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[Report No. 110-241]

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

IN THE SENATE OF THE UNITED STATES

FEBRUARY 6, 2007

Mr. LAUTENBERG (for himself, Ms. SNOWE, Mrs. BOXER, Mrs. CLINTON, Mr. LIEBERMAN, Mr. SANDERS, Mr. CARDIN, Mr. MENENDEZ, Mr. KERRY, Ms. KLOBUCHAR, Mr. WHITEHOUSE, Mrs. FEINSTEIN, Mr. LUGAR, and Mr. DODD) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

DECEMBER 12, 2007

Reported by Mrs. BOXER, with an amendment

[Strike out all after the enacting clause and insert the part printed in *italic*]

A BILL

To improve efficiency in the Federal Government through the use of high-performance 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,*

1 **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

2 (a) **SHORT TITLE.**—This Act may be cited as the
 3 “High-Performance Green Buildings Act of 2007”.

4 (b) **TABLE OF CONTENTS.**—The table of contents of
 5 this Act is as follows:

Sec. 1: Short title; table of contents.

Sec. 2: Definitions.

TITLE I—OFFICE OF HIGH-PERFORMANCE GREEN BUILDINGS

Sec. 101: Oversight.

Sec. 102: Office of High-Performance 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: Environmental health program.

Sec. 206: Authorization of appropriations.

TITLE III—STRENGTHENING FEDERAL LEADERSHIP

Sec. 301: Incentives.

Sec. 302: Federal procurement.

Sec. 303: Federal green building performance.

TITLE IV—DEMONSTRATION PROJECT

Sec. 401: Coordination of goals.

Sec. 402: Authorization of appropriations.

6 **SEC. 2. DEFINITIONS.**

7 In this Act:

8 (1) **ADMINISTRATOR.**—The term “Adminis-
 9 trator” means the Administrator of General Serv-
 10 ices.

1 (2) COMMITTEE.—The term “Committee”
 2 means the Green Building Advisory Committee es-
 3 tablished under section 103(a).

4 (3) DIRECTOR.—The term “Director” means
 5 the individual appointed to the position established
 6 under section 101(a).

7 (4) FEDERAL FACILITY.—

8 (A) IN GENERAL.—The term “Federal fa-
 9 cility” means any building or facility the in-
 10 tended use of which requires the building or fa-
 11 cility to be—

12 (i) accessible to the public; and

13 (ii) constructed or altered by or on be-
 14 half of the United States.

15 (B) EXCLUSIONS.—The term “Federal fa-
 16 cility” does not include a privately-owned resi-
 17 dential or commercial structure that is not
 18 leased by the Federal Government.

19 (5) HIGH-PERFORMANCE GREEN BUILDING.—
 20 The term “high-performance green building” means
 21 a building—

22 (A) that, during its life-cycle—

23 (i) reduces energy, water, and mate-
 24 rial resource use and the generation of
 25 waste;

(ii) improves indoor environmental quality, including protecting indoor air quality during construction, using low-emitting materials, improving thermal comfort, and improving lighting and acoustic environments that affect occupant health and productivity;

(iii) improves indoor and outdoor impacts of the building on human health and the environment;

(iv) increases the use of environmentally preferable products, including biobased, recycled content, and nontoxic products with lower life-cycle impacts;

(v) increases reuse and recycling opportunities; and

(vi) integrates systems in the building; and

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

(6) LIFE CYCLE.—The term “life cycle”, with respect to a high-performance green building, means all stages of the useful life of the building (including

1 components, equipment, systems, and controls of the
2 building) beginning at conception of a green building
3 project and continuing through site selection, design,
4 construction, landscaping, commissioning, operation,
5 maintenance, renovation, deconstruction or demoli-
6 tion, removal, and recycling of the green building.

7 (7) ~~LIFE-CYCLE ASSESSMENT.~~—The term “life-
8 cycle assessment” means a comprehensive system
9 approach for measuring the environmental perform-
10 ance of a product or service over the life of the prod-
11 uct or service, beginning at raw materials acquisition
12 and continuing through manufacturing, transpor-
13 tation, installation, use, reuse, and end-of-life waste
14 management.

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

19 (A) sums, over a given study period, the
20 costs of initial investment (less resale value), re-
21 placements, operations (including energy use),
22 and maintenance and repair of an investment
23 decision; and

24 (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 High-Performance Green Buildings established under section 102(a).

TITLE I—OFFICE OF HIGH-PERFORMANCE GREEN BUILDINGS

SEC. 101. OVERSIGHT.

(a) IN GENERAL.—The Administrator shall establish within the General Services Administration, and appoint an individual to serve as Director in, a position in the career-reserved Senior Executive service, to—

(1) establish and manage the Office in accordance with section 102; and

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

(b) COMPENSATION.—The compensation of the Director shall not exceed the maximum rate of basic pay for

1 the Senior Executive Service under section 5382 of title
 2 5, United States Code, including any applicable locality-
 3 based comparability payment that may be authorized
 4 under section 5304(h)(2)(C) of that title.

5 **SEC. 102. OFFICE OF HIGH-PERFORMANCE GREEN BUILD-**
 6 **INGS.**

7 (a) **ESTABLISHMENT.**—The Director shall establish
 8 within the General Services Administration an Office of
 9 High-Performance Green Buildings.

10 (b) **DUTIES.**—The Director shall—

11 (1) ensure full coordination of high-performance
 12 green building information and activities within the
 13 General Services Administration and all relevant
 14 Federal agencies, including, at a minimum—

15 (A) the Environmental Protection Agency;

16 (B) the Office of the Federal Environ-
 17 mental Executive;

18 (C) the Office of Federal Procurement Pol-
 19 icy;

20 (D) the Department of Energy;

21 (E) the Department of Health and Human
 22 Services;

23 (F) the Department of Defense; and

24 (G) such other Federal agencies as the Di-
 25 rector considers to be appropriate;

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

4 (3) identify and biennially reassess improved or
5 higher rating standards recommended by the Com-
6 mittee;

7 (4) establish a national high-performance green
8 building clearinghouse in accordance with section
9 104, which shall provide green building information
10 through—

11 (A) outreach;

12 (B) education; and

13 (C) the provision of technical assistance;

14 (5) ensure full coordination of research and de-
15 velopment information relating to high-performance
16 green building initiatives under section 105;

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

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

22 (8) review and analyze current Federal budget
23 practices and life-cycle costing issues, and make rec-
24 ommendations to Congress, in accordance with sec-
25 tion 106; and

1 (9) complete and submit the report described in
2 subsection (e).

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

6 (1) describes the status of the green building
7 initiatives under this Act and other Federal pro-
8 grams in effect as of the date of the report, includ-
9 ing—

10 (A) the extent to which the programs are
11 being carried out in accordance with this Act;
12 and

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

15 (2) identifies within the planning, budgeting,
16 and construction process all types of Federal facility
17 procedures that inhibit new and existing Federal fa-
18 cilities from becoming high-performance green build-
19 ings as measured by—

20 (A) a silver rating, as defined by the Lead-
21 ership in Energy and Environmental Design
22 Building Rating System standard established by
23 the United States Green Building Council (or
24 an equivalent rating obtained through a com-
25 parable system); or

1 ~~(B)~~ an improved or higher rating standard;
2 as identified by the Committee;

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

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

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

13 ~~(A)~~ restructuring of budgets to require the
14 use of complete energy- and environmental-cost
15 accounting;

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

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

1 ~~(D)~~ identifying short- and long-term cost
 2 savings that accrue from high-performance
 3 green buildings, including those relating to
 4 health and productivity;

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

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

14 (8) includes, for the 2-year period covered by
 15 the report, recommendations to address each of the
 16 matters, and a plan for implementation of each rec-
 17 ommendation, described in paragraphs (1) through
 18 ~~(6)~~;

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

22 **~~SEC. 103. GREEN BUILDING ADVISORY COMMITTEE.~~**

23 ~~(a) ESTABLISHMENT.~~—Not later than 180 days after
 24 the date of enactment of this Act, the Director shall estab-

lish an advisory committee, to be known as the “Green Building Advisory Committee”.

~~(b) MEMBERSHIP.—~~

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

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

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

~~(i) State and local governmental green building programs;~~

~~(ii) independent green building associations or councils;~~

~~(iii) building experts, including architects, material suppliers, and construction contractors;~~

~~(iv) security advisors focusing on national security needs, natural disasters, and other dire emergency situations; and~~

~~(v) environmental health experts, including those with experience in children’s 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 15.

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, in coordination with the Committee,
 17 shall carry out public outreach to inform individuals and
 18 entities of the information and services available Govern-
 19 ment-wide by—

20 ~~(1)~~ establishing and maintaining a national
 21 high-performance green building clearinghouse, in-
 22 cluding on the Internet, that—

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

1 (B) provides information relating to high-
2 performance green buildings, including
3 hyperlinks to Internet sites that describe related
4 activities, information, and resources of—

5 (i) the Federal Government;

6 (ii) State and local governments;

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

10 (iv) other relevant organizations, in-
11 cluding those from other countries;

12 (2) identifying and recommending educational
13 resources for implementing high-performance green
14 building practices, including security and emergency
15 benefits and practices;

16 (3) providing access to technical assistance on
17 using tools and resources to make more cost-effec-
18 tive, energy-efficient, health-protective, and environ-
19 mentally beneficial decisions for constructing high-
20 performance green buildings, including tools avail-
21 able to conduct life-cycle costing and life-cycle as-
22 sessment;

23 (4) providing information on application proc-
24 esses for certifying a high-performance green build-
25 ing, including certification and commissioning;

- 1 (5) providing technical information, market re-
2 search, or other forms of assistance or advice that
3 would be useful in planning and constructing high-
4 performance green buildings; and
5 (6) using such other methods as are determined
6 by the Director to be appropriate.

7 **SEC. 105. RESEARCH AND DEVELOPMENT.**

- 8 (a) **ESTABLISHMENT.**—The Director, in coordination
9 with the Committee, shall—

- 10 (1)(A) survey existing research and studies re-
11 lating to high-performance green buildings; and

- 12 (B) coordinate activities of common interest;

- 13 (2) develop and recommend a high-performance
14 green building research plan that—

- 15 (A) identifies information and research
16 needs, including the relationships between
17 human health, occupant productivity, and each
18 of—

- 19 (i) emissions from materials and prod-
20 ucts in the building;

- 21 (ii) natural day lighting;

- 22 (iii) ventilation choices and tech-
23 nologies;

- 24 (iv) heating, cooling, and system con-
25 trol choices and technologies;

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

1 (b) ~~INDOOR AIR QUALITY.~~—The Director, in con-
 2 sultation with the Committee, shall develop and carry out
 3 a comprehensive indoor air quality program for all Federal
 4 facilities to ensure the safety of Federal workers and facil-
 5 ity occupants—

6 (1) ~~during new construction and renovation of~~
 7 ~~facilities; and~~

8 (2) ~~in existing facilities.~~

9 **SEC. 106. BUDGET AND LIFE-CYCLE COSTING AND CON-**
 10 **TRACTING.**

11 (a) ~~ESTABLISHMENT.~~—The Director, in coordination
 12 with the Committee, shall—

13 (1) ~~identify, review, and analyze current budget~~
 14 ~~and contracting practices that affect achievement of~~
 15 ~~high-performance green buildings, including the~~
 16 ~~identification of barriers to green building life-cycle~~
 17 ~~costing and budgetary issues;~~

18 (2) ~~develop guidance and conduct training ses-~~
 19 ~~sions with budget specialists and contracting per-~~
 20 ~~sonnel from Federal agencies and budget examiners~~
 21 ~~to apply life-cycle cost criteria to actual projects;~~

22 (3) ~~identify tools to aid life-cycle cost decision-~~
 23 ~~making; and~~

24 (4) ~~explore the feasibility of incorporating the~~
 25 ~~benefits of green buildings, such as security benefits;~~

1 into a cost-budget analysis to aid in life-cycle costing
 2 for budget and decision making processes.

3 **SEC. 107. AUTHORIZATION OF APPROPRIATIONS.**

4 There is authorized to be appropriated to carry out
 5 this title \$4,000,000 for each of fiscal years 2008 through
 6 2012, to remain available until expended.

7 **TITLE II—HEALTHY HIGH-**
 8 **PERFORMANCE SCHOOLS**

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

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

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

15 The Administrator of the Environmental Protection
 16 Agency, in consultation with the Secretary of Education,
 17 may provide grants to qualified State agencies for use in—

18 (1) providing technical assistance for programs
 19 of the Environmental Protection Agency (including
 20 the Tools for Schools Program and the Healthy
 21 School Environmental Assessment Tool) to schools
 22 for use in addressing environmental issues; and

23 (2) development of State school environmental
 24 quality plans that include—

1 (A) standards for school building design;
2 construction, and renovation; and

3 (B) identification of ongoing school build-
4 ing environmental problems in the State and
5 recommended solutions to address those prob-
6 lems, including assessment of information on
7 the exposure of children to environmental haz-
8 ards in school facilities.

9 **SEC. 203. MODEL GUIDELINES FOR SITING OF SCHOOL FA-**
10 **CILITIES.**

11 The Administrator of the Environmental Protection
12 Agency, in consultation with the Secretary of Education
13 and the Secretary of Health and Human Services, shall
14 develop school site selection guidelines that account for—

15 (1) the special vulnerability of children to haz-
16 ardous substances or pollution exposures in any case
17 in which the potential for contamination at a poten-
18 tial school site exists;

19 (2) modes of transportation available to stu-
20 dents and staff; and

21 (3) the potential use of a school at the site as
22 an emergency shelter.

23 **SEC. 204. PUBLIC OUTREACH.**

24 (a) ~~IN GENERAL.~~—The Administrator of the Envi-
25 ronmental Protection Agency shall provide to the Director

1 information relating to all activities carried out under this
 2 title, which the Director shall include in the report de-
 3 scribed in section 102(c).

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

10 **SEC. 205. ENVIRONMENTAL HEALTH PROGRAM.**

11 (a) IN GENERAL.—The Administrator of the Envi-
 12 ronmental Protection Agency, in consultation with the
 13 Secretary of Education, the Secretary of Health and
 14 Human Services, and other relevant agencies, shall issue
 15 guidelines for use by the State in developing and imple-
 16 menting an environmental health program for schools
 17 that—

18 (1) takes into account the status and findings
 19 of Federal research initiatives established under this
 20 Act and other relevant Federal law with respect to
 21 school facilities, including relevant updates on trends
 22 in the field, such as the impact of school facility en-
 23 vironments on student and staff—

24 (A) health, safety, and productivity; and

25 (B) disabilities or special needs;

1 ~~(2)~~ provides research using relevant tools identified or developed in accordance with section 105(a) to quantify the relationships between—

2 ~~(A)~~ human health, occupant productivity, and student performance; and

3 ~~(B)~~ with respect to school facilities, each of—

4 ~~(i)~~ pollutant emissions from materials and products;

5 ~~(ii)~~ natural day lighting;

6 ~~(iii)~~ ventilation choices and technologies;

7 ~~(iv)~~ heating and cooling choices and technologies;

8 ~~(v)~~ moisture control and mold;

9 ~~(vi)~~ maintenance, cleaning, and pest control activities;

10 ~~(vii)~~ acoustics; and

11 ~~(viii)~~ other issues relating to the health, comfort, productivity, and performance of occupants of the school facilities;

12 ~~(3)~~ provides technical assistance on siting, design, management, and operation of school facilities, including facilities used by students with disabilities or special needs;

1 (4) collaborates with federally funded pediatric
2 environmental health centers to assist in on-site
3 school environmental investigations;

4 (5) assists States and the public in better un-
5 derstanding and improving the environmental health
6 of children; and

7 (6) provides to the Office a biennial report of
8 all activities carried out under this title, which the
9 Director shall include in the report described in sec-
10 tion 102(c).

11 (b) PUBLIC OUTREACH.—The Director shall ensure,
12 to the maximum extent practicable, that the public clear-
13 inghouse established under section 104 receives and makes
14 available—

15 (1) information from the Administrator of the
16 Environmental Protection Agency that is contained
17 in the report described in subsection (a)(6); and

18 (2) information on the exposure of children to
19 environmental hazards in school facilities, as pro-
20 vided by the Administrator of the Environmental
21 Protection Agency.

22 **SEC. 206. AUTHORIZATION OF APPROPRIATIONS.**

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

1 **TITLE III—STRENGTHENING**
 2 **FEDERAL LEADERSHIP**

3 **SEC. 301. INCENTIVES.**

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

9 (1) the provision of recognition awards; and

10 (2) the maximum feasible retention of financial
 11 savings in the annual budgets of Federal agencies.

12 **SEC. 302. FEDERAL PROCUREMENT.**

13 (a) IN GENERAL.—Not later than 2 years after the
 14 date of enactment of this Act, the Director of the Office
 15 of Federal Procurement Policy, in consultation with the
 16 Director and the Under Secretary of Defense for Acquisi-
 17 tion, Technology, and Logistics, shall promulgate revisions
 18 of the applicable acquisition regulations, to take effect as
 19 of the date of promulgation of the revisions—

20 (1) to direct any Federal procurement execu-
 21 tives involved in the acquisition, construction, or
 22 major renovation (including contracting for the con-
 23 struction or major renovation) of any facility, to the
 24 maximum extent practicable—

25 (A) to employ integrated design principles;

1 ~~(B)~~ to optimize building and systems en-
 2 ergy performance;

3 ~~(C)~~ to protect and conserve water;

4 ~~(D)~~ to enhance indoor environmental qual-
 5 ity; and

6 ~~(E)~~ to reduce environmental impacts of
 7 materials and waste flows; and

8 ~~(2)~~ to direct Federal procurement executives in-
 9 volved in leasing buildings; to give preference to the
 10 lease of facilities that, to the maximum extent prac-
 11 ticable—

12 ~~(A)~~ are energy-efficient; and

13 ~~(B)~~ have applied contemporary high-per-
 14 formance and sustainable design principles dur-
 15 ing construction or renovation.

16 ~~(b) GUIDANCE.—~~Not later than 90 days after the
 17 date of promulgation of the revised regulations under sub-
 18 section ~~(a)~~, the Director shall issue guidance to all Federal
 19 procurement executives providing direction and the option
 20 to renegotiate the design of proposed facilities; renovations
 21 for existing facilities; and leased facilities to incorporate
 22 improvements that are consistent with this section.

23 **SEC. 303. FEDERAL GREEN BUILDING PERFORMANCE.**

24 ~~(a) IN GENERAL.—~~Not later than October 31 of each
 25 of the 2 fiscal years following the fiscal year in which this

1 Act is enacted, and at such times thereafter as the Comp-
 2 troller General of the United States determines to be ap-
 3 propriate, the Comptroller General of the United States
 4 shall, with respect to the fiscal years that have passed
 5 since the preceding report—

6 (1) conduct an audit of the implementation of
 7 this Act; and

8 (2) submit to the Office, the Committee, the
 9 Administrator, and Congress a report describing the
 10 results of the audit.

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

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

18 (2) the level of coordination among the Office,
 19 the Office of Management and Budget, and relevant
 20 agencies;

21 (3) the performance of the Office in carrying
 22 out the implementation plan;

23 (4) the design stage of high-performance green
 24 building measures;

1 (5) high-performance building data that were
2 collected and reported to the Office; and

3 (6) such other matters as the Comptroller Gen-
4 eral of the United States determines to be appro-
5 priate.

6 (c) ENVIRONMENTAL STEWARDSHIP SCORECARD.—
7 The Director shall consult with the Committee to enhance,
8 and assist in the implementation of, the Environmental
9 Stewardship Scorecard announced at the White House
10 summit on Federal sustainable buildings in January 2006;
11 to measure the implementation by each Federal agency of
12 sustainable design and green building initiatives.

13 **TITLE IV—DEMONSTRATION** 14 **PROJECT**

15 **SEC. 401. COORDINATION OF GOALS.**

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

19 (b) PROJECTS.—

20 (1) IN GENERAL.—In accordance with guide-
21 lines established by the Director under subsection
22 (a) and the duties of the Director described in title
23 I, the Director shall carry out 3 demonstration
24 projects.

1 ~~(2) LOCATION OF PROJECTS.—~~Each project
 2 carried out under paragraph ~~(1)~~ shall be located in
 3 a Federal building in a State recommended by the
 4 Director in accordance with subsection ~~(c)~~.

5 ~~(3) REQUIREMENTS.—~~Each project carried out
 6 under paragraph ~~(1)~~ shall—

7 ~~(A)~~ provide for the evaluation of the infor-
 8 mation obtained through the conduct of projects
 9 and activities under this Act; and

10 ~~(B)~~ achieve a platinum rating, as defined
 11 by the Leadership in Energy and Environ-
 12 mental Design Building Rating System stand-
 13 ard established by the United States Green
 14 Building Council (or an equivalent rating ob-
 15 tained through a comparable system).

16 ~~(c) CRITERIA.—~~With respect to the existing or pro-
 17 posed Federal facility at which a demonstration project
 18 under this section is conducted, the Federal facility
 19 shall—

20 ~~(1)~~ be an appropriate model for a project relat-
 21 ing to—

22 ~~(A)~~ the effectiveness of high-performance
 23 technologies;

1 ~~(B)~~ analysis of materials, components, and
 2 systems, including the impact on the health of
 3 building occupants;

4 ~~(C)~~ life-cycle costing and life-cycle assess-
 5 ment of building materials and systems; and

6 ~~(D)~~ location and design that promote ac-
 7 cess to the Federal facility through walking,
 8 biking, and mass transit; and

9 ~~(2)~~ possess sufficient technological and organi-
 10 zational adaptability.

11 ~~(d) REPORT.~~—Not later than 1 year after the date
 12 of enactment of this Act, and annually thereafter through
 13 September 30, 2013, the Director shall submit to the Ad-
 14 ministrators a report that describes the status of and find-
 15 ings regarding the demonstration project.

16 **SEC. 402. AUTHORIZATION OF APPROPRIATIONS.**

17 There is authorized to be appropriated to carry out
 18 the Federal demonstration project described in section
 19 401(b) \$10,000,000 for the period of fiscal years 2008
 20 through 2012, to remain available until expended.

21 **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

22 ~~(a) SHORT TITLE.~~—*This Act may be cited as the*
 23 ~~“High-Performance Green Buildings Act of 2007”.~~

24 ~~(b) TABLE OF CONTENTS.~~—*The table of contents of this*
 25 ~~Act is as follows:~~

Sec. 1. Short title; table of contents.

Sec. 2. Findings and purposes.

Sec. 3. Definitions.

TITLE I—OFFICE OF HIGH-PERFORMANCE GREEN BUILDINGS

Sec. 101. Oversight.

Sec. 102. Office of High-Performance 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. Environmental health program.

Sec. 206. Authorization of appropriations.

TITLE III—STRENGTHENING FEDERAL LEADERSHIP

Sec. 301. Incentives.

Sec. 302. Federal procurement.

Sec. 303. Federal green building performance.

Sec. 304. Storm water runoff requirements for Federal development projects.

TITLE IV—DEMONSTRATION PROJECT

Sec. 401. Coordination of goals.

Sec. 402. Authorization of appropriations.

1 SEC. 2. FINDINGS AND PURPOSES.

2 *(a) FINDINGS.—Congress finds that—*

3 *(1) high-performance green buildings—*

4 *(A) reduce energy, water, and material re-*
5 *source use and the generation of waste;*

6 *(B) improve indoor environmental quality,*
7 *and protect indoor air quality by, for example,*
8 *using materials that emit fewer or no toxic*
9 *chemicals into the indoor air;*

10 *(C) improve thermal comfort;*

1 (D) improve lighting and the acoustic envi-
2 ronment;

3 (E) improve the health and productivity of
4 individuals who live and work in the buildings;

5 (F) improve indoor and outdoor impacts of
6 the buildings on human health and the environ-
7 ment;

8 (G) increase the use of environmentally
9 preferable products, including biobased, recycled,
10 and nontoxic products with lower lifecycle im-
11 pacts; and

12 (H) increase opportunities for reuse of ma-
13 terials and for recycling;

14 (2) during the planning, design, and construc-
15 tion of a high-performance green building, the envi-
16 ronmental and energy impacts of building location
17 and site design, the minimization of energy and ma-
18 terials use, and the environmental impacts of the
19 building are considered;

20 (3) according to the United States Green Build-
21 ing Council, certified green buildings, as compared to
22 conventional buildings—

23 (A) use an average of 36 percent less total
24 energy (and in some cases up to 50 to 70 percent
25 less total energy);

- 1 (B) use 30 percent less water; and
- 2 (C) reduce waste costs, often by 50 to 90
- 3 percent;
- 4 (4) the benefits of high-performance green build-
- 5 ings are important, because in the United States,
- 6 buildings are responsible for approximately—
- 7 (A) 39 percent of primary energy use;
- 8 (B) 12 percent of potable water use;
- 9 (C) 136,000,000 tons of building-related
- 10 construction and demolition debris;
- 11 (D) 70 percent of United States resource
- 12 consumption; and
- 13 (E) 70 percent of electricity consumption;
- 14 (5) green building certification programs can be
- 15 highly beneficial by disseminating up-to-date infor-
- 16 mation and expertise regarding high-performance
- 17 green buildings, and by providing third-party
- 18 verification of green building design, practices, and
- 19 materials, and other aspects of buildings; and
- 20 (6) a July 2006 study completed for the General
- 21 Services Administration, entitled “Sustainable Build-
- 22 ing Rating Systems Summary,” concluded that—
- 23 (A) green building standards are an impor-
- 24 tant means to encourage better practices;

1 (B) the Leadership in Energy and Environ-
 2 mental Design (LEED) standard for green
 3 building certification is “currently the dominant
 4 system in the United States market and is being
 5 adapted to multiple markets worldwide”; and

6 (C) there are other useful green building
 7 certification or rating programs in various
 8 stages of development and adoption, including
 9 the Green Globes program and other rating sys-
 10 tems.

11 (b) PURPOSES.—The purposes of this Act are—

12 (1) to encourage the Federal Government to act
 13 as an example for State and local governments, the
 14 private sector, and individuals by building high-per-
 15 formance green buildings that reduce energy use and
 16 environmental impacts;

17 (2) to establish an Office within the General
 18 Services Administration, and a Green Building Advi-
 19 sory Committee, to advance the goals of conducting
 20 research and development and public outreach, and to
 21 move the Federal Government toward construction of
 22 high-performance green buildings;

23 (3) to encourage States, local governments, and
 24 school systems to site, build, renovate, and operate
 25 high-performance green schools through the adoption

1 of voluntary guidelines for those schools, the dissemi-
 2 nation of grants, and the adoption of environmental
 3 health plans and programs;

4 (4) to strengthen Federal leadership on high-per-
 5 formance green buildings through the adoption of in-
 6 centives for high-performance green buildings, and
 7 improved green procurement by Federal agencies; and

8 (5) to demonstrate that high-performance green
 9 buildings can and do provide significant benefits, in
 10 order to encourage wider adoption of green building
 11 practices, through the adoption of demonstration
 12 projects.

13 **SEC. 3. DEFINITIONS.**

14 *In this Act:*

15 (1) *ADMINISTRATOR.*—The term “Adminis-
 16 trator” means the Administrator of General Services.

17 (2) *COMMITTEE.*—The term “Committee” means
 18 the Green Building Advisory Committee established
 19 under section 103(a).

20 (3) *DIRECTOR.*—The term “Director” means the
 21 individual appointed to the position established under
 22 section 101(a).

23 (4) *FEDERAL FACILITY.*—

24 (A) *IN GENERAL.*—The term “Federal facil-
 25 ity” means any building or facility the intended

1 *use of which requires the building or facility to*
 2 *be—*

3 *(i) accessible to the public; and*

4 *(ii) constructed or altered by or on be-*
 5 *half of the United States.*

6 *(B) EXCLUSIONS.—The term “Federal facil-*
 7 *ity” does not include a privately-owned residen-*
 8 *tial or commercial structure that is not leased by*
 9 *the Federal Government.*

10 *(5) HIGH-PERFORMANCE GREEN BUILDING.—The*
 11 *term “high-performance green building” means a*
 12 *building—*

13 *(A) that, during its life-cycle—*

14 *(i) reduces energy, water, and material*
 15 *resource use and the generation of waste;*

16 *(ii) improves indoor environmental*
 17 *quality, including protecting indoor air*
 18 *quality during construction, using low-*
 19 *emitting materials, improving thermal com-*
 20 *fort, and improving lighting and acoustic*
 21 *environments that affect occupant health*
 22 *and productivity;*

23 *(iii) improves indoor and outdoor im-*
 24 *pacts of the building on human health and*
 25 *the environment;*

1 (iv) increases the use of environ-
 2 mentally preferable products, including
 3 biobased, recycled content, and nontoxic
 4 products with lower life-cycle impacts;

5 (v) increases reuse and recycling op-
 6 portunities; and

7 (vi) integrates systems in the building;
 8 and

9 (B) for which, during its planning, design,
 10 and construction, the environmental and energy
 11 impacts of building location and site design are
 12 considered.

13 (6) *LIFE CYCLE*.—The term “life cycle”, with re-
 14 spect to a high-performance green building, means all
 15 stages of the useful life of the building (including com-
 16 ponents, equipment, systems, and controls of the
 17 building) beginning at conception of a green building
 18 project and continuing through site selection, design,
 19 construction, landscaping, commissioning, operation,
 20 maintenance, renovation, deconstruction or demoli-
 21 tion, removal, and recycling of the green building.

22 (7) *LIFE-CYCLE ASSESSMENT*.—The term “life-
 23 cycle assessment” means a comprehensive system ap-
 24 proach for measuring the environmental performance
 25 of a product or service over the life of the product or

1 *service, beginning at raw materials acquisition and*
 2 *continuing through manufacturing, transportation,*
 3 *installation, use, reuse, and end-of-life waste manage-*
 4 *ment.*

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

9 (A) *sums, over a given study period, the*
 10 *costs of initial investment (less resale value), re-*
 11 *placements, operations (including energy use),*
 12 *and maintenance and repair of an investment*
 13 *decision; and*

14 (B) *is expressed—*

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

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

23 (9) *OFFICE.*—*The term “Office” means the Office*
 24 *of High-Performance Green Buildings established*
 25 *under section 102(a).*

1 **TITLE I—OFFICE OF HIGH-PER-**
 2 **FORMANCE GREEN BUILD-**
 3 **INGS**

4 **SEC. 101. OVERSIGHT.**

5 (a) *IN GENERAL.*—The Administrator shall establish
 6 within the General Services Administration, and appoint
 7 an individual to serve as Director in, a position in the ca-
 8 reer-reserved Senior Executive service, to—

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

11 (2) carry out other duties as required under this
 12 Act.

13 (b) *COMPENSATION.*—The compensation of the Direc-
 14 tor shall not exceed the maximum rate of basic pay for the
 15 Senior Executive Service under section 5382 of title 5,
 16 United States Code, including any applicable locality-based
 17 comparability payment that may be authorized under sec-
 18 tion 5304(h)(2)(C) of that title.

19 **SEC. 102. OFFICE OF HIGH-PERFORMANCE GREEN BUILD-**
 20 **INGS.**

21 (a) *ESTABLISHMENT.*—The Director shall establish
 22 within the General Services Administration an Office of
 23 High-Performance Green Buildings.

24 (b) *DUTIES.*—The Director shall—

1 (1) *ensure full coordination of high-performance*
 2 *green building information and activities within the*
 3 *General Services Administration and all relevant*
 4 *Federal agencies, including, at a minimum—*

5 *(A) the Environmental Protection Agency;*

6 *(B) the Office of the Federal Environmental*
 7 *Executive;*

8 *(C) the Office of Federal Procurement Pol-*
 9 *icy;*

10 *(D) the Department of Energy;*

11 *(E) the Department of Health and Human*
 12 *Services;*

13 *(F) the Department of Defense; and*

14 *(G) such other Federal agencies as the Di-*
 15 *rector considers to be appropriate;*

16 (2) *establish a senior-level green building advi-*
 17 *sory committee, which shall provide advice and rec-*
 18 *ommendations in accordance with section 103;*

19 (3) *identify and biennially reassess improved or*
 20 *higher rating standards recommended by the Com-*
 21 *mittee;*

22 (4) *establish a national high-performance green*
 23 *building clearinghouse in accordance with section*
 24 *104, which shall provide green building information*
 25 *through—*

1 (A) outreach;

2 (B) education; and

3 (C) the provision of technical assistance;

4 (5) ensure full coordination of research and de-
5 velopment information relating to high-performance
6 green building initiatives under section 105;

7 (6) identify and develop green building stand-
8 ards that could be used for all types of Federal facili-
9 ties in accordance with section 105;

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

12 (8) review and analyze current Federal budget
13 practices and life-cycle costing issues, and make rec-
14 ommendations to Congress, in accordance with section
15 106; and

16 (9) complete and submit the report described in
17 subsection (c).

18 (c) *REPORT*.—Not later than 2 years after the date of
19 enactment of this Act, and biennially thereafter, the Direc-
20 tor shall submit to Congress a report that—

21 (1) describes the status of the green building ini-
22 tiatives under this Act and other Federal programs in
23 effect as of the date of the report, including—

1 (A) the extent to which the programs are
2 being carried out in accordance with this Act;
3 and

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

6 (2) identifies within the planning, budgeting,
7 and construction process all types of Federal facility
8 procedures that inhibit new and existing Federal fa-
9 cilities from becoming high-performance green build-
10 ings, as measured by the standard for high-perform-
11 ance green buildings identified in accordance with
12 subsection (d);

13 (3) identifies inconsistencies, as reported to the
14 Committee, in Federal law with respect to product ac-
15 quisition guidelines and high-performance product
16 guidelines;

17 (4) recommends language for uniform standards
18 for use by Federal agencies in environmentally re-
19 sponsible acquisition;

20 (5) in coordination with the Office of Manage-
21 ment and Budget, reviews the budget process for cap-
22 ital programs with respect to alternatives for—

23 (A) restructuring of budgets to require the
24 use of complete energy- and environmental-cost
25 accounting;

1 (B) using operations expenditures in budg-
2 et-related decisions while simultaneously incor-
3 porating productivity and health measures (as
4 those measures can be quantified by the Office,
5 with the assistance of universities and national
6 laboratories);

7 (C) permitting Federal agencies to retain
8 all identified savings accrued as a result of the
9 use of life cycle costing; and

10 (D) identifying short- and long-term cost
11 savings that accrue from high-performance green
12 buildings, including those relating to health and
13 productivity;

14 (6) identifies green, self-sustaining technologies
15 to address the operational needs of Federal facilities
16 in times of national security emergencies, natural dis-
17 asters, or other dire emergencies;

18 (7) summarizes and highlights development, at
19 the State and local level, of green building initiatives,
20 including Executive orders, policies, or laws adopted
21 promoting green building (including the status of im-
22 plementation of those initiatives); and

23 (8) includes, for the 2-year period covered by the
24 report, recommendations to address each of the mat-
25 ters, and a plan for implementation of each rec-

1 ommendation, described in paragraphs (1) through
2 (6).

3 (d) *IDENTIFICATION OF STANDARD.*—

4 (1) *IN GENERAL.*—For the purpose of subsection
5 (c)(2), not later than 60 days after the date of enact-
6 ment of this Act, the Director shall identify a stand-
7 ard that the Director determines to be the most likely
8 to encourage a comprehensive and environmentally-
9 sound approach to certification of green buildings.

10 (2) *BASIS.*—The standard identified under para-
11 graph (1) shall be based on—

12 (A) a biennial study, which shall be carried
13 out by the Director to compare and evaluate
14 standards;

15 (B) the ability and availability of assessors
16 and auditors to independently verify the criteria
17 and measurement of metrics at the scale nec-
18 essary to implement this Act;

19 (C) the ability of the applicable standard-
20 setting organization to collect and reflect public
21 comment;

22 (D) the ability of the standard to be devel-
23 oped and revised through a consensus-based proc-
24 ess;

1 (E) an evaluation of the adequacy of the
2 standard, which shall give credit for—

3 (i) efficient and sustainable use of
4 water, energy, and other natural resources;

5 (ii) use of renewable energy sources;

6 (iii) improved indoor environmental
7 quality through enhanced indoor air qual-
8 ity, thermal comfort, acoustics, day light-
9 ing, pollutant source control, and use of
10 low-emission materials and building system
11 controls; and

12 (iv) such other criteria as the Director
13 determines to be appropriate; and

14 (F) national recognition within the build-
15 ing industry.

16 (3) BIENNIAL REVIEW.—The Director shall—

17 (A) conduct a biennial review of the stand-
18 ard identified under paragraph (1); and

19 (B) include the results of each biennial re-
20 view in the report required to be submitted under
21 subsection (c).

22 (e) IMPLEMENTATION.—The Office shall carry out each
23 plan for implementation of recommendations under sub-
24 section (c)(7).

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

2 (a) *ESTABLISHMENT.*—Not later than 180 days after
3 the date of enactment of this Act, the Director shall establish
4 an advisory committee, to be known as the “Green Building
5 Advisory Committee”.

6 (b) *MEMBERSHIP.*—

7 (1) *IN GENERAL.*—The Committee shall be com-
8 posed of representatives of, at a minimum—

9 (A) each agency referred to in section
10 102(b)(1); and

11 (B) other relevant agencies and entities, as
12 determined by the Director, including at least 1
13 representative of each of—

14 (i) State and local governmental green
15 building programs;

16 (ii) independent green building asso-
17 ciations or councils;

18 (iii) building experts, including archi-
19 tects, material suppliers, and construction
20 contractors;

21 (iv) security advisors focusing on na-
22 tional security needs, natural disasters, and
23 other dire emergency situations; and

24 (v) environmental health experts, in-
25 cluding those with experience in children’s
26 health.

1 (2) *NON-FEDERAL MEMBERS.*—*The total number*
 2 *of non-Federal members on the Committee at any*
 3 *time shall not exceed 15.*

4 (c) *MEETINGS.*—*The Director shall establish a regular*
 5 *schedule of meetings for the Committee.*

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

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

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

16 *The Director, in coordination with the Committee,*
 17 *shall carry out public outreach to inform individuals and*
 18 *entities of the information and services available Govern-*
 19 *ment-wide by—*

20 (1) *establishing and maintaining a national*
 21 *high-performance green building clearinghouse, in-*
 22 *cluding on the Internet, that—*

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

1 (B) provides information relating to high-
 2 performance green buildings, including
 3 hyperlinks to Internet sites that describe related
 4 activities, information, and resources of—

5 (i) the Federal Government;

6 (ii) State and local governments;

7 (iii) the private sector (including non-
 8 governmental and nonprofit entities and or-
 9 ganizations); and

10 (iv) other relevant organizations, in-
 11 cluding those from other countries;

12 (2) identifying and recommending educational
 13 resources for implementing high-performance green
 14 building practices, including security and emergency
 15 benefits and practices;

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

22 (4) providing information on application proc-
 23 esses for certifying a high-performance green building,
 24 including certification and commissioning;

1 (5) *providing technical information, market re-*
 2 *search, or other forms of assistance or advice that*
 3 *would be useful in planning and constructing high-*
 4 *performance green buildings; and*

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

7 **SEC. 105. RESEARCH AND DEVELOPMENT.**

8 (a) *ESTABLISHMENT.*—*The Director, in coordination*
 9 *with the Committee, shall—*

10 (1)(A) *survey existing research and studies relat-*
 11 *ing to high-performance green buildings; and*

12 (B) *coordinate activities of common interest;*

13 (2) *develop and recommend a high-performance*
 14 *green building research plan that—*

15 (A) *identifies information and research*
 16 *needs, including the relationships between*
 17 *human health, occupant productivity, and each*
 18 *of—*

19 (i) *emissions from materials and prod-*
 20 *ucts in the building;*

21 (ii) *natural day lighting;*

22 (iii) *ventilation choices and tech-*
 23 *nologies;*

24 (iv) *heating, cooling, and system con-*
 25 *trol choices and technologies;*

1 (v) moisture control and mold;

2 (vi) maintenance, cleaning, and pest
3 control activities;

4 (vii) acoustics; and

5 (viii) other issues relating to the
6 health, comfort, productivity, and perform-
7 ance of occupants of the building; and

8 (B) promotes the development and dissemi-
9 nation of high-performance green building meas-
10 urement tools that, at a minimum, may be
11 used—

12 (i) to monitor and assess the life-cycle
13 performance of facilities (including dem-
14 onstration projects) built as high-perform-
15 ance green buildings; and

16 (ii) to perform life-cycle assessments;

17 (3) assist the budget and life-cycle costing func-
18 tions of the Office under section 106;

19 (4) study and identify potential benefits of green
20 buildings relating to security, natural disaster, and
21 emergency needs of the Federal Government; and

22 (5) support other research initiatives determined
23 by the Office.

24 (b) INDOOR AIR QUALITY.—The Director, in consulta-
25 tion with the Committee, shall develop and carry out a com-

1 *prehensive indoor air quality program for all Federal fa-*
 2 *cilities to ensure the safety of Federal workers and facility*
 3 *occupants—*

4 *(1) during new construction and renovation of*
 5 *facilities; and*

6 *(2) in existing facilities.*

7 **SEC. 106. BUDGET AND LIFE-CYCLE COSTING AND CON-**
 8 **TRACTING.**

9 *(a) ESTABLISHMENT.—The Director, in coordination*
 10 *with the Committee, shall—*

11 *(1) identify, review, and analyze current budget*
 12 *and contracting practices that affect achievement of*
 13 *high-performance green buildings, including the iden-*
 14 *tification of barriers to green building life-cycle cost-*
 15 *ing and budgetary issues;*

16 *(2) develop guidance and conduct training ses-*
 17 *sions with budget specialists and contracting per-*
 18 *sonnel from Federal agencies and budget examiners to*
 19 *apply life-cycle cost criteria to actual projects;*

20 *(3) identify tools to aid life-cycle cost decision-*
 21 *making; and*

22 *(4) explore the feasibility of incorporating the*
 23 *benefits of green buildings, such as security benefits,*
 24 *into a cost-budget analysis to aid in life-cycle costing*
 25 *for budget and decision making processes.*

1 **SEC. 107. AUTHORIZATION OF APPROPRIATIONS.**

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

5 **TITLE II—HEALTHY HIGH-**
 6 **PERFORMANCE SCHOOLS**

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

8 *In this title, the term “high-performance school” has*
 9 *the meaning given the term “healthy, high-performance*
 10 *school building” in section 5586 of the Elementary and Sec-*
 11 *ondary Education Act of 1965 (20 U.S.C. 7277e).*

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

13 *The Administrator of the Environmental Protection*
 14 *Agency, in consultation with the Secretary of Education,*
 15 *may provide grants to qualified State agencies for use in—*

16 *(1) providing technical assistance for programs*
 17 *of the Environmental Protection Agency (including*
 18 *the Tools for Schools Program and the Healthy School*
 19 *Environmental Assessment Tool) to schools for use in*
 20 *addressing environmental issues; and*

21 *(2) development of State school environmental*
 22 *quality plans that include—*

23 *(A) standards for school building design,*
 24 *construction, and renovation; and*

25 *(B) identification of ongoing school building*
 26 *environmental problems in the State and rec-*

1 *ommended solutions to address those problems,*
 2 *including assessment of information on the expo-*
 3 *sure of children to environmental hazards in*
 4 *school facilities.*

5 **SEC. 203. MODEL GUIDELINES FOR SITING OF SCHOOL FA-**
 6 **CILITIES.**

7 *The Administrator of the Environmental Protection*
 8 *Agency, in consultation with the Secretary of Education*
 9 *and the Secretary of Health and Human Services, shall de-*
 10 *velop voluntary school site selection guidelines that account*
 11 *for—*

12 *(1) the special vulnerability of children to haz-*
 13 *ardous substances or pollution exposures in any case*
 14 *in which the potential for contamination at a poten-*
 15 *tial school site exists;*

16 *(2) modes of transportation available to students*
 17 *and staff;*

18 *(3) the efficient use of energy; and*

19 *(4) the potential use of a school at the site as an*
 20 *emergency shelter.*

21 **SEC. 204. PUBLIC OUTREACH.**

22 *(a) IN GENERAL.—The Administrator of the Environ-*
 23 *mental Protection Agency shall provide to the Director in-*
 24 *formation relating to all activities carried out under this*

1 *title, which the Director shall include in the report described*
 2 *in section 102(c).*

3 *(b) PUBLIC OUTREACH.—The Director shall ensure, to*
 4 *the maximum extent practicable, that the public clearing-*
 5 *house established under section 104 receives and makes*
 6 *available information on the exposure of children to envi-*
 7 *ronmental hazards in school facilities, as provided by the*
 8 *Administrator of the Environmental Protection Agency.*

9 **SEC. 205. ENVIRONMENTAL HEALTH PROGRAM.**

10 *(a) IN GENERAL.—The Administrator of the Environ-*
 11 *mental Protection Agency, in consultation with the Sec-*
 12 *retary of Education, the Secretary of Health and Human*
 13 *Services, and other relevant agencies, shall issue voluntary*
 14 *guidelines for use by the State in developing and imple-*
 15 *menting an environmental health program for schools*
 16 *that—*

17 *(1) takes into account the status and findings of*
 18 *Federal research initiatives established under this Act*
 19 *and other relevant Federal law with respect to school*
 20 *facilities, including relevant updates on trends in the*
 21 *field, such as the impact of school facility environ-*
 22 *ments on student and staff—*

23 *(A) health, safety, and productivity; and*

24 *(B) disabilities or special needs;*

1 (2) *provides research using relevant tools identi-*
2 *fied or developed in accordance with section 105(a) to*
3 *quantify the relationships between—*

4 (A) *human health, occupant productivity,*
5 *and student performance; and*

6 (B) *with respect to school facilities, each*
7 *of—*

8 (i) *pollutant emissions from materials*
9 *and products;*

10 (ii) *natural day lighting;*

11 (iii) *ventilation choices and tech-*
12 *nologies;*

13 (iv) *heating and cooling choices and*
14 *technologies;*

15 (v) *moisture control and mold;*

16 (vi) *maintenance, cleaning, and pest*
17 *control activities;*

18 (vii) *acoustics; and*

19 (viii) *other issues relating to the*
20 *health, comfort, productivity, and perform-*
21 *ance of occupants of the school facilities;*

22 (3) *provides technical assistance on siting, de-*
23 *sign, management, and operation of school facilities,*
24 *including facilities used by students with disabilities*
25 *or special needs;*

1 (4) *collaborates with federally funded pediatric*
 2 *environmental health centers to assist in on-site school*
 3 *environmental investigations;*

4 (5) *assists States and the public in better under-*
 5 *standing and improving the environmental health of*
 6 *children; and*

7 (6) *provides to the Office a biennial report of all*
 8 *activities carried out under this title, which the Di-*
 9 *rector shall include in the report described in section*
 10 *102(c).*

11 (b) *PUBLIC OUTREACH.—The Director shall ensure, to*
 12 *the maximum extent practicable, that the public clearing-*
 13 *house established under section 104 receives and makes*
 14 *available—*

15 (1) *information from the Administrator of the*
 16 *Environmental Protection Agency that is contained*
 17 *in the report described in subsection (a)(6); and*

18 (2) *information on the exposure of children to*
 19 *environmental hazards in school facilities, as pro-*
 20 *vided by the Administrator of the Environmental*
 21 *Protection Agency.*

22 **SEC. 206. AUTHORIZATION OF APPROPRIATIONS.**

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

1 ***TITLE III—STRENGTHENING***
 2 ***FEDERAL LEADERSHIP***

3 ***SEC. 301. INCENTIVES.***

4 *As soon as practicable after the date of enactment of*
 5 *this Act, the Director shall identify incentives to encourage*
 6 *the use of green buildings and related technology in the op-*
 7 *erations of the Federal Government, including through—*

8 (1) *the provision of recognition awards; and*

9 (2) *the maximum feasible retention of financial*
 10 *savings in the annual budgets of Federal agencies.*

11 ***SEC. 302. FEDERAL PROCUREMENT.***

12 (a) *IN GENERAL.*—*Not later than 2 years after the*
 13 *date of enactment of this Act, the Director of the Office of*
 14 *Federal Procurement Policy, in consultation with the Di-*
 15 *rector and the Under Secretary of Defense for Acquisition,*
 16 *Technology, and Logistics, shall promulgate revisions of the*
 17 *applicable acquisition regulations, to take effect as of the*
 18 *date of promulgation of the revisions—*

19 (1) *to direct any Federal procurement executives*
 20 *involved in the acquisition, construction, or major*
 21 *renovation (including contracting for the construction*
 22 *or major renovation) of any facility, to the maximum*
 23 *extent practicable—*

24 (A) *to employ integrated design principles;*

1 (B) to optimize building and systems en-
2 ergy performance;

3 (C) to protect and conserve water;

4 (D) to enhance indoor environmental qual-
5 ity; and

6 (E) to reduce environmental impacts of ma-
7 terials and waste flows; and

8 (2) to direct Federal procurement executives in-
9 volved in leasing buildings, to give preference to the
10 lease of facilities that, to the maximum extent prac-
11 ticable—

12 (A) are energy-efficient; and

13 (B) have applied contemporary high-per-
14 formance and sustainable design principles dur-
15 ing construction or renovation.

16 (b) *GUIDANCE.*—Not later than 90 days after the date
17 of promulgation of the revised regulations under subsection
18 (a), the Director shall issue guidance to all Federal procure-
19 ment executives providing direction and the option to re-
20 negotiate the design of proposed facilities, renovations for
21 existing facilities, and leased facilities to incorporate im-
22 provements that are consistent with this section.

23 **SEC. 303. FEDERAL GREEN BUILDING PERFORMANCE.**

24 (a) *IN GENERAL.*—Not later than October 31 of each
25 of the 2 fiscal years following the fiscal year in which this

1 *Act is enacted, and at such times thereafter as the Comp-*
2 *troller General of the United States determines to be appro-*
3 *priate, the Comptroller General of the United States shall,*
4 *with respect to the fiscal years that have passed since the*
5 *preceding report—*

6 (1) *conduct an audit of the implementation of*
7 *this Act; and*

8 (2) *submit to the Office, the Committee, the Ad-*
9 *ministrator, and Congress a report describing the re-*
10 *sults of the audit.*

11 (b) *CONTENTS.—An audit under subsection (a) shall*
12 *include a review, with respect to the period covered by the*
13 *report under subsection (a)(2), of—*

14 (1) *budget, life-cycle costing, and contracting*
15 *issues, using best practices identified by the Comp-*
16 *troller General of the United States and heads of other*
17 *agencies in accordance with section 106;*

18 (2) *the level of coordination among the Office,*
19 *the Office of Management and Budget, and relevant*
20 *agencies;*

21 (3) *the performance of the Office in carrying out*
22 *the implementation plan;*

23 (4) *the design stage of high-performance green*
24 *building measures;*

1 (5) *high-performance building data that were*
 2 *collected and reported to the Office; and*

3 (6) *such other matters as the Comptroller Gen-*
 4 *eral of the United States determines to be appro-*
 5 *priate.*

6 (c) *ENVIRONMENTAL STEWARDSHIP SCORECARD.—*
 7 *The Director shall consult with the Committee to enhance,*
 8 *and assist in the implementation of, the Environmental*
 9 *Stewardship Scorecard announced at the White House sum-*
 10 *mit on Federal sustainable buildings in January 2006, to*
 11 *measure the implementation by each Federal agency of sus-*
 12 *tainable design and green building initiatives.*

13 **SEC. 304. STORM WATER RUNOFF REQUIREMENTS FOR FED-**
 14 **ERAL DEVELOPMENT PROJECTS.**

15 *The sponsor of any development or redevelopment*
 16 *project involving a Federal facility with a footprint that*
 17 *exceeds 5,000 square feet shall use site planning, design,*
 18 *construction, and maintenance strategies for the property*
 19 *to maintain, to the maximum extent technically feasible,*
 20 *the predevelopment hydrology of the property with regard*
 21 *to the temperature, rate, volume, and duration of flow.*

1 ***TITLE IV—DEMONSTRATION***
 2 ***PROJECT***

3 ***SEC. 401. COORDINATION OF GOALS.***

4 (a) *IN GENERAL.*—*The Director shall establish guide-*
 5 *lines to implement a demonstration project to contribute*
 6 *to the research goals of the Office.*

7 (b) *PROJECTS.*—

8 (1) *IN GENERAL.*—*In accordance with guidelines*
 9 *established by the Director under subsection (a) and*
 10 *the duties of the Director described in title I, the Di-*
 11 *rector shall carry out 3 demonstration projects.*

12 (2) *LOCATION OF PROJECTS.*—*Each project car-*
 13 *ried out under paragraph (1) shall be located in a*
 14 *Federal building in a State recommended by the Di-*
 15 *rector in accordance with subsection (c).*

16 (3) *REQUIREMENTS.*—*Each project carried out*
 17 *under paragraph (1) shall—*

18 (A) *provide for the evaluation of the infor-*
 19 *mation obtained through the conduct of projects*
 20 *and activities under this Act; and*

21 (B) *achieve the highest available rating*
 22 *under the standard identified pursuant to section*
 23 *102(d).*

1 (c) *CRITERIA.*—*With respect to the existing or pro-*
 2 *posed Federal facility at which a demonstration project*
 3 *under this section is conducted, the Federal facility shall—*

4 (1) *be an appropriate model for a project relat-*
 5 *ing to—*

6 (A) *the effectiveness of high-performance*
 7 *technologies;*

8 (B) *analysis of materials, components, and*
 9 *systems, including the impact on the health of*
 10 *building occupants;*

11 (C) *life-cycle costing and life-cycle assess-*
 12 *ment of building materials and systems; and*

13 (D) *location and design that promote access*
 14 *to the Federal facility through walking, biking,*
 15 *and mass transit; and*

16 (2) *possess sufficient technological and organiza-*
 17 *tional adaptability.*

18 (d) *REPORT.*—*Not later than 1 year after the date of*
 19 *enactment of this Act, and annually thereafter through Sep-*
 20 *tember 30, 2013, the Director shall submit to the Adminis-*
 21 *trator a report that describes the status of and findings re-*
 22 *garding the demonstration project.*

23 **SEC. 402. AUTHORIZATION OF APPROPRIATIONS.**

24 *There is authorized to be appropriated to carry out*
 25 *the Federal demonstration project described in section*

- 1 *401(b) \$10,000,000 for the period of fiscal years 2008*
- 2 *through 2012, to remain available until expended.*

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110TH CONGRESS
1ST Session

S. 506

[Report No. 110-241]

A BILL

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

DECEMBER 12, 2007

Reported with an amendment