

110TH CONGRESS
1ST SESSION

H. R. 3236

To promote greater energy efficiency.

IN THE HOUSE OF REPRESENTATIVES

JULY 31, 2007

Mr. BOUCHER (for himself and Mr. DINGELL) introduced the following bill; which was referred to the Committee on Energy and Commerce, and in addition to the Committees on Transportation and Infrastructure and Oversight and Government Reform, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

A BILL

To promote greater energy efficiency.

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 “Energy Efficiency Improvement Act of 2007”.

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

Sec. 1. Short title; table of contents.

TITLE I—PROMOTING ENERGY EFFICIENCY

Subtitle A—Appliance Efficiency

- Sec. 101. Energy standards for home appliances.
- Sec. 102. Electric motor efficiency standards.
- Sec. 103. Residential boilers.
- Sec. 104. Regional variations in heating or cooling standards.
- Sec. 105. Procedure for prescribing new or amended standards.
- Sec. 106. Expediting Appliance Standards Rulemakings.
- Sec. 107. Correction of large air conditioner rule issuance constraint.
- Sec. 108. Definition of energy conservation standard.
- Sec. 109. Improving schedule for standards updating and clarifying State authority.
- Sec. 110. Updating appliance test procedures.
- Sec. 111. Furnace fan standard process.
- Sec. 112. Technical corrections.
- Sec. 113. Energy efficient standby power devices.
- Sec. 114. External power supply efficiency standards.
- Sec. 115. Standby mode.

Subtitle B—Lighting Efficiency

- Sec. 121. Efficient light bulbs.
- Sec. 122. Incandescent reflector lamps.
- Sec. 123. Use of energy efficient lighting fixtures and bulbs.

Subtitle C—Residential Building Efficiency

- Sec. 131. Encouraging stronger building codes.
- Sec. 132. Energy code improvements applicable to manufactured housing.
- Sec. 133. Baseline building designs.
- Sec. 134. Reauthorization of weatherization assistance program.

Subtitle D—Commercial and Federal Building Efficiency

- Sec. 141. Definitions.
- Sec. 142. High-performance green buildings.
- Sec. 143. Zero-energy commercial buildings initiative.
- Sec. 144. Public outreach.
- Sec. 145. Budget and life-cycle costing and contracting.
- Sec. 146. Incentives.
- Sec. 147. Federal procurement.
- Sec. 148. Use of energy and water efficiency measures in Federal buildings.
- Sec. 149. Demonstration project.
- Sec. 150. Energy efficiency for data center buildings.
- Sec. 151. Authorization of appropriations.
- Sec. 152. Study and report on use of power management software.

Subtitle E—Industrial Energy Efficiency

- Sec. 161. Industrial energy efficiency.

Subtitle F—Energy Efficiency of Public Institutions

- Sec. 171. Short title.
- Sec. 172. Findings.
- Sec. 173. Definitions.
- Sec. 174. Technical Assistance Program.
- Sec. 175. Revolving Fund.
- Sec. 176. Reauthorization of State energy programs.

Subtitle G—Energy Savings Performance Contracting

- Sec. 181. Definition of energy savings.
 Sec. 182. Financing flexibility.
 Sec. 183. Authority to enter into contracts; reports.
 Sec. 184. Permanent reauthorization.
 Sec. 185. Training Federal contracting officers to negotiate energy efficiency contracts.
 Sec. 186. Promoting long-term energy savings performance contracts and verifying savings.

Subtitle H—Advisory Committee on Energy Efficiency Financing

- Sec. 189. Advisory committee.

Subtitle I—Energy Efficiency Block Grant Program

- Sec. 191. Definitions.
 Sec. 192. Establishment of program.
 Sec. 193. Allocations.
 Sec. 194. Eligible activities.
 Sec. 195. Requirements.
 Sec. 196. Review and evaluation.
 Sec. 197. Technical Assistance and Education Program.
 Sec. 198. Authorization of appropriations.

Subtitle J—Green Buildings Retrofit Loan Guarantees

- Sec. 199. Green buildings retrofit loan guarantees.

1 **TITLE I—PROMOTING ENERGY**
 2 **EFFICIENCY**

3 **Subtitle A—Appliance Efficiency**

4 **SEC. 101. ENERGY STANDARDS FOR HOME APPLIANCES.**

5 (a) APPLIANCES.—The Energy Policy and Conserva-
 6 tion Act is amended as follows:

7 (1) DEHUMIDIFIERS.—Section 325(cc)(2) (42
 8 U.S.C. 6295(cc)(2)) is amended to read as follows:

9 “(2) Dehumidifiers manufactured on or after October
 10 1, 2012, shall have an Energy Factor that meets or ex-
 11 ceeds the following values:

“Product Capacity (pints/day):	Minimum Energy Factor (liters/ KWh)
Up to 35.00	1.35
35.01–45.00	1.50
45.01–54.00	1.60
54.01–75.00	1.70
Greater than 75.00	2.5”.

1 (2) RESIDENTIAL CLOTHESWASHERS AND RESI-
2 DENTIAL DISHWASHERS.—Section 325(g) (42
3 U.S.C. 6295(g)) is amended by adding at the end
4 the following new paragraphs:

5 “(9) Clotheswashers manufactured on or after Janu-
6 ary 1, 2011, shall have—

7 “(A) a Modified Energy Factor of at least 1.26;
8 and

9 “(B) a water factor of not more than 9.5.

10 “(10) No later than December 31, 2011, the Sec-
11 retary shall publish a final rule determining whether to
12 amend the standards in effect for clotheswashers manufac-
13 tured on or after January 1, 2015. Such rule shall contain
14 such amendment, if any.

15 “(11) Dishwashers manufactured on or after January
16 1, 2010, shall—

17 “(A) for standard size dishwashers not exceed
18 355 kwh/year and 6.5 gallon per cycle; and

19 “(B) for compact size dishwashers not exceed
20 260 kwh/year and 4.5 gallons per cycle.

1 “(12) No later than January 1, 2015, the Secretary
2 shall publish a final rule determining whether to amend
3 the standards for dishwashers manufactured on or after
4 January 1, 2018. Such rule shall contain such amend-
5 ment, if any.”.

6 (3) ENERGY CONSERVATION STANDARD.—Sec-
7 tion 321(6)(A) (42 U.S.C. 6291(6)(A)) is amended
8 by striking “or, in the case of” and inserting “and,
9 in the case of residential clotheswashers, residential
10 dishwashers,”.

11 (4) REFRIGERATORS AND FREEZERS.—Section
12 325(b) (42 U.S.C. 6295(b)) is amended by adding
13 at the end the following new paragraph:

14 “(4) Not later than December 31, 2010, the Sec-
15 retary shall publish a final rule determining whether to
16 amend the standards in effect for refrigerators, refrig-
17 erator-freezers, and freezers manufactured on or after
18 January 1, 2014. Such rule shall contain such amend-
19 ment, if any.”.

20 (b) ENERGY STAR.—Section 324A(d)(2) of the En-
21 ergy Policy and Conservation Act (42 U.S.C. 6294a(d)(2))
22 is amended by striking “January 1, 2010” and inserting
23 “July 1, 2009”.

1 **SEC. 102. ELECTRIC MOTOR EFFICIENCY STANDARDS.**

2 (a) DEFINITIONS.—Section 340(13) of the Energy
3 Policy and Conservation Act (42 U.S.C. 6311(13)) is
4 amended—

5 (1) by redesignating subparagraphs (B)
6 through (H) as subparagraphs (C) through (I), re-
7 spectively; and

8 (2) by striking the text of subparagraph (A)
9 and inserting the following: “The term ‘general pur-
10 pose electric motor (subtype I)’ means any motor
11 that meets the definition of ‘General Purpose’ as es-
12 tablished in the final rule issued by the Department
13 of Energy for ‘Energy Efficiency Program for Cer-
14 tain Commercial and Industrial Equipment: Test
15 Procedures, Labeling, and Certification Require-
16 ments for Electric Motors’ (10 CFR 431), as in ef-
17 fect on the date of enactment of the [short title].

18 “(B) The term ‘general purpose electric motor
19 (subtype II)’ means motors incorporating the design ele-
20 ments of a general purpose electric motor (subtype I) that
21 are configured as one of the following:

22 “(i) U-Frame Motors.

23 “(ii) Design C Motors.

24 “(iii) Close-coupled pump motors.

25 “(iv) Footless motors.

1 “(v) Vertical solid shaft normal thrust motor
2 (as tested in a horizontal configuration).

3 “(vi) 8-pole motors (~900 rpm).

4 “(vii) All poly-phase motors with voltages up to
5 600 volts other than 230/460 volts.”.

6 (b) STANDARDS.—Section 342(b) of the Energy Pol-
7 icy and Conservation Act (42 U.S.C. 6313(b)) is amended
8 by striking the text of paragraph (1) and inserting the
9 following: “(A) Each general purpose electric motor
10 (subtype I), except as provided in subparagraph (B), with
11 a power rating of 1 horsepower or greater, but not greater
12 than 200 horsepower, manufactured (alone or as a compo-
13 nent of another piece of equipment) after the 36-month
14 period beginning on the date of enactment of the [short
15 title], shall have a nominal full load efficiency not less
16 than as defined in NEMA MG–1 (2006) Table 12–12.

17 “(B) Each fire pump motor manufactured (alone or
18 as a component of another piece of equipment) after the
19 36-month period beginning on the date of enactment of
20 the [short title], shall have nominal full load efficiency not
21 less than as defined in NEMA MG–1 (2006) Table 12–
22 11.

23 “(C) Each general purpose electric motor (subtype
24 II) with a power rating of 1 horsepower or greater, but
25 not greater than 200 horsepower, manufactured (alone or

1 as a component of another piece of equipment) after the
2 36-month period beginning on the date of enactment of
3 the [short title], shall have a nominal full load efficiency
4 not less than as defined in NEMA MG–1 (2006) Table
5 12–11.

6 “(D) Each NEMA Design B, general purpose electric
7 motor with a power rating of more than 200 horsepower,
8 but not greater than 500 horsepower, manufactured
9 (alone or as a component of another piece of equipment)
10 after the 36-month period beginning on the date of enact-
11 ment of the [short title], shall have a nominal full load
12 efficiency not less than as defined in NEMA MG–1 (2006)
13 Table 12–11.”.

14 **SEC. 103. RESIDENTIAL BOILERS.**

15 Section 325(f) of the Energy Policy and Conservation
16 Act (42 U.S.C. 6925(f)) is amended—

17 (1) in the subsection heading, by inserting
18 “AND BOILERS” after “FURNACES”;

19 (2) in paragraph (1), by striking “except that”
20 and all that follows through “(B)” and inserting
21 “except that”;

22 (3) by redesignating paragraph (3) as para-
23 graph (4); and

24 (4) by inserting after paragraph (2) the fol-
25 lowing:

1 “(3) BOILERS.—

2 “(A) IN GENERAL.—Subject to subparagraph
 3 (B), boilers manufactured on or after September 1,
 4 2012, shall meet the following requirements:

Boiler Type	Minimum Annual Fuel Utilization Efficiency	Design Requirements
Gas Hot Water	82%	No Constant Burning Pilot, Automatic Means for Adjusting Water Temperature
Gas Steam	80%	No Constant Burning Pilot
Oil Hot Water	84%	Automatic Means for Adjusting Temperature
Oil Steam	82%	None
Electric Hot Water	None	Automatic Means for Adjusting Temperature
Electric Steam	None	None

5 “(B) AUTOMATIC MEANS FOR ADJUSTING
 6 WATER TEMPERATURE.—

7 “(i) IN GENERAL.—The manufacturer
 8 shall equip each gas, oil and electric hot water
 9 boiler, except boilers equipped with tankless do-
 10 mestic water heating coils, with automatic
 11 means for adjusting the temperature of the
 12 water supplied by the boiler to ensure that an
 13 incremental change in inferred heat load pro-

1 duces a corresponding incremental change in
2 the temperature of water supplied.

3 “(ii) SINGLE INPUT RATE.—For a boiler
4 that fires at one input rate this requirement
5 may be satisfied by providing an automatic
6 means that allows the burner or heating ele-
7 ment to fire only when such means has deter-
8 mined that the inferred heat load cannot be met
9 by the residual heat of the water in the system.

10 “(iii) NO INFERRED HEAT LOAD.—When
11 there is no inferred heat load with respect to a
12 hot water boiler, the automatic means described
13 in clause (i) and (ii) shall limit the temperature
14 of the water in the boiler to not more than 140
15 degrees Fahrenheit.

16 “(iv) OPERATION.—A boiler described in
17 clause (i) or (ii) shall be operable only when the
18 automatic means described in clauses (i), (ii)
19 and (iii) is installed.”.

20 **SEC. 104. REGIONAL VARIATIONS IN HEATING OR COOLING**
21 **STANDARDS.**

22 (a) CONSUMER APPLIANCES.—Section 325(o) of the
23 Energy Policy and Conservation Act (42 U.S.C. 6925(o))
24 is amended by adding at the end the following new para-
25 graph:

1 “(6)(A) The Secretary may establish regional stand-
2 ards for space heating and air conditioning products, other
3 than window-unit air-conditioners and portable space
4 heaters. For each space heating and air conditioning prod-
5 uct, the Secretary may establish a national minimum
6 standard and two more stringent regional standards for
7 regions determined to have significantly differing climatic
8 conditions. Any standards set for any such region shall
9 achieve the maximum level of energy savings that are tech-
10 nically feasible and economically justified within that re-
11 gion. As a preliminary step to determining the economic
12 justifiability of establishing any such regional standard,
13 the Secretary shall conduct a study involving stakeholders,
14 including but not limited to a representative from the Na-
15 tional Institute of Standards and Technology; representa-
16 tives of nongovernmental advocacy organizations; rep-
17 resentatives of product manufacturers, distributors, and
18 installers; representatives of the gas and electric utility in-
19 dustries; and such other individuals as the Secretary may
20 designate. Such study shall determine the potential bene-
21 fits and consequences of prescribing regional standards for
22 heating and cooling products, and may, if favorable to
23 such standards, constitute the evidence of economic justifi-
24 ability required under this Act. Regional boundaries shall
25 follow State borders and only include contiguous States

1 (except Alaska and Hawaii), except that on the request
2 of a State, the Secretary may divide that State to include
3 a part of that State in each of two regions.

4 “(B) If the Secretary establishes regional standards,
5 it shall be unlawful under section 332 to offer for sale
6 at retail, sell at retail, or install noncomplying products
7 except within the specified regions.

8 “(C)(i) Except as provided in clause (ii), no product
9 manufactured to a regional standard established pursuant
10 to subparagraph (A) shall be distributed in commerce
11 without a prominent label affixed to the product which in-
12 cludes at the top of the label, in print of not less than
13 14-point type, the following: ‘It is a violation of Federal
14 law for this product to be installed in any State outside
15 the region shaded on the map printed on this label.’.
16 Below this notice shall appear a map of the United States
17 with clearly defined State boundaries and names, and with
18 all States in which the product meets or exceeds the stand-
19 ard established pursuant to subparagraph (A) shaded in
20 a color or a manner as to be easily visible without obscur-
21 ing the State boundaries and names. Below the map shall
22 be printed on each label the following: ‘It is a violation
23 of Federal law for this label to be removed, except by the
24 owner and legal resident of any single-family home in
25 which this product is installed.’.

1 “(ii) A product manufactured that meets or exceeds
2 all regional standards established under this paragraph
3 shall bear a prominent label affixed to the product which
4 includes at the top of the label, in print of not less than
5 14-point type the following: ‘This product has achieved an
6 energy efficiency rating under Federal law allowing its in-
7 stallation in any State.’.

8 “(D) Manufacturers of space heating and air condi-
9 tioning equipment subject to regional standards estab-
10 lished under this paragraph shall obtain and retain
11 records on the intended installation locations of the equip-
12 ment sold, and shall make such records available to the
13 Secretary on request.”.

14 (b) INDUSTRIAL EQUIPMENT.—Section 342(a) of the
15 Energy Policy and Conservation Act (42 U.S.C. 6313(a))
16 is amended by adding at the end the following new para-
17 graph:

18 “(10)(A) The Secretary may establish regional stand-
19 ards for space heating and air conditioning products sub-
20 ject to this subsection. For each space heating and air con-
21 ditioning product, the Secretary may establish a national
22 minimum standard and two more stringent regional stand-
23 ards for regions determined to have significantly differing
24 climatic conditions. Any standards set for any such region
25 shall achieve the maximum level of energy savings that

1 are technically feasible and economically justified within
2 that region. Regional boundaries shall follow State borders
3 and only include contiguous States (except Alaska and
4 Hawaii), except that on the request of a State, the Sec-
5 retary may divide that State to include a part of that State
6 in each of two regions.

7 “(B) If the Secretary establishes regional standards,
8 it shall be unlawful under section 345 to offer for sale
9 at retail, sell at retail, or install noncomplying products
10 except within the specified regions.

11 “(C) Manufacturers of space heating and air condi-
12 tioning equipment subject to regional standards estab-
13 lished under this paragraph shall obtain and retain
14 records on the intended installation locations of the equip-
15 ment sold, and shall make such records available to the
16 Secretary on request.”.

17 **SEC. 105. PROCEDURE FOR PRESCRIBING NEW OR AMEND-**
18 **ED STANDARDS.**

19 Section 325(p) of the Energy Policy and Conserva-
20 tion Act (42 U.S.C. 6925(p)) is amended—

21 (1) by striking paragraph (1); and

22 (2) by redesignating paragraphs (2) through

23 (4) as paragraphs (1) through (3), respectively.

1 **SEC. 106. EXPEDITING APPLIANCE STANDARDS**
2 **RULEMAKINGS.**

3 (a) **DIRECT FINAL RULE.**—Section 325(p) of the En-
4 ergy Policy and Conservation Act (42 U.S.C. 6295(p)) is
5 amended by adding a new paragraph (5) as follows:

6 “(5) If manufacturers of any type (or class) of
7 covered products or covered equipment, States, and
8 efficiency advocates, or persons determined by the
9 Secretary to fully represent such parties, submit to
10 the Secretary a joint recommendation of an energy
11 or water conservation standard and the Secretary
12 determines that the recommended standard complies
13 with subsection (o) or section 342(a)(6)(B), as appli-
14 cable, to that type (or class) of covered products or
15 covered equipment to which the standard would
16 apply, the Secretary may then issue a direct final
17 rule including the standard recommended. If the
18 Secretary determines that a direct final rule cannot
19 be issued based on such a submitted joint rec-
20 ommendation, the Secretary shall publish a deter-
21 mination with an explanation as to why the joint
22 recommendation does not comply with this para-
23 graph. For purposes of this paragraph, the term ‘di-
24 rect final rule’ means a final rule published the same
25 day with a parallel notice of proposed rulemaking
26 that proposes a new or amended energy or water

1 conservation standard that is identical to the stand-
2 ard set forth in the final rule. There shall be a 110-
3 day period for public comment with respect to the
4 direct final rule. Not later than 10 days after the ex-
5 piration of such 110-day period, the Secretary shall
6 publish a notice responding to comments received
7 with respect to the direct final rule. The Secretary
8 shall withdraw a direct final rule promulgated pur-
9 suant to this paragraph within 120 days after publi-
10 cation in the Federal Register if the Secretary re-
11 ceives, with respect to the direct final rule, one or
12 more adverse public comments or any alternate joint
13 recommendation and, based on the rulemaking
14 record, the Secretary determines that such adverse
15 comments or alternate joint recommendation may
16 provide a reasonable basis for withdrawing the direct
17 final rule under subsection (o), section 342(a)(6)(B),
18 or any applicable law. In such a case, the Secretary
19 shall then proceed with the parallel notice of pro-
20 posed rulemaking, and shall identify in a notice pub-
21 lished in the Federal Register the reasons for the
22 withdrawal of the direct final rule. A direct final rule
23 that is withdrawn in accordance with this paragraph
24 shall not be considered final for purposes of sub-
25 section (o)(1) of this section. No person shall be

1 found in violation of this part for noncompliance
2 with a direct final rule that is withdrawn under this
3 paragraph, if that person has complied with the ap-
4 plicable standard in effect under this part imme-
5 diately prior to issuance of that direct final rule.”.

6 (b) CONFORMING AMENDMENT.—Section 345(b)(1)
7 of the Energy Policy and Conservation Act (42 U.S.C.
8 6316(b)(1)) is amended by inserting after “section” the
9 first time it appears “325(p)(5), section”.

10 **SEC. 107. CORRECTION OF LARGE AIR CONDITIONER RULE**
11 **ISSUANCE CONSTRAINT.**

12 (a) DEFINITIONS.—Section 340 of the Energy Policy
13 and Conservation Act (42 U.S.C. 6311) is amended by
14 adding the following new paragraphs at the end:

15 “(22) The term ‘single package vertical air con-
16 ditioner’ means air-cooled commercial package air
17 conditioning and heating equipment; factory assem-
18 bled as a single package having its major compo-
19 nents arranged vertically, which is an encased com-
20 bination of cooling and optional heating components,
21 is intended for exterior mounting on, adjacent inte-
22 rior to, or through an outside wall; and is powered
23 by a single- or three-phase current. It may contain
24 separate indoor grille(s), outdoor louvers, various
25 ventilation options, indoor free air discharge, duct-

1 work, well plenum, or sleeve. Heating components
2 may include electrical resistance, steam, hot water,
3 or gas, but may not include reverse cycle refrigera-
4 tion as a heating means.

5 “(23) The term ‘single package vertical heat
6 pump’ means a single package vertical air condi-
7 tioner that utilizes reverse cycle refrigeration as its
8 primary heat source, that may include secondary
9 supplemental heating by means of electrical resist-
10 ance, steam, hot water, or gas.”.

11 (b) STANDARDS.—Section 342(a) of the Energy Pol-
12 icy and Conservation Act (42 U.S.C. 6313(a)) is amend-
13 ed—

14 (1) in each of paragraphs (1) and (2), by in-
15 serting after “heating equipment” in the first sen-
16 tence “, including single package vertical air condi-
17 tioners and single package vertical heat pumps,”;

18 (2) in paragraph (1), by striking “but before
19 January 1, 2010,”;

20 (3) in paragraph (6)(A)(i), by striking “Janu-
21 ary 1, 2010,” and inserting “October 24, 1992”;

22 (4) in paragraph (6)(A)(ii)—

23 (A) by striking “5” and inserting “2”; and

24 (B) by striking “the effective date of a
25 standard” and inserting “January 10, 2010, or

1 beginning on the effective date of the most re-
2 cent revision made under clause (i) of this sub-
3 paragraph,”; and

4 (C) by adding the following new clause at
5 the end:

6 “(iii) The Secretary may only initiate a rulemaking
7 under clause (ii) of this subparagraph for a particular
8 product so long as any standard established under a pre-
9 vious rulemaking with respect to that product has become
10 effective.”;

11 (5) in each of paragraphs (7), (8), and (9), by
12 inserting after “heating equipment” in the first sen-
13 tence “, excluding single package vertical air condi-
14 tioners and single package vertical heat pumps,”;

15 (6) in paragraph (7)—

16 (A) by striking “manufactured on or after
17 January 1, 2010”;

18 (B) in each of subparagraphs (A), (B), and
19 (C), by adding at the beginning “For equip-
20 ment manufactured on or after January 1,
21 2010,”; and

22 (C) by adding at the end the following new
23 subparagraphs:

24 “(D) For equipment manufactured on or after
25 the later of January 1, 2008, or the date six months

1 after enactment of this section, the minimum sea-
2 sonal energy efficiency ratio of air-cooled three-phase
3 electric central air conditioners and central air con-
4 ditioning heat pumps less than 65,000 Btu per hour
5 (cooling capacity), split systems, shall be 13.0.

6 “(E) For equipment manufactured on or after
7 the later of January 1, 2008, or the date six months
8 after enactment of this section, minimum seasonal
9 energy efficiency ratio of air-cooled three-phase elec-
10 tric central air conditioners and central air condi-
11 tioning heat pumps less than 65,000 Btu per hour
12 (cooling capacity), single package, shall be 13.0.

13 “(F) For equipment manufactured on or after
14 the later of January 1, 2008, or the date six months
15 after enactment of this section, minimum heating
16 seasonal performance factor of air-cooled three-
17 phase electric central air conditioning heat pumps
18 less than 65,000 Btu per hour (cooling capacity),
19 split systems, shall be 7.7.

20 “(G) For equipment manufactured on or after
21 the later of January 1, 2008, or the date six months
22 after enactment of this section, the minimum heat-
23 ing seasonal performance factor of air-cooled three-
24 phase electric central air conditioning heat pumps

1 less than 65,000 Btu per hour (cooling capacity),
2 single package, shall be 7.7.”; and

3 (7) by adding the following new paragraphs at
4 the end:

5 “(10) Single package vertical air conditioners and
6 single package vertical heat pumps manufactured on or
7 after January 1, 2010, shall meet the following standards:

8 (A) The minimum energy efficiency ratio of
9 single package vertical air conditioners less than
10 65,000 Btu per hour (cooling capacity), single-
11 phase, shall be 9.0.

12 (B) The minimum energy efficiency ratio of
13 single package vertical air conditioners less than
14 65,000 Btu per hour (cooling capacity), three-phase,
15 shall be 9.0.

16 (C) The minimum energy efficiency ratio of
17 single package vertical air conditioners at or above
18 65,000 Btu per hour (cooling capacity) but less than
19 135,000 Btu per hour (cooling capacity), shall be
20 8.9.

21 (D) The minimum energy efficiency ratio of
22 single package vertical air conditioners at or above
23 135,000 Btu per hour (cooling capacity) but less
24 than 240,000 Btu per hour (cooling capacity), shall
25 be 8.6.

1 “(E) The minimum energy efficiency ratio of
2 single package vertical heat pumps less than 65,000
3 Btu per hour (cooling capacity), single-phase, shall
4 be 9.0; and the minimum coefficient of performance
5 in the heating mode shall be 3.0.

6 “(F) The minimum energy efficiency ratio of
7 single package vertical heat pumps less than 65,000
8 Btu per hour (cooling capacity), three-phase, shall
9 be 9.0; and the minimum coefficient of performance
10 in the heating mode shall be 3.0.

11 “(G) The minimum energy efficiency ratio of
12 single package vertical heat pumps at or above
13 65,000 Btu per hour (cooling capacity) but less than
14 135,000 Btu per hour (cooling capacity), shall be
15 8.9; and the minimum coefficient of performance in
16 the heating mode shall be 3.0.

17 “(H) The minimum energy efficiency ratio of
18 single package vertical heat pumps at or above
19 135,000 Btu per hour (cooling capacity) but less
20 than 240,000 Btu per hour (cooling capacity), shall
21 be 8.6; and the minimum coefficient of performance
22 in the heating mode shall be 2.9.

23 “(11) Not later than 36 months after the date of en-
24 actment of this paragraph, the Secretary shall review the
25 most recently published ASHRAE/IES Standard 90.1

1 with respect to single package vertical air conditioners and
2 single package vertical heat pumps according to the proce-
3 dures established in paragraph (6).”.

4 **SEC. 108. DEFINITION OF ENERGY CONSERVATION STAND-**
5 **ARD.**

6 Section 321 of the Energy Policy and Conservation
7 Act (42 U.S.C. 6291) is amended by striking paragraph
8 (6) and inserting the following:

9 “(6) ENERGY CONSERVATION STANDARD.—

10 “(A) IN GENERAL.—The term ‘energy con-
11 servation standard’ means 1 or more perform-
12 ance standards that—

13 “(i) for covered products (excluding
14 clothes washers, dishwashers, showerheads,
15 faucets, water closets, and urinals), pre-
16 scribe a minimum level of energy efficiency
17 or a maximum quantity of energy use, de-
18 termined in accordance with test proce-
19 dures prescribed under section 323;

20 “(ii) for showerheads, faucets, water
21 closets, and urinals, prescribe a minimum
22 level of water efficiency or a maximum
23 quantity of water use, determined in ac-
24 cordance with test procedures prescribed
25 under section 323; and

1 “(iii) for clothes washers and dish-
2 washers—

3 “(I) prescribe a minimum level of
4 energy efficiency or a maximum quan-
5 tity of energy use, determined in ac-
6 cordance with test procedures pre-
7 scribed under section 323; and

8 “(II) may include a minimum
9 level of water efficiency or a maximum
10 quantity of water use, determined in
11 accordance with those test procedures.

12 “(B) INCLUSIONS.—The term ‘energy con-
13 servation standard’ includes—

14 “(i) 1 or more design requirements, if
15 the requirements were established—

16 “(I) on or before the date of en-
17 actment of this subclause; or

18 “(II) as part of a consensus
19 agreement under section 325(hh); and

20 “(ii) any other requirements that the
21 Secretary may prescribe under section
22 325(r).

23 “(C) EXCLUSION.—The term ‘energy con-
24 servation standard’ does not include a perform-
25 ance standard for a component of a finished

1 covered product, unless regulation of the com-
2 ponent is authorized or established pursuant to
3 this title.”.

4 **SEC. 109. IMPROVING SCHEDULE FOR STANDARDS UPDAT-**
5 **ING AND CLARIFYING STATE AUTHORITY.**

6 (a) CONSUMER APPLIANCES.—Section 325(m) of the
7 Energy Policy and Conservation Act (42 U.S.C. 6295(m))
8 is amended to read as follows:

9 “(m) FURTHER RULEMAKING.—(1) Not later than 6
10 years after issuance of any final rule establishing or
11 amending a standard, as required for a product under this
12 part, the Secretary shall publish either—

13 “(A) a notice of the Secretary’s determination
14 that standards for that product do not need to be
15 amended, based on the criteria in subsection (n)(2);
16 or

17 “(B) a notice of proposed rulemaking including
18 new proposed standards based on the criteria in sub-
19 section (o) and the procedures in subsection (p).

20 In either case, the Secretary shall also publish a notice
21 stating that the Department’s analysis is publicly avail-
22 able, and provide opportunity for written comment.

23 “(2) Not later than 2 years after a notice is issued
24 under paragraph (1)(B), the Secretary shall publish a
25 final rule amending the standard for the product. Not

1 later than 3 years after a determination under paragraph
2 (1)(A), the Secretary shall make a new determination and
3 publication under paragraph (1)(A) or (B).

4 “(3) An amendment prescribed under this subsection
5 shall apply to products manufactured after a date which
6 is 3 years after publication of the final rule establishing
7 a standard, except that a manufacturer shall not be re-
8 quired to apply new standards to a product with respect
9 to which other new standards have been required within
10 the prior 6 years.

11 “(4) The Secretary shall promptly submit to the
12 Committee on Energy and Commerce of the House of
13 Representatives and the Committee on Energy and Nat-
14 ural Resources of the Senate—

15 “(A) a progress report every 180 days on com-
16 pliance with this section, including a specific plan to
17 remedy any failures to comply with deadlines for ac-
18 tion set forth in this section; and

19 “(B) all required reports to the Court or to any
20 party to the Consent Decree in State of New York
21 v. Bodman, Consolidated Civil Actions No. 05 Civ.
22 7807 and No. 05 Civ. 7808.”.

23 (b) INDUSTRIAL EQUIPMENT.—Section 342(a)(6) of
24 the Energy Policy and Conservation Act (42 U.S.C.
25 6313(a)(6)) is amended—

1 (1) by redesignating subparagraph (C) as sub-
2 paragraph (D); and

3 (2) by amending the remainder of the para-
4 graph to read as follows:

5 “(6)(A) If ASHRAE/IES Standard 90.1 is
6 amended with respect to any small, large, or very
7 large commercial package air conditioning and heat-
8 ing equipment, packaged terminal air conditioners,
9 packaged terminal heat pumps, warm-air furnaces,
10 packaged boilers, storage water heaters, instantane-
11 ous water heaters, or unfired hot water storage
12 tanks, the Secretary shall within 6 months publish
13 in the Federal Register for public comment an anal-
14 ysis of the energy savings potential of the amended
15 energy efficiency standards. The Secretary shall es-
16 tablish an amended uniform national standard for
17 that product at the minimum level for each effective
18 date specified in the amended ASHRAE/IES Stand-
19 ard 90.1 within 18 months of the ASHRAE amend-
20 ment’s publication, unless the Secretary determines,
21 by rule published in the Federal Register, and sup-
22 ported by clear and convincing evidence, that adop-
23 tion of a uniform national standard more stringent
24 than such amended ASHRAE/IES Standard 90.1
25 for such product would result in significant addi-

1 tional conservation of energy and is technologically
2 feasible and economically justified.

3 “(B) If the Secretary issues a rule containing
4 such a determination, the rule shall establish such
5 amended standard, and shall be issued within 30
6 months of the ASHRAE amendment’s publication.

7 “(C)(i) Not later than 6 years after issuance of
8 any final rule establishing or amending a standard,
9 as required for a product under this part, the Sec-
10 retary shall publish either—

11 “(I) a notice of the Secretary’s determina-
12 tion that standards for that product do not
13 need to be amended, based on the criteria in
14 subparagraph (A); or

15 “(II) a notice of proposed rulemaking in-
16 cluding new proposed standards based on the
17 criteria and procedures in subparagraph (B).

18 In either case, the Secretary shall also publish a no-
19 tice stating that the Department’s analysis is pub-
20 licly available, and provide opportunity for written
21 comment.

22 “(ii) Not later than 2 years after a notice
23 is issued under clause (i)(II), the Secretary
24 shall publish a final rule amending the standard
25 for the product. Not later than 3 years after a

1 determination under clause (i)(I), the Secretary
2 shall make a new determination and publication
3 under clause (i)(I) or (II).

4 “(iii) An amendment prescribed under this
5 subparagraph shall apply to products manufac-
6 tured after a date which is 3 years after publi-
7 cation of the final rule establishing a standard,
8 except that a manufacturer shall not be re-
9 quired to apply new standards to a product
10 with respect to which other new standards have
11 been required within the prior 6 years.

12 “(iv) The Secretary shall promptly submit
13 to the House Committee on Energy and Com-
14 merce and to the Senate Committee on Energy
15 and Natural Resources a progress report every
16 180 days on compliance with this paragraph,
17 including a specific plan to remedy any failures
18 to comply with deadlines for action set forth in
19 this paragraph.”.

20 **SEC. 110. UPDATING APPLIANCE TEST PROCEDURES.**

21 (a) CONSUMER APPLIANCES.—Section 323(b)(1)(A)
22 of the Energy Policy and Conservation Act (42 U.S.C.
23 6923(b)(1)(A)) is amended by striking “The Secretary
24 may” and all that follows through “paragraph (3)” and

1 inserting “At least every 7 years the Secretary shall review
2 test procedures for all covered products and shall—

3 “(i) amend test procedures with respect to any
4 covered product if the Secretary determines that
5 amended test procedures would more accurately or
6 fully comply with the requirements of paragraph (3);
7 or

8 “(ii) publish notice in the Federal Register of
9 any determination not to amend a test procedure”.

10 (b) INDUSTRIAL EQUIPMENT.—Section 343(a)(1) of
11 the Energy Policy and Conservation Act (42 U.S.C.
12 6314(a)(1)) is amended by striking “The Secretary may”
13 and all that follows through “this section” and inserting
14 “At least every 7 years the Secretary shall conduct an
15 evaluation of each class of covered equipment and—

16 “(B) if the Secretary determines that amended
17 test procedures would more accurately or fully com-
18 ply with the requirements of paragraphs (2) and (3),
19 shall prescribe test procedures for such class in ac-
20 cordance with the provisions of this section; or

21 “(C) shall publish notice in the Federal Reg-
22 ister of any determination not to amend a test pro-
23 cedure”.

1 **SEC. 111. FURNACE FAN STANDARD PROCESS.**

2 Section 325(f)(3)(D) of the Energy Policy and Con-
3 servation Act (42 U.S.C. 6295(f)(3)(D)) is amended—

4 (1) by striking “may” and inserting “shall”; and

5 (2) by inserting “not later than July 1, 2013” after
6 “duct work”.

7 **SEC. 112. TECHNICAL CORRECTIONS.**

8 (a) Section 135(a)(1)(A)(ii) of the Energy Policy Act
9 of 2005 (Public Law 109–58) is amended by striking
10 “C78.1–1978(R1984)” and inserting “C78.3–
11 1978(R1984)”.

12 (b) Section 325 of the Energy Policy and Conserva-
13 tion Act (42 U.S.C. 6295) (as amended by section
14 135(e)(4) of the Energy Policy Act of 2005) is amended—

15 (1) in subsection (v)—

16 (A) in the subsection heading, by striking
17 “CEILING FANS AND”;

18 (B) by striking paragraph (1); and

19 (C) by redesignating paragraphs (2)
20 through (4) as paragraphs (1) through (3), re-
21 spectively; and

22 (2) in subsection (ff)—

23 (A) in paragraph (1)(A)—

24 (i) by striking clause (iii);

25 (ii) by redesignating clause (iv) as
26 clause (iii); and

1 (iii) in clause (iii)(II) (as so redesignated), by inserting “fans sold for” before
2 “outdoor”; and
3

4 (B) in paragraph (4)(C)—

5 (i) in the matter preceding clause (i),
6 by striking “subparagraph (B)” and inserting “subparagraph (A)”;
7

8 (ii) by striking clause (ii) and inserting the following:
9

10 “(ii) shall be packaged with lamps to fill all
11 sockets.”;

12 (C) in paragraph (6), by redesignating
13 subparagraphs (C) and (D) as clauses (i) and
14 (ii), respectively, of subparagraph (B); and

15 (D) in paragraph (7), by striking “327”
16 the second place it appears and inserting
17 “324”.

18 **SEC. 113. ENERGY EFFICIENT STANDBY POWER DEVICES.**

19 (a) DEFINITIONS.—In this section:

20 (1) AGENCY.—

21 (A) IN GENERAL.—The term “agency” has
22 the meaning given the term “Executive agency”
23 in section 105 of title 5, United States Code.

24 (B) INCLUSIONS.—The term “agency” includes military departments, as the term is de-
25

1 fined in section 102 of title 5, United States
2 Code.

3 (2) ELIGIBLE PRODUCT.—The term “eligible
4 product” means a commercially available, off-the-
5 shelf product that—

6 (A)(i) uses external standby power devices;

7 or

8 (ii) contains an internal standby power
9 function; and

10 (B) is included on the list compiled under
11 subsection (d).

12 (b) FEDERAL PURCHASING REQUIREMENT.—Subject
13 to subsection (c), if an agency purchases an eligible prod-
14 uct, the agency shall purchase—

15 (1) an eligible product that uses not more than
16 1 watt in the standby power consuming mode of the
17 eligible product; or

18 (2) if an eligible product described in paragraph
19 (1) is not available, the eligible product with the low-
20 est available standby power wattage in the standby
21 power consuming mode of the eligible product.

22 (c) LIMITATION.—The requirements of subsection (b)
23 shall apply to a purchase by an agency only if—

24 (1) the lower-wattage eligible product is—

25 (A) lifecycle cost-effective; and

1 (B) practicable; and

2 (2) the utility and performance of the eligible
3 product is not compromised by the lower wattage re-
4 quirement.

5 (d) ELIGIBLE PRODUCTS.—The Secretary of Energy,
6 in consultation with the Secretary of Defense and the Ad-
7 ministrator of General Services, shall compile a list of
8 cost-effective eligible products that shall be subject to the
9 purchasing requirements of subsection (b).

10 **SEC. 114. EXTERNAL POWER SUPPLY EFFICIENCY STAND-**
11 **ARDS.**

12 (a) Section 321 of the Energy Policy and Conserva-
13 tion Act (42 U.S.C. 6291) is amended—

14 (1) in paragraph (36) by inserting “(A)” before
15 the text and adding at the end the following:

16 “(B) The term ‘class A external power
17 supply’ means a device that—

18 “(i) is designed to convert line voltage
19 AC input into lower voltage AC or DC out-
20 put;

21 “(ii) is able to convert to only one AC
22 or DC output voltage at a time;

23 “(iii) is sold with, or intended to be
24 used with, a separate end-use product that
25 constitutes the primary load;

1 “(iv) is contained in a separate phys-
2 ical enclosure from the end-use product;

3 “(v) is connected to the end-use prod-
4 uct via a removable or hard-wired male/fe-
5 male electrical connection, cable, cord or
6 other wiring; and

7 “(vi) has nameplate output power less
8 than or equal to 250 watts.

9 “(C) The term ‘class A external power
10 supply’ does not include any device that—

11 “(i) requires Federal Food and Drug
12 Administration listing and approval as a
13 medical device, as described under section
14 513 of the Food, Drug, and Cosmetic Act
15 of 1938; or

16 “(ii) powers the charger of a detach-
17 able battery pack or charges the battery of
18 a product that is fully or primarily motor
19 operated.

20 “(D) The term ‘active mode’ means the
21 mode of operation when an external power sup-
22 ply is connected to the main electricity supply
23 and the output is connected to a load.

24 “(E) The term ‘no-load mode’ means the
25 mode of operation when an external power sup-

1 ply is connected to the main electricity supply
2 and the output is not connected to a load.”

3 (2) by adding at the end the following:

4 “(52) The term ‘detachable battery’ means a
5 battery that is contained in a separate enclosure
6 from the product and is intended to be removed or
7 disconnected from the product for recharging.”.

8 (b) Section 323 of the Energy Policy and Conserva-
9 tion Act (42 U.S.C. 6293) is amended in subsection (b)
10 by adding at the end the following:

11 “(16) Test procedures for class A external
12 power supplies shall be based upon the U.S. Envi-
13 ronmental Protection Agency’s ‘Test Method for
14 Calculating the Energy Efficiency of Single-Voltage
15 External AC–DC and AC–AC Power Supplies’, Au-
16 gust 11, 2004, provided that the test voltage speci-
17 fied in section 4(d) of such test method shall be only
18 115 volts, 60 Hz.”.

19 (c) Section 325 of the Energy Policy and Conserva-
20 tion Act (42 U.S.C. 6295) is amended in subsection (u)
21 by adding at the end the following:

22 “(6) EFFICIENCY STANDARDS FOR CLASS A EX-
23 TERNAL POWER SUPPLIES.—

24 “(A) Class A external power supplies man-
25 ufactured on or after July 1, 2008 (or the date

1 of enactment of this paragraph, if later) shall
 2 meet the following standards:

“Active Mode	
“Nameplate Output	Required Efficiency (decimal equivalent of apercentage)
Less than 1 watt	0.5 times the Nameplate Output
From 1 watt to not more than 51 watts	The sum of 0.09 times the Natural Logarithm of the Nameplate Output and 0.5
Greater than 51 watts	0.85
“No-Load Mode	
“Nameplate Output	Maximum Consumption
Not more than 250 watts	0.5watts

3 “(B) Notwithstanding paragraph (A), any
 4 class A external power supply manufactured on
 5 or after July 1, 2008, and before July 1, 2015,
 6 and made available by the manufacturer as a
 7 service part or a spare part for an end-use
 8 product—

9 “(i) that constitutes the primary load;

10 and

11 “(ii) was manufactured before July 1,

12 2008,

13 shall not be subject to the requirements of
 14 paragraph (A).

15 “(C) Any class A external power supply

16 manufactured on or after July 1, 2008 (or the

1 date of enactment of this paragraph, if later)
2 shall be clearly and permanently marked in ac-
3 cordance with the External Power Supply Inter-
4 national Efficiency Marking Protocol, as ref-
5 erenced in the ‘Energy Star Program Require-
6 ments for Single Voltage External AC–DC and
7 AC–AC Power Supplies, version 1.1’ published
8 by the Environmental Protection Agency.

9 “(D)(i) Not later than July 1, 2011 the
10 Secretary shall publish a final rule to determine
11 whether the standards established under para-
12 graph (A) should be amended. Such rule shall
13 provide that any amended standard shall apply
14 to products manufactured on or after July 1,
15 2013.

16 “(ii) Not later than July 1, 2015 the Sec-
17 retary shall publish a final rule to determine
18 whether the standards established under para-
19 graph (A) should be amended. Such rule shall
20 provide that any amended standard shall apply
21 to products manufactured on or after July 1,
22 2017.

23 “(7) An energy conservation standard for exter-
24 nal power supplies shall not constitute an energy

1 conservation standard for the separate end-use prod-
2 uct to which it is connected.”.

3 **SEC. 115. STANDBY MODE.**

4 (a) CONSUMER APPLIANCE REQUIREMENT.—Section
5 325 of the Energy Policy and Conservation Act (42 U.S.C.
6 6295) is amended by adding at the end the following new
7 subsection:

8 “(ii) STANDBY MODE.—

9 “(1) REQUIREMENT.—Except as provided in
10 paragraph (2), any final rule adopted after July 1,
11 2012, to set a new or revised energy efficiency
12 standard for a covered product shall specify that a
13 covered product manufactured on or after the effec-
14 tive date of such new or revised standard shall, when
15 in standby mode, operate with not more than 1 watt
16 of electric power.

17 “(2) EXCEPTIONS.—

18 “(A) EXTENSIONS.—The Secretary may
19 provide a single extension of up to 2 years for
20 compliance with paragraph (1) with respect to
21 a covered product if the Secretary finds that
22 such extension is appropriate.

23 “(B) EXEMPTIONS.—The Secretary may
24 provide an exemption from the requirement
25 under paragraph (1) for a covered product,

1 after public notice and opportunity for com-
2 ment, if the Secretary finds that—

3 “(i) achieving the requirement is not
4 technologically feasible and economically
5 justified for that covered product; or

6 “(ii) such an exemption is warranted
7 for medical or military reasons.

8 Any exemption provided under this subpara-
9 graph shall be reviewed at least once every 5
10 years.”.

11 (b) CONSUMER APPLIANCE TEST PROCEDURES.—
12 Section 323(b) of the Energy Policy and Conservation Act
13 (42 U.S.C. 6293(b)) is amended by adding at the end the
14 following new paragraph:

15 “(17) Not later than July 1, 2009, the Secretary
16 shall issue a final rule establishing test procedures for
17 standby power consumption for all covered products, ex-
18 cept for products for which the current test procedure al-
19 ready measures standby power consumption.”.

20 (c) REPEAL.—

21 (1) IN GENERAL.—Section 325(u) of the En-
22 ergy Policy and Conservation Act (42 U.S.C.
23 6295(u)) is amended—

24 (A) by striking paragraph (2); and

1 (B) by redesignating paragraphs (3)
2 through (5) as paragraphs (2) through (4), re-
3 spectively.

4 (2) EFFECTIVE DATE.—The amendments made
5 by paragraph (1) shall take effect on the date de-
6 scribed in section 325(ii)(I) of the Energy Policy
7 and Conservation Act as, added by subsection (a) of
8 this section.

9 (d) INDUSTRIAL EQUIPMENT REQUIREMENT.—Sec-
10 tion 342 of the Energy Policy and Conservation Act (42
11 U.S.C. 6313) is amended by adding at the end the fol-
12 lowing new subsection:

13 “(f) STANDBY POWER.—

14 “(1) REQUIREMENT.—Except as provided in
15 paragraph (2), any final rule adopted after July 1,
16 2012, to set a new or revised energy efficiency
17 standard for covered equipment shall specify that
18 covered equipment manufactured on or after the ef-
19 fective date of such new or revised standard shall,
20 when in standby mode, operate with not more than
21 1 watt of electric power.

22 “(2) EXCEPTIONS.—

23 “(A) EXTENSIONS.—The Secretary may
24 provide a single extension of up to 5 years for
25 compliance with paragraph (1) with respect to

1 a covered equipment if the Secretary finds that
2 such extension is appropriate.

3 “(B) EXEMPTIONS.—The Secretary may
4 provide an exemption from the requirement
5 under paragraph (1) for covered equipment,
6 after public notice and opportunity for com-
7 ment, if the Secretary finds that—

8 “(i) achieving the requirement is not
9 technologically feasible and economically
10 justified for that covered equipment; or

11 “(ii) such an exemption is warranted
12 for medical or military reasons.

13 Any exemption provided under this subpara-
14 graph shall be reviewed at least once every 5
15 years.”.

16 (e) INDUSTRIAL EQUIPMENT TEST PROCEDURES.—
17 Section 343(a) of the Energy Policy and Conservation Act
18 (42 U.S.C. 6314(a)) is amended by adding at the end the
19 following new paragraph:

20 “(9) Not later than July 1, 2009, the Secretary shall
21 issue a final rule establishing test procedures for standby
22 power consumption for all covered equipment, except for
23 equipment for which the current test procedure already
24 measures standby power consumption.”.

1 **Subtitle B—Lighting Efficiency**

2 **SEC. 121. EFFICIENT LIGHT BULBS.**

3 (a) PROHIBITION.—

4 (1) REGULATIONS.—Not later than 1 year after
5 the date of enactment of this Act, the Secretary of
6 Energy shall issue regulations—

7 (A) prohibiting the sale of 100 watt gen-
8 eral service incandescent lamps after January
9 1, 2012, unless those lamps emit at least 60
10 lumens per watt;

11 (B) prohibiting the sale of general service
12 lamps manufactured after the effective dates
13 shown in the table below that do not meet the
14 minimum efficacy levels (lumens/watt) shown in
15 the following table:

Minimum Efficacy Levels and Effective Dates

Lumen Range (Lumens)	Minimum Efficacy (Lumens/Watt)	Effective Dates
200–449	15	1/1/2014
450–699	17	1/1/2014
700–999	20	1/1/2013
1000–1500	22	1/1/2012
1501–3000	24	1/1/2012

16 (C) after January 1, 2020, prohibiting the
17 sale of general service lamps that emit less than
18 300 percent of the average lumens per watt

1 emitted by 100 watt incandescent general serv-
2 ice lamps that are commercially available as of
3 the date of enactment of this Act;

4 (D) establishing a minimum color ren-
5 dering index (CRI) of 80 or higher for all gen-
6 eral service lamps manufactured as of the effec-
7 tive dates in subparagraph (B); and

8 (E) prohibiting the manufacture or import
9 for sale in the United States of an adapter de-
10 vice designed to allow a lamp with a different
11 base to fit into a medium screw base socket
12 manufactured after January 1, 2009.

13 (2) EXEMPTIONS.—The regulations issued
14 under paragraph (1) shall include procedures for the
15 Secretary to exempt specialty lamps from the re-
16 quirements of paragraph (1). The Secretary may
17 provide such an exemption only in cases where the
18 Secretary finds, after a hearing and opportunity for
19 public comment, that it is not technically feasible to
20 serve a specialized lighting application, such as a
21 military, medical, public safety application, or in cer-
22 tified historic lighting applications using bulbs that
23 meet the requirements of paragraph (1). In addition,
24 the Secretary shall include as an additional criterion

1 that exempted products are unlikely to be used in
2 the general service lighting applications.

3 (3) ADDITIONAL LAMPS TYPES.—

4 (A) Manufacturers of rough service, vibra-
5 tion service, vibration resistant, appliance, shat-
6 ter resistant, and three-way lamps shall report
7 annual sales volume to the Secretary. If the
8 Secretary determines that annual sales volume
9 for any of these lamp types increases by 100
10 percent relative to 2009 sales in any later year,
11 then such lamps shall be subject to the fol-
12 lowing standards:

13 (i) Appliance lamps shall use no more
14 than 40 watts.

15 (ii) Rough service lamps shall use no
16 more than 40 watts.

17 (iii) Vibration service and vibration
18 resistant lamps shall use no more than 40
19 watts.

20 (iv) Three-way lamps shall comply
21 with the standards in paragraph (1) at
22 each level of rated lumen output.

23 (B) Rough service, vibration service, vibra-
24 tion resistant, appliance, shatter resistant, and

1 three-way lamps shall be available for sale at
2 retail in single packs only.

3 (4) CIVIL PENALTY.—The Secretary of Energy
4 shall include in regulations under this subsection a
5 schedule of appropriate civil penalties for violations
6 of the prohibitions under this subsection. Such pen-
7 alties shall be in an amount sufficient to ensure
8 compliance with this section.

9 (5) STATE PREEMPTION.—State standards for
10 general service lamps are preempted as of the date
11 of enactment of this Act, except—

12 (A) any State standard already enacted or
13 adopted as of the date of enactment of this Act
14 may be enforced until the Federal effective
15 dates for each lamp category, and such States
16 may modify existing State standards for general
17 service lamps to conform with the standards in
18 paragraph (1) at any time;

19 (B) any State standard identical to the
20 standards in paragraph (1)(B) with an effective
21 date no sooner than January 1, 2015; and

22 (C) any State standard identical to Fed-
23 eral standards, after such Federal standards
24 are in effect.

1 (6) DEFINITIONS.—For purposes of this sec-
2 tion, the following definitions apply:

3 (A) The term “general service lamp”
4 means a nonreflectorized lamp that—

5 (i) is intended for general service ap-
6 plications;

7 (ii) has a medium screw base;

8 (iii) has an initial lumen output no
9 less than 200 lumens and no more than
10 3000 lumens;

11 (iv) has an input voltage range at
12 least partially within 110 and 130 volts;

13 (v) has a A-15, A-19, A-21, A-23,
14 A-25, PS-25, PS-30, BT-14.5, BT-15,
15 CP-19, TB-19, CA-22, or similar shape
16 as defined in ANSI C78.20-2003; and

17 (vi) has a bulb finish of the frosted,
18 clear, soft white, modified spectrum, en-
19 hanced spectrum, full spectrum, or equiva-
20 lent type.

21 The following incandescent lamps are not gen-
22 eral service lamps: appliance, black light, bug,
23 colored, infrared, left-hand thread, marine, ma-
24 rine signal service, mine service, plant light, re-
25 flector, rough service, shatter resistant, sign

1 service, silver bowl, three-way, traffic signal,
2 and vibration service or vibration resistant.

3 (B) The term “appliance lamp” means any
4 lamp specifically designed to operate in a house-
5 hold appliance. Examples of appliance lamps in-
6 clude oven lamps, refrigerator lamps, and vacu-
7 um cleaner lamps.

8 (C) The term “black light lamp” means a
9 lamp that emits radiant energy in the UV-A
10 band (315–400 nm) and is designated and mar-
11 keted as a “black light”.

12 (D) The term “bug lamp” means a lamp
13 that contains a filter to suppress the blue and
14 green portions of the visible spectrum and is
15 designated and marketed as a “bug light”.

16 (E) The term “colored incandescent lamp”
17 means an incandescent lamp designated and
18 marketed as a colored lamp that has a CRI of
19 less than 50, as determined according to the
20 test method given in CIE publication 13.2, and
21 has a correlated color temperature less than
22 2,500K, or greater than 4,600K, where cor-
23 related color temperature is defined as the ab-
24 solute temperature of a blackbody whose chro-

1 maticity nearly resembles that of the light
2 source.

3 (F) The term “infrared lamp” means a
4 lamp that radiates predominately in the infra-
5 red region of the electromagnetic spectrum, and
6 where visible radiation is not of principal inter-
7 est.

8 (G) The term “lamp” means an electrical
9 appliance that includes a glass envelope and
10 produces optical radiation for the purpose of
11 visual illumination, designed to be installed into
12 a luminaire by means of an integral lamp-hold-
13 er. Types of lamps include incandescent, fluo-
14 rescent, and high intensity discharge (high
15 pressure sodium and metal halide).

16 (H) The term “left-handed thread lamp”
17 means a lamp on which the base screws into a
18 lamp socket in a counter-clockwise direction,
19 and screws out of a lamp socket in a clockwise
20 direction.

21 (I) The term “marine lamp” means a lamp
22 specifically designed and marketed to operate in
23 a marine application.

1 (J) The term “marine signal service lamp”
2 means a lamp specifically designed to provide
3 signals to marine vessels for seaway safety.

4 (K) The term “mine service lamp” means
5 a lamp specifically designed and marketed for
6 use in mine applications.

7 (L) The term “plant light lamp” means a
8 lamp that contains a filter to suppress yellow
9 and green portions of the spectrum and is des-
10 ignated and marketed as a “plant light”.

11 (M) The term “rough service lamp” means
12 a lamp that has a minimum of 5 supports with
13 filament configurations similar to but not lim-
14 ited to C7A, C11, C17, and C22 as listed in
15 Figure 6–12 of the 9th edition of the IESNA
16 Lighting handbook, where lead wires are not
17 counted as supports and that is designated and
18 marketed specifically for “rough service” appli-
19 cations.

20 (N) The term “shatter resistant lamp”
21 means a lamp with an external coating on the
22 bulb wall to resist breakage and which is des-
23 ignated and marketed as a shatter resistant
24 lamp.

1 (O) The term “showcase lamp” means a
2 lamp that has a tubular bulb with a conven-
3 tional screw base and which is designated and
4 marketed as a showcase lamp.

5 (P) The term “sign service lamp” means a
6 lamp of the vacuum type or gas-filled with suf-
7 ficiently low bulb temperature to permit ex-
8 posed outdoor use on high-speed flashing cir-
9 cuits. The designation shall be on the lamp
10 packaging, and marketing materials shall iden-
11 tify the lamp as being a sign service lamp.

12 (Q) The term “silver bowl lamp” means a
13 lamp that has a reflective coating applied di-
14 rectly to part of the bulb surface and that re-
15 flects light in a backward direction toward the
16 lamp base. The designation shall be on the
17 lamp packaging, and marketing materials shall
18 identify the lamp as being a silver bowl lamp or
19 similar designation.

20 (R) The term “three-way lamp” means a
21 lamp that employs two filaments, operated sep-
22 arately and in combination, to provide three
23 light levels. The designation shall be on the
24 lamp packaging, and marketing materials shall
25 identify the lamp as being a three-way lamp.

1 (S) The term “traffic signal lamp” means
2 a lamp that is designed with lifetime, wattage,
3 focal length, filament configuration, mounting,
4 lamp glass, and lamp base characteristics ap-
5 propriate for use in traffic signals.

6 (T) The term “vibration service lamp” or
7 “vibration resistant lamp” means a lamp with
8 filament configurations similar to but not lim-
9 ited to C-5, C-7A, or C-9, as listed in Figure
10 6-12 of the 9th Edition of the IESNA Lighting
11 Handbook. The lamp is designated and mar-
12 keted specifically for vibration service or vibra-
13 tion resistant applications. The designation
14 shall be on the lamp packaging, and marketing
15 materials shall identify the lamp as being vibra-
16 tion resistant or vibration service.

17 (b) INCENTIVE PLAN AND PUBLIC EDUCATION.—

18 (1) INCENTIVE PLAN.—Not later than 6
19 months after the date of enactment of this Act, the
20 Secretary of Energy shall transmit to the Congress
21 a plan for encouraging and providing incentives for
22 the domestic production of light bulbs by United
23 States manufacturers that meet the efficacy levels
24 shown in the table in subsection (a)(1)(B).

1 (2) LABELING RULEMAKING.—The Federal
2 Trade Commission shall conduct a rulemaking to
3 consider the effectiveness of current lamp labeling
4 requirements and to consider alternative labeling ap-
5 proaches that will help consumers to understand new
6 high-efficiency lamp products. Such labeling shall in-
7 clude, at a minimum, information on lighting output
8 (lumens), input power (watts), efficiency (lumens per
9 watt), lamp rated lifetime (hours), annual or lifetime
10 energy operating cost, and any hazardous materials
11 (such as mercury) that may be contained in lamp
12 products. The Federal Trade Commission shall com-
13 plete this rulemaking within one year after the date
14 of enactment of this Act.

15 (3) NATIONAL SALES DATA TRACKING SYS-
16 TEM.—The Secretary of Energy shall develop and
17 implement within one year after the date of enact-
18 ment of this Act a national sales data tracking sys-
19 tem in conjunction with the National Electrical
20 Manufacturers Association and other stakeholders
21 for lamp technologies, including Light Emitting Di-
22 odes, halogens, incandescents, and compact fluores-
23 cent lamps.

24 (c) REPORT ON MERCURY USE AND RELEASE.—Not
25 later than 1 year after the date of enactment of this Act,

1 the Secretary of Energy, in cooperation with the Adminis-
2 trator of the Environmental Protection Agency, shall sub-
3 mit to Congress a report describing recommendations re-
4 lating to the means by which the Federal Government may
5 reduce or prevent the release of mercury during the manu-
6 facture, transportation, storage, or disposal of general
7 service lamps.

8 **SEC. 122. INCANDESCENT REFLECTOR LAMPS.**

9 (a) DEFINITIONS.—Section 321 of the Energy Policy
10 and Conservation Act (42 U.S.C. 6291) is amended—

11 (1) in paragraph (30)(C)(ii)—

12 (A) in the matter preceding subclause

13 (I)—

14 (i) by striking “or similar bulb shapes

15 (excluding ER or BR)” and inserting “ER,

16 BR, BPAR, or similar bulb shapes”; and

17 (ii) by striking “2.75” and inserting

18 “2.25”; and

19 (B) by striking “is either—” and all that

20 follows through subclause (II) and inserting

21 “has a rated wattage that is greater than 40

22 watts.”; and

23 (2) by adding at the end the following:

1 “(52) The term ‘BPAR incandescent reflector
2 lamp’ means a reflector lamp as shown in figure
3 C78.21–278 on page 32 of ANSI C78.21–2003.

4 “(53)(A) The term ‘BR incandescent reflector
5 lamp’ means a reflector lamp that has—

6 “(i) a bulged section below the major di-
7 ameter of the bulb and above the approximate
8 baseline of the bulb, as shown in figure 1 (RB)
9 on page 7 of ANSI C79.1–1994, incorporated
10 by reference in section 430.22 of title 10, Code
11 of Federal Regulations (as in effect on the date
12 of enactment of this paragraph); and

13 “(ii) a finished size and shape shown in
14 ANSI C78.21–1989, including the referenced
15 reflective characteristics in part 7 of ANSI
16 C78.21.

17 “(B) The term ‘BR30’ refers to a BR incandes-
18 cent reflector lamp with a diameter of 30/8ths of an
19 inch and the term ‘BR40’ refers to a BR incandes-
20 cent reflector lamp with a diameter of 40/8ths of an
21 inch.

22 “(54)(A) The term ‘ER incandescent reflector
23 lamp’ means a reflector lamp that has—

24 “(i) an elliptical section below the major
25 diameter of the bulb and above the approximate

1 baseline of the bulb, as shown in figure 1 (RE)
2 on page 7 of ANSI C79.1–1994, incorporated
3 by reference in section 430.22 of title 10, Code
4 of Federal Regulations (as in effect on the date
5 of enactment of this paragraph); and

6 “(ii) a finished size and shape shown in
7 ANSI C78.21–1989, incorporated by reference
8 in section 430.22 of title 10, Code of Federal
9 Regulations (as in effect on the date of enact-
10 ment of this paragraph).

11 “(B) The term ‘ER30’ refers to an ER incan-
12 descent reflector lamp with a diameter of 30/8ths of
13 an inch and the term ‘ER40’ refers to an ER incan-
14 descent reflector lamp with a diameter of 40/8ths of
15 an inch.

16 “(55) The term ‘R20 incandescent reflector
17 lamp’ means a reflector lamp that has a face diame-
18 ter of approximately 2.5 inches, as shown in figure
19 1(R) on page 7 of ANSI C79.1–1994.”.

20 (b) STANDARDS FOR FLUORESCENT LAMPS AND IN-
21 CANDESCENT REFLECTOR LAMPS.—Section 325(i) of the
22 Energy Policy and Conservation Act (42 U.S.C. 6925(i))
23 is amended by striking paragraph (1) and inserting the
24 following:

25 “(1) STANDARDS.—

1 “(A) DEFINITION OF EFFECTIVE DATE.—
 2 In this paragraph, except as specified in sub-
 3 paragraphs (C) and (D), the term ‘effective
 4 date’ means, with respect to each type of lamp
 5 specified in a table contained in subparagraph
 6 (B), the last day of the period of months cor-
 7 responding to that type of lamp, as specified in
 8 the table, that follows the date of enactment of
 9 the [short title].

10 “(B) MINIMUM STANDARDS.—Each of the
 11 following general service fluorescent lamps and
 12 incandescent reflector lamps manufactured
 13 after the effective date specified in the tables
 14 contained in this paragraph shall meet or ex-
 15 ceed the following lamp efficacy and CRI stand-
 16 ards:

“FLUORESCENT LAMPS

Lamp Type	Nominal Lamp Wattage	Minimum CRI	Minimum Average Lamp Efficacy (LPW)	Effective Date (Period of Months)
4-foot medium bi-pin	>35 W	69	75.0	36
	≤35 W	45	75.0	36
2-foot U-shaped	>35 W	69	68.0	36
	≤35 W	45	64.0	36
8-foot slimline	65 W	69	80.0	18
	≤65 W	45	80.0	18
8-foot high output	>100 W	69	80.0	18
	≤100 W	45	80.0	18

“INCANDESCENT REFLECTOR LAMPS

Nominal Lamp Wattage	Minimum Average Lamp Efficacy (LPW)	Effective Date (Period of Months)
40–50	10.5	36
51–66	11.0	36
67–85	12.5	36

“INCANDESCENT REFLECTOR LAMPS—Continued

Nominal Lamp Wattage	Minimum Average Lamp Efficacy (LPW)	Effective Date (Period of Months)
86–115	14.0	36
116–155	14.5	36
156–205	15.0	36

1 “(C) EXEMPTIONS.—The standards speci-
2 fied in subparagraph (B) shall not apply to the
3 following types of incandescent reflector lamps:

4 “(i) Lamps rated at 50 watts or less
5 of the following types: ER30, BR30,
6 BR40, and ER40 lamps.

7 “(ii) Lamps rated at 65 watts of the
8 following types: BR30, BR40, and ER40
9 lamps.

10 “(iii) R20 incandescent reflector
11 lamps of 45 watts or less.

12 “(D) EFFECTIVE DATES.—

13 “(i) ER, BR, AND BPAR LAMPS.—Ex-
14 cept as provided in subparagraph (A), the
15 standards specified in subparagraph (B)
16 shall apply with respect to ER incandes-
17 cent reflector lamps, BR incandescent re-
18 flector lamps, BPAR incandescent reflector
19 lamps, and similar bulb shapes on and
20 after January 1, 2008.

1 “(ii) LAMPS BETWEEN 2.25–2.75
2 INCHES IN DIAMETER.—The standards
3 specified in subparagraph (B) shall apply
4 with respect to incandescent reflector
5 lamps with a diameter of more than 2.25
6 inches, but not more than 2.75 inches, on
7 and after January 1, 2008.”.

8 **SEC. 123. USE OF ENERGY EFFICIENT LIGHTING FIXTURES**
9 **AND BULBS.**

10 (a) IN GENERAL.—Chapter 33 of title 40, United
11 States Code, is amended—

12 (1) by redesignating sections 3313, 3314, and
13 3315 as sections 3314, 3315, and 3316, respectively;
14 and

15 (2) by inserting after section 3312 the fol-
16 lowing:

17 **“§ 3313. Use of energy efficient lighting fixtures and**
18 **bulbs**

19 “(a) CONSTRUCTION AND ALTERATION OF PUBLIC
20 BUILDINGS.—Each public building constructed or signifi-
21 cantly altered by the Administrator of General Services
22 shall be equipped, to the maximum extent feasible as de-
23 termined by the Administrator, with lighting fixtures and
24 bulbs that are energy efficient.

1 “(b) MAINTENANCE OF PUBLIC BUILDINGS.—Each
2 lighting fixture or bulb that is replaced by the Adminis-
3 trator in the normal course of maintenance of public build-
4 ings shall be replaced, to the maximum extent feasible as
5 determined by the Administrator, with a lighting fixture
6 or bulb that is energy efficient.

7 “(c) CONSIDERATIONS.—In making a determination
8 under this section concerning the feasibility of installing
9 a lighting fixture or bulb that is energy efficient, the Ad-
10 ministrator shall consider—

11 “(1) the life cycle cost effectiveness of the fix-
12 ture or bulb;

13 “(2) the compatibility of the fixture or bulb
14 with existing equipment;

15 “(3) whether use of the fixture or bulb could re-
16 sult in interference with productivity;

17 “(4) the aesthetics relating to use of the fixture
18 or bulb; and

19 “(5) such other factors as the Administrator
20 determines appropriate.

21 “(d) ENERGY STAR.—A lighting fixture or bulb shall
22 be treated as being energy efficient for purposes of this
23 section if—

24 “(1) the fixture or bulb is certified under the
25 Energy Star program established by section 324A of

1 the Energy Policy and Conservation Act (42 U.S.C.
2 6294a);

3 “(2) in the case of all LED luminaires, lamps,
4 and systems whose efficacy (lumens per watt) and
5 Color Rendering Index (CRI) meet the requirements
6 for minimum luminaire efficacy and CRI for the En-
7 ergy Star certification, as verified by an independent
8 third-party testing laboratory that conducts its tests
9 according to the procedures and recommendations of
10 the Illuminating Engineering Society of North
11 America, even if these luminaires, lamps, and sys-
12 tems have not received such certification; or

13 “(3) the Administrator has otherwise deter-
14 mined that the fixture or bulb is energy efficient.

15 “(e) SIGNIFICANT ALTERATIONS.—A public building
16 shall be treated as being significantly altered for purposes
17 of subsection (a) if the alteration is subject to congres-
18 sional approval under section 3307.

19 “(f) EFFECTIVE DATE.—The requirements of sub-
20 sections (a) and (b) shall take effect one year after the
21 date of enactment of this subsection.”.

22 (b) CONFORMING AMENDMENT.—The analysis for
23 chapter 33 of title 40, United States Code, is amended
24 by striking the items relating to sections 3313, 3314, and
25 3315 and inserting the following:

“3313. Use of energy efficient lighting fixtures and bulbs.

“3314. Delegation.

“3315. Report to Congress.

“3316. Certain authority not affected.”.

1 **Subtitle C—Residential Building**
 2 **Efficiency**

3 **SEC. 131. ENCOURAGING STRONGER BUILDING CODES.**

4 (a) IN GENERAL.—Section 304 of the Energy Con-
 5 servation and Production Act (42 U.S.C. 6833) is amend-
 6 ed to read as follows:

7 **“SEC. 304. UPDATING STATE BUILDING ENERGY EFFI-
 8 CIENCY CODES.**

9 “(a) UPDATING NATIONAL MODEL BUILDING EN-
 10 ERGY CODES.—(1) The Secretary shall support updating
 11 the national model building energy codes and standards
 12 at least every three years to achieve overall energy savings,
 13 compared to the 2006 IECC for residential buildings and
 14 ASHRAE Standard 90.1–2004 for commercial buildings,
 15 of at least—

16 “(A) 30 percent by 2010;

17 “(B) 50 percent by 2020; and

18 “(C) targets to be set by the Secretary in inter-
 19 mediate and subsequent years, at the maximum level
 20 of energy efficiency that is technologically feasible
 21 and life-cycle cost effective.

22 “(2)(A) Whenever the provisions of the IECC or
 23 ASHRAE Standard 90.1 regarding building energy use

1 are revised, the Secretary shall, not later than 6 months
2 after the date of such revision, determine—

3 “(i) whether such revision will improve energy
4 efficiency in buildings; and

5 “(ii) whether such revision will meet the targets
6 under paragraph (1).

7 “(B) If the Secretary makes a determination under
8 subparagraph (A)(ii) that a code or standard does not
9 meet the targets under paragraph (1), or if a national
10 model code or standard is not updated for more than three
11 years, then the Secretary shall within 12 months propose
12 a modified code or standard that meets such targets. The
13 modified code or standard shall serve as the baseline for
14 the next determination under subparagraph (A)(i).

15 “(C) The Secretary shall provide the opportunity for
16 public comment on targets, determinations, and modified
17 codes and standards under this subsection, and shall pub-
18 lish notice of targets, determinations, and modified codes
19 and standards under this subsection in the Federal Reg-
20 ister.

21 “(b) STATE CERTIFICATION OF BUILDING ENERGY
22 CODE UPDATES.—(1) Not later than 2 years after the
23 date of enactment of the [short title], each State shall cer-
24 tify to the Secretary that it has reviewed and updated the
25 provisions of its residential and commercial building codes

1 regarding energy efficiency. Such certification shall in-
2 clude a demonstration that such State’s code provisions
3 meet or exceed the 2006 IECC for residential buildings
4 and the ASHRAE Standard 90.1–2004 for commercial
5 buildings, or achieve equivalent or greater energy savings.

6 “(2)(A) If the Secretary makes an affirmative deter-
7 mination under subsection (a)(2)(A)(i) or proposes a
8 modified code or standard under subsection (a)(2)(B),
9 each State shall within 2 years certify that it has reviewed
10 and updated the provisions of its building code regarding
11 energy efficiency. Such certification shall include a dem-
12 onstration that such State’s code provisions meet or ex-
13 ceed the revised code or standard, or achieve equivalent
14 or greater energy savings.

15 “(B) If the Secretary fails to make a determination
16 under subsection (a)(2)(A)(i) by the date specified in sub-
17 section (a)(2), or makes a negative determination, each
18 State shall within 2 years after the specified date or the
19 date of the determination, certify that it has reviewed the
20 revised code or standard, and updated the provisions of
21 its building code regarding energy efficiency to meet or
22 exceed any provisions found to improve energy efficiency
23 in buildings, or to achieve equivalent or greater energy
24 savings in other ways.

1 “(c) STATE CERTIFICATION OF COMPLIANCE WITH
2 BUILDING CODES.—(1) Each State shall, not later than
3 3 years after a certification under subsection (b), certify
4 that it has achieved compliance with the certified building
5 energy code. Such certification shall include documenta-
6 tion of the rate of compliance based on independent in-
7 spections of a random sample of the new and renovated
8 buildings covered by the code in the preceding year.

9 “(2) A State shall be considered to achieve compli-
10 ance under paragraph (1) if—

11 “(A) at least 90 percent of new and renovated
12 buildings covered by the code in the preceding year
13 substantially meet all the requirements of the code;
14 or

15 “(B) the estimated excess energy use of new
16 and renovated buildings that did not meet the code
17 in the preceding year, compared to a baseline of
18 comparable buildings that meet the code, is not more
19 than 10 percent of the estimated energy use of all
20 new and renovated buildings covered by the code in
21 the preceding year.

22 “(d) FAILURE TO MEET DEADLINES.—(1) The Sec-
23 retary shall permit extensions of the deadlines for the cer-
24 tification requirements under subsections (b) and (c) of
25 this section for up to 1 year if a State can demonstrate

1 that it has made a good faith effort to comply with such
2 requirements and that it has made significant progress in
3 doing so.

4 “(2) Any State for which the Secretary has not ac-
5 cepted a certification by a deadline under subsection (b)
6 or (c) of this section, with any extension granted under
7 paragraph (1), is out of compliance with this section.

8 “(3) In any State that is out of compliance with this
9 section, a local government may be in compliance with this
10 section by meeting the certification requirements under
11 subsections (b) and (c) of this section.

12 “(e) TECHNICAL ASSISTANCE.—(1) The Secretary
13 shall provide technical assistance, including building en-
14 ergy analysis and design tools, building demonstrations,
15 and design assistance and training to enable the national
16 model building energy codes and standards to meet the
17 targets in subsection (a)(1).

18 “(2) The Secretary shall provide technical assistance
19 to States to implement the requirements of this section,
20 including procedures for States to demonstrate that their
21 code provisions achieve equivalent or greater energy sav-
22 ings than the national model codes and standards, and to
23 improve and implement State residential and commercial
24 building energy efficiency codes or to otherwise promote
25 the design and construction of energy efficient buildings.

1 “(f) AVAILABILITY OF INCENTIVE FUNDING.—(1)
2 The Secretary shall provide incentive funding to States to
3 implement the requirements of this section, and to im-
4 prove and implement State residential and commercial
5 building energy efficiency codes, including increasing and
6 verifying compliance with such codes. In determining
7 whether, and in what amount, to provide incentive funding
8 under this subsection, the Secretary shall consider the ac-
9 tions proposed by the State to implement the requirements
10 of this section, to improve and implement residential and
11 commercial building energy efficiency codes, and to pro-
12 mote building energy efficiency through the use of such
13 codes.

14 “(2) Additional funding shall be provided under this
15 subsection for implementation of a plan to achieve and
16 document at least a 90 percent rate of compliance with
17 residential and commercial building energy efficiency
18 codes, based on energy performance—

19 “(A) to a State that has adopted and is imple-
20 menting, on a Statewide basis—

21 “(i) a residential building energy efficiency
22 code that meets or exceeds the requirements of
23 the 2006 IECC, or any succeeding version of
24 that code that has received an affirmative de-

1 termination from the Secretary under sub-
2 section (a)(2)(A)(i); and

3 “(ii) a commercial building energy effi-
4 ciency code that meets or exceeds the require-
5 ments of the ASHRAE Standard 90.1–2004, or
6 any succeeding version of that standard that
7 has received an affirmative determination from
8 the Secretary under subsection (a)(2)(A)(i); or

9 “(B) in a State in which there is no Statewide
10 energy code either for residential buildings or for
11 commercial buildings, or where State codes fail to
12 comply with subparagraph (A), to a local govern-
13 ment that has adopted and is implementing residen-
14 tial and commercial building energy efficiency codes,
15 as described in subparagraph (A).

16 “(3) Of the amounts made available under this sub-
17 section, the Secretary may use amounts required, not ex-
18 ceeding \$500,000 for each State, to train State and local
19 officials to implement codes described in paragraph (2).

20 “(4)(A) There are authorized to be appropriated to
21 carry out this subsection—

22 “(i) \$25,000,000 for each of fiscal years 2008
23 through 2012; and

24 “(ii) such sums as are necessary for fiscal year
25 2013 and each fiscal year thereafter.

1 “(B) Funding provided to States under paragraph
2 (2) for each fiscal year shall not exceed one-half of the
3 excess of funding under this subsection over \$5,000,000
4 for the fiscal year.”.

5 (b) DEFINITION.—Section 303 of the Energy Con-
6 servation and Production Act (42 U.S.C. 6832) is amend-
7 ed by adding at the end the following new paragraph:

8 “(17) The term ‘IECC’ means the International
9 Energy Conservation Code.”.

10 **SEC. 132. ENERGY CODE IMPROVEMENTS APPLICABLE TO**
11 **MANUFACTURED HOUSING.**

12 (a) IN GENERAL.—Not later than 4 years after the
13 date of enactment of this Act, the Secretary of Energy
14 shall by regulation establish standards for energy effi-
15 ciency in manufactured housing.

16 (b) CERTAIN REQUIREMENTS.—The regulations
17 under subsection (a) shall be in accordance with the fol-
18 lowing:

19 (1) The energy conservation standards estab-
20 lished under this subsection shall be based on the
21 most recent version of the International Energy
22 Conservation Code (including supplements) except
23 where the Secretary finds that such code is not cost-
24 effective, or a more stringent standard would be

1 more cost-effective, based on total life-cycle con-
2 struction and operating costs.

3 (2) The energy conservation standards estab-
4 lished under this subsection may—

5 (A) take into consideration the design and
6 factory construction techniques of manufac-
7 tured homes;

8 (B) be based on the climate zones estab-
9 lished by the Department of Housing and
10 Urban Development rather than those under
11 the International Energy Conservation Code;
12 and

13 (C) provide for alternative practices that
14 result in net estimated energy consumption
15 equal to or less than the specified standards.

16 (3) The energy conservation standards estab-
17 lished under this subsection shall be updated within
18 one year after the date of enactment of this Act and
19 within one year after any revision to the Inter-
20 national Energy Conservation Code.

21 (c) ENFORCEMENT.—Any manufacturer of manufac-
22 tured housing that violates a provision of the regulations
23 under subsection (a) is liable to the United States for a
24 civil penalty in an amount not exceeding 1 percent of the

1 manufacturer’s retail list price of the manufactured hous-
2 ing.

3 **SEC. 133. BASELINE BUILDING DESIGNS.**

4 Section 327(f)(3)(D) of the Energy Policy and Con-
5 servation Act (42 U.S.C. 6297(f)(3)(D)) is amended to
6 read as follows:

7 “(D) If the code uses one or more baseline
8 building designs against which all submitted building
9 designs are to be evaluated and such baseline build-
10 ing designs contain a covered product subject to an
11 energy conservation standard established in or pre-
12 scribed under section 325, the baseline building de-
13 signs are based on the efficiency level for such cov-
14 ered product which—

15 “(i) meets but does not exceed such stand-
16 ard;

17 “(ii) is the efficiency level required by a
18 regulation of that State for which the Secretary
19 has issued a rule granting a waiver under sub-
20 section (d) of this section; or

21 “(iii) is a level that, when evaluated in the
22 baseline building design, the State has found to
23 be feasible and cost-effective.”.

1 **SEC. 134. REAUTHORIZATION OF WEATHERIZATION ASSIST-**
2 **ANCE PROGRAM.**

3 (a) AMENDMENT.—Section 422 of the Energy Con-
4 servation and Production Act (42 U.S.C. 6872) is amend-
5 ed by striking “\$500,000,000 for fiscal year 2006,
6 \$600,000,000 for fiscal year 2007, and \$700,000,000 for
7 fiscal year 2008” and inserting “\$600,000,000 for fiscal
8 year 2007, and \$750,000,000 for each of fiscal years
9 2008, 2009, 2010, 2011, and 2012. From those sums, the
10 Secretary is authorized to initiate an Alternative Delivery
11 System Pilot Project to examine options for decreasing en-
12 ergy consumption associated with heating and cooling
13 while increasing household participation by focusing on
14 key energy saving components. Alternative Delivery Sys-
15 tem Pilot Projects should be undertaken in both hot and
16 cold urban areas”.

17 (b) SUSTAINABLE ENERGY RESOURCES FOR CON-
18 SUMERS GRANTS.—(1) The Secretary of Energy may
19 make funding available to local Weatherization agencies
20 from amounts authorized under the amendment made by
21 subsection (a) to expand the weatherization assistance
22 program for residential buildings to include materials,
23 benefits, and renewable and domestic energy technologies
24 not currently covered by the program, provided that the
25 State Weatherization grantee has certified that the appli-
26 cant has the capacity to carry out the proposed activities

1 and that the grantee will include the project in its finan-
2 cial oversight of the Weatherization Assistance program.

3 (2) In selecting the grants, the program shall give
4 priority to—

5 (A) the expected effectiveness and benefits of
6 the proposed project to low- and moderate-income
7 energy consumers;

8 (B) the potential for replication of successful
9 results;

10 (C) the impact on the health and safety and en-
11 ergy costs of those served; and

12 (D) the extent of partnerships with other public
13 and private entities that contribute to the resources
14 and implementation of the program, including finan-
15 cial partnerships.

16 (3) Funding for such projects may equal up to two
17 percent of funding in any fiscal year, provided that no
18 funding is utilized for Sustainable Energy Resources for
19 Consumers grants in any fiscal year in which Weatheriza-
20 tion appropriations are less than \$275,000,000.

21 **Subtitle D—Commercial and**
22 **Federal Building Efficiency**

23 **SEC. 141. DEFINITIONS.**

24 In this subtitle:

1 (1) CONSORTIUM.—The term “Consortium”
2 means the Green Building Partnership Consortium
3 created in response to section 142(c)(1) to represent
4 the private sector in a Public-Private Partnership to
5 promote high-performance green buildings and zero-
6 net-energy commercial buildings.

7 (2) DIRECTOR.—The term “Director” means
8 the individual appointed to the position established
9 under section 142(b).

10 (3) FEDERAL FACILITY.—

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

15 (i) accessible to the public; and

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

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

22 (4) HIGH-PERFORMANCE GREEN BUILDING.—
23 The term “high-performance green building” means
24 a building that, during its life-cycle—

1 (A) reduces energy, water, and material re-
2 source use, and in the case of a new or ren-
3 ovated Federal building, meets or exceeds the
4 standards under section 305(a)(3) of the En-
5 ergy Conservation and Production Act (42
6 U.S.C. 6834(a)(3));

7 (B) improves indoor environmental quality
8 including, reducing indoor pollution, improving
9 thermal comfort, and improving lighting and
10 acoustic environments that affect occupant
11 health and productivity;

12 (C) reduces negative impacts on the envi-
13 ronment throughout the life-cycle of the build-
14 ing, including air and water pollution and waste
15 generation;

16 (D) increases the use of environmentally
17 preferable products, including biobased, recycled
18 content, and nontoxic products with lower life-
19 cycle impacts;

20 (E) increases reuse and recycling opportu-
21 nities;

22 (F) integrates systems in the building;

23 (G) reduces the environmental and energy
24 impacts of transportation through building loca-
25 tion and site design that support a full range

1 of transportation choices for users of the build-
2 ing; and

3 (H) considers indoor and outdoor effects of
4 the building on human health and the environ-
5 ment, including—

6 (i) improvements in worker produc-
7 tivity;

8 (ii) the life-cycle impacts of building
9 materials and operations; and

10 (iii) other factors that the Office con-
11 siders to be appropriate.

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

21 (6) LIFE-CYCLE ASSESSMENT.—The term “life-
22 cycle assessment” means a comprehensive system
23 approach for measuring the environmental perform-
24 ance of a product or service over the life of the prod-
25 uct or service, beginning at raw materials acquisition

1 and continuing through manufacturing, transpor-
2 tation, installation, use, reuse, and end-of-life waste
3 management.

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

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

13 (B) is expressed—

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

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

22 (8) OFFICE.—The term “Office” means the Of-
23 fice of High-Performance Green Buildings estab-
24 lished under section 142(a).

1 (9) PRACTICES.—The term “practices” mean
2 design, financing, permitting, construction, commis-
3 sioning, operation and maintenance, and other prac-
4 tices that contribute to achieving zero-net-energy
5 commercial buildings.

6 (10) SECRETARY.—The term “Secretary”
7 means the Secretary of Energy.

8 (11) ZERO-NET-ENERGY.—The term “zero-net-
9 energy commercial building” means a commercial
10 building that is designed, constructed, and operated
11 to—

12 (A) require a greatly reduced quantity of
13 energy to operate;

14 (B) meet the balance of energy needs from
15 sources of energy that do not produce green-
16 house gases;

17 (C) therefore result in no net emissions of
18 greenhouse gases; and

19 (D) be economically viable.

20 **SEC. 142. HIGH-PERFORMANCE GREEN BUILDINGS.**

21 (a) ESTABLISHMENT OF OFFICE.—Not later than 60
22 days after the date of enactment of this Act, the Secretary
23 shall establish within the Office of Energy Efficiency and
24 Renewable Energy an Office of High-Performance Green
25 Buildings.

1 (b) DIRECTOR.—

2 (1) APPOINTMENT.—The Secretary shall ap-
3 point an individual to serve as Director, a position
4 in the career-reserved Senior Executive service, to
5 carry out duties as required under this subtitle.

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

13 (3) DUTIES.—The Director shall, with respect
14 to Federal facilities—

15 (A) identify and biennially reassess im-
16 proved or higher rating standards;

17 (B) identify and develop green building
18 standards that could be used for all types of
19 Federal facilities;

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

22 (D) review and analyze current Federal
23 budget practices and life-cycle costing issues,
24 and make recommendations to Congress, in ac-
25 cordance with section 145;

1 (E) identify within the planning, budg-
2 eting, and construction process all types of Fed-
3 eral facility procedures that inhibit new and ex-
4 isting Federal facilities from becoming high-per-
5 formance green buildings;

6 (F) identify inconsistencies in Federal law
7 with respect to product acquisition guidelines
8 for energy efficient and environmentally pref-
9 erable products;

10 (G) recommend actions to improve compli-
11 ance by Federal agencies with standards for en-
12 vironmentally responsible acquisition;

13 (H) in coordination with the Office of
14 Management and Budget, review the budget
15 process for capital programs with respect to al-
16 ternatives for—

17 (i) restructuring of budgets to require
18 the use of complete energy- and environ-
19 mental-cost accounting;

20 (ii) using operations expenditures in
21 budget-related decisions while simulta-
22 neously incorporating productivity and
23 health measures (as those measures can be
24 quantified by the Office, with the assist-

1 ance of universities and national labora-
2 tories);

3 (iii) permitting Federal agencies to re-
4 tain all identified savings accrued as a re-
5 sult of the use of life-cycle costing for fu-
6 ture high-performance green building ini-
7 tiatives; and

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

12 (I) identify green, self-sustaining tech-
13 nologies to address the operational needs of
14 Federal facilities in times of national security
15 emergencies, natural disasters, or other dire
16 emergencies;

17 (J) in consultation with the Environmental
18 Protection Agency, develop and implement a
19 comprehensive indoor air quality program for
20 all Federal facilities to ensure the safety of
21 Federal workers and facility occupants—

22 (i) during new construction and ren-
23 ovation of facilities; and

24 (ii) in existing facilities;

1 (K) implement the zero-energy commercial
2 buildings initiative under section 143; and

3 (L) perform such other functions as are
4 assigned under this subtitle.

5 (4) DUTIES.—The Director shall, with respect
6 to development of high performance green buildings
7 and zero-energy commercial buildings throughout
8 the economy—

9 (A) develop the legal predicates and agree-
10 ments for, negotiate, and establish one or more
11 public-private partnerships with the Consor-
12 tium, members of the Consortium, and other
13 capable counterparties meeting the qualifica-
14 tions of the Consortium, to further such devel-
15 opment;

16 (B) represent the public and the Depart-
17 ment of Energy in negotiating and performing
18 in accord with such public-private partnerships;
19 and

20 (C) use appropriated funds in an effective
21 manner to encourage the maximum investment
22 of private funds to achieve such development.

23 (5) REPORTING.—The Director shall report di-
24 rectly to the Assistant Secretary for Energy Effi-
25 ciency and Renewable Energy, or to other senior of-

1 officials in a way that facilitates the integrated pro-
2 gram of this subtitle for both energy efficiency and
3 renewable energy and both technology development
4 and technology deployment.

5 (6) COORDINATION.—The Director shall ensure
6 full coordination of high-performance green building
7 information and activities, including activities under
8 this subtitle, within the Federal Government by
9 working with the General Services Administration
10 and all relevant agencies, including, at a minimum—

11 (A) the Environmental Protection Agency;

12 (B) the Office of the Federal Environ-
13 mental Executive;

14 (C) the Office of Federal Procurement Pol-
15 icy;

16 (D) the Department of Energy, particu-
17 larly the Federal Energy Management Pro-
18 gram;

19 (E) the Department of Health and Human
20 Services;

21 (F) the Department of Housing and Urban
22 Development;

23 (G) the Department of Defense;

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

1 (I) such nonprofit green building rating
2 and analysis entities as the Director determines
3 can offer support, expertise, and review serv-
4 ices.

5 (c) GREEN BUILDING PARTNERSHIP CONSORTIUM.—

6 (1) RECOGNITION.—Not later than 90 days
7 after the date of enactment of this Act, the Director
8 shall formally recognize one or more groups that
9 qualify as a green building partnership consortium.

10 (2) REPRESENTATION TO QUALIFY.—To qualify
11 under this section, any consortium shall include rep-
12 resentation from—

13 (A) the design professions, including na-
14 tional associations of architects and of profes-
15 sional engineers;

16 (B) the development, construction, finan-
17 cial, and real estate industries;

18 (C) building owners and operators from
19 the public and private sectors;

20 (D) academic and research organizations,
21 including at least one national laboratory with
22 extensive commercial building energy expertise;

23 (E) building code agencies and organiza-
24 tions, including a model energy code-setting or-
25 ganization;

1 (F) independent green building associa-
2 tions or councils;

3 (G) experts in indoor air quality and envi-
4 ronmental factors;

5 (H) experts in intelligent buildings and in-
6 tegrated building information systems;

7 (I) utility energy efficiency programs; and

8 (J) nongovernmental energy efficiency or-
9 ganizations.

10 (3) FUNDING.—The Secretary may make pay-
11 ments to the Consortium pursuant to the terms of
12 a public-private partnership for such activities of the
13 Consortium undertaken under such a partnership as
14 described in this subtitle directly to the Consortium
15 or through one or more of its members.

16 (d) REPORT.—Not later than 2 years after the date
17 of enactment of this Act, and biennially thereafter, the Di-
18 rector, in consultation with the Consortium, shall submit
19 to Congress a report that—

20 (1) describes the status of the green building
21 initiatives under this subtitle and other Federal pro-
22 grams in effect as of the date of the report, includ-
23 ing—

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

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

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

11 (3) includes, for the 2-year period covered by
12 the report, recommendations to address each of the
13 matters, and a plan for implementation of each rec-
14 ommendation, described in paragraph (1) of this
15 subsection and subparagraphs (E) through (I) of
16 subsection (b)(3).

17 **SEC. 143. ZERO-ENERGY COMMERCIAL BUILDINGS INITIA-**
18 **TIVE.**

19 (a) GOAL.—The Director, in partnership with the
20 Consortium, shall periodically study and refine a national
21 goal to reduce commercial building energy use and achieve
22 zero-net-energy commercial buildings. Unless the Director
23 concludes that such targets are unachievable or unreal-
24 istic, the goal shall include objectives that—

1 (1) all new commercial buildings constructed
2 after the beginning of 2025 are zero-net-energy com-
3 mercial buildings;

4 (2) by 2035, 50 percent of the then existing
5 stock of commercial buildings that were constructed
6 before 2025 are zero-net-energy commercial build-
7 ings; and

8 (3) by 2050, all commercial buildings are zero-
9 net-energy commercial buildings.

10 (b) STRATEGY.—

11 (1) IN GENERAL.—The Director, in partnership
12 with the Consortium, shall develop a market trans-
13 formation strategy intended to achieve the adopted
14 goal by significantly accelerating the development
15 and widespread deployment of energy efficiency tech-
16 nologies, practices, and policies in both new and ex-
17 isting commercial buildings, and by leveraging State,
18 utility, and private sector commercial building en-
19 ergy efficiency programs.

20 (2) FEDERAL COMPLIANCE WITH GOAL.—The
21 Director, in partnership with the Consortium, shall
22 further identify and adopt a strategy leading to zero-
23 net-energy performance for all Federal buildings in
24 accordance with the adopted goal.

1 (c) INITIATIVE.—The Director, in partnership with
2 the Consortium, shall implement an initiative to carry out
3 the strategy that may include—

4 (1) support for industry efforts to develop ad-
5 vanced materials, equipment, controls, practices, and
6 integrated building systems aimed at achieving zero-
7 net-energy commercial buildings and monitoring and
8 benchmarking commercial building energy use;

9 (2) training, education, and awareness pro-
10 grams, including—

11 (A) programs in cooperation with industry
12 and professional associations and educational
13 institutions to provide education on achieving
14 sustainable and energy-efficient performance
15 through proper system and structure design,
16 construction, and operation to—

17 (i) architects;

18 (ii) mechanical, electrical, and plumb-
19 ing engineers;

20 (iii) contractors; and

21 (iv) construction managers and facil-
22 ity managers;

23 (B) programs to incorporate energy effi-
24 ciency and sustainability elements into architec-
25 ture, engineering, and vocational training and

1 certification curricula, including professional
2 certification and continuing education pro-
3 grams; and

4 (C) regional and national public education
5 campaigns to educate real estate, finance, and
6 other commercial buildings professionals and
7 the general public about the opportunities for
8 energy and cost savings and associated environ-
9 mental and health benefits associated with high
10 performance green buildings;

11 (3) pilot projects to demonstrate and document
12 the performance of scalable and replicable tech-
13 nologies, practices, and policies to achieve high-per-
14 formance green buildings and zero-net-energy com-
15 mercial buildings, including—

16 (A) pilot projects representing each market
17 segment or building type in each climate region
18 that include current best practice in integrated
19 design, technology and systems, construction,
20 commissioning, operation, and building infor-
21 mation management;

22 (B) pilot projects, in cooperation with
23 State and local governments, in public build-
24 ings; and

1 (C) pilot projects, in cooperation with pub-
2 lic school districts and colleges and universities,
3 to—

4 (i) demonstrate such technologies and
5 practices in new and existing facilities;

6 (ii) involve students and faculty mem-
7 bers in integrating energy efficiency and
8 green building concepts and measures
9 within the educational curriculum; and

10 (iii) use education facilities as show-
11 cases to communicate these concepts to the
12 community;

13 (4) technical assistance and funding of pilot
14 projects for the development and use of new building
15 energy design standards, model designs, model en-
16 ergy codes, and incentives and other policies, to be
17 provided to designers, builders, developers, commer-
18 cial building owners, and utility and government en-
19 ergy efficiency programs, including—

20 (A) support for code and standards organi-
21 zations to develop aggressive model energy
22 codes, beyond-code guidelines, and code compli-
23 ance programs for new and existing buildings;

24 (B) assistance to utilities, builders, and
25 State and local officials in developing, imple-

1 menting, and evaluating pilot programs to
2 achieve building design and actual energy per-
3 formance that meet and exceed performance
4 levels in the model energy codes; and

5 (C) support for development and dissemi-
6 nation of model programs and policies that pro-
7 vide incentives for high performance green
8 buildings, such as accelerated zoning and con-
9 struction permitting and inspections, density
10 bonuses, and State and local tax incentives;

11 (5) technical assistance and funding of pilot
12 projects for innovative market-based initiatives to
13 advance energy-efficient technologies and practices
14 in new and existing commercial buildings, provided
15 to State agencies, utilities, and other entities, includ-
16 ing—

17 (A) design assistance and incentives for in-
18 corporating sustainability and energy efficiency
19 beginning with the first stages of building de-
20 sign and continuing through start-up commis-
21 sioning and long-term operation;

22 (B) performance-based design and con-
23 struction fees for high performance green con-
24 struction and renovation;

1 (C) equipment leasing and financing strat-
2 egies for energy efficiency upgrades of new and
3 replacement commercial building equipment;

4 (D) trade-in programs for early retirement
5 of low-efficiency commercial building equipment
6 and system components, such as motors, air
7 conditioners, boilers, lighting, and windows;

8 (E) improved methods of energy perform-
9 ance contracting to reduce transaction costs
10 and encourage the use of third-party funding
11 and expertise for energy-efficient retrofitting of
12 existing commercial buildings;

13 (F) improved model protocols for commer-
14 cial building energy audits, energy performance
15 measurement and verification, continuous com-
16 missioning, and ongoing performance moni-
17 toring and diagnostics; and

18 (G) strategies to reduce barriers to energy
19 efficiency investment by addressing split incen-
20 tives between commercial building owners and
21 tenants;

22 (6) development, dissemination, technical assist-
23 ance, and pilot project activities to improve the prac-
24 tice of monitoring, benchmarking, and disclosure of

1 actual commercial building energy performance and
2 operating costs, including—

3 (A) improved methods of measuring and
4 compiling energy performance data on a statis-
5 tically significant share of commercial new con-
6 struction, renovation, and energy retrofit
7 projects;

8 (B) development and dissemination of en-
9 ergy performance metrics for the commercial
10 building stock and for important subcategories
11 of commercial buildings;

12 (C) improved methods of providing energy
13 performance feedback to commercial building
14 owners, operators, and occupants, including
15 real-time feedback and comparisons to perform-
16 ance goals, past performance, and similar build-
17 ings;

18 (D) voluntary programs at the national, re-
19 gional, and sectoral levels to recognize and re-
20 ward commercial buildings with exceptional per-
21 formance or performance improvement; and

22 (E) increased availability and use of tools
23 for post occupancy assessment of energy effi-
24 ciency and occupant satisfaction with commer-
25 cial high performance green buildings, and for

1 measuring and documenting non-energy finan-
2 cial and other benefits of such buildings;

3 (7) in cooperation with the Energy Information
4 Administration and with utility, State, and private
5 sector organizations, development and application of
6 improved methods for assessing trends in the energy
7 performance of the commercial buildings stock, new
8 construction, and building renovations, by building
9 type and region, in order to track progress toward
10 the goals adopted under subsection (a); and

11 (8) such otherwise authorized activities that the
12 Secretary and the Director determine are necessary
13 to the success of the initiative.

14 **SEC. 144. PUBLIC OUTREACH.**

15 The Director, in coordination with the Consortium,
16 shall carry out public outreach to inform individuals and
17 entities of the information and services available Govern-
18 mentwide by—

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

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

24 (B) provides information relating to high-
25 performance green buildings, including

1 hyperlinks to internet sites that describe the ac-
2 tivities, information, and 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) international organizations;

9 (2) identifying and recommending educational
10 resources for implementing high-performance green
11 building practices, including security and emergency
12 benefits and practices;

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

20 (4) providing information on application proc-
21 esses for certifying a high-performance green build-
22 ing, including certification 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 high-
2 performance green buildings;

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

5 (7) surveying existing research and studies re-
6 lating to high-performance green buildings;

7 (8) coordinating activities of common interest;

8 (9) developing and recommending a high-per-
9 formance green building practices that—

10 (A) identify information and research
11 needs, including the relationships between
12 health, occupant productivity, and each of—

13 (i) pollutant emissions from materials
14 and products in the building;

15 (ii) natural day lighting;

16 (iii) ventilation choices and tech-
17 nologies;

18 (iv) heating, cooling, and system con-
19 trol choices and technologies;

20 (v) moisture control and mold;

21 (vi) maintenance, cleaning, and pest
22 control activities;

23 (vii) acoustics; and

1 (viii) other issues relating to the
2 health, comfort, productivity, and perform-
3 ance of occupants of the building; and

4 (B) promote the development and dissemi-
5 nation of high-performance green building
6 measurement tools that, at a minimum, may be
7 used—

8 (i) to monitor and assess the life-cycle
9 performance of facilities (including dem-
10 onstration projects) built as high-perform-
11 ance green buildings; and

12 (ii) to perform life-cycle assessments;

13 (10) assisting the budget and life-cycle costing
14 functions of the Office under section 145;

15 (11) studying and identifying potential benefits
16 of green buildings relating to security, natural dis-
17 aster, and emergency needs of the Federal Govern-
18 ment; and

19 (12) supporting other research initiatives deter-
20 mined by the Office.

21 **SEC. 145. BUDGET AND LIFE-CYCLE COSTING AND CON-**
22 **TRACTING.**

23 The Director, in coordination with the Consortium,
24 shall—

1 (1) identify, review, and analyze current budget
2 and contracting practices that affect achievement of
3 high-performance green buildings, including the
4 identification of barriers to green building life-cycle
5 costing and budgetary issues;

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

10 (3) identify tools to aid life-cycle cost decision-
11 making; and

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

16 **SEC. 146. INCENTIVES.**

17 As soon as practicable after the date of enactment
18 of this Act, the Director shall identify incentives to encour-
19 age the use of green buildings and related technology in
20 the operations of the Federal Government, including
21 through—

22 (1) the provision of recognition awards; and

23 (2) the maximum feasible retention of financial
24 savings in the annual budgets of Federal agencies

1 for use in reinvesting in future green building initia-
2 tives.

3 **SEC. 147. FEDERAL PROCUREMENT.**

4 (a) IN GENERAL.—Not later than 2 years after the
5 date of enactment of this Act, the Director of the Office
6 of Federal Procurement Policy, in consultation with the
7 Director and the Under Secretary of Defense for Acquisi-
8 tion, Technology, and Logistics, shall promulgate revisions
9 of the applicable acquisition regulations, to take effect as
10 of the date of promulgation of the revisions—

11 (1) to direct any Federal procurement execu-
12 tives involved in the acquisition, construction, or
13 major renovation (including contracting for the con-
14 struction or major renovation) of any facility—

15 (A) to employ integrated design principles;

16 (B) to improve site selection for environ-
17 mental and community benefits;

18 (C) to optimize building and systems en-
19 ergy performance;

20 (D) to protect and conserve water;

21 (E) to enhance indoor environmental qual-
22 ity; and

23 (F) to reduce environmental impacts of
24 materials and waste flows; and

1 (2) to direct Federal procurement executives in-
2 volved in leasing buildings, to give preference to the
3 lease of facilities that—

4 (A) are energy-efficient; and

5 (B) to the maximum extent practicable,
6 have applied contemporary high-performance
7 and sustainable design principles during con-
8 struction or renovation.

9 (b) GUIDANCE.—Not later than 90 days after the
10 date of promulgation of the revised regulations under sub-
11 section (a), the Director of the Office of Procurement Pol-
12 icy shall issue guidance to all Federal procurement execu-
13 tives providing direction and instructions to renegotiate
14 the design of proposed facilities, renovations for existing
15 facilities, and leased facilities to incorporate improvements
16 that are consistent with this section.

17 **SEC. 148. USE OF ENERGY AND WATER EFFICIENCY MEAS-**
18 **URES IN FEDERAL BUILDINGS.**

19 Section 543 of the National Energy Conservation
20 Policy Act (42 U.S.C. 8253) is amended by adding at the
21 end the following:

22 “(f) USE OF ENERGY AND WATER EFFICIENCY
23 MEASURES IN FEDERAL BUILDINGS.—

24 “(1) FACILITY ENERGY MANAGERS.—

1 “(A) IN GENERAL.—Each Federal agency
2 shall designate a manager responsible for imple-
3 menting this subsection and reducing energy
4 use at each building or facility that meets cri-
5 teria under subparagraph (B).

6 “(B) COVERED FACILITIES.—The Sec-
7 retary shall develop criteria, after consultation
8 with affected agencies, energy efficiency advo-
9 cates, and energy and utility service providers,
10 that cover buildings and facilities, including
11 central utility plants and distribution systems
12 and other energy intensive operations, com-
13 prising at least two-thirds of total Federal
14 building and facility energy use.

15 “(2) ENERGY AND WATER EVALUATIONS AND
16 COMMISSIONING.—

17 “(A) EVALUATIONS.—Not later than 18
18 months after the date of enactment of this sub-
19 section, and every 5 years thereafter, each en-
20 ergy manager shall complete a comprehensive
21 energy and water evaluation for each building
22 or facility that meets criteria under paragraph
23 (1)(B).

24 “(B) RECOMMISSIONING AND RETRO-
25 FITTING.—As part of the evaluation under sub-

1 paragraph (A) or on the same schedule the en-
2 ergy manager shall recommission and retrofit
3 each such building and facility if applicable.

4 “(3) IMPLEMENTATION OF IDENTIFIED ENERGY
5 AND WATER EFFICIENCY MEASURES.—

6 “(A) IN GENERAL.—Not later than 2 years
7 after the completion of each evaluation under
8 paragraph (1), each energy manager—

9 “(i) shall fully implement each energy
10 and water-saving measure identified in the
11 evaluation conducted under paragraph (2)
12 that is life-cycle cost-effective and has a
13 12-year or shorter simple payback period;

14 “(ii) may implement any energy or
15 water-saving measure that the Federal
16 agency identified in the evaluation con-
17 ducted under paragraph (1) that is life-
18 cycle cost-effective and has longer than a
19 12-year simple payback period; and

20 “(iii) may bundle individual measures
21 of varying paybacks together into combined
22 projects.

23 “(B) PAYBACK PERIOD.—For the purpose
24 of subparagraph (A), the simple payback period
25 of a measure shall be obtained by dividing—

1 “(i) the estimated initial implementa-
2 tion cost of the measure (other than fi-
3 nancing costs); by

4 “(ii) the annual cost savings from the
5 measure.

6 “(C) COST SAVINGS.—For the purpose of
7 subparagraph (B), cost savings shall include net
8 savings in estimated—

9 “(i) energy and water costs; and

10 “(ii) operations, maintenance, repair,
11 replacement, and other direct costs.

12 “(D) EXCEPTIONS.—The Secretary may
13 modify or make exceptions to the calculation of
14 a 12-year simple payback under this paragraph
15 in the guidelines issued by the Secretary under
16 paragraph (5).

17 “(E) LIFE-CYCLE COST-EFFECTIVE.—For
18 the purpose of subparagraph (A), determination
19 of whether a measure is life-cycle cost-effective
20 shall use methods and procedures developed
21 pursuant to section 544.

22 “(4) FOLLOW-UP ON IMPLEMENTED MEAS-
23 URES.—For each measure implemented under para-
24 graph (3), each energy manager shall ensure that—

1 “(A) equipment, including building and
2 equipment controls, is fully commissioned at ac-
3 ceptance to be operating at design specifica-
4 tions;

5 “(B) a plan for appropriate operations,
6 maintenance, and repair of the equipment is in
7 place at acceptance and is followed;

8 “(C) equipment and system performance is
9 measured during its entire life to ensure proper
10 operations, maintenance, and repair; and

11 “(D) energy and water savings are meas-
12 ured and verified.

13 “(5) GUIDELINES.—

14 “(A) IN GENERAL.—The Secretary shall
15 issue guidelines and necessary criteria that each
16 Federal agency shall follow for implementation
17 of—

18 “(i) paragraphs (1) and (2) not later
19 than 180 days after the date of enactment
20 of this subsection; and

21 “(ii) paragraphs (3) and (4) not later
22 than 1 year after the date of enactment of
23 this subsection.

24 “(B) RELATIONSHIP TO FUNDING
25 SOURCE.—The guidelines issued by the Sec-

1 retary under subparagraph (A) shall be appro-
2 priate and uniform for measures funded with
3 each type of funding made available under
4 paragraph (9), but may distinguish between dif-
5 ferent types of measures project size, and other
6 criteria the Secretary determines are relevant.

7 “(6) WEB-BASED CERTIFICATION.—

8 “(A) IN GENERAL.—For each building or
9 facility that meets the criteria established by
10 the Secretary under paragraph (1), the energy
11 manager shall use the web-based tracking sys-
12 tem under subparagraph (B) to certify compli-
13 ance with the requirements for—

14 “(i) energy and water evaluations and
15 recommissioning and retrofitting under
16 paragraph (2);

17 “(ii) implementation of identified en-
18 ergy and water measures under paragraph
19 (3); and

20 “(iii) follow-up on implemented meas-
21 ures under paragraph (4).

22 “(B) DEPLOYMENT.—

23 “(i) IN GENERAL.—Not later than 1
24 year after the date of enactment of this
25 subsection, the Secretary shall develop and

1 deploy the web-based tracking system re-
2 quired under this paragraph in a manner
3 that tracks, at a minimum—

4 “(I) the covered buildings and fa-
5 cilities;

6 “(II) the status of meeting the
7 requirements specified in subpara-
8 graph (A);

9 “(III) the estimated cost and
10 savings for measures required to be
11 implemented in a building or facility;
12 and

13 “(IV) the measured savings and
14 persistence of savings for implemented
15 measures.

16 “(ii) EASE OF COMPLIANCE.—The
17 Secretary shall ensure that energy man-
18 ager compliance with the requirements in
19 this paragraph, to the greatest extent prac-
20 ticable, can be accomplished with the use
21 of streamlined procedures, and templates
22 that minimize the time demands on Fed-
23 eral employees.

24 “(C) AVAILABILITY.—

1 “(i) IN GENERAL.—Subject to clause
2 (ii), the Secretary shall make the web-
3 based tracking system required under this
4 paragraph available to Congress, other
5 Federal agencies, and the public through
6 the Internet.

7 “(ii) EXEMPTIONS.—At the request of
8 a Federal agency, the Secretary may ex-
9 empt specific data for specific buildings
10 from disclosure under clause (i) for na-
11 tional security purposes.

12 “(7) BENCHMARKING OF FEDERAL FACILI-
13 TIES.—

14 “(A) IN GENERAL.—The energy manager
15 shall enter energy use data for each building or
16 facility that meets the criteria established by
17 the Secretary under paragraph (1) into a build-
18 ing energy use benchmarking system, such as
19 the Energy Star Portfolio Manager.

20 “(B) SYSTEM AND GUIDANCE.—Not later
21 than 1 year after the date of enactment of this
22 subsection, the Secretary shall—

23 “(i) select or develop the building en-
24 ergy use benchmarking system required

1 under this paragraph for each type of
2 building; and

3 “(ii) issue guidance for use of the sys-
4 tem.

5 “(8) FEDERAL AGENCY SCORECARDS.—

6 “(A) IN GENERAL.—The Director of the
7 Office of Management and Budget shall issue
8 semiannual scorecards for energy management
9 activities carried out by each Federal agency
10 that includes—

11 “(i) summaries of the status of imple-
12 menting the various requirements of the
13 agency and its energy managers under this
14 subsection; and

15 “(ii) any other means of measuring
16 performance that the Director considers
17 appropriate.

18 “(B) AVAILABILITY.—The Director shall
19 make the scorecards required under this para-
20 graph available to Congress, other Federal
21 agencies, and the public through the Internet.

22 “(9) FUNDING AND IMPLEMENTATION.—

23 “(A) AUTHORIZATION OF APPROPRIA-
24 TIONS.—There are authorized to be appro-

1 appropriated such sums as are necessary to carry out
2 this subsection.

3 “(B) FUNDING OPTIONS.—

4 “(i) IN GENERAL.—To carry out this
5 subsection, a Federal agency may use any
6 combination of—

7 “(I) appropriated funds made
8 available under subparagraph (A);
9 and

10 “(II) private financing, including
11 financing available through energy
12 savings performance contracts or util-
13 ity energy service contracts.

14 “(ii) COMBINED FUNDING FOR SAME
15 MEASURE.—A Federal agency may use any
16 combination of appropriated funds and pri-
17 vate financing described in clause (i) to
18 carry out the same measure under this
19 subsection, with proportional allocation for
20 any energy and water savings.

21 “(iii) LACK OF APPROPRIATED
22 FUNDS.—Since measures may be carried
23 out using private financing described in
24 clause (i), a lack of available appropria-
25 tions shall not be considered a sufficient

1 reason for the failure of a Federal agency
2 to comply with this subsection.

3 “(C) IMPLEMENTATION.—Each Federal
4 agency may implement the requirements under
5 this subsection itself or may contract out per-
6 formance of some or all of the requirements.

7 “(10) RULE OF CONSTRUCTION.—This sub-
8 section shall not be construed either to require or to
9 obviate any contractor savings guarantees.”.

10 **SEC. 149. DEMONSTRATION PROJECT.**

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

14 (b) PROJECTS.—In accordance with guidelines estab-
15 lished by the Director under subsection (a) and the duties
16 of the Director described in this subtitle, the Director shall
17 carry out—

18 (1) for each of fiscal years 2009 through 2014,
19 1 demonstration project in a Federal building se-
20 lected by the Director in accordance with relevant
21 agencies and described in subsection (c)(1), that—

22 (A) provides for the evaluation of the in-
23 formation obtained through the conduct of
24 projects and activities under this subtitle; and

1 (B) achieves the highest rating offered by
2 an existing high-performance green building
3 rating system that is developed through a con-
4 sensus-based process, provides minimum re-
5 quirements in all performance categories, re-
6 quires substantiating documentation and
7 verifiable calculations, employs third-party post-
8 construction review and verification, and is na-
9 tionally recognized within the building industry;
10 (2) no fewer than 4 demonstration projects at
11 4 universities, that, as competitively selected by the
12 director in accordance with subsection (c)(2), have—

13 (A) appropriate research resources and rel-
14 evant projects to meet the goals of the dem-
15 onstration project established by the Office; and

16 (B) the ability—

17 (i) to serve as a model for high-per-
18 formance green building initiatives, includ-
19 ing research and education;

20 (ii) to identify the most effective ways
21 o use high-performance green building and
22 landscape technologies to engage and edu-
23 cate undergraduate and graduate students;

1 (iii) to effectively implement a high-
2 performance green building education pro-
3 gram for students and occupants;

4 (iv) to demonstrate the effectiveness
5 of various high-performance technologies in
6 each of the 4 climatic regions of the
7 United States described in subsection
8 (c)(2)(B); and

9 (v) to explore quantifiable and non-
10 quantifiable beneficial impacts on public
11 health and employee and student perform-
12 ance;

13 (3) demonstration projects to evaluate
14 replicable approaches to achieving various types of
15 commercial buildings in various climates; and

16 (4) deployment activities to disseminate infor-
17 mation on and encourage widespread adoption of
18 technologies, practices, and policies to achieve zero-
19 net-energy commercial buildings or low energy use
20 and effective monitoring of energy use in commercial
21 buildings.

22 (c) CRITERIA.—

23 (1) FEDERAL FACILITIES.—With respect to the
24 existing or proposed Federal facility at which a dem-

1 onstration project under this section is conducted,
2 the Federal facility shall—

3 (A) be an appropriate model for a project
4 relating to—

5 (i) the effectiveness of high-perform-
6 ance technologies;

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

13 (iii) life-cycle costing and life-cycle as-
14 sessment of building materials and sys-
15 tems; and

16 (iv) location and design that promote
17 access to the Federal facility through walk-
18 ing, biking, and mass transit; and

19 (B) possess sufficient technological and or-
20 ganizational adaptability.

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

24 (A) the universities should be selected,
25 after careful review of all applications received

1 containing the required information, as deter-
2 mined by the Director, based on—

3 (i) successful and established public-
4 private research and development partner-
5 ships;

6 (ii) demonstrated capabilities to con-
7 struct or renovate buildings that meet high
8 indoor environmental quality standards;

9 (iii) organizational flexibility;

10 (iv) technological adaptability;

11 (v) the demonstrated capacity of at
12 least 1 university to replicate lessons
13 learned among nearby or sister univer-
14 sities, preferably by participation in groups
15 or consortia that promote sustainability;

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

20 (vii) the demonstrated capacity of at
21 least 1 university to have been recognized
22 by similar institutions as a national leader
23 in sustainability education and curriculum
24 for students of the university; and

1 (B) each university shall be located in a
2 different climatic region of the United States,
3 each of which regions shall have, as determined
4 by the Office—

5 (i) a hot, dry climate;

6 (ii) a hot, humid climate;

7 (iii) a cold climate; or

8 (iv) a temperate climate (including a
9 climate with cold winters and humid sum-
10 mers).

11 (d) REPORT.—Not later than 1 year after the date
12 of enactment of this Act, and annually thereafter through
13 September 30, 2014—

14 (1) the Director shall submit to the Secretary
15 a report that describes the status of the demonstra-
16 tion projects; and

17 (2) each University at which a demonstration
18 project under this section is conducted shall submit
19 to the Secretary a report that describes the status
20 of the demonstration projects under this section.

21 **SEC. 150. ENERGY EFFICIENCY FOR DATA CENTER BUILD-**
22 **INGS.**

23 (a) IN GENERAL.—

24 (1) Not later than 90 days after the date of en-
25 actment of this Act, the Secretary of Energy and

1 Administrator of the Environmental Protection
2 Agency shall jointly, after consulting with informa-
3 tion technology industry and other interested par-
4 ties, initiate a voluntary national information pro-
5 gram for those types of data centers and data center
6 equipment and facilities that are widely used and for
7 which there is a potential for significant data center
8 energy savings as a result of such program.

9 (2) Such program shall—

10 (A) consistent with the objectives of para-
11 graph (1), determine the type of data center
12 and data center equipment and facilities to be
13 covered under such program; and

14 (B) include specifications, measurements,
15 and benchmarks that will enable data center op-
16 erators to make more informed decisions about
17 the energy efficiency and costs of data centers,
18 and that—

19 (i) reflect the total energy consump-
20 tion of data centers, including both equip-
21 ment and facilities, taking into account—

22 (I) the performance and utiliza-
23 tion of servers, data storage devices,
24 and other information technology
25 equipment;

- 1 (II) the efficiency of heating,
2 ventilation, and air conditioning, cool-
3 ing, and power conditioning systems;
- 4 (III) energy savings from the
5 adoption of software and data man-
6 agement techniques; and
- 7 (IV) other factors determined by
8 the organization described in sub-
9 section (b);
- 10 (ii) allow for creation of separate
11 specifications, measurements, and bench-
12 marks based on data center size and func-
13 tion, as well as other appropriate charac-
14 teristics determined by the organization
15 described in subsection (b);
- 16 (iii) advance the design and imple-
17 mentation of efficiency technologies to the
18 maximum extent economically practical;
19 and
- 20 (iv) provide to data center operators
21 in the private sector and the Federal Gov-
22 ernment information about best practices
23 and purchasing decisions that reduce the
24 energy consumption of data centers;

1 (C) publish the information described in
2 subparagraph (B), which may be disseminated
3 through catalogs, trade publications, the Inter-
4 net, or other mechanisms, that will allow data
5 center operators to assess the energy consump-
6 tion and potential cost savings of alternative
7 data centers and data center equipment and fa-
8 cilities; and

9 (D) not later than 1 year after the date of
10 enactment of this Act, and thereafter on an on-
11 going basis, transmit the information described
12 in subparagraph (B) to the Secretary and the
13 Administrator.

14 (3) Such program shall be developed and co-
15 ordinated by the data center efficiency organization
16 described in subsection (b) according to commonly
17 accepted procedures for the development of specifica-
18 tions, measurements, and benchmarks.

19 (b) DATA CENTER EFFICIENCY ORGANIZATION.—
20 Upon creation of the program under subsection (a), the
21 Secretary and the Administrator shall jointly designate an
22 information technology industry organization to coordi-
23 nate the program. Such organization, whether preexisting
24 or formed specifically for the purposes of subsection (a),
25 shall—

1 (1) consist of interested parties that have exper-
2 tise in energy efficiency and in the development, op-
3 eration, and functionality of computer data centers,
4 information technology equipment, and software, as
5 well as representatives of hardware manufacturers,
6 data center operators, and facility managers;

7 (2) obtain and address input from Department
8 of Energy National Laboratories or any college, uni-
9 versity, research institution, industry association,
10 company, or public interest group with applicable ex-
11 pertise in any of the areas listed in paragraph (1)
12 of this subsection;

13 (3) follow commonly accepted procedures for
14 the development of specifications and accredited
15 standards development processes;

16 (4) have a mission to develop and promote en-
17 ergy efficiency for data centers and information
18 technology; and

19 (5) have the primary responsibility to oversee
20 the development and publishing of the information,
21 measurements, and benchmarks described in sub-
22 section (a) and transmission of such information to
23 the Secretary and the Administrator for their adop-
24 tion under subsection (c).

1 (c) ADOPTION OF SPECIFICATIONS.—The Secretary
2 and the Administrator shall jointly, in accordance with the
3 requirements of section 12(d) of the National Technology
4 Transfer Advancement Act of 1995, adopt and publish the
5 specifications, measurements, and benchmarks described
6 in subsection (a) for use by the Federal Energy Manage-
7 ment Program and the Energy Star program as energy
8 efficiency requirements for the purposes of those pro-
9 grams.

10 (d) MONITORING.—The Secretary and the Adminis-
11 trator shall jointly monitor and evaluate the efforts to de-
12 velop the program described in subsection (a) and, not
13 later than 3 years after the date of enactment of this Act,
14 shall make a determination as to whether such program
15 is consistent with the objectives of subsection (a).

16 (e) ALTERNATIVE SYSTEM.—If the Secretary and the
17 Administrator make a determination under subsection (d)
18 that a voluntary national information program for data
19 centers consistent with the objectives of subsection (a) has
20 not been developed, the Secretary and the Administrator
21 shall jointly, after consultation with the National Institute
22 of Standards and Technology, develop, not later than 2
23 years after such determination, and implement the pro-
24 gram under subsection (a).

1 (f) PROTECTION OF PROPRIETARY INFORMATION.—
2 The Secretary, the Administrator, or the data center effi-
3 ciency organization shall not disclose any proprietary in-
4 formation or trade secrets provided by any individual or
5 company for the purposes of carrying out this program.

6 (g) DEFINITIONS.—For purposes of this section:

7 (1) The term “data center” means any facility
8 that primarily contains electronic equipment used to
9 process, store, and transmit digital information,
10 which may be—

11 (A) a free-standing structure; or

12 (B) a facility within a larger structure,
13 that utilizes environmental control equipment to
14 maintain the proper conditions for the oper-
15 ation of electronic equipment.

16 (2) The term “data center operator” means any
17 person or government entity that builds or operates
18 a data center or purchases data center services,
19 equipment, and facilities.

20 **SEC. 151. AUTHORIZATION OF APPROPRIATIONS.**

21 (a) IN GENERAL.—In addition to amounts authorized
22 under subsections (b), (c), and (d), there are authorized
23 to be appropriated to carry out this subtitle—

24 (1) \$10,000,000 for fiscal year 2008; and

1 (2) \$20,000,000 for each of the fiscal years
2 2009 through 2014, to remain available until ex-
3 pended.

4 (b) ZERO-ENERGY COMMERCIAL BUILDINGS INITIA-
5 TIVE.—There are authorized to be appropriated to carry
6 out the initiative described in section 143—

7 (1) \$20,000,000 for fiscal year 2008;

8 (2) \$50,000,000 for each of fiscal years 2009
9 and 2010;

10 (3) \$100,000,000 for each of fiscal years 2011
11 and 2012; and

12 (4) \$200,000,000 for each of fiscal years 2013
13 through 2050.

14 (c) DEMONSTRATION PROJECTS.—

15 (1) FEDERAL DEMONSTRATION PROJECT.—

16 There are authorized to be appropriated to carry out
17 the Federal demonstration project described in sec-
18 tion 149(b)(1) \$10,000,000 for the period of fiscal
19 years 2009 through 2014, to remain available until
20 expended.

21 (2) UNIVERSITY DEMONSTRATION PROJECTS.—

22 There are authorized to be appropriated to carry out
23 the university demonstration projects described in
24 section 149(b)(2) \$10,000,000 for the period of fis-

1 cal years 2009 through 2014, to remain available
2 until expended.

3 (d) ENERGY EFFICIENCY FOR DATA CENTER BUILD-
4 INGS.—There are authorized to be appropriated to each
5 of the Secretary and the Administrator for carrying out
6 section 150 \$250,000 for each of the fiscal years 2008
7 through 2012.

8 **SEC. 152. STUDY AND REPORT ON USE OF POWER MANAGE-**
9 **MENT SOFTWARE.**

10 (a) STUDY.—The Secretary of Energy, through the
11 Federal Energy Management Program, shall conduct a
12 study on the use of power management software by the
13 Department of Energy and Federal facilities to reduce the
14 use of electricity in computer monitors and personal com-
15 puters.

16 (b) REPORT.—Not later than 60 days after the date
17 of enactment of the Act, the Secretary shall submit to
18 Congress a report containing the results of the study
19 under subsection (a), including a description of the rec-
20 ommendations developed under the study. The Secretary
21 and the Federal Energy Management Program are en-
22 couraged to draw upon similar studies and efforts by other
23 Federal entities on power management software.

1 **Subtitle E—Industrial Energy**
2 **Efficiency**

3 **SEC. 161. INDUSTRIAL ENERGY EFFICIENCY.**

4 (a) AMENDMENT.—Title III of the Energy Conserva-
5 tion and Policy Act (42 U.S.C. 6201 and following) is
6 amended by adding the following after part D:

7 **“PART E—INDUSTRIAL ENERGY EFFICIENCY**

8 **“SEC. 371. SURVEY OF WASTE INDUSTRIAL ENERGY RECOV-**
9 **ERY AND POTENTIAL USE.**

10 “Congress finds that—

11 “(1) the Nation should encourage the use of
12 otherwise wasted energy and the development of
13 combined heat and power and other waste energy re-
14 covery projects where there is wasted thermal energy
15 in large volumes at potentially useful temperatures;

16 “(2) such projects would increase energy effi-
17 ciency and lower pollution by generating power with
18 no incremental fossil fuel consumption;

19 “(3) because recovered waste energy and com-
20 bined heat and power projects are associated with
21 end-uses of thermal energy and electricity at the
22 local level, they help avoid new transmission lines,
23 reduce line losses, reduce local air pollutant emis-
24 sions, and reduce vulnerability to extreme weather
25 and terrorism; and

1 “(4) States, localities, electric utilities, and
2 other electricity customers may benefit from private
3 investments in recovered waste energy and combined
4 heat and power projects at industrial and commer-
5 cial sites by avoiding generation, transmission and
6 distribution expenses, and transmission line loss ex-
7 penses that may otherwise be required to be recov-
8 ered from ratepayers.

9 **“SEC. 372. DEFINITIONS.**

10 “For purposes of this Part:

11 “(1) The term ‘Administrator’ means the Ad-
12 ministrator of the Environmental Protection Agency.

13 “(2) The term ‘waste energy’ means—

14 “(A) exhaust heat and flared gases from
15 any industrial process;

16 “(B) waste gas or industrial tail gas that
17 would otherwise be flared, incinerated or vent-
18 ed;

19 “(C) a pressure drop in any gas, excluding
20 any pressure drop to a condenser that subse-
21 quently vents the resulting heat; and

22 “(D) such other forms of waste energy as
23 the Administrator may identify.

24 “(3) The term ‘recoverable waste energy’ means
25 waste energy from which electricity or useful ther-

1 mal energy may be recovered through modification
2 of existing facilities or addition of new facilities.

3 “(4) The term ‘net excess power’ means, for
4 any facility, recoverable waste energy recovered in
5 the form of electricity in amounts exceeding the total
6 consumption of electricity at the specific time of gen-
7 eration on the site where the facility is located.

8 “(5) The term ‘useful thermal energy’ is energy
9 in the forms of direct heat, steam, hot water, or
10 other thermal forms that is used in production and
11 beneficial measures for heating, cooling, humidity
12 control, process use, or other valid thermal end-use
13 energy requirements, and for which fuel or elec-
14 tricity would otherwise be consumed.

15 “(6) The term ‘combined heat and power sys-
16 tem’ means a facility—

17 “(A) that simultaneously and efficiently
18 produces useful thermal energy and electricity;
19 and

20 “(B) that recovers not less than 60 percent
21 of the energy value in the fuel (on a lower-heat-
22 ing-value basis) in the form of useful thermal
23 energy and electricity.

24 “(7) The terms ‘electric utility’, ‘State regu-
25 lated electric utility’, ‘nonregulated electric utility’

1 and other terms used in this Part have the same
2 meanings as when such terms are used in title I of
3 the Public Utility Regulatory Policies Act of 1978
4 (relating to retail regulatory policies for electric utili-
5 ties).

6 **“SEC. 373. SURVEY AND REGISTRY.**

7 “(a) RECOVERABLE WASTE-ENERGY INVENTORY
8 PROGRAM.—The Administrator, in cooperation with State
9 energy offices, shall establish a Recoverable Waste-Energy
10 Inventory Program. The program shall include an ongoing
11 survey of all major industrial and large commercial com-
12 bustion sources in the United States and the sites where
13 these are located, together with a review of each for quan-
14 tity and quality of waste energy.

15 “(b) CRITERIA.—The Administrator shall, within 120
16 days after the enactment of this section, develop and pub-
17 lish proposed criteria subject to notice and comment, and
18 within 270 days of enactment, establish final criteria, to
19 identify and designate those sources and sites in the inven-
20 tory under subsection (a) where recoverable waste energy
21 projects or combined heat and power system projects may
22 have economic feasibility with a payback of invested costs
23 within 5 years or less from the date of first full project
24 operation (including incentives offered under this Part).
25 Such criteria will include standards that insure that

1 projects proposed for inclusion in the Registry are not de-
2 veloped for the primary purpose of making sales of excess
3 electric power under the regulatory treatment provided
4 under this Part.

5 “(c) TECHNICAL SUPPORT.—The Administrator shall
6 provide to owners or operators of combustion sources tech-
7 nical support and offer partial funding (up to one-half of
8 total costs) for feasibility studies to confirm whether or
9 not investment in recovery of waste energy or combined
10 heat and power at that source would offer a payback pe-
11 riod of 5 years or less.

12 “(d) REGISTRY.—(1) The Administrator shall, within
13 one year after the enactment of this section, establish a
14 Registry of Recoverable Waste-energy Sources, and sites
15 on which those sources are located, which meet the criteria
16 set forth under subsection (b). The Administrator shall
17 update the Registry on not less than a monthly basis, and
18 make the Registry accessible to the public on the Environ-
19 mental Protection Agency web site. Any State or electric
20 utility may contest the listing of any source or site by sub-
21 mitting a petition to the Administrator.

22 “(2) The Administrator shall register and include on
23 the Registry all sites meeting the criteria of subsection (b).
24 The Administrator shall calculate the total amounts of po-
25 tentially recoverable waste energy from sources at such

1 sites, nationally and by State, and shall make such totals
2 public, together with information on the air pollutant and
3 greenhouse gas emissions savings that might be achieved
4 with recovery of the waste energy from all sources and
5 sites listed in the Registry.

6 “(3) The Administrator shall notify owners or opera-
7 tors of Recoverable Waste-Energy Sources and sites listed
8 in the Registry prior to publishing the listing. The owner
9 or operator of sources at such sites may elect to have de-
10 tailed quantitative information concerning that site not
11 made public by notifying the Administrator of that elec-
12 tion. Information concerning that site shall be included in
13 State totals unless there are fewer than 3 sites in the
14 State.

15 “(4) As waste energy projects achieve successful re-
16 covery of waste energy, the Administrator shall remove the
17 related sites or sources from the Registry, and shall des-
18 ignate the removed projects as eligible for the incentive
19 provisions provided under this Part and the regulatory
20 treatment required by this Part. No project shall be re-
21 moved from the Registry without the consent of the owner
22 or operator of the project if the owner or operator has
23 submitted a petition under section 375 and such petition
24 has not been acted upon or denied.

1 “(5) The Administrator shall not list any source con-
2 structed after the date of the enactment of this Part on
3 the Registry if the Administrator determines that such
4 source—

5 “(A) was developed for the primary purpose of
6 making sales of excess electric power under the reg-
7 ulatory treatment provided under this Part; or

8 “(B) does not capture at least 60 percent of the
9 total energy value of the fuels used (on a lower-heat-
10 ing-value basis) in the form of useful thermal en-
11 ergy, electricity, mechanical energy, chemical output,
12 or some combination of them.

13 “(e) SELF-CERTIFICATION.—Owners, operators, or
14 third-party developers of industrial waste-energy projects
15 that qualify under standards established by the Adminis-
16 trator may self-certify their sites or sources to the Admin-
17 istrator for inclusion in the Registry, subject to procedures
18 adopted by the Administrator. To prevent a fraudulent
19 listing, the sources shall be included on the Registry only
20 if the Administrator confirms the submitted data, at the
21 Administrator’s discretion.

22 “(f) NEW FACILITIES.—As a new energy-consuming
23 industrial facility is developed after the enactment of this
24 Part, to the extent it may constitute a site with recover-
25 able waste energy that may qualify for the Registry, the

1 Administrator may elect to include it in the Registry at
2 the request of its owner or operator or developer on a con-
3 ditional basis, removing the site if its development ceases
4 or it if fails to qualify for listing under this Part.

5 “(g) OPTIMUM MEANS OF RECOVERY.—For each site
6 listed in the Registry, at the request of the owner or oper-
7 ator of the site, the Administrator shall offer, in coopera-
8 tion with Clean Energy Application Centers operated by
9 the Secretary of Energy, suggestions of optimum means
10 of recovery of value from waste energy stream in the form
11 of electricity, useful thermal energy, or other energy-re-
12 lated products.

13 “(h) REVISION.—Each annual State report under
14 section 548(a) of the National Energy Conservation Policy
15 Act shall include the results of the survey for that State
16 under this section.

17 “(i) AUTHORIZATION.—There are authorized to be
18 appropriated to the Administrator for the purposes of cre-
19 ating and maintaining the Registry and services author-
20 ized by this section not more than \$1,000,000 for each
21 of fiscal years 2008, 2009, 2010, 2010, and 2012 and not
22 more than \$5,000,000 to the States to provide funding
23 for State energy office functions under this section .

1 **“SEC. 374. WASTE ENERGY RECOVERY INCENTIVE GRANT**
2 **PROGRAM.**

3 “(a) ESTABLISHMENT OF PROGRAM.—There is es-
4 tablished in the Environmental Protection Agency a Waste
5 Energy Recovery Incentive Grant Program to provide in-
6 centive grants to owners and operators of projects that
7 successfully produce electricity or incremental useful ther-
8 mal energy from waste energy recovery (and to utilities
9 purchasing or distributing such electricity) and to reward
10 States that have achieved 80 percent or more of identified
11 waste-heat recovery opportunities.

12 “(b) GRANTS TO PROJECTS AND UTILITIES.—

13 “(1) IN GENERAL.—The Administrator shall
14 make grants to the owners or operators of waste en-
15 ergy recovery projects, and, in the case of excess
16 power purchased or transmitted by a electric utility,
17 to such utility. Grants may only be made upon re-
18 ceipt of proof of waste energy recovery or excess
19 electricity generation, or both, from the project in a
20 form prescribed by the Administrator, by rule.

21 “(2) EXCESS ELECTRIC ENERGY.—In the case
22 of waste energy recovery, the grants under this sec-
23 tion shall be made at the rate of \$10 per megawatt
24 hour of documented electricity produced from recov-
25 ered waste energy (or by prevention of waste energy
26 in the case of a new facility) by the project during

1 the first 3 calendar years of such production, begin-
2 ning on or after the date of enactment of this Part.
3 If the project produces net excess power and an elec-
4 tric utility purchases or transmits the excess power,
5 50 percent of so much of such grant as is attrib-
6 utable to the net excess power shall be paid to the
7 electric utility purchasing or transporting the net ex-
8 cess power.

9 “(3) USEFUL THERMAL ENERGY.—In the case
10 of waste energy recovery that produces useful ther-
11 mal energy that is used for a purpose different from
12 that for which the project is principally designed, the
13 grants under this section shall be made to the owner
14 or operator of the waste energy recovery project at
15 the rate of \$10 for each 3,412,000 Btus of such ex-
16 cess thermal energy used for such different purpose.

17 “(c) GRANTS TO STATES.—In the case of States that
18 have achieved 80 percent or more of waste-heat recovery
19 opportunities identified by the Administrator under this
20 Part, the Administrator shall make grants to the States
21 of up to \$1,000 per Megawatt of waste-heat capacity re-
22 covered (or its thermal equivalent) to support State-level
23 programs to identify and achieve additional energy effi-
24 ciency.

1 “(d) ELIGIBILITY.—The Administrator shall estab-
2 lish rules and guidelines to establish eligibility for grants,
3 shall make the grant program known to those listed in
4 the Registry, and shall offer such grants on the basis of
5 the merits of each project in recovering or preventing
6 waste energy throughout the United States on an impar-
7 tial, objective, and not unduly discriminatory basis.

8 “(e) AUTHORIZATION.—(1) There is authorized to be
9 appropriated to the Administrator \$100,000,000 for fiscal
10 year 2008, and \$200,000,000 for each of fiscal years
11 2009, 2010, 2011, and 2012 for grants under subsection
12 (b) of this section, and such additional amounts during
13 those years and thereafter as may be necessary for admin-
14 istration of the Waste Energy Recovery Incentive Grant
15 Program.

16 “(2) There is authorized to be appropriated to the
17 Administrator not more than \$10,000,000 for each of the
18 first five fiscal years after the enactment of this Part, to
19 be available until expended for purposes of grants to
20 States under subsection (c).

21 **“SEC. 375. ADDITIONAL INCENTIVES FOR RECOVERY, UTILI-**
22 **ZATION AND PREVENTION OF INDUSTRIAL**
23 **WASTE ENERGY.**

24 “(a) CONSIDERATION OF STANDARD.—Not later
25 than 180 days after the receipt by a State regulatory au-

1 thority (with respect to each electric utility for which it
2 has ratemaking authority), or nonregulated electric utility,
3 of a request from a project sponsor or owner or operator,
4 the State regulatory authority or nonregulated electric
5 utility shall provide public notice and conduct a hearing
6 respecting the standard established by subsection (b) and,
7 on the basis of such hearing, shall consider and make a
8 determination whether or not it is appropriate to imple-
9 ment such standard to carry out the purposes of this Part.
10 For purposes of any such determination and any review
11 of such determination in any court the purposes of this
12 section supplement otherwise applicable State law. Noth-
13 ing in this Part prohibits any State regulatory authority
14 or nonregulated electric utility from making any deter-
15 mination that it is not appropriate to adopt any such
16 standard, pursuant to its authority under otherwise appli-
17 cable State law.

18 “(b) STANDARD FOR SALES OF EXCESS POWER.—
19 For purposes of this section, the standard referred to in
20 subsection (a) shall provide that an owner or operator of
21 a waste energy recovery project identified on the Registry
22 who generates net excess power shall be eligible to benefit
23 from at least one of the options described in subsection
24 (c) for disposal of the net excess power in accordance with

1 the rate conditions and limitations described in subsection
2 (d).

3 “(c) OPTIONS.—The options referred to in subsection
4 (b) are as follows:

5 “(1) SALE OF NET EXCESS POWER TO UTIL-
6 ITY.—The electric utility shall purchase the net ex-
7 cess power from the owner or operator of the eligible
8 waste-energy recovery project during the operation
9 of the project under a contract entered into for that
10 purpose.

11 “(2) TRANSPORT BY UTILITY FOR DIRECT SALE
12 TO THIRD PARTY.—The electric utility shall transmit
13 the net excess power on behalf of the project owner
14 or operator to up to three separate locations on that
15 utility’s system for direct sale by that owner or oper-
16 ator to third parties at such locations.

17 “(3) TRANSPORT OVER PRIVATE TRANSMISSION
18 LINES.—The State and the electric utility shall per-
19 mit, and shall waive or modify such laws as would
20 otherwise prohibit, the construction and operation of
21 private electric wires constructed, owned and oper-
22 ated by the project owner or operator, to transport
23 such power to up to 3 purchasers within a 3-mile ra-
24 dius of the project, allowing such wires to utilize or
25 cross public rights-of-way, without subjecting the

1 project to regulation as a public utility, and accord-
2 ing such wires the same treatment for safety, zon-
3 ing, land-use and other legal privileges as apply or
4 would apply to the utility's own wires, except that—

5 “(A) there shall be no grant of any power
6 of eminent domain to take or cross private
7 property for such wires, and

8 “(B) such wires shall be physically seg-
9 regated and not interconnected with any portion
10 of the utility's system, except on the customer's
11 side of the utility's revenue meter and in a
12 manner that precludes any possible export of
13 such electricity onto the utility system, or dis-
14 ruption of such system.

15 “(4) AGREED UPON ALTERNATIVES.—The util-
16 ity and the owner or operator of the project may
17 reach agreement on any alternate arrangement and
18 its associated payments or rates that is mutually
19 satisfactory and in accord with State law.

20 “(d) RATE CONDITIONS AND CRITERIA.—

21 “(1) IN GENERAL.—The options described in
22 paragraphs (1) and (2) in subsection (c) shall be of-
23 fered under purchase and transport rate conditions
24 reflecting the rate components defined under para-
25 graph (2) of this subsection as applicable under the

1 circumstances described in paragraph (3) of this
2 subsection.

3 “(2) RATE COMPONENTS.—For purposes of this
4 section:

5 “(A) PER UNIT DISTRIBUTION COSTS.—
6 The term ‘per unit distribution costs’ means the
7 utility’s depreciated book-value distribution sys-
8 tem costs divided by the previous year’s volume
9 of utility electricity sales or transmission at the
10 distribution level in kilowatt hours.

11 “(B) PER UNIT DISTRIBUTION MARGIN.—
12 The term ‘per unit distribution margin’ means:

13 “(i) In the case of a State regulated
14 electric utility, a per-unit gross pretax
15 profit determined by multiplying the util-
16 ity’s State-approved percentage rate of re-
17 turn for distribution system assets by the
18 per unit distribution costs.

19 “(ii) In the case of an nonregulated
20 utility, a per unit contribution to net reve-
21 nues determined by dividing the amount of
22 any net revenue payment or contribution
23 to the nonregulated utility’s owners or sub-
24 scribers in the prior year by the utility’s
25 gross revenues for the prior year to obtain

1 a percentage (but not less than 10 percent)
2 and multiplying that percentage by the per
3 unit distribution costs.

4 “(C) PER UNIT TRANSMISSION COSTS.—
5 The term ‘per unit transmission costs’ means
6 the total cost of those transmission services
7 purchased or provided by a utility on a per-kilo-
8 watt-hour basis as included in that utility’s re-
9 tail rate.

10 “(3) APPLICABLE RATES.—

11 “(A) RATES APPLICABLE TO SALE OF NET
12 EXCESS POWER.—Sales made by a project
13 owner or operator under the option described in
14 subsection (c) (1) shall be paid for on a per kil-
15 owatt hour basis that shall equal the full
16 undiscounted retail rate paid to the utility for
17 power purchased by such a facility minus per
18 unit distribution costs, as applicable to the type
19 of utility purchasing the power. If the net ex-
20 cess power is made available for purchase at
21 voltages that must be transformed to or from
22 voltages exceeding 25 kilovolts to be available
23 for resale by the utility, then the purchase price
24 shall further be reduced by per unit trans-
25 mission costs.

1 “(B) RATES APPLICABLE TO TRANSPORT
2 BY UTILITY FOR DIRECT SALE TO THIRD PAR-
3 TIES.—Transportation by utilities of power on
4 behalf of the owner or operator of a project
5 under the option described in subsection (c)(2)
6 shall incur a transportation rate equal to the
7 per unit distribution costs and per unit dis-
8 tribution margin, as applicable to the type of
9 utility transporting the power. If the net excess
10 power is made available for transportation at
11 voltages that must be transformed to or from
12 voltages exceeding 25 kilovolts to be trans-
13 ported to the designated third-party purchasers,
14 then the transport rate shall further be in-
15 creased by per unit transmission costs. In
16 States with competitive retail markets for elec-
17 tricity, the applicable transportation rate for
18 similar transportation shall be applied in lieu of
19 any rate calculated under this paragraph.

20 “(4) LIMITATIONS.—(A) Any rate established
21 for sale or transportation under this section shall be
22 modified over time with changes in the electric util-
23 ity’s underlying costs or rates, and shall reflect the
24 same time-sensitivity and billing periods as are es-

1 established in the retail sales or transportation rates
2 offered by the utility.

3 “(B) No utility shall be required to purchase or
4 transport an amount of net excess power under this
5 section that exceeds the available capacity of the
6 wires, meter, or other equipment of the electric util-
7 ity serving the site unless the owner or operator of
8 the project agrees to pay necessary and reasonable
9 upgrade costs.

10 “(e) PROCEDURAL REQUIREMENTS FOR CONSIDER-
11 ATION AND DETERMINATION.—(1) The consideration re-
12 ferred to in subsection (b) shall be made after public no-
13 tice and hearing. The determination referred to in sub-
14 section (b) shall be—

15 “(A) in writing,

16 “(B) based upon findings included in such de-
17 termination and upon the evidence presented at the
18 hearing, and

19 “(C) available to the public.

20 “(2) The Administrator may intervene as a matter
21 of right in a proceeding conducted under this section and
22 may calculate the energy and emissions likely to be saved
23 by electing to adopt one or more of the options, as well
24 as the costs and benefits to ratepayers and the utility and
25 to advocate for the waste-energy recovery opportunity.

1 “(3) Except as otherwise provided in paragraph (1),
2 and paragraph (2), the procedures for the consideration
3 and determination referred to in subsection (a) shall be
4 those established by the State regulatory authority or the
5 nonregulated electric utility. In the instance that there is
6 more than one project seeking such consideration simulta-
7 neously in connection with the same utility, such pro-
8 ceeding may encompass all such projects, provided that
9 full attention is paid to their individual circumstances and
10 merits, and an individual judgment is reached with respect
11 to each project.

12 “(f) IMPLEMENTATION.—(1) The State regulatory
13 authority (with respect to each electric utility for which
14 it has ratemaking authority) or nonregulated electric util-
15 ity may, to the extent consistent with otherwise applicable
16 State law—

17 “(A) implement the standard determined under
18 this section, or

19 “(B) decline to implement any such standard.

20 “(2) If a State regulatory authority (with respect to
21 each electric utility for which it has ratemaking authority)
22 or nonregulated electric utility declines to implement any
23 standard established by this section, such authority or
24 nonregulated electric utility shall state in writing the rea-
25 sons therefor. Such statement of reasons shall be available

1 to the public, and the Administrator shall include the
2 project in an annual report to Congress concerning lost
3 opportunities for waste-heat recovery, specifically identi-
4 fying the utility and stating the amount of lost energy and
5 emissions savings calculated. If a State regulatory author-
6 ity (with respect to each electric utility for which it has
7 ratemaking authority) or nonregulated electric utility de-
8 clines to implement the standard established by this sec-
9 tion, the project sponsor may submit a new petition under
10 this section with respect to such project at any time after
11 24 months after the date on which the State regulatory
12 authority or nonregulated utility has declined to imple-
13 ment such standard.

14 **“SEC. 376. CLEAN ENERGY APPLICATION CENTERS.**

15 “(a) PURPOSE.—The purpose of this section is to re-
16 name and provide for the continued operation of the
17 United States Department of Energy’s Regional Com-
18 bined Heat and Power (CHP) Application Centers.

19 “(b) FINDINGS.—The Congress finds the Depart-
20 ment of Energy’s Regional Combined Heat and Power
21 (CHP) Application Centers program has produced signifi-
22 cant energy savings and climate change benefits and will
23 continue to do so through the deployment of clean energy
24 technologies such as Combined Heat and Power (CHP),

1 recycled waste energy and biomass energy systems, in the
2 industrial and commercial energy markets.

3 “(c) RENAMING.—The Combined Heat and Power
4 Application Centers at the Department of Energy are
5 hereby be redesignated as Clean Energy Application Cen-
6 ters. Any reference in any law, rule or regulation or publi-
7 cation to the Combined Heat and Power Application Cen-
8 ters shall be treated as a reference to the Clean Energy
9 Application Centers.

10 “(d) RELOCATION.—In order to better coordinate ef-
11 forts with the separate Industrial Assessment Centers and
12 to assure that the energy efficiency and, when applicable,
13 the renewable nature of deploying mature clean energy
14 technology is fully accounted for, the Secretary of Energy
15 shall relocate the administration of the Clean Energy Ap-
16 plication Centers to the Office of Energy Efficiency and
17 Renewable Energy within the Department of Energy. The
18 Office of Electricity Delivery and Energy Reliability shall
19 continue to perform work on the role of such technology
20 in support of the grid and its reliability and security, and
21 shall assist the Clean Energy Application Centers in their
22 work with regard to the grid and with electric utilities.

23 “(e) GRANTS.—

24 “(1) IN GENERAL.—The Secretary of Energy
25 shall make grants to universities, research centers,

1 and other appropriate institutions to assure the con-
2 tinued operations and effectiveness of 8 Regional
3 Clean Energy Application Centers in each of the fol-
4 lowing regions (as designated for such purposes as
5 of the date of the enactment of this section):

6 “(A) Gulf Coast.

7 “(B) Intermountain.

8 “(C) Mid-Atlantic.

9 “(D) Midwest.

10 “(E) Northeast.

11 “(F) Northwest.

12 “(G) Pacific.

13 “(H) Southeast.

14 “(2) ESTABLISHMENT OF GOALS AND COMPLI-
15 ANCE.—In making grants under this section, the
16 Secretary shall ensure that sufficient goals are es-
17 tablished and met by each Center throughout the
18 program duration concerning outreach and tech-
19 nology deployment.

20 “(f) ACTIVITIES.—Each Clean Energy Application
21 Center shall operate a program to encourage deployment
22 of clean energy technologies through education and out-
23 reach to building and industrial professionals, and to other
24 individuals and organizations with an interest in efficient
25 energy use. In addition, the Centers shall provide project

1 specific support to building and industrial professionals
2 through assessments and advisory activities. Funds made
3 available under this section may be used for the following
4 activities:

5 “(1) Developing and distributing informational
6 materials on clean energy technologies, including
7 continuation of the eight existing Web sites.

8 “(2) Developing and conducting target market
9 workshops, seminars, internet programs and other
10 activities to educate end users, regulators, and
11 stakeholders in a manner that leads to the deploy-
12 ment of clean energy technologies.

13 “(3) Providing or coordinating onsite assess-
14 ments for sites and enterprises that may consider
15 deployment of clean energy technology.

16 “(4) Performing market research to identify
17 high profile candidates for clean energy deployment.

18 “(5) Providing consulting support to sites con-
19 sidering deployment of clean energy technologies.

20 “(6) Assisting organizations developing clean
21 energy technologies to overcome barriers to deploy-
22 ment.

23 “(7) Assisting companies and organizations
24 with performance evaluations of any clean energy
25 technology implemented.

1 “(g) DURATION.—A grant awarded under this sec-
 2 tion shall be for a period of 5 years. Each grant shall be
 3 evaluated annually for its continuation based on its activi-
 4 ties and results.

5 “(h) AUTHORIZATION.—There is authorized to be ap-
 6 propriated for purposes of this section the sum of
 7 \$10,000,000 for each of fiscal years 2008, 2009, 2010,
 8 2011, and 2012.”.

9 (b) TABLE OF CONTENTS.—The table of contents for
 10 such Act is amended by inserting the following after the
 11 items relating to part D of title III:

“PART E—INDUSTRIAL ENERGY EFFICIENCY

“Sec. 371. Survey of waste industrial energy recovery and potential use.

“Sec. 372. Definitions.

“Sec. 373. Survey and registry.

“Sec. 374. Incentives for recovery, utilization and prevention of industrial waste
 energy.

“Sec. 375. Clean Energy Application Centers.”.

12 **Subtitle F—Energy Efficiency of**
 13 **Public Institutions**

14 **SEC. 171. SHORT TITLE.**

15 This subtitle may be cited as the “Sustainable En-
 16 ergy Institutional Infrastructure Act of 2007”.

17 **SEC. 172. FINDINGS.**

18 The Congress finds the following:

19 (1) Many institutional entities own and operate,
 20 or are served by, district energy systems.

1 (2) A variety of renewable energy resources
2 could be tapped by governmental and institutional
3 energy systems to meet energy requirements.

4 (3) Use of these renewable energy resources to
5 meet energy requirements will reduce reliance on
6 fossil fuels and the associated emissions of air pollu-
7 tion and carbon dioxide.

8 (4) CHP is a highly efficient and environ-
9 mentally beneficial means to generate electric energy
10 and heat, and offers total efficiency much greater
11 than conventional separate systems, where electric
12 energy is generated at and transmitted long dis-
13 tances from a centrally located generation facility,
14 and onsite heating and cooling equipment is used to
15 meet nonelectric energy requirements.

16 (5) Heat recovered in a CHP generation system
17 can be used for space heating, domestic hot water,
18 or process steam requirements, or can be converted
19 to cooling energy to meet air conditioning require-
20 ments.

21 (6) The increased efficiency of CHP results in
22 reduction in emissions of air pollution and carbon di-
23 oxide.

24 (7) District energy systems represent a key op-
25 portunity for expanding implementation of CHP be-

1 cause district energy systems provide a means of de-
2 livering thermal energy from CHP to a substantial
3 base of end users.

4 (8) District energy systems help cut peak power
5 demand and reduce power transmission and distribu-
6 tion system constraints by meeting air conditioning
7 demand through delivery of chilled water produced
8 with CHP-generated heat or other energy sources,
9 shifting power demand through thermal storage,
10 and, with CHP, generating power near load centers.

11 (9) Evaluation and implementation of sustain-
12 able energy infrastructure is a complex undertaking
13 involving a variety of technical, economic, legal, and
14 institutional issues and barriers, and technical as-
15 sistance is often required to successfully navigate
16 these barriers.

17 (10) The major constraint to significant expan-
18 sion of sustainable energy infrastructure by institu-
19 tional entities is a lack of capital funding for imple-
20 mentation.

21 **SEC. 173. DEFINITIONS.**

22 For purposes of this subtitle—

23 (1) the term “CHP” means combined heat and
24 power, or the generation of electric energy and heat
25 in a single, integrated system;

1 (2) the term “district energy systems” means
2 systems providing thermal energy to buildings and
3 other energy consumers from one or more plants to
4 individual buildings to provide space heating, air
5 conditioning, domestic hot water, industrial process
6 energy, and other end uses;

7 (3) the term “institutional entities” means local
8 governments, public school districts, municipal utili-
9 ties, State governments, Federal agencies, and other
10 entities established by local, State, or Federal agen-
11 cies to meet public purposes, and public or private
12 colleges, universities, airports, and hospitals;

13 (4) the term “renewable thermal energy
14 sources” means non-fossil-fuel energy sources, in-
15 cluding biomass, geothermal, solar, natural sources
16 of cooling such as cold lake or ocean water, and
17 other sources that can provide heating or cooling en-
18 ergy;

19 (5) the term “sustainable energy infrastruc-
20 ture” means facilities for production of energy from
21 CHP or renewable thermal energy sources and dis-
22 tribution of thermal energy to users; and

23 (6) the term “thermal energy” means heating
24 or cooling energy in the form of hot water or steam
25 (heating energy) or chilled water (cooling energy).

1 **SEC. 174. TECHNICAL ASSISTANCE PROGRAM.**

2 (a) ESTABLISHMENT.—The Secretary of Energy
3 shall, with funds appropriated for this purpose, implement
4 a program of information dissemination and technical as-
5 sistance to institutional entities to assist them in identi-
6 fying, evaluating, designing, and implementing sustainable
7 energy infrastructure.

8 (b) INFORMATION DISSEMINATION.—The Secretary
9 shall develop and disseminate information and assessment
10 tools addressing—

11 (1) identification of opportunities for sustain-
12 able energy infrastructure;

13 (2) technical and economic characteristics of
14 sustainable energy infrastructure;

15 (3) utility interconnection, and negotiation of
16 power and fuel contracts;

17 (4) financing alternatives;

18 (5) permitting and siting issues;

19 (6) case studies of successful sustainable energy
20 infrastructure systems; and

21 (7) computer software for assessment, design,
22 and operation and maintenance of sustainable en-
23 ergy infrastructure systems.

24 (c) ELIGIBLE COSTS.—Upon application by an insti-
25 tutional entity, the Secretary may make grants to such
26 applicant to fund—

1 (1) 75 percent of the cost of feasibility studies
2 to assess the potential for implementation or im-
3 provement of sustainable energy infrastructure;

4 (2) 60 percent of the cost of guidance on over-
5 coming barriers to project implementation, including
6 financial, contracting, siting, and permitting bar-
7 riers; and

8 (3) 45 percent of the cost of detailed engineer-
9 ing and design of sustainable energy infrastructure.

10 (d) AUTHORIZATION OF APPROPRIATIONS.—There
11 are authorized to be appropriated to carry out this section
12 \$15,000,000 for fiscal year 2008, \$15,000,000 for fiscal
13 year 2009, and \$15,000,000 for fiscal year 2010.

14 **SEC. 175. REVOLVING FUND.**

15 (a) ESTABLISHMENT.—The Secretary of Energy
16 shall, with funds appropriated for this purpose, create a
17 Sustainable Institutions Revolving Fund for the purpose
18 of establishing and operating a Sustainable Institutions
19 Revolving Fund (in this section referred to as the
20 “SIRF”) for the purpose of providing loans for the con-
21 struction or improvement of sustainable energy infrastruc-
22 ture to serve institutional entities.

23 (b) ELIGIBLE COSTS.—A loan provided from the
24 SIRF shall be for no more than 70 percent of the total
25 capital costs of a project, and shall not exceed

1 \$15,000,000. Such loans shall be for constructing sustain-
2 able energy infrastructure, including—

3 (1) plant facilities used for producing thermal
4 energy, electricity, or both;

5 (2) facilities for storing thermal energy;

6 (3) facilities for distribution of thermal energy;

7 and

8 (4) costs for converting buildings to use ther-
9 mal energy from sustainable energy sources.

10 (c) QUALIFICATIONS.—Loans from the SIRF may be
11 made to institutional entities for projects meeting the
12 qualifications and conditions established by the Secretary,
13 including the following minimum qualifications:

14 (1) The project shall be technically and eco-
15 nomically feasible as determined by a detailed feasi-
16 bility analysis performed or corroborated by an inde-
17 pendent consultant.

18 (2) The borrower shall demonstrate that ade-
19 quate and comparable financing was not found to be
20 reasonably available from other sources, and that
21 the project is economically more feasible with the
22 availability of the SIRF loan.

23 (3) The borrower shall obtain commitments for
24 the remaining capital required to implement the
25 project, contingent on approval of the SIRF loan.

1 (4) The borrower shall provide to the Secretary
2 reasonable assurance that all laborers and mechanics
3 employed by contractors or subcontractors in the
4 performance of construction work financed in whole
5 or in part with a loan provided under this section
6 will be paid wages at rates not less than those pre-
7 vailing on similar work in the locality as determined
8 by the Secretary of Labor in accordance with sub-
9 chapter IV of chapter 31 of title 40, United States
10 Code (commonly referred to as the Davis-Bacon
11 Act).

12 (d) FINANCING TERMS.—(1) Interest on a loan under
13 this section may be a fixed rate or floating rate, and shall
14 be equal to the Federal cost of funds consistent with the
15 loan type and term, minus 1.5 percent.

16 (2) Interest shall accrue from the date of the loan,
17 but the first payment of interest shall be deferred, if de-
18 sired by the borrower, for a period ending not later than
19 3 years after the initial date of operation of the system.

20 (3) Interest attributable to the period of deferred
21 payment shall be amortized over the remainder of the loan
22 term.

23 (4) Principal shall be repaid on a schedule established
24 at the time the loan is made. Such payments shall begin

1 not later than 3 years after the initial date of operation
2 of the system.

3 (5) Loans made from the SIRF shall be repayable
4 over a period ending not more than 20 years after the
5 date the loan is made.

6 (6) Loans shall be prepayable at any time without
7 penalty.

8 (7) SIRF loans shall be subordinate to other loans
9 for the project.

10 (e) FUNDING CYCLES.—Applications for loans from
11 the SIRF shall be received on a periodic basis at least
12 semiannually.

13 (f) APPLICATION OF REPAYMENTS FOR DEFICIT RE-
14 DUCTION.—Loans from the SIRF shall be made, with
15 funds available for this purpose, during the 10 years start-
16 ing from the date that the first loan from the fund is
17 made. Until this 10-year period ends, funds repaid by bor-
18 rowers shall be deposited in the SIRF to be made available
19 for additional loans. Once loans from the SIRF are no
20 longer being made, repayments shall go directly into the
21 United States Treasury.

22 (g) PRIORITIES.—In evaluating projects for funding,
23 priority shall be given to projects which—

24 (1) maximize energy efficiency;

1 (2) minimize environmental impacts, including
2 from regulated air pollutants, greenhouse gas emis-
3 sions, and the use of refrigerants known to cause
4 ozone depletion;

5 (3) use renewable energy resources;

6 (4) maximize oil displacement; and

7 (5) benefit economically-depressed areas.

8 (h) REGULATIONS.—Not later than one year after
9 the date of enactment of this Act, the Secretary of Energy
10 shall develop a plan and adopt rules and procedures for
11 establishing and operating the SIRF.

12 (i) PROGRAM REVIEW.—Every two years the Sec-
13 retary shall report to the Congress on the status and
14 progress of the SIRF.

15 (j) AUTHORIZATION OF APPROPRIATIONS.—There
16 are authorized to be appropriated to carry out this section
17 \$250,000,000 for fiscal year 2008 and \$500,000,000 for
18 each of the fiscal years 2009 through 2012.

19 **SEC. 176. REAUTHORIZATION OF STATE ENERGY PRO-**
20 **GRAMS.**

21 Section 365(f) of the Energy Policy and Conservation
22 Act (42 U.S.C. 6325(f)) is amended by striking
23 “\$100,000,000 for each of the fiscal years 2006 and 2007
24 and \$125,000,000 for fiscal year 2008” and inserting

1 “\$125,000,000 for each of the fiscal years 2007, 2008,
2 2009, 2010, 2011, and 2012”.

3 **Subtitle G—Energy Savings**
4 **Performance Contracting**

5 **SEC. 181. DEFINITION OF ENERGY SAVINGS.**

6 Section 804(2) of the National Energy Conservation
7 Policy Act (42 U.S.C. 8287c(2)) is amended—

8 (1) by redesignating subparagraphs (A), (B),
9 and (C) as clauses (i), (ii), and (iii), respectively,
10 and indenting appropriately;

11 (2) by striking “means a reduction” and insert-
12 ing “means—

13 “(A) a reduction”;

14 (3) by striking the period at the end and insert-
15 ing a semicolon; and

16 (4) by adding at the end the following:

17 “(B) the increased efficient use of an exist-
18 ing energy source by cogeneration or heat re-
19 covery, and installation of renewable energy sys-
20 tems;

21 “(C) if otherwise authorized by Federal or
22 State law (including regulations), the sale or
23 transfer of electrical or thermal energy gen-
24 erated onsite but in excess of Federal needs, to
25 utilities or non-Federal energy users; and

1 “(D) the increased efficient use of existing
2 water sources in interior or exterior applica-
3 tions.”.

4 **SEC. 182. FINANCING FLEXIBILITY.**

5 Section 801(a)(2) of the National Energy Conserva-
6 tion Policy Act (42 U.S.C. 8287(a)(2)) is amended by add-
7 ing at the end the following:

8 “(E) SEPARATE CONTRACTS.—In carrying out a con-
9 tract under this title, a Federal agency may—

10 “(i) enter into a separate contract for energy
11 services and conservation measures under the con-
12 tract; and

13 “(ii) provide all or part of the financing nec-
14 essary to carry out the contract.”.

15 **SEC. 183. AUTHORITY TO ENTER INTO CONTRACTS; RE-**
16 **PORTS.**

17 (a) AUTHORITY TO ENTER INTO CONTRACTS.—Sec-
18 tion 801(a)(2)(D) of the National Energy Conservation
19 Policy Act (42 U.S.C. 8287(a)(2)(D)) is amended—

20 (1) in clause (ii), by inserting “and” after the
21 semicolon at the end;

22 (2) by striking clause (iii); and

23 (3) by redesignating clause (iv) as clause (iii).

24 (b) REPORTS.—Section 548(a)(2) of the National
25 Energy Conservation Policy Act (42 U.S.C. 8258(a)(2))

1 is amended by inserting “and any termination penalty ex-
2 posure” after “the energy and cost savings that have re-
3 sulted from such contracts”.

4 (c) CONFORMING AMENDMENT.—Section 2913 of
5 title 10, United States Code is amended by striking sub-
6 section (e).

7 **SEC. 184. PERMANENT REAUTHORIZATION.**

8 Section 801 of the National Energy Conservation
9 Policy Act (42 U.S.C. 8287) is amended by striking sub-
10 section (c).

11 **SEC. 185. TRAINING FEDERAL CONTRACTING OFFICERS TO**
12 **NEGOTIATE ENERGY EFFICIENCY CON-**
13 **TRACTS.**

14 (a) PROGRAM.—The Secretary of Energy shall create
15 and administer in the Federal Energy Management Pro-
16 gram a training program to educate Federal contract ne-
17 gotiation and contract management personnel so that such
18 contract officers are prepared to—

19 (1) negotiate energy savings performance con-
20 tracts;

21 (2) conclude effective and timely contracts for
22 energy efficiency services with all companies offering
23 energy efficiency services; and

1 (3) review Federal contracts for all products
2 and services for their potential energy efficiency op-
3 portunities and implications.

4 (b) SCHEDULE.—The Federal Energy Management
5 Program shall plan, staff, announce, and begin such train-
6 ing not later than one year after the date of enactment
7 of this Act.

8 (c) PERSONNEL TO BE TRAINED.—Personnel appro-
9 priate to receive such training shall be selected by and sent
10 for such training from—

11 (1) the Department of Defense;

12 (2) the Department of Veterans Affairs;

13 (3) the Department of Energy;

14 (4) the General Services Administration;

15 (5) the Department of Housing and Urban De-
16 velopment;

17 (6) the United States Postal Service; and

18 (7) all other Federal agencies and departments
19 that enter contracts for buildings, building services,
20 electricity and electricity services, natural gas and
21 natural gas services, heating and air conditioning
22 services, building fuel purchases, and other types of
23 procurement or service contracts determined by Fed-
24 eral Energy Management Program to offer the po-
25 tential for energy savings and greenhouse gas emis-

1 sion reductions if negotiated with such goals in
2 mind.

3 (d) TRAINERS.—Such training may be conducted by
4 attorneys or contract officers with experience in negoti-
5 ating and managing such contracts from any agency, and
6 the Department of Energy shall reimburse their related
7 salaries and expenses from amounts appropriated for car-
8 rying out this section to the extent they are not already
9 employees of the Department of Energy. Such training
10 may also be provided by private experts hired by the De-
11 partment of Energy for the purposes of this section, except
12 that the Department may not hire experts who are simul-
13 taneously employed by any company under contract to
14 provide such energy efficiency services to the Federal Gov-
15 ernment.

16 (e) AUTHORIZATION OF APPROPRIATIONS.—There
17 are authorized to be appropriated to the Secretary of En-
18 ergy for carrying out this section \$750,000 for each of
19 fiscal years 2008 through 2012.

20 **SEC. 186. PROMOTING LONG-TERM ENERGY SAVINGS PER-**
21 **FORMANCE CONTRACTS AND VERIFYING SAV-**
22 **INGS.**

23 Section 801(a)(2) of the National Energy Conserva-
24 tion Policy Act (42 U.S.C. 8287(a)(2)) is amended—

1 (1) in subparagraph (D), by inserting “begin-
2 ning on the date of the delivery order” after “25
3 years”; and

4 (2) by adding at the end the following:

5 “(F) PROMOTION OF CONTRACTS.—In car-
6 rying out this section, a Federal agency shall
7 not—

8 “(i) establish a Federal agency policy
9 that limits the maximum contract term
10 under subparagraph (D) to a period short-
11 er than 25 years; or

12 “(ii) limit the total amount of obliga-
13 tions under energy savings performance
14 contracts or other private financing of en-
15 ergy savings measures.

16 “(G) MEASUREMENT AND VERIFICATION
17 REQUIREMENTS FOR PRIVATE FINANCING.—

18 “(i) IN GENERAL.—The evaluations
19 and savings measurement and verification
20 required under paragraphs (1) and (3) of
21 section 543(f) shall be used by a Federal
22 agency to meet the requirements for—

23 “(I) in the case of energy savings
24 performance contracts, the need for
25 energy audits, calculation of energy

1 savings, and any other evaluation of
2 costs and savings needed to imple-
3 ment the guarantee of savings under
4 this section; and

5 “(II) in the case of utility energy
6 service contracts, needs that are simi-
7 lar to the purposes described in sub-
8 clause (I).

9 “(ii) MODIFICATION OF EXISTING
10 CONTRACTS.—Not later than 180 days
11 after the date of enactment of this sub-
12 paragraph, each Federal agency shall, to
13 the maximum extent practicable, modify
14 any indefinite delivery and indefinite quan-
15 tity energy savings performance contracts,
16 and other indefinite delivery and indefinite
17 quantity contracts using private financing,
18 to conform to the amendments made by
19 subtitle G of title I of the [short title].”.

20 **Subtitle H—Advisory Committee on**
21 **Energy Efficiency Financing**

22 **SEC. 189. ADVISORY COMMITTEE.**

23 (a) ESTABLISHMENT.—The Assistant Secretary of
24 Energy for Energy Efficiency and Renewable Energy shall
25 establish an advisory committee to provide advice and rec-

1 ommendations to the Department of Energy on energy ef-
2 ficiency finance and investment issues, options, ideas, and
3 trends, and to assist the energy community in identifying
4 practical ways of lowering costs and increasing invest-
5 ments in energy efficiency technologies.

6 (b) MEMBERSHIP.—The advisory committee estab-
7 lished under this section shall have a balanced membership
8 that shall include members representing the following
9 communities:

10 (1) Providers of seed capital.

11 (2) Venture capitalists.

12 (3) Private equity sources.

13 (4) Investment banking corporate finance.

14 (5) Investment banking mergers and acquisi-
15 tions.

16 (6) Equity capital markets.

17 (7) Debt capital markets.

18 (8) Research analysts.

19 (9) Sales and trading.

20 (10) Commercial lenders.

21 (11) Residential lenders.

22 (c) AUTHORIZATION OF APPROPRIATIONS.—There
23 are authorized to be appropriated such sums as may be
24 necessary to the Secretary of Energy for carrying out this
25 section.

1 **Subtitle I—Energy Efficiency Block**
2 **Grant Program**

3 **SEC. 191. DEFINITIONS.**

4 For purposes of this subtitle—

5 (1) the term “eligible entity” means a State or
6 an eligible unit of local government within a State;

7 (2) the term “eligible unit of local government”
8 means—

9 (A) a city with a population of at least
10 50,000; and

11 (B) a county with a population of at least
12 200,000;

13 (3) the term “Secretary” means the Secretary
14 of Energy; and

15 (4) the term “State” means one of the 50
16 States, the District of Columbia, the Commonwealth
17 of Puerto Rico, Guam, American Samoa, the United
18 States Virgin Islands, the Commonwealth of the
19 Northern Mariana Islands, and any other common-
20 wealth, territory, or possession of the United States.

21 **SEC. 192. ESTABLISHMENT OF PROGRAM.**

22 The Secretary shall establish an Energy Efficiency
23 Block Grant Program to make block grants to eligible en-
24 tities as provided in this subtitle.

1 **SEC. 193. ALLOCATIONS.**

2 (a) IN GENERAL.—Of the funds appropriated for
3 making grants under this subtitle for each fiscal year, the
4 Secretary shall allocate 70 percent to be provided to eligi-
5 ble units of local government as provided in subsection (b)
6 and 30 percent to be provided to States as provided in
7 subsection (c).

8 (b) ELIGIBLE UNITS OF LOCAL GOVERNMENT.—The
9 Secretary shall provide grants to eligible units of local gov-
10 ernment according to a formula giving equal weight to—

11 (1) population, according to the most recent
12 available Census data; and

13 (2) daytime population, or another similar fac-
14 tor such as square footage of commercial, office, and
15 industrial space, as determined by the Secretary.

16 (c) STATES.—The Secretary shall provide grants to
17 States according to a formula based on population, accord-
18 ing to the most recent available Census data.

19 (d) PUBLICATION OF ALLOCATION FORMULAS.—Not
20 later than 90 days before the beginning of any fiscal year
21 in which grants are to be made under this subtitle, the Sec-
22 retary shall publish in the Federal Register the formulas
23 for allocation described in subsection (b)(1) and (b)(2).

24 **SEC. 194. ELIGIBLE ACTIVITIES.**

25 Funds provided through a grant under this subtitle
26 may be used for the following activities:

1 (1) Development and implementation of an En-
2 ergy Efficiency Strategy under section 195.

3 (2) Retaining technical consultant services to
4 assist an eligible entity in the development of such
5 Strategy, including—

6 (A) formulation of energy efficiency, en-
7 ergy conservation, and energy usage goals;

8 (B) identification of strategies to meet
9 such goals through efforts to increase energy ef-
10 ficiency and reduce energy consumption;

11 (C) identification of strategies to encour-
12 age behavioral changes among the populace
13 that will help achieve such goals;

14 (D) development of methods to measure
15 progress in achieving such goals;

16 (E) development and preparation of annual
17 reports to the citizenry of the eligible entity's
18 energy efficiency strategies and goals, and
19 progress in achieving them; and

20 (F) other services to assist in the imple-
21 mentation of the Energy Efficiency Strategy.

22 (3) Conducting energy audits.

23 (4) Development and implementation of weath-
24 erization programs.

1 (5) Creation of financial incentive programs for
2 energy efficiency retrofits, including zero-interest or
3 low-interest revolving loan funds.

4 (6) Grants to nonprofit organizations and gov-
5 ernmental agencies for energy retrofits.

6 (7) Development and implementation of energy
7 efficiency programs and technologies for buildings
8 and facilities of nonprofit organizations and govern-
9 mental agencies.

10 (8) Development and implementation of build-
11 ing and home energy conservation programs, includ-
12 ing—

13 (A) design and operation of the programs;

14 (B) identifying the most effective methods
15 for achieving maximum participation and effi-
16 ciency rates;

17 (C) public education;

18 (D) measurement protocols; and

19 (E) identification of energy efficient tech-
20 nologies.

21 (9) Development and implementation of energy
22 conservation programs, including—

23 (A) use of flex time by employers;

24 (B) satellite work centers; and

1 (C) other measures that have the effect of
2 increasing energy efficiency and decreasing en-
3 ergy consumption.

4 (10) Development and implementation of build-
5 ing codes and inspection services for public, commer-
6 cial, industrial, and single and multifamily residen-
7 tial buildings to promote energy efficiency.

8 (11) Application and implementation of alter-
9 native energy and energy distribution technologies
10 that significantly increase energy efficiency and pro-
11 mote distributed resources and district heating and
12 cooling systems.

13 (12) Development and promotion of zoning
14 guidelines or requirements that result in increased
15 energy efficiency, efficient development, active living
16 land use planning, and infrastructure such as bike
17 lanes and pathways, and pedestrian walkways.

18 (13) Promotion of greater participation and ef-
19 ficiency rates for material conservation programs, in-
20 cluding source reduction, recycling, and recycled
21 content procurement programs that lead to increases
22 in energy efficiency.

23 (14) Establishment of a State, county, or city
24 office to assist in the development and implementa-
25 tion of the Energy Efficiency Strategy.

1 **SEC. 195. REQUIREMENTS.**

2 (a) REQUIREMENTS FOR ELIGIBLE UNITS OF LOCAL
3 GOVERNMENT.—

4 (1) PROPOSED STRATEGY.—Not later than 1
5 year after being awarded a grant under this subtitle,
6 an eligible unit of local government shall submit to
7 the Secretary a proposed Energy Efficiency Strategy
8 which establishes goals for increased energy effi-
9 ciency in the jurisdiction of the eligible units of local
10 government. The Strategy shall include plans for the
11 use of funds received under the grant to assist the
12 eligible unit of local government in the achievement
13 of such goals, consistent with section 194. In devel-
14 oping such a Strategy, an eligible unit of local gov-
15 ernment shall take into account any plans for the
16 use of funds by adjoining eligible units of local gov-
17 ernments funded under this subtitle.

18 (2) APPROVAL.—The Secretary shall approve or
19 disapprove a proposed Strategy submitted under
20 paragraph (1) not later than 90 days after receiving
21 it. If the Secretary disapproves a proposed Strategy,
22 the Secretary shall provide to the eligible unit of
23 local government the reasons for such disapproval.
24 The eligible unit of local government may revise and
25 resubmit the Strategy, as many times as required,
26 until approval is granted.

1 (3) FUNDING FOR PREPARATION OF STRAT-
2 EGY.—

3 (A) IN GENERAL.—Until the Secretary has
4 approved a proposed Energy Efficiency Strat-
5 egy under paragraph (2), the Secretary shall
6 only disburse to an eligible unit of local govern-
7 ment \$200,000 or 20 percent of the grant,
8 whichever is greater, which may be used only
9 for preparation of the Strategy.

10 (B) REMAINDER OF FUNDS.—The remain-
11 der of an eligible unit of local government's
12 grant funds awarded but not disbursed under
13 subparagraph (A) shall remain available and
14 shall be disbursed by the Secretary upon ap-
15 proval of the Strategy.

16 (4) LIMITATIONS ON USE OF FUNDS.—Of the
17 amounts provided through a grant under this sub-
18 title, an eligible unit of local government may use—

19 (A) not more than 10 percent, or \$75,000,
20 whichever is greater, for administrative ex-
21 penses, not including expenses needed to meet
22 reporting requirements under this subtitle;

23 (B) not more than 20 percent, or
24 \$250,000, whichever is greater, for the estab-
25 lishment of revolving loan funds; and

1 (C) not more than 20 percent, or
2 \$250,000, whichever is greater, for subgranting
3 to nongovernmental organizations for the pur-
4 pose of assisting in the implementation of the
5 Energy Efficiency Strategy.

6 (5) ANNUAL REPORT.—Not later than 2 years
7 after receipt of the first disbursement of funds from
8 a grant awarded under this subtitle, and annually
9 thereafter, an eligible unit of local government shall
10 submit a report to the Secretary on the status of the
11 Strategy’s development and implementation, and,
12 where practicable, a best available assessment of en-
13 ergy efficiency gains within the jurisdiction of the el-
14 igible unit of local government.

15 (b) REQUIREMENTS FOR STATES.—

16 (1) ALLOCATION OF GRANT FUNDS.—A State
17 receiving a grant under this subtitle shall use at
18 least 70 percent of the funds received to provide
19 subgrants to units of local government in the State
20 that are not eligible units of local government. The
21 State shall make such subgrant awards not later
22 than 6 months after approval of the State’s Strategy
23 under paragraph (3).

24 (2) PROPOSED STRATEGY.—Not later than 120
25 days the date of enactment of this subtitle, each

1 State shall submit to the Secretary a proposed En-
2 ergy Efficiency Strategy which establishes a process
3 for making subgrants described in paragraph (1),
4 and establishes goals for increased energy efficiency
5 in the jurisdiction of the State. The Strategy shall
6 include plans for the use of funds received under a
7 grant under this subtitle to assist the State in the
8 achievement of such goals, consistent with section
9 194.

10 (3) APPROVAL.—The Secretary shall approve or
11 disapprove a proposed Strategy submitted under
12 paragraph (2) not later than 90 days after receiving
13 it. If the Secretary disapproves a proposed Strategy,
14 the Secretary shall provide to the State the reasons
15 for such disapproval. The State may revise and re-
16 submit the Strategy, as many times as required,
17 until approval is granted.

18 (4) FUNDING FOR PREPARATION OF STRAT-
19 EGY.—

20 (A) IN GENERAL.—Until the Secretary has
21 approved a proposed Energy Efficiency Strat-
22 egy under paragraph (2), the Secretary shall
23 only disburse to a State \$200,000 or 20 percent
24 of the grant, whichever is greater, which may
25 be used only for preparation of the Strategy.

1 (B) REMAINDER OF FUNDS.—The remain-
2 der of a State’s grant funds awarded but not
3 disbursed under subparagraph (A) shall remain
4 available and shall be disbursed by the Sec-
5 retary upon approval of the Strategy.

6 (5) LIMITATIONS ON USE OF FUNDS.—Of the
7 amounts provided through a grant under this sub-
8 title, a State may use not more than 10 percent for
9 administrative expenses.

10 (6) ANNUAL REPORTS.—A State shall annually
11 report to the Secretary on the development and im-
12 plementation of its Strategy. Each such report shall
13 include—

14 (A) a status report on the State’s subgrant
15 program described in paragraph (1);

16 (B) a best available assessment of energy
17 efficiency gains achieved through the State’s
18 Strategy; and

19 (C) specific energy efficiency and energy
20 conservation goals for future years.

21 (c) STATE AND LOCAL ADVISORY COMMITTEE.—

22 (1) STATE AND LOCAL ADVISORY COM-
23 MITTEE.—The Secretary shall establish a State and
24 Local Advisory Committee to provide advice regard-

1 ing the administration, direction, and evaluation of
2 the program under this subtitle.

3 **SEC. 196. REVIEW AND EVALUATION.**

4 The Secretary may review and evaluate the perform-
5 ance of grant recipients, including by performing audits,
6 and may deny funding to such grant recipients for failure
7 to properly adhere to—

8 (1) the Secretary’s guidelines and regulations
9 relating to the program under this subtitle, including
10 the misuse or misappropriation of funds; or

11 (2) the grant recipient’s Strategy.

12 **SEC. 197. TECHNICAL ASSISTANCE AND EDUCATION PRO-**
13 **GRAM.**

14 (a) ESTABLISHMENT.—The Secretary shall establish
15 and carry out a technical assistance and education pro-
16 gram to provide—

17 (1) technical assistance to State and local gov-
18 ernments;

19 (2) public education programs;

20 (3) demonstration of innovative energy effi-
21 ciency systems and practices; and

22 (4) identification of effective measurement
23 methodologies and methods for changing or influ-
24 encing public participation in, and awareness of, en-
25 ergy efficiency programs.

1 (b) ELIGIBLE RECIPIENTS.—Eligible recipients of as-
2 sistance under this section shall include State and local
3 governments, State and local government associations,
4 public and private nonprofit organizations, and colleges
5 and universities.

6 (c) AUTHORIZATION OF APPROPRIATIONS.—There
7 are authorized to be appropriated to the Secretary for car-
8 rying out this section \$150,000,000 for each of the fiscal
9 years 2008 through 2012.

10 **SEC. 198. AUTHORIZATION OF APPROPRIATIONS.**

11 (a) GRANTS.—There are authorized to be appro-
12 priated to the Secretary for grants under this subtitle,
13 \$2,000,000,000 for each of fiscal years 2008 through
14 2012.

15 (b) ADMINISTRATION.—There are authorized to be
16 appropriated to the Secretary for administrative expenses
17 of the program established under this subtitle—

18 (1) \$20,000,000 for fiscal year 2008;

19 (2) \$20,000,000 for fiscal year 2009;

20 (3) \$25,000,000 for fiscal year 2010;

21 (4) \$25,000,000 for fiscal year 2011; and

22 (5) \$30,000,000 for fiscal year 2012.

1 **Subtitle J—Green Buildings**
2 **Retrofit Loan Guarantees**

3 **SEC. 199. GREEN BUILDINGS RETROFIT LOAN GUARAN-**
4 **TEES.**

5 (a) DEFINITIONS.—In this section:

6 (1) COST.—The term “cost” has the meaning
7 given the term “cost of a loan guarantee” within the
8 meaning of section 502(5)(C) of the Federal Credit
9 Reform Act of 1990 (2 U.S.C. 661a(5)(C)).

10 (2) GUARANTEE.—

11 (A) IN GENERAL.—The term “guarantee”
12 has the meaning given the term “loan guar-
13 antee” in section 502 of the Federal Credit Re-
14 form Act of 1990 (2 U.S.C. 661a).

15 (B) INCLUSION.—The term “guarantee”
16 includes a loan guarantee commitment (as de-
17 fined in section 502 of the Federal Credit Re-
18 form Act of 1990 (2 U.S.C. 661a)).

19 (3) OBLIGATION.—The term “obligation”
20 means the loan or other debt obligation that is guar-
21 anteed under this section.

22 (4) SECRETARY.—The term “Secretary” means
23 the Secretary of Energy.

24 (b) ELIGIBLE PURPOSES.—Except for division C of
25 Public Law 108–423, the Director shall make loan guar-

1 antees under this section for renovation projects that are
2 eligible projects within the meaning of section 1703 of the
3 Energy Policy Act of 2005 and that will result in a build-
4 ing achieving the United States Green Building Council
5 Leadership in Energy and Environmental Design “cer-
6 tified” level, or meeting a comparable standard approved
7 by the Director.

8 (c) TERMS AND CONDITIONS.—

9 (1) IN GENERAL.—The Director shall make
10 guarantees under this section for projects on such
11 terms and conditions as the Director determines,
12 after consultation with the Secretary of the Treas-
13 ury, in accordance with this section, including limi-
14 tations on the amount of any loan guarantee to en-
15 sure distribution to a variety of borrowers.

16 (2) SPECIFIC APPROPRIATION OR CONTRIBU-
17 TION.—No guarantee shall be made under this sec-
18 tion unless—

19 (A) an appropriation for the cost has been
20 made; or

21 (B) the Director has received from the bor-
22 rower a payment in full for the cost of the obli-
23 gation and deposited the payment into the
24 Treasury.

1 (3) LIMITATION.—Not more than \$100,000,000
2 in loans may be guaranteed under this section at
3 any one time.

4 (4) AMOUNT.—Unless otherwise provided by
5 law, a guarantee by the Director under this section
6 shall not exceed an amount equal to 80 percent of
7 the project cost that is the subject of the guarantee,
8 as estimated at the time at which the guarantee is
9 issued.

10 (5) REPAYMENT.—No guarantee shall be made
11 under this section unless the Director determines
12 that there is reasonable prospect of repayment of the
13 principal and interest on the obligation by the bor-
14 rower.

15 (6) INTEREST RATE.—An obligation shall bear
16 interest at a rate that does not exceed a level that
17 the Director determines appropriate, taking into ac-
18 count the prevailing rate of interest in the private
19 sector for similar loans and risks.

20 (7) TERM.—The term of an obligation shall re-
21 quire full repayment over a period not to exceed the
22 lesser of—

23 (A) 30 years; or

24 (B) 90 percent of the projected useful life
25 of the building whose renovation is to be fi-

1 nanced by the obligation (as determined by the
2 Director).

3 (8) DEFAULTS.—

4 (A) PAYMENT BY DIRECTOR.—

5 (i) IN GENERAL.—If a borrower de-
6 faults on the obligation (as defined in reg-
7 ulations promulgated by the Director and
8 specified in the guarantee contract), the
9 holder of the guarantee shall have the
10 right to demand payment of the unpaid
11 amount from the Director.

12 (ii) PAYMENT REQUIRED.—Within
13 such period as may be specified in the
14 guarantee or related agreements, the Di-
15 rector shall pay to the holder of the guar-
16 antee the unpaid interest on, and unpaid
17 principal of the obligation as to which the
18 borrower has defaulted, unless the Director
19 finds that there was no default by the bor-
20 rower in the payment of interest or prin-
21 cipal or that the default has been rem-
22 edied.

23 (iii) FORBEARANCE.—Nothing in this
24 paragraph precludes any forbearance by
25 the holder of the obligation for the benefit

1 of the borrower which may be agreed upon
2 by the parties to the obligation and ap-
3 proved by the Director.

4 (B) SUBROGATION.—

5 (i) IN GENERAL.—If the Director
6 makes a payment under subparagraph (A),
7 the Director shall be subrogated to the
8 rights of the recipient of the payment as
9 specified in the guarantee or related agree-
10 ments including, where appropriate, the
11 authority (notwithstanding any other pro-
12 vision of law) to—

13 (I) complete, maintain, operate,
14 lease, or otherwise dispose of any
15 property acquired pursuant to such
16 guarantee or related agreements; or

17 (II) permit the borrower, pursu-
18 ant to an agreement with the Direc-
19 tor, to continue to pursue the pur-
20 poses of the project if the Director de-
21 termines this to be in the public inter-
22 est.

23 (ii) SUPERIORITY OF RIGHTS.—The
24 rights of the Director, with respect to any
25 property acquired pursuant to a guarantee

1 or related agreements, shall be superior to
2 the rights of any other person with respect
3 to the property.

4 (iii) TERMS AND CONDITIONS.—A
5 guarantee agreement shall include such de-
6 tailed terms and conditions as the Director
7 determines appropriate to—

8 (I) protect the interests of the
9 United States in the case of default;
10 and

11 (II) have available all the patents
12 and technology necessary for any per-
13 son selected, including the Director, to
14 complete and operate the project.

15 (C) PAYMENT OF PRINCIPAL AND INTER-
16 EST BY DIRECTOR.—With respect to any obliga-
17 tion guaranteed under this section, the Director
18 may enter into a contract to pay, and pay, hold-
19 ers of the obligation, for and on behalf of the
20 borrower, from funds appropriated for that pur-
21 pose, the principal and interest payments which
22 become due and payable on the unpaid balance
23 of the obligation if the Director finds that—

24 (i)(I) the borrower is unable to meet
25 the payments and is not in default;

1 (II) it is in the public interest to
2 permit the borrower to continue to
3 pursue the purposes of the project;
4 and

5 (III) the probable net benefit to
6 the Federal Government in paying the
7 principal and interest will be greater
8 than that which would result in the
9 event of a default;

10 (ii) the amount of the payment that
11 the Director is authorized to pay shall be
12 no greater than the amount of principal
13 and interest that the borrower is obligated
14 to pay under the agreement being guaran-
15 teed; and

16 (iii) the borrower agrees to reimburse
17 the Director for the payment (including in-
18 terest) on terms and conditions that are
19 satisfactory to the Director.

20 (D) ACTION BY ATTORNEY GENERAL.—

21 (i) NOTIFICATION.—If the borrower
22 defaults on an obligation, the Director
23 shall notify the Attorney General of the de-
24 fault.

1 (ii) RECOVERY.—On notification, the
2 Attorney General shall take such action as
3 is appropriate to recover the unpaid prin-
4 cipal and interest due from—

5 (I) such assets of the defaulting
6 borrower as are associated with the
7 obligation; or

8 (II) any other security pledged to
9 secure the obligation.

10 (9) FEES.—

11 (A) IN GENERAL.—The Director shall
12 charge and collect fees for guarantees in
13 amounts the Director determines are sufficient
14 to cover applicable administrative expenses.

15 (B) AVAILABILITY.—Fees collected under
16 this paragraph shall—

17 (i) be deposited by the Director into
18 the Treasury; and

19 (ii) remain available until expended,
20 subject to such other conditions as are con-
21 tained in annual appropriations Acts.

22 (10) RECORDS; AUDITS.—

23 (A) IN GENERAL.—A recipient of a guar-
24 antee shall keep such records and other perti-
25 nent documents as the Director shall prescribe

1 by regulation, including such records as the Di-
2 rector may require to facilitate an effective
3 audit.

4 (B) ACCESS.—The Director and the Comp-
5 troller General of the United States, or their
6 duly authorized representatives, shall have ac-
7 cess, for the purpose of audit, to the records
8 and other pertinent documents.

9 (11) FULL FAITH AND CREDIT.—The full faith
10 and credit of the United States is pledged to the
11 payment of all guarantees issued under this section
12 with respect to principal and interest.

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