AMENDMENT NO._____ Calendar No._____

Purpose: To improve the bill.

IN THE SENATE OF THE UNITED STATES—112th Cong., 2d Sess.

H. R. 4850

To allow for innovations and alternative technologies that meet or exceed desired energy efficiency goals.

Referred to the Committee on _____ and ordered to be printed

Ordered to lie on the table and to be printed

AMENDMENT intended to be proposed by _____

Viz:

At the end of the bill, add the following:

TITLE II—INDUSTRIAL ENERGY EFFICIENCY

SEC. 201. COORDINATION OF RESEARCH AND DEVELOPMENT OF ENERGY EFFICIENT TECHNOLOGIES FOR INDUSTRY.

(a) IN GENERAL.—As part of the research and development activities of the Industrial Technologies Program of the Department of Energy, the Secretary of Energy (referred to in this title as the ''Secretary'') shall establish, as appropriate, collaborative research and development partnerships with other programs within the Office of Energy Efficiency and Renewable Energy (including the

Building Technologies Program), the Office of Electricity Delivery and Energy Reliability, and the Office of Science that—

(1) leverage the research and development expertise of those programs to promote early stage energy efficiency technology development;

(2) support the use of innovative manufacturing processes and applied research for development, demonstration, and commercialization of new technologies and processes to improve efficiency (including improvements in efficient use of water), reduce emissions, reduce industrial waste, and improve industrial cost-competitiveness; and

(3) apply the knowledge and expertise of the Industrial Technologies Program to help achieve the program goals of the other programs.

(b) REPORTS.—Not later than 2 years after the date of enactment of this Act and biennially thereafter, the Secretary shall submit to Congress a report that describes actions taken to carry out subsection (a) and the results of those actions.

SEC. 202. REDUCING BARRIERS TO THE DEPLOYMENT OF INDUSTRIAL ENERGY EFFICIENCY.

(a) DEFINITIONS.—In this section:

(1) INDUSTRIAL ENERGY EFFICIENCY.—The term ''industrial energy efficiency'' means the energy efficiency derived from commercial technologies and measures to improve energy efficiency or to generate or transmit electric power and heat, including electric motor efficiency improvements, demand response, direct or indirect combined heat and power, and waste heat recovery.

(2) INDUSTRIAL SECTOR.—The term ''industrial sector'' means any subsector of the manufacturing sector (as defined in North American Industry Classification System codes 31-33 (as in effect on the date of enactment of this Act)) establishments of which have, or could have, thermal host facilities with electricity requirements met in whole, or in part, by onsite electricity generation, including direct and indirect combined heat and power or waste recovery.

(b) REPORT ON THE DEPLOYMENT OF INDUSTRIAL ENERGY EFFICIENCY.—

(1) IN GENERAL.—Not later than 1 year after the date of enactment of this Act, the Secretary shall submit to the Committee on Energy and Commerce of the House of Representatives and the Com-

mittee on Energy and Natural Resources of the Senate a report describing—

(A) the results of the study conducted under paragraph (2); and

(B) recommendations and guidance developed under paragraph (3).

(2) STUDY.—The Secretary, in coordination with the industrial sector, shall conduct a study of the following:

(A) The legal, regulatory, and economic barriers to the deployment of industrial energy efficiency in all electricity markets (including organized wholesale electricity markets, and regulated electricity markets), including, as applicable, the following:

(i) Transmission and distribution interconnection requirements.

(ii) Standby, back-up, and maintenance fees (including demand ratchets).

(iii) Exit fees.

(iv) Life of contract demand ratchets.

(v) Net metering.

(vi) Calculation of avoided cost rates.

(vii) Power purchase agreements.

(viii) Energy market structures.

(ix) Capacity market structures.

(x) Other barriers as may be identified by the Secretary, in coordination with the industrial sector.

(B) Examples of —

(i) successful State and Federal policies that resulted in greater use of industrial energy efficiency;

(ii) successful private initiatives that resulted in greater use of industrial energy efficiency; and

(iii) cost-effective policies used by foreign countries to foster industrial energy efficiency.

(C) The estimated economic benefits to the national economy of providing the industrial sector with Federal energy efficiency matching grants of $5,000,000,000 for 5- and 10-year periods, including benefits relating to—

(i) estimated energy and emission reductions;

(ii) direct and indirect jobs saved or created;

(iii) direct and indirect capital investment;

(iv) the gross domestic product; and

(v) trade balance impacts.

(D) The estimated energy savings available from increased use of recycled material in energy-intensive manufacturing processes.

(3) RECOMMENDATIONS AND GUIDANCE.—The Secretary, in coordination with the industrial sector, shall develop policy recommendations regarding the deployment of industrial energy efficiency, including proposed regulatory guidance to States and relevant Federal agencies to address barriers to deployment.

SEC. 203. STUDY OF ADVANCED ENERGY TECHNOLOGY MANUFACTURING CAPABILITIES IN THE UNITED STATES.

(a) IN GENERAL.—Not later than 60 days after the date of enactment of this Act, the Secretary shall enter into an arrangement with the National Academy of Sciences under which the Academy shall conduct a study of the development of advanced manufacturing capabilities for various energy technologies, including—

(1) an assessment of the manufacturing supply chains of established and emerging industries;

(2) an analysis of—

(A) the manner in which supply chains have changed over the 25-year period ending on the date of enactment of this Act;

(B) current trends in supply chains; and

(C) the energy intensity of each part of the supply chain and opportunities for improvement;

(3) for each technology or manufacturing sector, an analysis of which sections of the supply chain are critical for the United States to retain or develop to be competitive in the manufacturing of the technology;

(4) an assessment of which emerging energy technologies the United States should focus on to create or enhance manufacturing capabilities; and

(5) recommendations on leveraging the expertise of energy efficiency and renewable energy user facilities so that best materials and manufacturing practices are designed and implemented.

(b) REPORT.—Not later than 2 years after the date on which the Secretary enters into the agreement with the Academy described in subsection (a), the Academy shall submit to the Committee on Energy and Natural Resources of the Senate, the Committee on Energy and Commerce of the House of Representatives, and the Secretary

a report describing the results of the study required under this section, including any findings and recommendations.

SEC. 204. INDUSTRIAL TECHNOLOGIES STEERING COMMITTEE.

The Secretary shall establish an advisory steering committee that includes national trade associations representing energy-intensive industries or energy service providers to provide recommendations to the Secretary on planning and implementation of the Industrial Technologies Program of the Department of Energy.

TITLE III—FEDERAL AGENCY ENERGY EFFICIENCY

SEC. 301. AVAILABILITY OF FUNDS FOR DESIGN UPDATES.

Section 3307 of title 40, United States Code, is amended—

(1) by redesignating subsections (d) through (h) as subsections (e) through (i), respectively; and

(2) by inserting after subsection (c) the following:

''(d) AVAILABILITY OF FUNDS FOR DESIGN UPDATES.—

''(1) IN GENERAL.—Subject to paragraph (2), for any project for which congressional approval is received under subsection (a) and for which the design has been substantially completed but construc-

tion has not begun, the Administrator of General Services may use appropriated funds to update the project design to meet applicable Federal building energy efficiency standards established under section 305 of the Energy Conservation and Production Act (42 U.S.C. 6834) and other requirements established under section 3312.

''(2) LIMITATION.—The use of funds under paragraph (1) shall not exceed 125 percent of the estimated energy or other cost savings associated with the updates as determined by a life-cycle cost analysis under section 544 of the National Energy Conservation Policy Act (42 U.S.C. 8254).''.

SEC. 302. BEST PRACTICES FOR ADVANCED METERING.

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

''(3) PLAN.—

''(A) IN GENERAL.—Not later than 180 days after the date on which guidelines are established under paragraph (2), in a report submitted by the agency under section 548(a), each agency shall submit to the Secretary a plan describing the manner in which the agency will

implement the requirements of paragraph (1), including—

"(i) how the agency will designate personnel primarily responsible for achieving the requirements; and

"(ii) a demonstration by the agency, complete with documentation, of any finding that advanced meters or advanced metering devices (as those terms are used in paragraph (1)), are not practicable.

"(B) UPDATES.—Reports submitted under subparagraph (A) shall be updated annually.

"(4) BEST PRACTICES REPORT.—

"(A) IN GENERAL.—Not later than 180 days after the date of enactment of this paragraph, the Secretary of Energy, in consultation with the Secretary of Defense and the Administrator of General Services, shall develop, and issue a report on, best practices for the use of advanced metering of energy use in Federal facilities, buildings, and equipment by Federal agencies.

"(B) UPDATING.—The report described under subparagraph (A) shall be updated annually.

"(C) COMPONENTS.—The report shall include, at a minimum—

"(i) summaries and analysis of the reports by agencies under paragraph (3);

"(ii) recommendations on standard requirements or guidelines for automated energy management systems, including—

"(I) potential common communications standards to allow data sharing and reporting;

"(II) means of facilitating continuous commissioning of buildings and evidence-based maintenance of buildings and building systems; and

"(III) standards for sufficient levels of security and protection against cyber threats to ensure systems cannot be controlled by unauthorized persons; and

"(iii) an analysis of—

"(I) the types of advanced metering and monitoring systems being piloted, tested, or installed in Federal buildings; and

"(II) existing techniques used within the private sector or other non-Federal government buildings.".

SEC. 303. FEDERAL ENERGY MANAGEMENT AND DATA COLLECTION STANDARD.

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

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

(2) in subsection (f)(7), by striking subparagraph (A) and inserting the following:

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

"(i) to certify compliance with the requirements for—

"(I) energy and water evaluations under paragraph (3);

"(II) implementation of identified energy and water measures under paragraph (4); and

''(III) follow-up on implemented measures under paragraph (5); and

''(ii) to publish energy and water consumption data on an individual facility basis.''.

SEC. 304. FEDERAL PURCHASE REQUIREMENT.

Section 203 of the Energy Policy Act of 2005 (42 U.S.C. 15852) is amended—

(1) in subsections (a) and (b)(2), by striking ''electric energy'' each place it appears and inserting ''electric, direct, and thermal energy'';

(2) in subsection (b)(2)—

(A) by inserting '', or avoided by,'' after ''generated from''; and

(B) by inserting ''(including ground-source, reclaimed, and ground water)''after ''geothermal'';

(3) by redesignating subsection (d) as subsection (e); and

(4) by inserting after subsection (c) the following:

''(d) SEPARATE CALCULATION.—Renewable energy produced at a Federal facility, on Federal land, or on Indian land (as defined in section 2601 of the Energy Policy Act of 1992 (25 U.S.C. 3501))—

''(1) shall be calculated (on a BTU-equivalent basis) separately from renewable energy used; and

''(2) may be used individually or in combination to comply with subsection (a).''.

SEC. 305. STUDY ON FEDERAL DATA CENTER CONSOLIDATION.

(a) IN GENERAL.—The Secretary of Energy shall conduct a study on the feasibility of a government-wide data center consolidation, with an overall Federal target of a minimum of 800 Federal data center closures by October 1, 2015.

(b) COORDINATION.—In conducting the study, the Secretary shall coordinate with Federal data center program managers, facilities managers, and sustainability officers.

(c) REPORT.—Not later than 1 year after the date of enactment of this Act, the Secretary shall submit to Congress a report that describes the results of the study, including a description of agency best practices in data center consolidation.