

112TH CONGRESS
2^D SESSION

H. R. 4017

To promote efficient energy use in the Federal and private sectors, and
for other purposes.

IN THE HOUSE OF REPRESENTATIVES

FEBRUARY 14, 2012

Mr. BASS of New Hampshire (for himself, Mr. MATHESON, Mr. DOLD, Mr. WELCH, Mr. BARROW, and Mr. FITZPATRICK) introduced the following bill; which was referred to the Committee on Energy and Commerce, and in addition to the Committees on Oversight and Government Reform and Science, Space, and Technology, 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 efficient energy use in the Federal and private
sectors, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

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

4 (a) SHORT TITLE.—This Act may be cited as the
5 “Smart Energy Act”.

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—FEDERAL ENERGY USE AND GENERATION

- Sec. 101. Utilizing energy savings performance contracts.
 Sec. 102. Demand response programs.
 Sec. 103. Federal data center consolidation.
 Sec. 104. Adoption of personal computer power savings techniques by Federal agencies.
 Sec. 105. Best practices for advanced metering.
 Sec. 106. Federal energy management and data collection standard.

TITLE II—PROVIDING OPPORTUNITIES FOR ENERGY EFFICIENCY
IN BUSINESS AND INDUSTRY

- Sec. 201. Loan program for energy efficiency upgrades to existing buildings.
 Sec. 202. Coordination of research and development of energy efficient technologies for industry.
 Sec. 203. Combined heat and power and waste heat recovery.

1 **TITLE I—FEDERAL ENERGY USE**
 2 **AND GENERATION**

3 **SEC. 101. UTILIZING ENERGY SAVINGS PERFORMANCE**
 4 **CONTRACTS AND UTILITY ENERGY SERVICE**
 5 **CONTRACTS.**

6 (a) IMPLEMENTATION OF ENERGY MANAGEMENT
 7 REQUIREMENTS.—Section 543(f)(10) of the National En-
 8 ergy Conservation Policy Act (42 U.S.C. 8253(f)(10)) is
 9 amended—

10 (1) in subparagraph (B)(i), by striking “To
 11 carry” and inserting “To the extent consistent with
 12 subparagraph (C), to carry”;

13 (2) in subparagraph (B)(ii), by striking “A
 14 Federal” and inserting “To the extent consistent
 15 with subparagraph (C), a Federal”; and

16 (3) by amending subparagraph (C) to read as
 17 follows:

18 “(C) IMPLEMENTATION.—

1 “(i) GENERAL RULE.—Except as pro-
2 vided in clause (i) or (ii) of this subpara-
3 graph, each Federal agency shall imple-
4 ment the requirements under this sub-
5 section through private financing described
6 in subparagraph (B)(i)(II).

7 “(ii) EXCEPTION.—A Federal agency
8 may implement the requirements under
9 this subsection using appropriated funds
10 described in subparagraph (B)(i)(I) if im-
11 plementation pursuant to clause (i) of this
12 subparagraph conflicts with the primary
13 mission of the agency or facility, or if
14 greater cost savings can be generated
15 under a different program. A Federal
16 agency shall provide a written justification
17 for any decision to implement such require-
18 ments under this clause, including an anal-
19 ysis of the impact of such decision on the
20 taxpayer.

21 “(iii) FEDERAL ADMINISTRATIVE
22 COSTS.—A Federal agency may implement
23 the requirements under this subsection
24 using appropriated funds described in sub-
25 paragraph (B)(i)(I) to the extent necessary

1 to cover Federal administrative costs with
2 respect to implementation pursuant to
3 clause (i) of this subparagraph.”.

4 (b) TERMINATION CLAUSES.—Section 801(b)(2) of
5 the National Energy Conservation Policy Act (42 U.S.C.
6 8287(b)(2)) is amended—

7 (1) by striking “and” at the end of subpara-
8 graph (B);

9 (2) by striking the period at the end of sub-
10 paragraph (C)(iv) and inserting “; and”; and

11 (3) by adding at the end the following new sub-
12 paragraph:

13 “(D) require each agency to include in con-
14 tracts appropriate termination clauses for facili-
15 ties that will or may close before the end of the
16 term of the contract.”.

17 (c) ESPCS FOR ELECTRIC VEHICLES AND FUELING
18 INFRASTRUCTURE.—Section 804 of the National Energy
19 Conservation Policy Act (42 U.S.C. 8287c) is amended—

20 (1) by striking “or” at the end of subparagraph
21 (A);

22 (2) by striking the period at the end of sub-
23 paragraph (B) and inserting “; or”; and

24 (3) by adding at the end the following new sub-
25 paragraph:

1 “(C) a measure to support the use of elec-
2 tric vehicles or the fueling or charging infra-
3 structure necessary for electric vehicles.”.

4 (d) UESCs FOR ELECTRIC VEHICLES AND FUELING
5 INFRASTRUCTURE.—Section 546 of the National Energy
6 Conservation Policy Act (42 U.S.C. 8256) is amended in
7 subsection (c)(1) by inserting “, including measures taken
8 to finance the acquisition or use of electric-powered vehi-
9 cles or their fueling infrastructure,” after “demand”.

10 **SEC. 102. DEMAND RESPONSE PROGRAMS.**

11 Section 543 of the National Energy Conservation
12 Policy Act (42 U.S.C. 8253) is amended—

13 (1) by redesignating the second subsection (f)
14 as subsection (g); and

15 (2) by adding at the end the following new sub-
16 section:

17 “(h) DEMAND RESPONSE PROGRAMS.—To carry out
18 this section, a Federal agency shall participate in demand
19 response programs offered by electric utilities, Inde-
20 pendent System Operators, Regional Transmission Orga-
21 nizations, and demand response aggregators, where such
22 programs are available, if such participation does not con-
23 flict with the primary mission of the agency or facility,
24 in order to support electric grid reliability and security
25 and reduce energy bills for the agency or facility.”.

1 **SEC. 103. FEDERAL DATA CENTER CONSOLIDATION.**

2 (a) DEFINITION.—In this section, the term “Federal
3 data center” means a room or space in a Federal building
4 that is used for housing computer servers, data storage
5 devices, or network equipment, including server closets.

6 (b) OMB REQUIREMENTS.—The Director of the Of-
7 fice of Management and Budget shall direct the Federal
8 Chief Information Officer to—

9 (1) require that agencies, when updating their
10 Federal data center inventories in the third quarter
11 of each fiscal year, state what actions have been
12 taken to verify the inventories and to identify any
13 limitations of this information;

14 (2) require that agencies complete the missing
15 elements in their respective plans and submit com-
16 plete Federal data center consolidation plans, or pro-
17 vide a schedule for when they will do so, not later
18 than 180 days after the date of enactment of this
19 Act;

20 (3) require agencies to consider consolidation
21 challenges and lessons learned when updating their
22 consolidation plans; and

23 (4) utilize the existing accountability infrastruc-
24 ture by requiring the Data Center Consolidation
25 Task Force to assess agency consolidation plans to

1 ensure they are complete and to monitor the agen-
2 cies' implementation of their plans.

3 (c) DEPARTMENT AND AGENCY REQUIREMENTS.—

4 Each of the department secretaries and agency heads of
5 the 23 departments and agencies participating in the Of-
6 fice of Management and Budget's Federal data center con-
7 solidation initiative shall—

8 (1) direct their component agencies and their
9 Federal data center consolidation program managers
10 to complete the missing elements in their respective
11 Federal data center consolidation inventories and
12 plans; and

13 (2) require their Federal data center consolida-
14 tion program managers to consider consolidation
15 challenges and lessons learned when updating their
16 consolidation plans.

17 **SEC. 104. ADOPTION OF PERSONAL COMPUTER POWER**

18 **SAVINGS TECHNIQUES BY FEDERAL AGEN-**

19 **CIES.**

20 (a) IN GENERAL.—Not later than 360 days after the
21 date of enactment of this Act, the Secretary of Energy,
22 in consultation with the Secretary of Defense, the Sec-
23 retary of Veterans Affairs, and the Administrator of Gen-
24 eral Services, shall issue guidance for Federal agencies to
25 employ advanced tools allowing energy savings through

1 the use of computer hardware, energy efficiency software,
2 and power management tools.

3 (b) REPORTS ON PLANS AND SAVINGS.—Not later
4 than 180 days after the date of the issuance of the guid-
5 ance under subsection (a), each Federal agency shall sub-
6 mit to the Secretary of Energy a report that describes—

7 (1) the plan of the agency for implementing the
8 guidance within the agency; and

9 (2) estimated energy and financial savings from
10 employing the tools described in subsection (a).

11 **SEC. 105. BEST PRACTICES FOR ADVANCED METERING.**

12 Section 543(e) of the National Energy Conservation
13 Policy Act (42 U.S.C. 8253(e)) is amended by striking
14 paragraph (3) and inserting the following:

15 “(3) PLAN.—

16 “(A) IN GENERAL.—Not later than 180
17 days after the date on which guidelines are es-
18 tablished under paragraph (2), in a report sub-
19 mitted by the agency under section 548(a), each
20 agency shall submit to the Secretary a plan de-
21 scribing the manner in which the agency will
22 implement the requirements of paragraph (1),
23 including—

1 “(i) how the agency will designate
2 personnel primarily responsible for achiev-
3 ing the requirements; and

4 “(ii) a demonstration by the agency,
5 complete with documentation, of any find-
6 ing that advanced meters or advanced me-
7 tering devices (as those terms are used in
8 paragraph (1)), are not practicable.

9 “(B) UPDATES.—Reports submitted under
10 subparagraph (A) shall be updated annually.

11 “(4) BEST PRACTICES REPORT.—

12 “(A) IN GENERAL.—Not later than 180
13 days after the date of enactment of the Smart
14 Energy Act, the Secretary of Energy, in con-
15 sultation with the Secretary of Defense and the
16 Administrator of General Services, shall de-
17 velop, and issue a report on, best practices for
18 the use of advanced metering of energy use in
19 Federal facilities, buildings, and equipment by
20 Federal agencies.

21 “(B) UPDATING.—The report described
22 under subparagraph (A) shall be updated annu-
23 ally.

24 “(C) COMPONENTS.—The report shall in-
25 clude, at a minimum—

1 “(i) summaries and analysis of the re-
2 ports by agencies under paragraph (3);

3 “(ii) recommendations on standard re-
4 quirements or guidelines for automated en-
5 ergy management systems, including—

6 “(I) potential common commu-
7 nications standards to allow data
8 sharing and reporting;

9 “(II) means of facilitating contin-
10 uous commissioning of buildings and
11 evidence-based maintenance of build-
12 ings and building systems; and

13 “(III) standards for sufficient
14 levels of security and protection
15 against cyber threats to ensure sys-
16 tems cannot be controlled by unau-
17 thorized persons; and

18 “(iii) an analysis of—

19 “(I) the types of advanced meter-
20 ing and monitoring systems being pi-
21 loted, tested, or installed in Federal
22 buildings; and

23 “(II) existing techniques used
24 within the private sector or other non-
25 Federal government buildings.”.

1 **SEC. 106. FEDERAL ENERGY MANAGEMENT AND DATA COL-**
2 **LECTION STANDARD.**

3 Section 543 of the National Energy Conservation
4 Policy Act (42 U.S.C. 8253) is amended—

5 (1) by redesignating the second subsection (f)
6 (as added by section 434(a) of Public Law 110–140
7 (121 Stat. 1614)) as subsection (g); and

8 (2) in subsection (f)(7), by striking subpara-
9 graph (A) and inserting the following:

10 “(A) IN GENERAL.—For each facility that
11 meets the criteria established by the Secretary
12 under paragraph (2)(B), the energy manager
13 shall use the web-based tracking system under
14 subparagraph (B)—

15 “(i) to certify compliance with the re-
16 quirements for—

17 “(I) energy and water evalua-
18 tions under paragraph (3);

19 “(II) implementation of identified
20 energy and water measures under
21 paragraph (4); and

22 “(III) follow-up on implemented
23 measures under paragraph (5); and

24 “(ii) to publish energy and water con-
25 sumption data on an individual facility
26 basis.”.

1 **TITLE II—PROVIDING OPPORTU-**
2 **NITIES FOR ENERGY EFFI-**
3 **CIENCY IN BUSINESS AND IN-**
4 **DUSTRY**

5 **SEC. 201. LOAN PROGRAM FOR ENERGY EFFICIENCY UP-**
6 **GRADES TO EXISTING BUILDINGS.**

7 Title XVII of the Energy Policy Act of 2005 (42
8 U.S.C. 16511 et seq.) is amended by adding at the end
9 the following:

10 **“SEC. 1706. BUILDING RETROFIT FINANCING PROGRAM.**

11 “(a) DEFINITIONS.—In this section:

12 “(1) CREDIT SUPPORT.—The term ‘credit sup-
13 port’ means a guarantee or commitment to issue a
14 guarantee or other forms of credit enhancement to
15 ameliorate risks for efficiency obligations.

16 “(2) EFFICIENCY OBLIGATION.—The term ‘effi-
17 ciency obligation’ means a debt or repayment obliga-
18 tion incurred in connection with financing a project,
19 or a portfolio of such debt or payment obligations.

20 “(3) PROJECT.—The term ‘project’ means the
21 installation and implementation of efficiency, ad-
22 vanced metering, distributed generation, or renew-
23 able energy technologies and measures in a building
24 (or in multiple buildings on a given property) that
25 are expected to increase the energy efficiency of the

1 building (including fixtures) in accordance with cri-
2 teria established by the Secretary.

3 “(b) ELIGIBLE PROJECTS.—

4 “(1) IN GENERAL.—Notwithstanding sections
5 1703 and 1705, the Secretary may provide credit
6 support under this section, in accordance with sec-
7 tion 1702.

8 “(2) INCLUSIONS.—Buildings eligible for credit
9 support under this section include commercial, mul-
10 tifamily residential, industrial, municipal, govern-
11 ment, institution of higher education, school, and
12 hospital facilities that satisfy criteria established by
13 the Secretary.

14 “(c) GUIDELINES.—

15 “(1) IN GENERAL.—Not later than 180 days
16 after the date of enactment of this section, the Sec-
17 retary shall—

18 “(A) establish guidelines for credit support
19 provided under this section; and

20 “(B) publish the guidelines in the Federal
21 Register; and

22 “(C) provide for an opportunity for public
23 comment on the guidelines.

1 “(2) REQUIREMENTS.—The guidelines estab-
2 lished by the Secretary under this subsection shall
3 include—

4 “(A) standards for assessing the energy
5 savings that could reasonably be expected to re-
6 sult from a project;

7 “(B) examples of financing mechanisms
8 (and portfolios of such financing mechanisms)
9 that qualify as efficiency obligations;

10 “(C) the threshold levels of energy savings
11 that a project, at the time of issuance of credit
12 support, shall be reasonably expected to achieve
13 to be eligible for credit support;

14 “(D) the eligibility criteria the Secretary
15 determines to be necessary for making credit
16 support available under this section; and

17 “(E) notwithstanding subsections (d)(3)
18 and (g)(2)(B) of section 1702, lien priority and
19 credit risk protections established by the Sec-
20 retary, in consultation with the Director of the
21 Office of Management and Budget, which shall
22 include—

23 “(i) requirements to preserve priority
24 lien status of secured lenders and creditors
25 in buildings eligible for credit support;

1 “(ii) remedies available to the Sec-
2 retary under chapter 176 of title 28,
3 United States Code, in the event of default
4 on the efficiency obligation by the bor-
5 rower; and

6 “(iii) measures to limit the exposure
7 of the Secretary to financial risk in the
8 event of default, such as—

9 “(I) the collection of a credit sub-
10 sidy fee from the borrower as a loan
11 loss reserve, taking into account the
12 limitation on credit support under
13 subsection (d);

14 “(II) minimum debt-to-income
15 levels of the borrower;

16 “(III) minimum levels of value
17 relative to outstanding mortgage or
18 other debt on a building eligible for
19 credit support;

20 “(IV) allowable thresholds for the
21 percent of the efficiency obligation rel-
22 ative to the amount of any mortgage
23 or other debt on an eligible building;

1 “(V) analysis of historic and an-
2 ticipated occupancy levels and rental
3 income of an eligible building;

4 “(VI) requirements of third-party
5 contractors to guarantee energy sav-
6 ings that will result from a retrofit
7 project, and whether financing on the
8 efficiency obligation will amortize
9 from the energy savings;

10 “(VII) requirements that the ret-
11 rofit project incorporate protocols to
12 measure and verify energy savings;
13 and

14 “(VIII) recovery of payments
15 equally by the Secretary and the ret-
16 rofit.

17 “(3) EFFICIENCY OBLIGATIONS.—The financing
18 mechanisms qualified by the Secretary under para-
19 graph (2)(B) may include—

20 “(A) loans, including loans made by the
21 Federal Financing Bank;

22 “(B) power purchase agreements, including
23 energy efficiency power purchase agreements;

24 “(C) energy services agreements, including
25 energy performance contracts;

1 “(D) property assessed clean energy bonds
2 and other tax assessment-based financing mech-
3 anisms;

4 “(E) aggregate on-meter agreements that
5 finance retrofit projects; and

6 “(F) any other efficiency obligations the
7 Secretary determines to be appropriate.

8 “(4) PRIORITIES.—In carrying out this section,
9 the Secretary shall prioritize—

10 “(A) the maximization of energy savings
11 with the available credit support funding;

12 “(B) the establishment of a clear applica-
13 tion and approval process that allows private
14 building owners, lenders, and investors to rea-
15 sonably expect to receive credit support for
16 projects that conform to guidelines;

17 “(C) the distribution of projects receiving
18 credit support under this section across States
19 or geographical regions of the United States;
20 and

21 “(D) projects designed to achieve whole-
22 building retrofits.

23 “(d) LIMITATION.—Notwithstanding section 1702(c),
24 the Secretary shall not issue credit support under this sec-
25 tion in an amount that exceeds—

1 “(1) 90 percent of the principal amount of the
2 efficiency obligation that is the subject of the credit
3 support; or

4 “(2) \$10,000,000 for any single project.

5 “(e) AGGREGATION OF PROJECTS.—To the extent
6 provided in the guidelines developed in accordance with
7 subsection (c), the Secretary may issue credit support on
8 a portfolio, or pool of projects, that are not required to
9 be geographically contiguous, if each efficiency obligation
10 in the pool fulfills the requirements described in this sec-
11 tion.

12 “(f) APPLICATION.—

13 “(1) IN GENERAL.—To be eligible to receive
14 credit support under this section, the applicant shall
15 submit to the Secretary an application at such time,
16 in such manner, and containing such information as
17 the Secretary determines to be necessary.

18 “(2) CONTENTS.—An application submitted
19 under this section shall include assurances by the
20 applicant that—

21 “(A) each contractor carrying out the
22 project meets minimum experience level criteria,
23 including local retrofit experience, as deter-
24 mined by the Secretary;

1 “(B) the project is reasonably expected to
2 achieve energy savings, as set forth in the appli-
3 cation using any methodology that meets the
4 standards described in the program guidelines;

5 “(C) the project meets any technical cri-
6 teria described in the program guidelines;

7 “(D) the recipient of the credit support
8 and the parties to the efficiency obligation will
9 provide the Secretary with—

10 “(i) any information the Secretary re-
11 quests to assess the energy savings that re-
12 sult from the project, including historical
13 energy usage data, a simulation-based
14 benchmark, and detailed descriptions of
15 the building work, as described in the pro-
16 gram guidelines; and

17 “(ii) permission to access information
18 relating to building operations and usage
19 for the period described in the program
20 guidelines; and

21 “(E) any other assurances that the Sec-
22 retary determines to be necessary.

23 “(3) DETERMINATION.—Not later than 90 days
24 after receiving an application, the Secretary shall

1 make a final determination on the application, which
2 may include requests for additional information.

3 “(g) FEES.—

4 “(1) IN GENERAL.—In addition to the fees re-
5 quired by section 1702(h)(1), the Secretary may
6 charge reasonable fees for credit support provided
7 under this section.

8 “(2) AVAILABILITY.—Fees collected under this
9 section shall be subject to section 1702(h)(2).

10 “(h) UNDERWRITING.—The Secretary may delegate
11 the underwriting activities under this section to 1 or more
12 entities that the Secretary determines to be qualified.

13 “(i) REPORT.—Not later than 1 year after com-
14 mencement of the program, the Secretary shall submit to
15 the appropriate committees of Congress a report that de-
16 scribes in reasonable detail—

17 “(1) the manner in which this section is being
18 carried out;

19 “(2) the number and type of projects sup-
20 ported;

21 “(3) the types of funding mechanisms used to
22 provide credit support to projects;

23 “(4) the energy savings expected to result from
24 projects supported by this section;

1 “(5) any tracking efforts the Secretary is using
2 to calculate the actual energy savings produced by
3 the projects; and

4 “(6) any plans to improve the tracking efforts
5 described in paragraph (5).”.

6 **SEC. 202. COORDINATION OF RESEARCH AND DEVELOP-**
7 **MENT OF ENERGY EFFICIENT TECH-**
8 **NOLOGIES FOR INDUSTRY.**

9 (a) IN GENERAL.—As part of the research and devel-
10 opment activities of the Advanced Manufacturing Office
11 of the Department of Energy, the Secretary of Energy
12 shall establish, as appropriate, collaborative research and
13 development partnerships with other programs within the
14 Office of Energy Efficiency and Renewable Energy (in-
15 cluding the Building Technologies Program), the Office of
16 Electricity Delivery and Energy Reliability, and the Office
17 of Science that—

18 (1) leverage the research and development ex-
19 pertise of those programs to promote early stage en-
20 ergy efficiency technology development;

21 (2) support the use of innovative manufacturing
22 processes and applied research for development,
23 demonstration, and commercialization of new tech-
24 nologies and processes to improve efficiency, reduce

1 emissions, reduce industrial waste, and improve in-
2 dustrial cost-competitiveness; and

3 (3) apply the knowledge and expertise of the
4 Advanced Manufacturing Office to help achieve the
5 program goals of the other programs.

6 (b) REPORTS.—Not later than 2 years after the date
7 of enactment of this Act and biennially thereafter, the Sec-
8 retary of Energy shall submit to Congress a report that
9 describes actions taken to carry out subsection (a) and the
10 results of those actions.

11 **SEC. 203. COMBINED HEAT AND POWER AND WASTE HEAT**
12 **RECOVERY.**

13 (a) GOAL.—It is the goal of the United States to,
14 not later than December 31, 2020, achieve a doubling of
15 the production of electricity from combined heat and
16 power and waste heat recovery in the United States from
17 the current level of approximately 85 to at least 170
18 gigawatts by 2020 and thereby improve the energy effi-
19 ciency of the industrial sector.

20 (b) STRATEGIC PLAN.—

21 (1) IN GENERAL.—Not later than 1 year after
22 the date of enactment of this Act, and biennially
23 thereafter, the Secretary of Energy (referred to in
24 this section as the “Secretary”), in cooperation with
25 the heads of other appropriate Federal agencies,

1 shall transmit to the Congress and make available to
2 the public a strategic plan, or update thereof, to
3 achieve the national goal established under sub-
4 section (a).

5 (2) PUBLIC INPUT AND COMMENT.—The Sec-
6 retary shall develop the strategic plan in a manner
7 that provides appropriate opportunities for public
8 input and comment.

9 (3) PLAN CONTENTS.—The strategic plan
10 shall—

11 (A) establish policy priorities and identify
12 requirements to ensure compliance with the na-
13 tional goal established under subsection (a);

14 (B) include estimates for achievable in-
15 creases in combined heat and power and waste
16 heat recovery production and for energy savings
17 that will be achieved by those increases; and

18 (C) include data collection and compilation
19 methodologies used to establish baselines and
20 document energy savings data.

21 (4) PLAN UPDATES.—

22 (A) INCLUSION IN NATIONAL ENERGY POL-
23 ICY PLAN.—The Secretary shall include each
24 updated strategic plan in the National Energy
25 Policy Plan required by section 801 of the De-

1 partment of Energy Organization Act (42
2 U.S.C. 7321).

3 (B) CONTENTS.—In updating the strategic
4 plan, the Secretary shall—

5 (i) report on progress made toward
6 implementing combined heat and power
7 and waste heat recovery policies to achieve
8 the national goal established under sub-
9 section (a); and

10 (ii) verify, to the maximum extent
11 practicable, energy savings resulting from
12 those policies.

○