SCHOOLS

- Sec. 201. Definition of high-performance school.
- Sec. 202. Grants for healthy school environments.
- Sec. 203. Model guidelines for siting of school facilities.
- Sec. 204. Public outreach.
- Sec. 205. Authorization of appropriations.

## TITLE III—STRENGTHENING FEDERAL LEADERSHIP

- Sec. 301. Incentives.
- Sec. 302. Federal green building performance.

## TITLE IV—DEMONSTRATION PROJECT

- Sec. 401. Coordination of goals.
- Sec. 402. Authorization of appropriations.

### 1 **SEC. 2. DEFINITIONS.**

2       In this Act:

3           (1) **ADMINISTRATOR.**—The term “Adminis-  
4       trator” means the Administrator of General Serv-  
5       ices.

6           (2) **COMMITTEE.**—The term “Committee”  
7       means the Green Building Advisory Committee es-  
8       tablished under section 103(a).

9           (3) **DIRECTOR.**—The term “Director” means  
10      the individual appointed to the position established  
11      under section 101(a).

12          (4) **FEDERAL FACILITY.**—The term “Federal  
13      facility” means any building or facility the intended  
14      use of which requires the building or facility to be—

15                   (A) accessible to the public;

1 (B) constructed or altered by or on behalf  
2 of the United States; and

3 (C) owned or leased by the Federal Gov-  
4 ernment.

5 (5) GREEN BUILDING.—The term “green build-  
6 ing” means a building—

7 (A) that, during its life-cycle—

8 (i) reduces energy, water, and mate-  
9 rial resource use and the generation of  
10 waste;

11 (ii) improves indoor environmental  
12 quality, including protecting indoor air  
13 quality during construction, reducing in-  
14 door air pollution, using low-emitting ma-  
15 terials, improving thermal comfort, and im-  
16 proving lighting and acoustic environments  
17 that affect occupant health and produc-  
18 tivity;

19 (iii) improves indoor and outdoor im-  
20 pacts of the building on human health and  
21 the environment;

22 (iv) increases the use of environ-  
23 mentally preferable products, including  
24 biobased, recycled content, and nontoxic  
25 products with lower life-cycle impacts;

1 (v) increases reuse and recycling op-  
 2 portunities; and

3 (vi) integrates systems in the building;  
 4 and

5 (B) for which, during its planning, design,  
 6 and construction, the environmental and energy  
 7 impacts of building location and site design are  
 8 considered.

9 (6) LIFE CYCLE.—The term “life cycle”, with  
 10 respect to a green building, means all stages of the  
 11 useful life of the building (including components,  
 12 equipment, systems, and controls of the building) be-  
 13 ginning at conception of a green building project and  
 14 continuing through site selection, design, construc-  
 15 tion, landscaping, commissioning, operation, mainte-  
 16 nance, renovation, deconstruction or demolition, re-  
 17 moval, and recycling of the green building.

18 (7) LIFE-CYCLE ASSESSMENT.—The term “life-  
 19 cycle assessment” means a comprehensive system  
 20 approach for measuring the environmental perform-  
 21 ance of a product or service over the life of the prod-  
 22 uct or service, beginning at raw materials acquisition  
 23 and continuing through manufacturing, transpor-  
 24 tation, installation, use, reuse, and end-of-life waste  
 25 management.

(8) LIFE-CYCLE COSTING.—The term “life-cycle costing”, with respect to a green building, means a technique of economic evaluation that—

(A) sums, over a given study period, the costs of initial investment (less resale value), replacements, operations (including energy use), and maintenance and repair of an investment decision; and

(B) is expressed—

(i) in present value terms, in the case of a study period equivalent to the longest useful life of the building, determined by taking into consideration the typical life of such a building in the area in which the building is to be located; or

(ii) in annual value terms, in the case of any other study period.

(9) OFFICE.—The term “Office” means the Office of Green Buildings established under section 102(a).

## **TITLE I—OFFICE OF GREEN BUILDINGS**

### **SEC. 101. OVERSIGHT.**

(a) IN GENERAL.—The Administrator shall establish within the General Services Administration, and appoint

1 an individual to serve as Director in, a position in the ca-  
 2 reer-reserved Senior Executive service, to—

3 (1) establish and manage the Office in accord-  
 4 ance with section 102; and

5 (2) carry out other duties as required under  
 6 this Act.

7 (b) COMPENSATION.—The compensation of the Di-  
 8 rector shall not exceed the maximum rate of basic pay for  
 9 the Senior Executive Service under section 5382 of title  
 10 5, United States Code, including any applicable locality-  
 11 based comparability payment that may be authorized  
 12 under section 5304(h)(2)(C) of that title.

13 **SEC. 102. OFFICE OF GREEN BUILDINGS.**

14 (a) ESTABLISHMENT.—The Director shall establish  
 15 within the General Services Administration an Office of  
 16 Green Buildings.

17 (b) DUTIES.—The Director shall—

18 (1) ensure full coordination of green building  
 19 information and activities within the General Serv-  
 20 ices Administration and all relevant Federal agen-  
 21 cies, including, at a minimum—

22 (A) the Environmental Protection Agency;

23 (B) the Office of the Federal Environ-  
 24 mental Executive;

1 (C) the Office of Federal Procurement Pol-  
2 icy;

3 (D) the Department of Energy;

4 (E) the Department of Health and Human  
5 Services; and

6 (F) such other Federal agencies as the Di-  
7 rector considers to be appropriate;

8 (2) establish a senior-level green building advi-  
9 sory committee, which shall provide advice and rec-  
10 ommendations in accordance with section 103;

11 (3) identify and biennially reassess improved or  
12 higher rating standards recommended by the Com-  
13 mittee;

14 (4) establish a national green building clearing-  
15 house in accordance with section 104, which shall  
16 provide green building information through—

17 (A) outreach;

18 (B) education; and

19 (C) the provision of technical assistance;

20 (5) ensure full coordination of research and de-  
21 velopment information relating to green building ini-  
22 tiatives under section 105;

23 (6) identify and develop green building stand-  
24 ards that could be used for all types of Federal fa-  
25 cilities in accordance with section 105;

1           (7) establish green practices that can be used  
2 throughout the life of a Federal facility;

3           (8) review and analyze current Federal budget  
4 practices and life-cycle costing issues, and make rec-  
5 ommendations to Congress, in accordance with sec-  
6 tion 106; and

7           (9) complete and submit the report described in  
8 subsection (c).

9       (c) REPORT.—Not later than 2 years after the date  
10 of enactment of this Act, and biennially thereafter, the Di-  
11 rector shall submit to Congress a report that—

12           (1) describes the status of the green building  
13 initiatives under this Act and other Federal pro-  
14 grams in effect as of the date of the report, includ-  
15 ing—

16               (A) the extent to which the programs are  
17 being carried out in accordance with this Act;  
18 and

19               (B) the status of funding requests and ap-  
20 propriations for those programs;

21           (2) identifies within the planning, budgeting,  
22 and construction process all types of Federal facility  
23 procedures that inhibit new and existing Federal fa-  
24 cilities from becoming green buildings as measured  
25 by a standard to be determined by the Office;



1           (3) identifies inconsistencies, as reported to the  
2       Committee, in Federal law with respect to product  
3       acquisition guidelines and high-performance product  
4       guidelines;

5           (4) recommends language for uniform stand-  
6       ards for use by Federal agencies in environmentally  
7       responsible acquisition;

8           (5) in coordination with the Office of Manage-  
9       ment and Budget, reviews the budget process for  
10      capital programs with respect to alternatives for—

11           (A) restructuring of budgets to recommend  
12      the use of complete energy- and environmental-  
13      cost accounting;

14           (B) using operations expenditures in budg-  
15      et-related decisions while simultaneously incor-  
16      porating productivity and health measures (as  
17      those measures can be quantified by the Office,  
18      with the assistance of universities and national  
19      laboratories);

20           (C) permitting Federal agencies to retain  
21      all identified savings accrued as a result of the  
22      use of life cycle costing; and

23           (D) identifying short- and long-term cost  
24      savings that accrue from green buildings, in-

1 including those relating to health and produc-  
2 tivity;

3 (6) identifies green, self-sustaining technologies  
4 to address the operational needs of Federal facilities  
5 in times of national security emergencies, natural  
6 disasters, or other dire emergencies;

7 (7) summarizes and highlights development, at  
8 the State and local level, of green building initia-  
9 tives, including Executive orders, policies, or laws  
10 adopted promoting green building (including the sta-  
11 tus of implementation of those initiatives); and

12 (8) includes, for the 2-year period covered by  
13 the report, recommendations to address each of the  
14 matters, and a plan for implementation of each rec-  
15 ommendation, described in paragraphs (1) through  
16 (6).

17 (d) IMPLEMENTATION.—The Office shall carry out  
18 each plan for implementation of recommendations under  
19 subsection (c)(7).

20 **SEC. 103. GREEN BUILDING ADVISORY COMMITTEE.**

21 (a) ESTABLISHMENT.—Not later than 180 days after  
22 the date of enactment of this Act, the Director shall estab-  
23 lish an advisory committee, to be known as the “Green  
24 Building Advisory Committee”.

25 (b) MEMBERSHIP.—

1           (1) IN GENERAL.—The Committee shall be  
2       composed of representatives of, at a minimum—

3               (A) each agency referred to in section  
4       102(b)(1); and

5               (B) other relevant agencies and entities, as  
6       determined by the Director, including at least 1  
7       representative of each of—

8                   (i) State and local governmental green  
9       building programs;

10                  (ii) independent green building asso-  
11       ciations or councils;

12                  (iii) building experts, including archi-  
13       tects, material suppliers, and construction  
14       contractors;

15                  (iv) energy efficiency experts from  
16       commercial industry, research, or academic  
17       backgrounds;

18                  (v) security advisors focusing on na-  
19       tional security needs, natural disasters,  
20       and other dire emergency situations; and

21                  (vi) environmental health experts, in-  
22       cluding those with experience in children's  
23       health.

1           (2) NON-FEDERAL MEMBERS.—The total num-  
2       ber of non-Federal members on the Committee at  
3       any time shall not exceed 10.

4       (c) MEETINGS.—The Director shall establish a reg-  
5       ular schedule of meetings for the Committee.

6       (d) DUTIES.—The Committee shall provide advice  
7       and expertise for use by the Director in carrying out the  
8       duties under this Act, including such recommendations re-  
9       lating to Federal activities carried out under sections 104  
10      through 106 as are agreed to by a majority of the mem-  
11      bers of the Committee.

12      (e) FACA EXEMPTION.—The Committee shall not be  
13      subject to section 14 of the Federal Advisory Committee  
14      Act (5 U.S.C. App.).

15      **SEC. 104. PUBLIC OUTREACH.**

16      The Director shall carry out public outreach to in-  
17      form individuals and entities of the information and serv-  
18      ices available Government-wide by—

19           (1) establishing and maintaining a national  
20      green building clearinghouse, including on the Inter-  
21      net, that—

22           (A) identifies existing similar efforts and  
23      coordinates activities of common interest; and

24           (B) provides information relating to green  
25      buildings, including hyperlinks to Internet sites

1           that describe related activities, information, and  
2           resources of—

3                       (i) the Federal Government;

4                       (ii) State and local governments;

5                       (iii) the private sector (including non-  
6                       governmental and nonprofit entities and  
7                       organizations); and

8                       (iv) other relevant organizations, in-  
9                       cluding those from other countries;

10           (2) identifying and recommending educational  
11           resources for implementing green building practices,  
12           including security and emergency benefits and prac-  
13           tices;

14           (3) providing access to technical assistance on  
15           using tools and resources to make more cost-effec-  
16           tive, energy-efficient, health-protective, and environ-  
17           mentally beneficial decisions for constructing green  
18           buildings, including tools available to conduct life-  
19           cycle costing and life-cycle assessment;

20           (4) providing information on application proc-  
21           esses for certifying a green building, including cer-  
22           tification and commissioning;

23           (5) providing technical information, market re-  
24           search, or other forms of assistance or advice that

1 would be useful in planning and constructing green  
 2 buildings; and

3 (6) using such other methods as are determined  
 4 by the Director to be appropriate.

5 **SEC. 105. RESEARCH AND DEVELOPMENT.**

6 The Director shall—

7 (1)(A) survey existing research and studies re-  
 8 lating to green buildings; and

9 (B) coordinate activities of common interest;

10 (2) develop and recommend a green building re-  
 11 search plan that—

12 (A) identifies information and research  
 13 needs, including the relationships between  
 14 human health, occupant productivity, and each  
 15 of—

16 (i) emissions from materials and prod-  
 17 ucts in the building;

18 (ii) natural day lighting;

19 (iii) ventilation choices and tech-  
 20 nologies;

21 (iv) heating, cooling, and system con-  
 22 trol choices and technologies;

23 (v) moisture control and mold;

24 (vi) maintenance, cleaning, and pest  
 25 control activities;

- 1 (vii) acoustics; and
- 2 (viii) other issues relating to the
- 3 health, comfort, productivity, and perform-
- 4 ance of occupants of the building; and
- 5 (B) promotes the development and dissemi-
- 6 nation of green building measurement tools
- 7 that, at a minimum, may be used—
- 8 (i) to monitor and assess the life-cycle
- 9 performance of facilities (including dem-
- 10 onstration projects) built as green build-
- 11 ings; and
- 12 (ii) to perform life-cycle assessments;
- 13 (3) assist the budget and life-cycle costing func-
- 14 tions of the Office under section 106;
- 15 (4) study and identify potential benefits of
- 16 green buildings relating to security, natural disaster,
- 17 and emergency needs of the Federal Government;
- 18 and
- 19 (5) support other research initiatives deter-
- 20 mined by the Office.

21 **SEC. 106. BUDGET AND LIFE-CYCLE COSTING AND CON-**

22 **TRACTING.**

- 23 (a) ESTABLISHMENT.—The Director shall—
- 24 (1) identify, review, and analyze current budget
- 25 and contracting practices that affect achievement of

1 green buildings, including the identification of bar-  
 2 riers to green building life-cycle costing and budg-  
 3 etary issues;

4 (2) develop guidance and conduct training ses-  
 5 sions with budget specialists and contracting per-  
 6 sonnel from Federal agencies and budget examiners  
 7 to apply life-cycle cost criteria to actual projects;

8 (3) identify tools to aid life-cycle cost decision-  
 9 making; and

10 (4) explore the feasibility of incorporating the  
 11 benefits of green buildings, such as security benefits,  
 12 into a cost-budget analysis to aid in life-cycle costing  
 13 for budget and decision making processes.

14 **SEC. 107. AUTHORIZATION OF APPROPRIATIONS.**

15 There is authorized to be appropriated to carry out  
 16 this title \$4,000,000 for each of fiscal years 2008 through  
 17 2012, to remain available until expended.

18 **TITLE II—HEALTHY HIGH-**  
 19 **PERFORMANCE SCHOOLS**

20 **SEC. 201. DEFINITION OF HIGH-PERFORMANCE SCHOOL.**

21 In this title, the term “high-performance school” has  
 22 the meaning given the term “healthy, high-performance  
 23 school building” in section 5586 of the Elementary and  
 24 Secondary Education Act of 1965 (20 U.S.C. 7277e).



1 **SEC. 202. GRANTS FOR HEALTHY SCHOOL ENVIRONMENTS.**

2 The Administrator of the Environmental Protection  
3 Agency, in consultation with the Secretary of Education,  
4 may provide grants to qualified State agencies for use in—

5 (1) providing technical assistance for programs  
6 of the Environmental Protection Agency (including  
7 the Tools for Schools Program and the Healthy  
8 School Environmental Assessment Tool) to schools  
9 for use in addressing environmental issues; and

10 (2) development of State school environmental  
11 quality plans that include—

12 (A) standards for school building design,  
13 construction, and renovation; and

14 (B) identification of ongoing school build-  
15 ing environmental problems in the State and  
16 recommended solutions to address those prob-  
17 lems, including assessment of information on  
18 the exposure of children to environmental haz-  
19 ards in school facilities.

20 **SEC. 203. MODEL GUIDELINES FOR SITING OF SCHOOL FA-**  
21 **CILITIES.**

22 The Administrator of the Environmental Protection  
23 Agency, in consultation with the Secretary of Education,  
24 the Secretary of Energy, the Secretary of Transportation,  
25 and the Secretary of Health and Human Services, shall

1 develop voluntary school site selection guidelines that ac-  
2 count for—

3 (1) efficient use of energy;

4 (2) the special vulnerability of children to haz-  
5 arduous substances or pollution exposures in any case  
6 in which the potential for contamination at a poten-  
7 tial school site exists;

8 (3) modes of transportation available to stu-  
9 dents and staff; and

10 (4) the potential use of a school at the site as  
11 an emergency shelter.

12 **SEC. 204. PUBLIC OUTREACH.**

13 (a) IN GENERAL.—The Administrator of the Envi-  
14 ronmental Protection Agency shall provide to the Director  
15 information relating to all activities carried out under this  
16 title, which the Director shall include in the report de-  
17 scribed in section 102(c).

18 (b) PUBLIC OUTREACH.—The Director shall ensure,  
19 to the maximum extent practicable, that the public clear-  
20 inghouse established under section 104 receives and makes  
21 available information on the exposure of children to envi-  
22 ronmental hazards in school facilities, as provided by the  
23 Administrator of the Environmental Protection Agency.

1 **SEC. 205. AUTHORIZATION OF APPROPRIATIONS.**

2       There is authorized to be appropriated to carry out  
 3 this title \$10,000,000 for the period of fiscal years 2008  
 4 through 2012, to remain available until expended.

5       **TITLE III—STRENGTHENING**  
 6       **FEDERAL LEADERSHIP**

7 **SEC. 301. INCENTIVES.**

8       As soon as practicable after the date of enactment  
 9 of this Act, the Director shall identify incentives to encour-  
 10 age the use of green buildings and related technology in  
 11 the operations of the Federal Government, including  
 12 through—

- 13               (1) the provision of recognition awards; and  
 14               (2) the maximum feasible retention of financial  
 15 savings in the annual budgets of Federal agencies.

16 **SEC. 302. FEDERAL GREEN BUILDING PERFORMANCE.**

17       (a) IN GENERAL.—Not later than October 31 of each  
 18 of the 2 fiscal years following the fiscal year in which this  
 19 Act is enacted, and at such times thereafter as the Comp-  
 20 troller General of the United States determines to be ap-  
 21 propriate, the Comptroller General of the United States  
 22 shall, with respect to the fiscal years that have passed  
 23 since the preceding report—

- 24               (1) conduct an audit of the implementation of  
 25 this Act; and

1           (2) submit to the Office, the Committee, the  
2       Administrator, and Congress a report describing the  
3       results of the audit.

4       (b) CONTENTS.—An audit under subsection (a) shall  
5       include a review, with respect to the period covered by the  
6       report under subsection (a)(2), of—

7           (1) budget, life-cycle costing, and contracting  
8       issues, using best practices identified by the Comp-  
9       troller General of the United States and heads of  
10      other agencies in accordance with section 106;

11          (2) the level of coordination among the Office,  
12      the Office of Management and Budget, and relevant  
13      agencies;

14          (3) the performance of the Office in carrying  
15      out the implementation plan;

16          (4) the design stage of green building measures;

17          (5) green building data that were collected and  
18      reported to the Office; and

19          (6) such other matters as the Comptroller Gen-  
20      eral of the United States determines to be appro-  
21      priate.

22      (c) ENVIRONMENTAL STEWARDSHIP SCORECARD.—  
23      The Director shall consult with the Committee to enhance,  
24      and assist in the implementation of, the Environmental  
25      Stewardship Scorecard announced at the White House

1 summit on Federal sustainable buildings in January 2006,  
 2 to measure the implementation by each Federal agency of  
 3 sustainable design and green building initiatives.

## 4 **TITLE IV—DEMONSTRATION** 5 **PROJECT**

### 6 **SEC. 401. COORDINATION OF GOALS.**

7 (a) IN GENERAL.—The Director shall establish  
 8 guidelines to implement a demonstration project to con-  
 9 tribute to the research goals of the Office.

10 (b) PROJECTS.—In accordance with guidelines estab-  
 11 lished by the Director under subsection (a) and the duties  
 12 of the Director described in title I, the Director shall carry  
 13 out—

14 (1) for each of fiscal years 2008 through 2013,  
 15 1 demonstration project in a Federal building se-  
 16 lected by the Director in accordance with relevant  
 17 agencies and described in subsection (c)(1), that—

18 (A) provides for the evaluation of the in-  
 19 formation obtained through the conduct of  
 20 projects and activities under this Act; and

21 (B) achieves a minimum standard to be  
 22 determined by the Office; and

23 (2) no fewer than 4 demonstration projects at  
 24 4 universities, that, as competitively selected by the

1 Director in accordance with subsection (c)(2),  
2 have—

3 (A) appropriate research resources and rel-  
4 evant projects to meet the goals of the dem-  
5 onstration project established by the Office; and

6 (B) the ability—

7 (i) to serve as a model for green  
8 building initiatives, including research and  
9 education;

10 (ii) to identify the most effective ways  
11 to use green building and landscape tech-  
12 nologies to engage and educate under-  
13 graduate and graduate students;

14 (iii) to effectively implement a green  
15 building education program for students  
16 and occupants;

17 (iv) to demonstrate the effectiveness  
18 of various green building technologies in  
19 each of the 4 climatic regions of the  
20 United States described in subsection  
21 (c)(2)(B); and

22 (v) to explore quantifiable and non-  
23 quantifiable beneficial impacts on public  
24 health and employee and student perform-  
25 ance.

1 (c) CRITERIA.—

2 (1) FEDERAL FACILITIES.—With respect to the  
3 existing or proposed Federal facility at which a dem-  
4 onstration project under this section is conducted,  
5 the Federal facility shall—

6 (A) be an appropriate model for a project  
7 relating to—

8 (i) the effectiveness of high-perform-  
9 ance technologies;

10 (ii) analysis of materials, components,  
11 systems, and emergency operations in the  
12 building, and the impact of those mate-  
13 rials, components, and systems, including  
14 the impact on the health of building occu-  
15 pants;

16 (iii) life-cycle costing and life-cycle as-  
17 sessment of building materials and sys-  
18 tems; and

19 (iv) location and design that promote  
20 access to the Federal facility through walk-  
21 ing, biking, and mass transit; and

22 (B) possess sufficient technological and or-  
23 ganizational adaptability.

1           (2) UNIVERSITIES.—With respect to the 4 uni-  
 2           versities at which a demonstration project under this  
 3           section is conducted—

4           (A) the universities should be selected,  
 5           after careful review of all applications received  
 6           containing the required information, as deter-  
 7           mined by the Director, based on—

8                   (i) successful and established public-  
 9                   private research and development partner-  
 10                  ships;

11                  (ii) demonstrated capabilities to con-  
 12                  struct or renovate buildings that meet high  
 13                  indoor environmental quality standards;

14                  (iii) organizational flexibility;

15                  (iv) technological adaptability;

16                  (v) the demonstrated capacity of at  
 17                  least 1 university to replicate lessons  
 18                  learned among nearby or sister univer-  
 19                  sities, preferably by participation in groups  
 20                  or consortia that promote sustainability;

21                  (vi) the demonstrated capacity of at  
 22                  least 1 university to have officially-adopt-  
 23                  ed, institution-wide “green building” guide-  
 24                  lines for all campus building projects; and



1 (vii) the demonstrated capacity of at  
2 least 1 university to have been recognized  
3 by similar institutions as a national leader  
4 in sustainability ecodesign, green design,  
5 or environmental design education and cur-  
6 riculum for students of the university; and

7 (B) each university shall be located in a  
8 different climatic region of the United States,  
9 each of which regions shall have, as determined  
10 by the Office—

11 (i) a hot, dry climate;

12 (ii) a hot, humid climate;

13 (iii) a cold climate; or

14 (iv) a temperate climate (including a  
15 climate with cold winters and humid sum-  
16 mers).

17 (d) REPORT.—Not later than 1 year after the date  
18 of enactment of this Act, and annually thereafter through  
19 September 30, 2013—

20 (1) the Director shall submit to the Adminis-  
21 trator a report that describes the status of the dem-  
22 onstration projects; and

23 (2) each University at which a demonstration  
24 project under this section is conducted shall submit

1 to the Administrator a report that describes the sta-  
2 tus of the demonstration projects under this section.

3 **SEC. 402. AUTHORIZATION OF APPROPRIATIONS.**

4 (a) FEDERAL DEMONSTRATION PROJECT.—There is  
5 authorized to be appropriated to carry out the Federal  
6 demonstration project described in section 401(b)(1)  
7 \$10,000,000 for the period of fiscal years 2008 through  
8 2013, to remain available until expended.

9 (b) UNIVERSITY DEMONSTRATION PROJECTS.—  
10 There is authorized to be appropriated to carry out the  
11 university demonstration projects described in section  
12 401(b)(2) \$10,000,000 for the period of fiscal years 2008  
13 through 2013, to remain available until expended.

○